

# **The Impact of Country-of-Origin (COO) on Australian Procurement Managers**

by

**Jashim Uddin**

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fulfilment of the requirements for the degree of  
Doctor of Philosophy**

**Supervisor: Professor Greg Elliott**

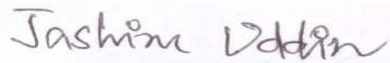
**Department of Marketing and Management  
Faculty of Business and Economics  
Macquarie University  
Australia**

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## Statement of Candidate

I hereby declare that this submission is my own work and, to the best of my knowledge, it contains no materials previously published or written by another person, or substantial proportions of material, which have been accepted for the award of any other degree or diploma at Macquarie University or any other educational institution. Any contribution made to the research by others, with whom I have worked at Macquarie University or elsewhere, is explicitly acknowledged in the thesis. I also declare that the intellectual content of this thesis is the product of my own work, except to the extent that assistance from others in the project's design and conception or in its style, presentation and linguistic expression is acknowledged. Regarding the ethical concerns in relation to human research, the ethics approval for this research has been granted (Ethics Approval Reference No. 5201300312).

Signature:

A handwritten signature in dark ink, reading "Jashim Uddin", is written over a light blue rectangular background.

Jashim Uddin

Date: 19/August/2015

# Thesis Summary

The conceptual origins of this study lie in the field of ‘country-of-origin’ (COO) research. In recent history, competence in particular production processes and product categories have become increasingly dispersed among many countries worldwide generating greater sourcing options for business-to-business (B2B) buyers. It is evident that purchasing managers are required to simultaneously choose both a country and a company when making source country selection decision, a strong reality that has scarcely received attention in extant COO research. To validate the models in the three empirical papers, the study used a quantitative-positivist approach as the research paradigm; cross-sectional design as the survey method; and covariance-based structural equation modelling (SEM) as the major data analysis technique along with hierarchical regression analysis. The first paper’s results showed that company effect is a valid second-order construct derived from four first-order marketing mix constructs, and that the role of company effect is substantially higher than country image on international supplier performance. The second paper found that international supplier performance is significantly influenced by company-specific effect and geographical proximity of the source country. The findings from the third paper showed that international supplier performance is significantly influenced by company effect and the geographical proximity of the source country. In addition, trade infrastructure, product-country image (PCI) and geographical proximity directly influence the company effect. Additionally, hierarchical regression analysis showed that product aspects and pricing aspects represent the significant company constructs, and that product-country image and geographical proximity are the significant country constructs as predictors of three supplier performance criteria. For purchasing managers, business consultants and country policy makers, the thesis provides evidence that competitiveness should be sourced from both company and country as company competitiveness alone cannot achieve a superior supplier image in the eyes of international buyers.

# Dedication

To my father, my mother and my eldest brother

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All praise goes to almighty Allah, the most merciful and most beneficent. I am gratified to you for creating me and for bestowing on me sound intellectual and physical ability that not only contributed to my PhD journey but also to every positive thing performed by me in my entire life. At the same time, you kept me surrounded by superlative humanity through many individuals. I believe that they came into my life as your sheer blessings. I take this rare opportunity to acknowledge several of these superlative humans.

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# List of Abbreviations

ANOVA	analysis of variance
AVE	average variance extracted
B2B	business-to-business
BPP	brand profitability performance
CFA	confirmatory factor analysis
CFI	Comparative Fit Index
CI	overall country image
CO	country of origin
COA	country of assembly
COB	country of brand
COD	country of design
CoI	country image
COM	country of manufacture
CompE	company effect
COO	country-of-origin
COP	country of parts
CRS	country's regulatory strength
DSA	delivery and service aspects
ER	early respondents
GCI	Global Competitiveness Index
GRP	geographical proximity
GVC	global value chain
IDE-JETRO	Institute of Developing Economies of the Japan External Trade Organization
IMF	International Monetary Fund
LDCs	least developed countries
LPI	Logistics Performance Index (World Bank)
LR	late respondents
MANOVA	multivariate analysis of variance
MCA	marketing communications aspects
MIW	Made in the world
MIWI	Made in the World Initiative
MNE	multinational enterprises
NIC	newly industrialised country
OECD	Organisation for Economic Co-operation and Development



PCA	principal component analysis
PCI	product-country image
PDA	product aspects
PRA	pricing aspects
RPBE	retailer-perceived brand equity
SPLP	supplier performance
TCI	trade-related country infrastructure
TLI	Tucker–Lewis Index
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
WTO	World Trade Organization

# Abstract

The conceptual origins of this study lie in the field of ‘country-of-origin’ (COO) research. Despite being a widely researched area in international marketing, the overwhelming majority of published COO studies have investigated consumers as users of COO information, thus creating a substantial imbalance over business-to-business (B2B) buyer-focused COO studies. In recent history, competence in particular production processes and product categories has become increasingly dispersed among many countries worldwide generating greater sourcing options for B2B buyers. Consequently, B2B buyers seeking to source products or components are confronted by decisions about source country selection from among a large number of countries, thus establishing a closely intertwined relationship between international B2B sourcing and COO. When more closely examining this decision about source country selection, it is evident that purchasing managers are required to simultaneously choose both a country and a company when making this one decision, a strong reality that has scarcely received attention in extant COO research. In addition, B2B purchasing decisions are likely to be based on trade-related country characteristics. In addition, COO research is yet to integrate trade-related country aspects that are well represented in the international supplier selection, global supply chain and international trade literature, thus creating a disconnect from real-world practice. In this regard, proximity, trade facilitation and transport cost all have strong country-related significance. As a consequence of such disparity from real-world significance, COO research has faced strong criticism for its lack of relevance in recent times. The current thesis fills these gaps in the extant COO literature by examining the relative impact of company effect, along with that of multiple COO facets that include traditional COO constructs and newly validated trade-related country constructs, on international supplier performance, as a more realistic outcome construct relevant to B2B buyers.

This PhD study is in publication format comprising three empirical papers along with one literature review chapter. The literature review chapter can be classified into three topic areas, namely: a) antecedents of COO effect, methodologies and findings in B2B-focused COO studies; b) reported antecedents and findings of selected global purchasing, international supplier selection, global supply chain and international trade literature relevant to country choice decisions; and c) development of a conceptual framework based on research gaps that incorporates company and country facets in a multi-attribute attitude model influencing the outcome construct, international supplier performance. The first empirical paper sought to understand the relative impact of company- and country-specific effects on international supplier performance according to B2B buyers in the Australian context. The paper also examined the mediating effects of country and company constructs. The second paper developed and validated three trade-related country constructs and later investigated the comparative influence of the trade-related country effect and company effect on the same outcome construct used in the first paper. The third empirical paper tested an integrated model that comprises company constructs, traditional COO constructs and newly developed trade-related COO constructs with international supplier performance as the outcome construct. This paper also sought to gain an understanding of the relative significant contribution of the country- and company-related constructs on three indicator variables of supplier performance through hierarchical regression.

To validate the models in the three empirical papers, the study used a quantitative-positivist approach as the research paradigm; cross-sectional design as the survey method; and covariance-based structural equation modelling (SEM) as the major data analysis technique along with hierarchical regression analysis. Data were collected from Australian purchasing managers using a web-based

structured questionnaire. The first paper's results showed that company effect is a valid second-order construct derived from four first-order marketing mix constructs, and that the role of company effect is substantially higher than country image on international supplier performance. In addition, the study revealed that the impact of overall country image on company effect and supplier performance is fully mediated by product-country image (PCI), and that company image partially mediates the relationship between product-country image (PCI) and supplier performance.

The second paper found that international supplier performance is significantly influenced by company-specific effect and geographical proximity of the source country. In addition, the company effect fully mediates the relationship between trade-related country infrastructure and supplier performance, and partially mediates the relationship between geographical proximity and supplier performance. The findings from the third paper showed that international supplier performance is significantly influenced by company effect and the geographical proximity of the source country. In addition, trade infrastructure, product-country image (PCI) and geographical proximity directly influence the company effect. Additionally, hierarchical regression analysis showed that product aspects and pricing aspects represent the significant company constructs, and that product-country image (PCI) and geographical proximity are the significant country constructs as predictors of three supplier performance criteria.

In terms of theory, the study extends COO research by developing and validating three new trade-related country constructs, validating company effect as a second-order construct, and using company effect along with multiple COO dimensions in a multi-cue research setting. Moreover, the thesis successfully addressed the recent criticism of the relevance of COO research through adopting an ecologically valid research design. Furthermore, the long-term criticism of COO being used as a too narrowly defined concept despite its wide multidimensional associations has also been addressed through integration with other trade-related research streams. In addition, use of several COO constructs has specifically allowed different aspects of COO to be captured. Moreover, this study is the first to test the sequence of country image influence in B2B settings.

For purchasing managers, business consultants and country policy makers (specifically those countries exporting to Australia), the thesis provides evidence that competitiveness should be sourced from both company and country as company competitiveness alone cannot achieve a superior supplier image in the eyes of international buyers. With regard to country competitiveness, the significance of overall country image, product-country image (PCI) and trade-related country image revealed by this study will substantially aid company and country decision makers.

## Academic Presentations associated with this Thesis

- 1) Uddin, J. (2013). The impact of country-of-Origin (COO) on Australian procurement managers. Research proposal presented at *ANZMAC Doctoral Colloquium*, Auckland, New Zealand.
- 2) Uddin, J., & Elliott, G. (2013). The relevance of B2B buyers in country-of origin research. In proceedings of the *ANZMAC Conference*, Auckland, New Zealand.  
Retrieved from [http://www.anzmac.org/conference\\_archive/2013/papers/anzmac2013-218.pdf](http://www.anzmac.org/conference_archive/2013/papers/anzmac2013-218.pdf)
- 3) Uddin, J., Elliott, G., & Hamin, H. (2014). Influence of country-of-origin on overseas supplier performance. Paper presented at the *ANZMAC Conference*, Brisbane, Australia.

## CHAPTER 1

### Introduction

There is nothing to be researched regarding the proposition that “the sun rises in the east” as it is an everlasting constant. In contrast, one objective of research in any area of human enquiry is to conceive of, measure and validate the impact of change. In this context, the construct of country-of-origin (COO) in research investigations is also subject to constant change, as changes in the level of globalisation bring changes in the conceptualisation and salience of COO. When change is the constant phenomenon in any research field, there exists a persistent meaningful research opportunity. In this sense, the COO issue is widely influenced by globalisation and is having an impact on wide-ranging areas of research, such as consumer and industrial buying behaviour; tourism; global investment and country selection; diplomatic actions and trade negotiations; immigration regulations; multinational human resources practices; etc. The use of COO in this thesis is set against the broad background of international marketing, as it also impacts on international marketing.

Over the last 50 years, the simple concept of ‘Made in ...’ (Dichter, 1962) has developed a strong foothold in international marketing literature as COO, along with the related terms, country of origin (CO) (Samiee, 1994) and country image (CoI) (Roth & Diamantopoulos, 2009). Increasing levels of globalisation have gradually resulted in the common occurrence of products being assembled from a range of parts from different countries, rather than a single country of origin that dispersed a single product from its conceptualisation to its final production over several countries. In addressing the complexity of the product origins, (Chao, 1993) decomposed COO into country of assembly (COA) and country of design (COD), and later, (Insch, 2003) added country of parts (COP). Despite strong evidence that these constructs can have significant impact (Acharya & Elliott, 2001; Chao, 1993; Inch &

McBride, 2004; Li, Murray, & Scott, 2000), there was a further effort to maintain the simplicity of the COO construct by proposing the construct of country of brand (COB) in evaluating products with a multi-country associations (Phau & Prendergast, 2000). As a consequence of the emergence of COB, another COO construct, country of manufacture (COM), has inevitably added further complexity. However, recent studies have seen the growing recognition of brand or COB (Hui & Zhou, 2003; Liefeld, 2004; Pharr, 2005; Phau & Chao, 2008; Samiee, 2010, 2011; Samiee, Shimp, & Sharma, 2005; Srinivasan, Jain, & Sikand, 2004; Usunier, 2006, 2011). Taking yet another different stance, Josiassen and Harzing (2008), while accepting that brand image is more important than COM, reiterated with Li et al. (2000) that ‘country of association’ should be the most appropriate COO perspective for investigation.

Despite all these efforts to develop a more relevant COO construct, the COO research literature has received growing criticism regarding its relevance in the second half of the past decade. One major reason behind this relevance debate were consistent findings that consumers’ knowledge regarding brand origin is often poor (Anderson Analytics, 2007; Balabanis & Diamantopoulos, 2008; Samiee et al., 2005) with the exception of the highly correct origin association reported by Magnusson, Westjohn, and Zdravkovic (2011b). In addition to inaccurate recognition of country of origin, many other arguments have led to the conclusion that “CO has essentially lost its validity as an important issue with a managerial relevance” (Samiee, 2011, p. 473). When a field of research is questioned with respect to its managerial relevance then the arguments at the centre of the criticism should be addressed. The current study is set against the background of some of these criticisms, which eventually will frame the aims, and objectives of this research thesis.

## 1.1 Background of the thesis

In seeking to establish that COO research is irrelevant, some arguments are:

the fact that many are aware that components of today's products are manufactured and sourced from multiple countries.(Samiee, 2010, p. 443)

... given the global production of an increasing number of brands, contract manufacturing and international sourcing, strategic alliances involving parts and components, as well as the emergence of design only firms that market branded products, but lack any manufacturing facilities.(Samiee, 2011, p. 473)

Consumers are still relatively unconcerned. They live in a cluttered environment, with overabundant information which far exceeds their information processing capacity. (Usunier, 2011, p. 493)

... a massive over-estimation of COO effects, due to lack of familiarity.(Usunier & Cestre, 2008, p. 272)

These comments clearly argue for the irrelevance of COO in consumer decision making as products have an association with so many countries, often with the consequence that the country of origin is unknown to consumers. This also potentially makes information processing too difficult for consumers so that they eventually consider COO information as “unworthy of retention in memory” (Samiee et al., 2005, p. 392). The concern about consumers' lack of product familiarity that is associated with COO research suggests that limitations occur in studies which are based on asking consumers COO-related questions about a product without knowing their familiarity with that product. Beyond global sourcing, several other real-world business trends have made it more unlikely for consumers to follow COO-related information. Frequent cross-border mergers and acquisitions and global strategic alliances and evolving business practices continuously change the COO information landscape in today's globally integrated economy. For example, after Microsoft purchased Nokia's mobile phone unit, the latest decision to use 'Microsoft Lumia' on Windows phone sets (Trenholm, 2014) will keep consumers confused about the origin association of the

Lumia brand name. In addition, the purchase of the prominent US ice cream brand, Ben & Jerry's, by Unilever in 2000 and the acquisition of English brand, The Body Shop, by French beauty giant L'Oréal, while keeping the brand names unchanged, makes origin information dynamic, opaque and difficult to follow. More interestingly, in a different example, the logos of Target Australia and Target Brands Inc. of USA look identical but the website of Target Australia clearly spells out that "Target Australia Pty. Ltd. is a part of the Wesfarmers Ltd. group and has no affiliation with Target Corporation US" but this is at the bottom of the webpages and is unlikely to be read by a typical customer of Target Australia.

### *1.1.1 Significance of intermediate goods in global trade and the relevance of B2B buyers as COO decision makers*

Shifting the focus away from core COO research, related research streams demonstrate clear evidence of a major shift from producer-driven supply chains to buyer-driven supply chains (Gereffi & Lee, 2012, p. 25) and a shift from "trade in goods" to "trade in value added" and "trade in tasks" (OECD, 2011; WTO & IDE-JETRO, 2011). This latter trend is reflected in world exports of intermediate goods representing 51% of non-fuel merchandise exports and thus exceeding the combined export value of finished products and capital goods (WTO & IDE-JETRO, 2011, p. 81). In addition, large retailers are one of the prime drivers of globally scattered production, logistics and trade linkages (Gereffi & Lee, 2012). Retail giants, like Walmart, Carrefour and Tesco, and globally renowned brand names such as Gap, Adidas and Nike typically fulfil their sourcing requirements by imposing strict guidelines and specifications on their suppliers (Dolan & Humphrey, 2004; Gereffi, 1994). Collectively, these trends point to the involvement and significance of procurement/purchasing managers (more popularly termed as business-to-business [B2B] buyers) in evaluating and choosing producers, suppliers, channels and countries. Moreover, B2B buyers' familiarity with, and



knowledge about, products are clearly evidenced in a very early study by a prominent COO critic: "... they (industrial buyers) exhibit repeat purchase patterns that lead to a more accurate and broader information base about manufacturers and greater product familiarity and experience than is the case for consumers. Thus, industrial buyers' use of CO/M (country-of-origin/country of manufacture) cues is likely to be linked to their more frequent experience with manufacturers and their sourcing countries" (Samiee, 1994, p. 591).

The following example concerning origin labelling and global sourcing helps to illustrate the close association of B2B buyers and global sourcing of intermediate goods. The reverse side of an iPhone 4 has origin labelling which states "Designed by Apple in California, Assembled in China". This labelling signifies the importance of the COD and COA cues in the consumer domain but does not reveal anything about the parts and components inside the iPhone 4. It is also evident that COO-related information disclosure in product labelling is far from being comprehensive and, therefore, is arguably inaccurate, which results in consumers being incompletely informed about the total COO associations. As (Samiee, 2010, p. 443) clearly outlined, COO designations are lost very quickly as soon as the raw materials and components board a vessel and are ready for transport. Although elusive to consumers, the reality is not unknown to B2B managers. For example, the final price of iPhone 4 (at the factory gate) is \$194.04, the input values by country of origin are the USA \$24.63, South Korea \$80.05, Germany \$16.08, France \$3.25, China \$6.54, Japan \$0.70 and rest of the world \$62.79 (OECD, 2011, p. 40). This globally dispersed sourcing practice clearly pinpoints the undoubted, but largely unmeasured, involvement of B2B buyers in deciding "where value is created and captured" (Gereffi & Lee, 2012).

### *1.1.2 Publications in the popular press and the significance of B2B buyers as respondents*

In criticising the relevance of COO research, Usunier (2006, p. 60) highlighted the double challenge of business research in the sense that research investigations in business have to be academically sound and reflect real-world relevance. One reason why COO research has failed to be attuned to real-world significance is that, arguably, it has rarely associated itself with the findings and opinions of popular business publications and publications of international organisations, consulting firms and research organisations. These publications have recognised the importance to B2B managers for research purposes, whereas COO research has focused on consumers and has rarely considered B2B buyers as respondents. As proof of this claim, the only literature review on COO studies from the industrial buyers' perspective (Andersen & Chao, 2003, p. 341) identified only 20 studies in the B2B area while recognising 200–300 studies in the consumer behaviour area. The aforementioned business and research publications consider B2B respondents as well-informed and knowledgeable. For instance, B2B respondents have been recognised in the development of the 'World's Most Admired Companies' list by Fortune in which senior executives, directors and analysts rate companies in their industry on nine criteria (innovation, people management, use of corporate assets, social responsibility, quality of management, financial soundness, long-term investment value, quality of products/services and global competitiveness). With regard to one of the most extensive studies on a global scale, the Global Competitiveness Index (GCI) by the World Economic Forum recognises business executives as knowledgeable respondents in its Executive Opinion Survey (a survey conducted annually for over 30 years with the 2013–2014 report compiling opinions of over 13,000 business executives from 148 countries) which is used in part to compile the GCI. In this survey, business executives are entrusted with reflecting on, and responding in areas critical for a country's competitiveness and sustainable development (such as overall perceptions of your economy, infrastructure,

innovation and technology infrastructure, financial environment, foreign trade and investment, domestic competition, company operations and strategy, government and public institutions, education and human capital, corruption, ethics and social responsibility, travel and tourism, environment and health). The representation of B2B executives in developing the 'World's Most Admired Companies' list and the GCI strengthens the argument that B2B buyers are a more knowledgeable and well-informed segment than consumers.

### *1.1.3 Relevance of company image over brand image for B2B buyers*

Country-of-origin (COO) is an extrinsic cue used in product evaluation along with other cues such as price, store image, actual physical product, brand name, packaging, warranty, etc. Among these cues, the most significant and most frequently used in COO research is brand (Ahmed & d'Astous, 1996; Al-Sulaiti & Baker, 1998; Andersen & Chao, 2003; Cervino, Sanchez, & Cubillo, 2005; Hsieh & Lindridge, 2005; Hsieh, Pan, & Setiono, 2004; Kotler & Gertner, 2002; Scott & Keith, 2005; Steenkamp, Batra, & Alden, 2003; Thakor & Lavack, 2003). As the brand name is legally exclusive to the company owning the brand, marketers give the brand name maximum visibility and always place the brand at the forefront (Usunier, 2011, p. 488) in all marketing communications. However, when B2B buyers are the focal respondent group, the use of the brand name as a major antecedent of COO influence is, arguably, less influential than company/firm.

Brand rankings by different global platforms can shed more light on the real-world significance of the company identity over brand, particularly to B2B buyers. According to the ranking of 'World's Most Valuable Brands' 2014 by Forbes, the top brand 'Apple' means the company apple not the splitting of the brand image which is generated by each product class named as iPhone S/ iPhone C, iPad, MacBook or iPod. With regard to the next in the list, Microsoft means Microsoft Inc. not Windows, Xbox, Skype or Office. In addition, among the

top 50 brands, 46 are company brands that reflect a summative company image as the brand image. The other four are: Gillette owned by P&G; Nescafé owned by Nestlé (both are within the top 50, Nescafé at 27 and Nestlé at 39); Marlboro owned by Altria (in the USA) and Philip Morris International (outside USA); and Frito-Lay, a sub-brand of PepsiCo (both are within the top 50, PepsiCo at 25 and Frito-Lay at 40). Similar information is observed within the top 50 of the 'Best Global Brands 2013' compiled by Interbrand as only three (Gillette and Pampers both owned by P&G; Nescafé ranked at 37; and Nestlé ranked at 56) on that list are under company ownership of another name. According to the '2014 Top 100 BrandZ' compiled by Millward Brown, again only three non-company brands, namely, Marlboro, Pampers and Movister (owned by Telefónica of Spain) are on the list. A similar reflection can also be detected in the COO research literature. In measuring the COO effect on brand equity, (Pappu, Quester, & Cooksey, 2007) considered the car brands Toyota (not the specific subordinate brand names such as Camry, Corolla or Prius) and Mitsubishi (not Lancer, Galant or Mirage). Similarly, (Magnusson et al., 2011b) used mostly company brands for origin recognition such as Sony (not brands for product classes like Bravia, PlayStation or Xperia) and Land Rover (not Discovery or Defender). Balabanis and Diamantopoulos (2008) also used company brands for origin recognition testing such as Daewoo, LG, Matsui, Panasonic, Samsung, Sharp, Whirlpool, etc. These examples illustrate that it is easier to identify brand origin with regard to companies using company branding (Ford, Samsung, Sony, Toyota, etc.) compared to companies that use individual brand names while giving their company names less visibility (such as Philip Morris International and P&G). All these examples depicting the distinction and association between brand and company are expected to be better known by B2B buyers owing to their constant dealings with companies.

#### *1.1.4 B2B buyers may evaluate company image and country image separately*

From the research methodology perspective, the early common practice of investigating the impact of country image as a single cue from both the consumer and B2B buyer perspectives clearly is a departure from reality as this approach dramatically compresses the available information by using this short-cut. With regard to B2B managers, when examining the source country selection decision, it is evident that purchasing/procurement managers are required to choose both a country and a company. As one of the early observers of this phenomenon, Samiee(1994, p. 586) emphasised the need for an extension of COO research to firm-level aspects as it was an important gap in the literature. Other authors (Olson & Jacoby, 1972; Papadopoulos, 1993) argued that the country effect may not directly influence buyer evaluations as an extrinsic cue, but is more likely to be influential through internal company variables. In this view, competition exists typically among companies within a country where the country effect remains constant. Therefore, performance variations among domestic companies are mostly attributable to company characteristics, competitiveness and sustainability effects (rather than to country effects). For instance, Toyota and Suzuki of Japan, Intel and AMD of the USA, and Apple and HP of the USA compete based on company effects. As strong evidence, Table 1.1.1 presents concrete differences in market performance between pairs of companies belonging to the same country, stock exchange and industry sector. In the case of COO research, B2B buyers directly deal with foreign companies that could involve dealing with several at the same time. In such circumstances, it is likely that B2B buyers will derive the perceived country image by generalising from these company experiences despite potentially significant company differences within the same single country. Such generalisation may therefore distort the differences between companies. Therefore, when considering B2B buyers as respondents of a COO investigation, it is imperative to accommodate company-related issues and differences.

**Table 1.1.1 Market performance indicators of company pairs from same origin**

Performance indicators	US pair		Japanese pair		Australian pair	
	Apple	HP	Toyota	Suzuki	Woolworths	IGA
Market price	US\$ 95.6	US\$ 35.61	JP¥ 6087	JP¥ 3429	AU\$ 33.22	AU\$ 2.86
Earnings per share	US\$ 6.19	US\$ 3.17	JP¥ 575.31	JP¥ 210.29	AU\$ 1.96	AU\$ 0.21
Book value	US\$ 20.21	US\$ 15.08	JP¥ 4576	JP¥ 2397	AU\$ 8.18	AU\$ 4.57
Market price/Book value	4.73	2.36	1.33	1.43	4.06	1.60
Market price/Earnings per share	15.44	11.20	10.58	16.30	16.91	14.07
Market capitalisation (in millions)	US\$ 572,440	US\$ 66,638	JP¥ 20,805,350	JP¥ 1,923,831	AU\$ 42033	AU\$ 2606

Source: Bloomberg.com (1 August 2014 for US and Japanese pairs; 18 November 2014 for Australian pair)

The simple rationale for asking B2B buyers about specific supplier company actions and experiences (instead of considering the supplier company as a proxy of the supplier country, as is the case in most B2B-centric COO studies) was first introduced in COO research by Bradley (2001). In addition to establishing consistency between B2B buyers and company antecedents, Bradley (2001) prudently constructed multi-cue settings (company and country) that can overcome the “over-estimation of COO effects” (Peterson & Jolibert, 1995; Samiee et al., 2005), which is a common criticism of COO research. As clear evidence of COO overestimation in single cue studies, Peterson and Jolibert (1995, p. 891) found that the effect size of COO as a quality/reliability perception was .30 in single cue studies and .16 in multi-cue studies. Moreover, the size of the COO effect with regard to purchase intention was .19 in single cue studies and .03 in multi-cue studies. With regard to industrial products, there is evidence that COO perception reduces significantly when incorporating other information along with the ‘Made in ...’ label (Ahmed & d'Astous, 1995; Ahmed, d'Astous, & El Adraoui, 1994). Although COO researchers have debated these issues, the supremacy of multi-cue studies over single cue studies is almost universally accepted. Therefore, this study

adopts a multi-cue research design, which places company and country together to investigate their individual and combined effects.

While company differences may exert a strong influence on B2B buyers, country is also compelling source of perceived differences, and thus COO retains a degree of relevance. Evidence is mounting in favour of the importance of country in extant COO research. However, this enormous amount of evidence apparently has not influenced COO research critics; rather, the evidence is cited as source of criticism about overestimation. Therefore, the country importance arguments are framed based on publications that reflect real-world phenomena. In this age of global corporations and globally scattered sourcing practices, apparently people still cannot digest the proposition that a company can be considered as ‘belonging to the world’ and thus can be independent of COO. Although international development agencies, such as the World Trade Organization [WTO], World Bank, International Monetary Fund [IMF], United Nations [UN] and Organisation for Economic Co-operation and Development [OECD]) started to investigate the term ‘Made in the world (MIW)’ after 2011, knowledge leaders have not yet acknowledged that many companies have disassociated themselves from their links to their origin or headquarters countries. Even in the Transnationality Index, estimated and reported by the United Nations Conference on Trade and Development (UNCTAD) in its World Investment Report, the name of the home economy is specified beside the company name. In a related analysis, Rugman and Verbeke (2004) reported on the regional nature of the top 500 (Fortune 500 companies) multinational enterprises (MNEs). Only nine of the 500 MNEs are considered global and all the MNEs still have a dominant presence in their home region as is reflected in Table 1.1.2. Therefore, the trend towards globally disbursed sales of MNE’s is still the exception, rather than the rule.

**Table 1.1.2 Multinational enterprises and home region sales**

Type of MNE	No. of MNEs	Home region sales %
Global (more than 20% in each region and less than 50% in a single region)	9	38.3
Host region-oriented (more than 50% sales outside home region)	11	30.9
Bi-regional	25	42
Home region-oriented	320	80

Source: Rugman and Verbeke (2004, p. 7)

The importance of country associations is also strongly evidenced in well-accepted global ranking platforms. The top 50 brands/companies from four ranking platforms as shown on Table 1.1.3 present a common pattern regarding country affiliation.

**Table 1.1.3 Companies in global rankings based on origin country**

Origin Country	Fortune's Most Admired Companies 2014	Forbes' Most Valuable Brands 2014	Interbrand's Best Global Brands 2013	Millward Brown Top 100 BrandZ 2014
USA	42	32	28	28
Germany	2 (BMW, VW)	5 (BMW, Mercedes-Benz, SAP, Siemens, Audi)	5 (BMW, Mercedes, SAP, VW, Siemens)	4 (SAP, Deutsche Telekom, BMW, Mercedes)
France	-	3 (LV, L'Oréal, Danone)	3 (LV, L'Oréal, Danone)	3 (LV, L'Oréal, Hermès)
Japan	1 (Toyota)	2 (Toyota, Honda)	4 (Toyota, Honda, Canon, Sony)	1 (Toyota)
South Korea	1 (Samsung)	1 (Samsung)	2 (Samsung, Hyundai)	1 (Samsung)
Italy	-	1 (Gucci)	1 (Gucci)	-
Switzerland	1 (Nestlé)	2 (Nescafé, Nestlé)	1 (Nescafé)	-
UK	-	1 (HSBC)	1 (HSBC)	2 (Vodafone, HSBC)
Spain	-	-	1 (Zara)	2 (Zara, Movistar)
Sweden	-	2 (H&M, IKEA)	2 (H&M, IKEA)	1 (IKEA)
Canada	1 (Magna Int'l)	1 (Thomson Reuters)	1 (Thomson Reuters)	2 (RBC, TD)
Anglo-Dutch	1 (Unilever)	-	-	-
Netherlands	-	-	1 (Philips)	-
China	-	-	-	5 (Tencent, China Mobile, ICBC, Baidu, China Construction Bank)
Singapore	1 (Singapore Air)	-	-	-
Australia	-	-	-	1 (Commonwealth Bank)

In particular, the leading companies/brands are common across all the cited rankings (with the exception of the Chinese brands ranked by Millward Brown). From these studies, it is undoubted that the USA as a country has a clear competitive strength through the dominance



of its companies/brands. Regarding the remaining countries, differences in competitive strengths among them are evident as the same companies/brands belonging to a specific country are common across all lists. Interestingly, this repetitive appearance of the same companies and countries also endorses the importance of considering company and country together, which is one of the foundations of this study.

#### *1.1.5 Impacts of overall country image and product country image*

As the literature in areas beyond COO research indicates the importance of country, the discussion can now move towards COO research publications. There are several well-accepted general conclusions regarding the significance of country in COO research. One widely reported and accepted conclusion is that consumers generally associate higher quality products with the economic status of a country (Hong & Wyer, 1989; Klein, Ettenson, & Morris, 1998) which typically leads consumers, even in less-developed countries, to prefer goods from developed nations (Agbonifoh & Elimimian, 1999; Batra, Ramaswamy, Alden, Steenkamp, & Ramachander, 2000; Chao, 1989; Knight & Calantone, 2000; Knight, Gao, Garrett, & Deans, 2008; Lee, Phau, & Roy, 2012, p. 45; Phau & Leng, 2008; Wang & Lamb, 1983). Likewise, companies are also interested in associating their products with countries that have a strong reputation for quality, expertise and technological advancement (Chao, 1993; Han & Terpstra, 1988; Iyer & Kalita, 1997; Kea & Phau, 2008; Phau & Prendergast, 2000). However, the global sourcing practices and prominence of the intermediate goods trade that was discussed previously have resulted in the emergence of hybrid finished products that may have components sourced from several countries worldwide (Kea & Phau, 2008). Evidence shows that the importance of sourcing by developed countries with regard to intermediate goods has not diminished; rather, the flow of intermediate goods within developed countries has increased substantially. According to the (OECD, 2011), most

intermediate goods are now traded within large regional economic blocs such as the European Union (mainly developed countries) and North America rather than across them. In addition, the trade between Asia (mainly developing countries) and the European Union and North America represented the two highest inter-regional import flows of intermediate goods in 2008 (Gereffi & Lee, 2012). Therefore, the role of developed and developing countries is strongly associated with the global trade in intermediate goods. At the same time, in the literature from various fields, the distinction between developed and developing countries is obvious. In this context, the development levels of countries are reflected in their overall country image (CI). Thus, developed countries are perceived to be at a higher level than developing countries in relation to economic, political and technological dimensions.

Product-country image (PCI) is another previously used COO dimension that was initially defined by Nagashima (1970) and later, with a similar meaning, used by others (Darling & Wood, 1990; Han & Terpstra, 1988; Roth & Romeo, 1992). Nagashima (1977) also examined the dynamic nature of PCI over time, a type of study rarely done in the COO literature, and reported significant differences regarding PCI which were of greatest value for automobile, cosmetics, food and pharmaceutical products within the eight-year comparison period (1967–1975). As it is a form of country image construct, perceptions related to PCI are linked to product evaluations (Hong & Wyer, 1989; Leclerc, Schmitt, & Dubé, 1994; Thakor & Lavack, 2003). In addition, PCI has been reported as a significant antecedent of brand image (Tse & Gorn, 1993); brand identification, attitudes and purchase intentions (Aaker, 1991; Knight & Calantone, 2000; Parameswaran & Pisharodi, 2002); consumer-based brand equity (Pappu, Quester, & Cooksey, 2006; Pappu et al., 2007; Yasin, Noor, & Mohamad, 2007); and retailer-perceived brand equity (RPBE) (Baldauf, Cravens, Diamantopoulos, & Zeugner-Roth, 2009). In a study of B2B buyers, Knight, Holdsworth, and Mather (2007)

reported that product-specific country image is a well-accepted criterion for ‘sourcing’ as well as in the ‘consumer purchase decision’.

#### *1.1.6 The need to develop new constructs to capture trade-related dimensions in COO*

A further, and still unaddressed, criticism of COO research is that it does not generally accommodate multidimensional associations of COO. In this regard, (Usunier, 2006, p. 71) described COO research as a too narrowly defined research area as it also has cross-disciplinary associations with international marketing, consumer/buyer behaviour and international trade. More specifically, COO literature from the B2B perspective has conceptual overlaps or interconnectedness with other established fields of studies but this has clearly been de-emphasised in the extant literature. The global purchasing, international supplier selection and international trade literature are of practical relevance in this regard. Consequently, unlike any other past COO studies, this study conceives the need for new COO constructs from the B2B perspective that will simultaneously respond to the above criticism and also represent a unique contribution of this research thesis (see Chapter 4 for the details of trade-related construct development).

The extant B2B-centric COO studies have explicitly considered several trade-related variables that are subject to variations by country but, to date, no effort has been made to operationalise COO constructs from these variables. In this regard, it is useful to consider discussions in related and interconnected fields of research. The global purchasing literature, for example, is clearly relevant to the question of the importance of COO in B2B purchasing. In a major review of the global purchasing literature, Quintens, Pauwels, & Matthyssens, (2006, p. 174) summarised findings from 19 studies that outlined the environmental drivers of global purchasing. The drivers are cost advantages (labour), satisfying countertrade requirements, guarding against currency fluctuations, stimulating foreign government policies

and creating an advantageous legal and economic environment. All these factors are highly dependent on the source country. Moreover, as facilitators, better foreign transport and communications and capable intermediaries (for generating logistics strengths) are products of the source country infrastructure. As barriers, import quotas and an adverse political and economic environment generate source country disadvantage for purchasing. Kotabe and Murray (2004, p. 9) also emphasised several aspects for successful global sourcing in addition to reduced manufacturing cost; namely, exchange rate fluctuations, available infrastructure (including transportation, communications), industrial and cultural environments, etc. Furthermore, they specified several barriers to global sourcing including logistics, inventory management, distance, nationalism and lack of working knowledge about foreign business practices.

Another field of research, international supplier selection, has a conceptual association with COO research. Katsikeas and Kaleka (1999, p. 27) differentiated international purchasing from local purchasing based on additional factors associated with international purchasing, such as exchange rate fluctuations, complex documentation requirements, trade regulations, customs duty, cultural differences, complex payment procedure and transportation difficulties (Min & Galle, 1991). According to Joshi (2009) and Kaufmann and Carter (2006), reduced trade barriers and information technology (IT) improvements dramatically increase opportunities for global purchasing relationships. Another environmental aspect related to country is regulatory strength. Notwithstanding these points, importers/industrial buyers may naturally consider that trade-related country information and attributes are, for all practical purposes, not controllable by producers or suppliers. This may lead them to preclude (or even exclusively include) particular countries as their source countries. In this sense, the importance of COO may be understated in that B2B buyers may often only consider a limited number of potential supplier countries (or even only one supplier country) before considering

a range of potential supplier companies. Thus countries whose economic advantages (such as China and Taiwan in electronics and China, India and Bangladesh in garment manufacturing) have led them to focus on particular industries may come to naturally dominate the considerations of B2B buyers.

The international trade literature has never been associated with COO research despite COO research having grown substantially. This may be simply due to the sheer magnitude of international trade and its exponential growth or, perhaps, to the overwhelmingly macro-economic focus of international trade literature in contrast to the behavioural focus of COO research. However, several aspects of international trade issues reveal country-related trade impacts. The relevance of country in international trade issues from the B2B perspective is related to distance or proximity, transport cost, transport infrastructure, transport mode, logistics, trade facilitation, etc. One of the most extensively studied areas of international trade is the gravity model that deals with distance and international trade (Behar & Venables, 2011). According to another recent and related study (Cantwell, 2009; Dunning, 1998), global firms typically consider geography as an important decision attribute as part of the overall economic environment—especially the distance and proximity of markets. Trade facilitation can also have a significant impact on trade. (Wilson, Mann, & Otsuki, 2005) evaluated port facilities, customs handling, the regulatory environment and the availability of service sector infrastructure as the four measures of trade facilitation. In short, the above discussion provides evidence that international trade-related literature highlights country-related factors that may be influential in B2B buyers' international procurement decisions.

#### *1.1.7 Introducing international supplier performance as an outcome construct in COO research*

In addressing the real-world relevance of COO research, this study has introduced international supplier performance (international supplier performance and supplier

performance used synonymously in this thesis as the study only considered international suppliers) as the outcome construct. Extant studies have mostly considered country preference or supplier preference, which may, or may not, be the same as the actual decisions of B2B buyers. In this context, the current study argues that supplier preference of B2B buyers is obviously directed at extracting higher performance from a supplier. Moreover, supplier performance is an outcome assessment of the total supplier selection process. In consumer-centric COO studies, purchase intention is considered as a dependent measure that involves greater personal commitment than perceptual evaluations (Peterson & Jolibert, 1995, p. 894). From the attitude theory perspective, purchase intention is considered as a valid measure of behaviour in consumer decision models (Ajzen & Fishbein, 1980; Miniard & Cohen, 1983). Regarding the COO effect size, Peterson and Jolibert (1995, p. 891) reported that the COO effect is smaller for purchase intention than quality perceptions alone. Thus, the use of purchase intention can also contribute to reducing COO overestimation. As purchase intention is considered closer than preference to actual purchase decisions in consumer decision making, in the current study, it is argued that rating of supplier performance can be considered as a valid surrogate of purchase intention in the B2B domain. At the same time, perceptions of performance will intrinsically relate to actual past performance, as distinct from an expectation of future performance. In this sense, it is likely to be a more reliable predictor of actual supplier choice in future.

#### *1.1.8 Key relevant papers that shape the current study*

This study primarily intends to extend the work of Bradley (2001). At the same time the study also intends to address several criticisms of COO research that create a “disconnect” between real world business practices and COO research. In developing the theoretical framework, several methodological improvements suggested in previous studies have also

been adopted. The following table specifies some relevant and seminal papers of COO that shaped this study.

**Table 1.1.4 Key papers that shape up the basic foundation of the current study**

<b>Name of study</b>	<b>Support provided</b>
Bradley (2001)	Basic conceptual foundation
Bradley (2001); Baldauf et al. (2009)	Conceptual and methodological foundation
COO meta analyses: Peterson and Jolibert (1995); Verlegh and Steenkamp (1999); Magnusson and Westjohn (2011)	Summary of past studies, and identifying the best practices in COO research
Samiee and Leonidou, (2011); Samiee, (1994); Samiee (2011); Usunier, (2006)	COO criticism and irrelevance
Roth and Diamantopoulos (2009)	Past COO constructs and theoretical applications in COO research
Gereffi and Lee (2012), Quintens et al. (2006)	International supply chain and international purchasing practices relevant to COO
Steenkamp (2014)	Recent practices of global companies and association of COO issues

## 1.2 Theoretical foundation of the study

In the social psychology literature, schemas are defined as “cognitive structures of organized prior knowledge, abstracted from experience with specific instances” (Fiske & Linville, 1980, p. 543). In addition, it is considered that schemas are most closely related to the cognitive component of attitudes (Fiske & Linville, 1980, p. 551). As previously stated, B2B buyers are the respondent group of this current study and the COO literature has considered the rational nature and greater information base of these buyers. Consequently, B2B buyers are usually better informed than consumers, and the purchasing decisions of B2B buyers are typically policy-driven and rational (Samiee, 1994). With this background, B2B buyers are more likely to use schemas in their industrial purchase behaviour, thus falling clearly under the cognitive component of attitude theory. Within attitude theory, it is important not only to consider the

cognitive component, but also the affective component of country image (Fishbein & Ajzen, 1975; Zanna & Rempel, 1988). From this perspective, business-to-business (B2B) buyers can have emotional attachments regarding particular countries; however, due to the involvement of multiple actors in decision making and their accountability for organisational benefit, these factors may limit the actual reflection of these attachments in purchasing processes and decisions. In addition, one very important emotional component of attitude in COO research is the so-called home country bias (Verlegh, 2007). In this context, the current study only considers international purchases and has not included home country purchases, nor any studies focused on preferences where emotion plays an important role. From the research methodology perspective, according to more recent studies (Boddy, 2005; Koll, Von Wallpach, & Kreuzer, 2010), survey-based studies are more likely to capture rational and verbally-expressed country associations than emotionally-held COO aspects. Therefore, the conceptual model of this study draws on the cognitive component of attitude theory (Fishbein & Ajzen, 1975) which explains attitude as “a learned predisposition to respond in a consistently favourable or unfavourable manner”. Therefore, purchasing managers can respond favourably or unfavourably to variables related to the supplier company and country from their acquired knowledge derived through their prior dealings. Thus, in this study, by using the range of scale items, B2B managers will use schemas in rating company, country and corresponding supplier performance that will be ultimately measured using a linear compensatory multi-attribute attitude model (similar to Bradley, 2001).

### **1.3 Aim and objectives of the thesis**

The basic aim of this research study is to *develop a B2B-centric COO model that empirically explains the integrated relationship between company- and country-related facets on*



*buyers' perceptions of supplier performance*. In addition, this research has employed an empirical research design, which addresses several criticisms surrounding the relevance of COO research.

In achieving the overall research aim, the study intends to address specific, subordinate objectives:

Empirical paper 1:

- I. Identifying and selecting company and country-related constructs from the existing literature that may influence international supplier performance.
- II. Developing empirical evidence regarding the sequential dependent relationships among the company, country and supplier performance constructs.

Empirical paper 2:

- III. Identifying trade-related country variables to develop and validate new COO constructs that may capture trade-related country image.
- IV. Empirically estimating the relative influence of company- and trade-related country constructs on buyer-perceived supplier performance.

Empirical paper 3:

- V. Empirically estimating the relative impact of company and traditional country constructs along with newly developed trade-related country constructs on buyer-perceived supplier performance.

In order to test a number of empirical models, this study has considered intermediate goods (raw materials and component parts) as the product category that will enable the study to generate the practical significance of the research findings in relation to the global supply chain. The survey country chosen for this research is Australia.

## 1.4 Relevance of Australia as the survey country

The survey country, Australia, plays an important part in the global economy, not least in relation to its imports. Regarding global imports, Australia ranked 18<sup>th</sup> (*Trade at a Glance*, 2013, p. 14), contributing to 1.5% of global imports, ahead of countries such as Brazil, Taiwan, Thailand, Turkey, Switzerland, Malaysia, Indonesia, Austria and Sweden. According to the KOF Index of Globalisation 2014, Australia is ranked 19<sup>th</sup> among 191 countries. In addition, the significance of Australia is evidenced as, according to 2010 data, it holds 18<sup>th</sup> position (IHS Global Insight, 2013) among global importers of containerised cargo. Therefore, Australia is heavily engaged in global trade, despite its small population.

### *1.4.1 Australia's diverse pool of source countries may reduce possible COO biases*

In studying COO, it is important to create a diverse pool of countries to minimise the bias towards a particular country or group of countries. One important bias in COO, even in the B2B domain, is towards products from developed countries over those from developing countries (Ahmed et al., 1994; Crawford & Lamb, 1981; Dzever & Quester, 1999; Knight et al., 2008; Saghafi & Puig, 1997). Similarly, buyers tend to select suppliers from geographically proximate countries over those from more distant countries (Oke, Maltz, & Christiansen, 2009). Another global pattern is the regional concentration of global trade (Rugman & Verbeke, 2004), which is also geographically concentrated, albeit in a wider distribution. Taking into consideration all these kinds of trade biases, Australia's top 10 import sources include representation from Asia (physically proximate supplier markets and mostly developing countries), Europe and North America (mostly developed countries and distant suppliers), and also newly industrialised countries.

**Table 1.4.1 Top 10 import sources for selected developed economies**

Source country rank	Imports of USA	Imports of UK	Imports of Australia	Imports of France	Imports of Japan	Imports of Germany
1	China 22%	Germany 13%	China 18%	Germany 19%	China 22%	Netherlands 9.9%
2	Mexico 14%	China 8.7%	United States 12%	China 7.9%	United States 8.5%	China 8.2%
3	Canada 9.8%	Netherlands 7.5%	Japan 8.2%	Italy 7.8%	Australia 6.2%	France 7.4%
4	Japan 7.8%	United States 7%	Singapore 5.6%	Spain 6.4%	Saudi Arabia 6.0%	United States 5.3%
5	Germany 16.0%	France 5.7%	Germany 5.0%	Belgium-Luxembourg 6.4%	South Korea 4.9%	Italy 5.2%
6	South Korea 3.5%	Norway 5.5%	Thailand 4.4%	United States 6.1%	United Arab Emirates 4.8%	United Kingdom 4.7%
7	United Kingdom 2.9%	Belgium-Luxembourg 4.8%	South Korea 4.3%	Netherlands 4.8%	Indonesia 4.1%	Russian Federation 4.4%
8	France 2.0%	Italy 3.7%	Malaysia 4.1%	United Kingdom 4.8%	Qatar 4.0%	Belgium-Luxembourg 4.3%
9	Italy 2.0%	Ireland 3.2%	New Zealand 3.1%	Switzerland 2.4%	Malaysia 2.0%	Switzerland 4.2%
10	India 1.9%	Spain 2.7%	United Kingdom 2.9%	Russia 1.8%	Germany 2.9%	Austria 4.1%

Source: (Country Profile, 2013) and Statistisches Bundesamt, Wiesbaden (based on 2013 data)

#### *1.4.2 Sourcing from developed and developing countries may assess price/quality trade-offs*

In addition, this current study argues that developed countries are suitable for COO study. The reason, in part, is that developed country consumers' higher purchasing capacity and tendency to seek greater variety necessitate that B2B buyers consider products from a wider sourcing pool of developed and developing countries. In contrast, in developing countries, consumers' limited buying capacity often means that B2B buyers are precluded or restricted from importing costly products from developed countries. As a consequence, purchasing managers in developed countries typically deal with more opportunities, and inspect products, from a wider range of countries and receive customer feedback about them. Moreover, the growth of e-commerce, e-business and e-procurement are all recent

phenomena, and developed countries, with better quality technological infrastructure and fewer restrictions on foreign currency transactions, are able to reap the maximum benefits from these recent developments. These environmental characteristics of developed countries therefore increase the opportunities for purchasing/procurement managers in those countries to source products from a larger and more diverse range of suppliers and countries.

#### *1.4.3 Australia's trade in intermediate goods is representative of global intermediate goods trade*

The product category chosen for the current study is 'raw materials and components'. By investigating the trade of 'raw materials and components' or intermediate goods, this study is also aligned with the obvious reality of global trade in recent times. In addition, no previous B2B-focused COO study has explicitly addressed intermediate goods as a product category. The exponential growth of the global supply chain not only covers finished goods but also components and sub-assemblies (Gereffi & Lee, 2012, p. 25) thus giving rise to the global trade in intermediate goods. In 2009, global exports of intermediate goods exceeded the export values of final goods plus capital goods, representing 51% of non-fuel merchandise exports (WTO & IDE-JETRO, 2011, p. 81). Therefore, a shift has occurred from 'trade in goods' to 'trade in value added' and 'trade in tasks' (OECD, 2011; WTO & IDE-JETRO, 2011). The increased use of the statement 'Made in country X from local and imported materials/ingredients' in 'Made in ...' labelling is clear evidence of the increasing nature of the intermediate goods trade. In terms of its representation of intermediate goods imports (excluding fuel), Australian imports of processed industrial supplies and parts for industrial goods grew on average 6.8% per annum from the period 1990–91 to 2010–11 (Andrew, 2012). In comparison, the global average of annual growth rate in intermediate inputs trade

between 1995 and 2006 was 6.2% (OECD, 2011, p. 30). This demonstrates that the growth of the Australian intermediate inputs trade is representative of the global growth rate.

It is evident from the extant COO literature that developed countries' products reflect a higher quality and cost image and that, conversely, developing countries' products are perceived as of lower quality-lower cost. In addition, the cost and quality preferences of developed country procurement managers may echo these perceptions. Further, the assessment of supplier company, country, and respective supplier performance by Australian procurement managers may also be generalisable to other developed countries' perceptions of intermediate goods imports. Notwithstanding, the suggested limitation of the generalisability of the study results may hold only in respect to the proximity construct, which is likely to vary, depending on the specific subject country.

### **1.5 Significance of the thesis**

COO is considered as one of the most extensively researched topic in international business, marketing and consumer behaviour literature (Peterson & Jolibert, 1995, p. 883). In recent times, this field of study has faced severe criticism due to its perceived widening relevance gap (Usunier, 2006). However, COO research publications or interest has not faltered at all as a result of this criticism of its relevance. In their recent meta-analysis, Magnusson and Westjohn (2011, p. 294) reported that there was no significant reduction of COO studies after the publications of Samiee et al. (2005) and Usunier (2006), two major studies that brought this debate to the forefront in recent times. When the relevance of a research field is questioned, this can indicate that the research field is disconnected from observable reality, that there are some issues which have been missed or inadequately addressed or that external environmental changes have not been integrated within study settings. This current study argues that all three points are the reasons for criticisms regarding the relevance of COO

literature and research. As a consequence, this study specifically addresses some criticisms of COO research in order to develop insights and accommodate these insights in the study settings.

### *1.5.1 Conceptual significance*

It has been claimed that COO research suffers from a lack of integration with other relevant disciplines (Usunier, 2006). The global purchasing literature is clearly relevant to the question of the importance of COO in B2B purchasing. In a major review of the global purchasing literature, (Quintens et al., 2006, p. 174) outlined environmental drivers of global purchasing cost advantages (labour) that satisfy countertrade requirements, guard against currency fluctuations, stimulate foreign government policies and create an advantageous legal and economic environment. Kotabe and Murray (2004, p. 9) also emphasised several aspects for successful global sourcing in addition to reduced manufacturing cost; such as exchange rate fluctuations, available infrastructure (including transportation and communications), industrial and cultural environments, etc. In addition, they specified several barriers including logistics, inventory management, distance, nationalism and lack of working knowledge about foreign business practices. All these factors are highly dependent on the source country. Similarly, international trade, as a field of economics, has studied the impact of geographical proximity, cultural proximity and trade facilitation on cross-border trade. However, in contrast, trade-related country constructs that may be influential in B2B purchase decision facets are clearly absent in the COO literature. With this reality in mind, this study has undertaken the development of new COO constructs that can capture B2B buyers' trade-related country considerations.

### *1.5.2 Methodological significance*

Another important criticism of the extant COO research is that there is a gross overestimation of COO effects (Peterson & Jolibert, 1995; Usunier & Cestre, 2008, p. 272). One important reason is the oversimplification (Bilkey & Nes, 1982) that arises due to the use of single cue settings (using only the COO cue as the antecedent). The single cue setting deviates from the basic premise that COO is just one of many potential cues which may influence consumers' and buyers' product evaluation and purchase intentions. Moreover, in the presence of other directly related antecedent(s), the impact of COO generally reduces. Although multi-cue studies are very common in consumer-centric COO studies, in the B2B sphere, this effort is rarely detected (exception includes Baldauf et al., 2009; Bradley, 2001). In addition, in reality B2B buyers are directly associated with the supplier company, the influence of which can be logically expected to be more than the country influence. Again, the inclusion of company-specific antecedents along with those of country (the study setting first conceived by Bradley [2001] and still rare in B2B-centric COO studies) can substantially mitigate the impact of COO overestimation. Therefore, the current research investigation adopts the company-country model of Bradley (2001) to minimise any possible COO overestimation effect.

The current thesis is not only significant for addressing COO criticisms and in considering unique insights in the B2B field and proposing new constructs, but also for the possible outcomes of the theoretical models used. The sequential direction of influence among multiple COO constructs has not previously been tested in B2B-centric COO studies. In this regard, three competing models established in consumer-based COO studies are investigated to identify the best model and, eventually, the sequential direction with the best fit among the two most prominent COO constructs (overall country image and product-country image [PCI]). In addition, the conceptual model also reveals the impact of trade-related country

constructs on international supplier performance, and represents a unique investigation in B2B-centric COO research to date. Furthermore, although investigating two COO constructs together in one model is rare in COO research, the integrated model of this thesis simultaneously investigates five COO constructs which allows the measurement of the specific influence of each construct on supplier performance.

### *1.5.3 Practical Significance*

The meaning of ‘Made in ...’ has changed substantially due to multidimensional changes in globalisation. Country-of-origin (COO) research has constantly reported the results that consumers and industrial buyers prefer products from developed countries (Ahmed et al., 1994; Chetty, Dzever, & Quester, 1999; Dzever & Quester, 1999; Quester, Dzever, & Chetty, 2000) to those from developing countries. However, most retailers’ shelves today are filled with products largely produced in developing countries. The reality is that the ‘Made in ...’ label at present mostly indicates the country of final assembly and says almost nothing about the internal components. In addition, over a long time period and with recent developments, the emergence of the global supply chain has extensively partitioned what was once a single production process. In recent times, this fragmentation has also become more geographically dispersed (Gereffi & Lee, 2012, p. 24). The example of the iPhone 4 sourcing countries provided at the beginning of this introduction is only one of many similar stories. Such geographically dispersed production locations of intermediate goods (raw materials and component parts) naturally suggest a country as a candidate for analysis. Unfortunately, to date, however, there has been no effort in COO research to address this reality. It is also certain that to capture any possible COO effect on the purchase of intermediate goods, the respondents will, of necessity, be industry insiders or B2B buyers.



## **1.6 Overview and structure of the thesis chapters**

This PhD thesis is in publication format and comprises one literature review chapter and three academic papers based on empirical investigations. In addition, the last chapter (Chapter 6) contains concluding remarks.

The literature review chapter reviews extant COO studies from the B2B buyers' perspectives to identify the variables used as antecedents of international supplier preference. In addition, this chapter also identifies COO linkages with other relevant fields of studies that are insightful of B2B buyers' purchase decisions. Furthermore, taking into consideration a wide range of literature, a theoretical model is developed based on company and country constructs that influence international supplier performance.

Empirical Paper 1 (Chapter 3) empirically tested part of the theoretical model developed in the literature review chapter. The theoretical model in this paper investigated the relative impact of the company effect and two COO constructs on international suppliers' performance. The study also examined the directional influence of country image constructs along with the outcome construct in a B2B setting.

Empirical Paper 2 (Chapter 4) developed and empirically validated three new trade-related country constructs proposed in the literature review chapter. Taking into consideration the newly validated COO constructs from the pre-testing data, Empirical Paper 2 examined the relative impact of new trade-related country constructs on international supplier performance in a country and company antecedent framework.

Based on the acceptable structural model validity of the previous two conceptual models, Empirical Paper 3 (Chapter 5) tested an integrated model by accommodating company

antecedents and five country-related constructs to gain an understanding of their impact on international supplier performance.

The concluding chapter (Chapter 6) summarises the findings of the three empirical papers, draws the overall conclusion and presents the contributions of the thesis, concluding with a discussion of the study's limitations and future research directions.

Table 1.6.1 presents the highlights of the major chapters of this thesis.

**Table 1.6.1 Highlights of major chapters of thesis**

<b>Chapter number and name Title of empirical paper</b>	<b>Highlights of major chapters</b>
Chapter 2: Literature Review	<p>The literature review chapter focuses on the COO literature that addresses B2B buyers as the respondent group. Study settings and findings from the extant literature are discussed, based on several dimensions: studies that considered COO in single cue design, studies that considered COO in multi-cue design, studies that partitioned and decomposed COO antecedents, COO studies based on personal interviews, import-related COO studies, case studies on COO effect and multidimensional associations of B2B-based COO studies. In describing the multidimensional associations of B2B-centric COO studies, linkages with several research fields, namely, global purchasing/procurement, international supplier selection and international trade have been discussed, an aspect clearly absent in previous COO literature. Taking into consideration the rationale of several COO criticisms, and antecedents and research designs from the existing literature, a conceptual model is developed and proposed as a practically relevant COO model from the B2B buyers' perspective.</p>
Chapter 3: Empirical Paper 1  Title: International Supplier Performance: Impact of Country and Company Antecedents	<p>This study seeks to understand the relative impact of company- and country-specific effects on international suppliers' performance with a focus on B2B buyers. Supplier performance as an outcome construct is first used in this COO study as being a relevant indicator of B2B buyers' post-purchase assessment. In addition, the sequential dependence relationship among the COO constructs and the outcome construct, supplier performance, is also investigated, which has never previously been tested in B2B-centric COO studies despite its prominence in consumer-centric studies. In doing so, three competing models (halo, summary construct and flexible models) have been estimated to identify the best fit model. Moreover, empirical analysis also tested for significant mediating relationships among the constructs.</p> <p>The results of the study show that the company effect is the stronger predictor and product-country image (PCI) is the weaker predictor of supplier performance. Overall country image is not a statistically significant direct predictor of supplier performance. Among the competing models, the halo model best fits the data (meaning that overall country image positively influences product-country image [PCI] and product-country image [PCI] positively influences supplier performance). The study also detected three significant mediating relationships, namely: overall country image → product-country image (PCI) → company effect (full mediation); overall country image → product-country image (PCI) → supplier performance (full mediation); and product-country image (PCI) → company effect → supplier performance (partial mediation).</p>
Chapter 4: Empirical Paper 2  Title: International Supplier Performance: The Role of the Infrastructure and Proximity of the Country of Origin	<p>This study makes a novel effort to develop and validate new COO constructs that will address trade-related COO aspects from the B2B buyers' perspectives. To fill this gap, this study seeks to understand the relative impact of the company effect and the country's trade-related image on international suppliers' performance. Moreover, structural model relationships are also investigated for significant mediating relationships among the constructs.</p> <p>The study validated three new COO constructs (geographical proximity, trade-related country infrastructure and country's regulatory strength) that cover trade-related COO aspects from the international B2B buyers' perspectives. Results of the structural model show that international supplier performance is significantly influenced by the company effect and geographical proximity of the source country. In addition, the company effect fully mediates the relationship between trade-related country infrastructure and supplier performance, and partially mediates the relationship between geographical</p>

Chapter number and name Title of empirical paper	Highlights of major chapters
Chapter 5: Empirical Paper 3 Title: Impact of Country-of-Origin (COO) on Business-to-Business (B2B) Purchasing: Modelling an Integrated Relationship	<p>proximity and supplier performance. A country's regulatory strength has no significant impact either on company or on international supplier performance.</p> <p>This study intends to fill the gap in the COO literature by using traditional COO constructs along with newly developed country-related COO constructs (developed and validated in Empirical Paper 2). In addition, the study seeks to understand the relative impact of company- and country-related constructs on business-to-business (B2B) buyers' perceptions of international supplier performance. The study also investigates relative and significant contributions from company-related and country-related constructs on specific supplier performance criteria (product quality performance, delivery performance and price performance) using hierarchical regression analysis.</p> <p>The structural model results show that international supplier performance is significantly influenced by the company-specific effect and geographical proximity of the source country. In addition, the country's trade infrastructure, product-country image (PCI) and geographical proximity directly influence the company effect. Product-country image (PCI) and geographical proximity are significant country-related predictors of specific supplier performance criteria. Hierarchical regression results show that the company's product-related aspects and the country's product image are statistically significant contributors to suppliers' product quality performance. With regard to the delivery performance of the supplier, supplier company's delivery and service aspects and source country's geographical proximity are statistically significant contributors. In predicting the price performance of the supplier, the supplier company's pricing aspects and the source country's geographical proximity are statistically significant contributors.</p>

## CHAPTER 2

# Literature Review

Country-of-Origin (COO) is commonly considered as an extrinsic cue in product evaluation in the same way as brand, price, packaging, etc. In other words, COO differentiates a product from other products because buyers may consider COO as a proxy of quality, price level, performance, etc. Therefore, the COO information of a product can be used by buyers as a signal or cue from which to derive a meaning and to evaluate the product.

### 2.1 Key observations from COO literature and global trade practices

#### *2.1.1 COO effect size in single and multi cue studies*

The field of COO research has a relatively long history. In the initial stage, COO was treated as a single cue that influenced consumers' evaluation of products (Schooler, 1965, 1971; Nagashima, 1970). The next stage of COO research included COO with other cues of product evaluation (such as price, store image, actual physical product, brand name, warranty) and, as a result, findings typically reported diminishing COO effects in multiple cue situations (Johansson et al., 1985; Wall et al., 1991; Agrawal & Kamakura, 1999). More specifically, Peterson and Jolibert (1995) found that the effect size of COO on quality/reliability perception was 0.30 for single cue studies and 0.16 for multi cue studies. In a later meta-analysis, Verlegh and Steenkamp (1999) reported a COO effect size of 0.39 along with the conclusion that COO effect sizes are larger for single cue studies than multi cue studies.

### *2.1.2 Increasing level of globalisation and the emergence of decomposed COO cues*

As COO research was growing, the impact of globalisation has prompted multinational companies to ramp up their production facilities around the globe, usually at the expense of domestic manufacturing. This has arguably had the effect of making COO information more blurry or fuzzy to consumers. Such complexity and ambiguity has necessitated consumers, and eventually, COO researchers decompose the COO construct to better reflect the more complex reality. Thus, Chao (1993) decomposed COO into country of assembly (COA) and country of design (COD) and found that COD, along with price, was the most important for consumers in evaluating product quality. In another study, Acharya and Elliott (2001) reported that COA was more important than COD in evaluating product quality and in product choice decisions. Similarly, Li et al. (2000) found COD to be more important; however, according to Insch and McBride (2004), the country of parts was more important. In addition, Aiello et al.'s (2009) study provided evidence that, in most countries, there is a well-balanced split between the preference for COD and the preference for COA/country of manufacture (COM) among consumers. Moreover, this study by Aiello et al. (2009) reported cross-cultural differences in this perception. Therefore, the importance of COD or COA is still inconclusive.

Another decomposition of COO, which appears in the extant literature, is country of manufacture (COM) (as mentioned above) and country of brand (COB). Although the primacy of one over the others is still debatable, recent studies are more in favour of COB (Hui & Zhou, 2003; Srinivasan et al., 2004; Liefeld, 2004; Pharr, 2005; Usunier, 2006, 2011; Phau & Chao, 2008; Samiee, 2010, 2011; Samiee et al., 2005). Taking a different stance, Jossiasen and Harzing (2008) accepted that brand image is more important than COM but they proposed that 'country of association' should be the most appropriate COO facet for

investigation. However, addressing COB as the more significant COO facet in recent times is also questionable owing to more stable findings that consumers' knowledge regarding brand origin is indeed poor (Anderson Analytics, 2007; Balabanis & Diamantopoulos, 2008; Samiee et al., 2005) except for the highly correct origin association reported by Magnusson, Westjohn and Zdravkovic (2011). In addition, the importance of COB is evidenced in developing countries such as India and China (Batra et al., 2000; Zhuang et al., 2008; Zhou et al., 2010) along with the impact of correct and incorrect association, which signify the role of COB.

### *2.1.3 Impact of product involvement and familiarity on COO*

Another well-researched topic in COO is the level of involvement and familiarity with the product category and the importance of COO facets (Ahmed et al., 2004; Gurhan-Canli & Maheswaran, 2000a; Josiassen et al., 2008; Lin & Chen, 2006; Verlegh et al., 2005). Han (1989) proposed two models (the halo model and summary construct model) associated with product familiarity and the direction of COO influence. Han's (1989) 'halo model' claimed that when associated with an unfamiliar situation, consumers are primarily concerned about the overall country image and, based on their perception of that product-country image or PCI, are led to make their product evaluation or purchase intention. In the 'summary construct model', consumers' familiarity with the country's product leads them to infer about the overall country image and this leads to their subsequent purchase intention. Another competing model proposed by Knight and Calantone (2000) is the 'flexible model', which considers that the overall country image directly and indirectly (through PCI) influences purchase intention. In other studies, Gurhan-Canli and Maheswaran (2000a), and Josiassen et al. (2008) found that the importance of COO was greater when evaluating a less familiar product category. Regarding the product involvement level, d'Astous and Ahmed (1999,

p. 108) found that a higher involvement level leads to greater use of COO information in product evaluation. In contrast, Gurhan-Canli and Maheswaran (2000b), and Verlegh et al. (2005) stated that, in low-involvement situations, COO information is more important.

#### *2.1.4 Clear dominance of experiment and survey as research designs*

In terms of research approaches, empirical COO research began with the experimental design setting in Schooler and Wildt's (1968) study. In recent times, experimental design with forced choices is a dominant approach in the literature (Srinivasan, Jain & Sikand, 2004; Veale & Quester, 2009; Ha-Brookshire, 2012). Such controlled experiments are typically constrained by quasi-realistic search and choice processes and options (Srinivasan, Jain & Sikand, 2004). In addition, perception-based questionnaire surveys are another major methodological approach in COO studies (Han & Terpstra, 1988; Knight & Calantone, 2000; Ahmed et al., 2004; Nebenzahl et al., 2004; Roth et al., 2008).

#### *2.1.5 Question of COO relevance and the significance of B2B buyers*

The importance of COO appears debatable after the long history of research. Some studies conclude that COO exerts a substantial influence on consumer perceptions and purchase intentions (Roth & Diamantopoulos, 2010; Phau & Chao 2008; Jaffe & Nebenzahl 2006; Pharr, 2006; Wilcox, 2005; Laroche et al., 2002; d'Astous & Ahmed, 1999; Kamakura, 1999; Pappu et al., 2007), whereas others hold the opposite stance (Lim & Darley, 1997; Lim et al. 1994; Samiee, 1994, 2010, 2011; Samiee et al., 2005; Samiee & Leonidou, 2011; Usunier, 2006, 2011). Despite these two opposing stances in the recent literature, in the most recent meta-analysis, covering the first decade of the 21<sup>st</sup> century, Magnusson and Westjohn (2011, p. 297) estimated that among the 94 empirical COO studies, 88 concluded that a product's COO mattered. However, the authors (Magnusson & Westjohn, 2011, p. 297) also noted that the significant association of hypothesised relationships might have provided higher chances



to get published. Somewhat surprisingly however, the authors at the centre of this debate have not identified the possible significance of the business-to-business (B2B) context in COO research. The next section, therefore, presents B2B buyers' relevance in COO studies.

Firstly, the significance of B2B buyers is well evidenced in extant meta-analyses. Peterson and Jolibert (1995) found that the quality/reliability perception and purchase intention in consumer product-based studies generated an effect size of 0.14 whereas, in the case of industrial product-based studies, the effect size was 0.32. In a later meta-analysis, Verlegh and Steenkamp (1999) reported that COO effects are not significantly less for industrial products than for consumer products, despite the fact that industrial buyers are considered more objective and better informed (Webster & Wind, 1972), possessing a greater information base (Samiee, 1994, p. 591) than the typical consumer. One important criticism of COO research is that "often questionnaires are administered without checking respondent familiarity with all the goods and origins mentioned in the research instrument" (Usunier, 2006, p. 62) which does not apply for B2B buyers. Ironically, despite "greater product familiarity and experience than is the case for consumers" (Samiee, 1994, p. 591), no emphasis has been placed on B2B buyers to avoid the criticism about respondents' familiarity with the product category. Furthermore, several studies already mentioned above (Ahmed et al., 2004; Gurhan-Canli & Maheswaran, 2000a; Han, 1989; Josiassen et al., 2008; Knight & Calantone, 2000) have studied the relationship of COO and familiarity in the consumer domain, but such effort has yet to be made in the B2B domain as a familiar respondent group.

Secondly, the overwhelming acceptance of COB over COM in the recent COO literature is also subject to questionable findings as existing literature has already reported the very limited ability of consumers to recognise brand origin (Anderson Analytics, 2007; Balabanis & Diamantopoulos, 2008; Samiee et al., 2005) and consumers' incorrect perception about brand origin (Batra et al., 2000; Zhuang et al., 2008). In contrast, the possibility of correctly

perceived COB and COM seems to be higher for B2B buyers. The following quote exerts the rationality of such a claim:

Industrial buyers tend to be better informed about their purchases than consumers and their decision processes are typically policy-driven and rationalized. Furthermore, they exhibit repeat purchase patterns that lead to a more accurate and broader information base about manufacturers and greater product familiarity and experience than is the case for consumers. Thus, industrial buyers' use of CO/M cues is likely to be linked to their more frequent experience with manufacturers and their sourcing countries. (Samiee, 1994, p. 591)

Therefore, considering B2B buyers as the respondent group of COO studies can significantly reduce the question of relevance.

Thirdly, evolving practices of global trade in the last 40 years also indicate the relevance of B2B buyers regarding COO studies. The beginning of global outsourcing through US manufacturers' "twin plant" program with Mexico accelerated very quickly (Dicken, 2011) and, in the 1970s to 1980s, US retail brands caused a major shift in this international outsourcing from producer-driven to buyer-driven supply chains (Gereffi & Lee, 2012) (with the latter certainly meaning the relevance of B2B buyers). This growth in multinational sourcing necessitated the trading of more intermediate goods across borders and, in fact, in 2009, global exports of intermediate goods represented more than 51% of total non-fuel merchandise export, which was more than the combined value of final and capital goods (WTO & IDE-JETRO 2011, p. 81). This situation again makes consumers relevant as COO respondents as stated by Samiee (2011, p. 474): "... regarding [the] multi-locational nature of production and sourcing for components, sub-assemblies, and finished products, it is difficult to realistically attribute the production of a particular product to a single country, something that research conditions often impose or ask". As a consequence, appropriate COO labelling for a finished product is clearly unavailable in the consumer space, but the B2B buyers may

know about this in greater detail simply because they directly deal in these international trade activities.

Fourthly, the relevance of COO studies is also questioned as the research topic is “too narrowly defined” (Usunier, 2006, p. 71). With regard to the multidimensional association of COO research in consumer-centric studies, Usunier (2006, p. 71) indicated the possible interrelationships and changing nature of international marketing, consumer behaviour and international trade literature. In the B2B domain, this association is among international marketing, industrial marketing and international trade literature. As already outlined, the close connection of B2B buyers with buyer-driven globally scattered international trade blatantly indicates the alienation of COO research from real-world trade practices. In addition, the literature related to some well-established sub-domains (global purchasing, international supplier selection, global supply chain and global value chain) of industrial marketing is closely related to B2B-centric COO studies, all of which have significant real-world relevance. As a consequence, establishing conceptual linkages among industrial marketing, international trade and COO will add a new dimension in the COO literature that can confidently address the relevance debate.

Despite the conceptual relevance of B2B buyers in COO research, the actual scenario portrays the very poor representation of B2B-centric studies. This is not only in COO research: the corresponding side of B2B buyers in international trade, the importer side, is also neglected in the academic literature compared to the exporter side (Liang & Parkhe, 1997). The most recent comprehensive academic literature review on importing by (Aykol, Palihawadana & Leonidou, 2013, p. 228) reported findings from 321 articles published from 1960 to 2010. Conversely, an export literature review of a similar nature by Leonidou, Katsikeas, and Coudounaris (2010) reported findings from 821 articles published from 1960 to 2007. This is a striking imbalance despite the higher power exerted by importers in the

currently dominant buyer-driven supply chains (Gereffi & Lee, 2012). The representation of B2B buyers or studies related to industrial products in review articles in the extant literature is presented in Table 2.1.5.1. This table clearly evidences the dearth of COO studies in the B2B sphere.

**Table 2.1.5.1 Representation of B2B samples in extant COO research**

<b>Study source</b>	<b>B2B representation</b>
Literature review 1965-1997 (Al-Sulaiti & Baker, 1998, pp. 179-199)	Eighteen (18) studies out of 99 presented in the appendix
Research relevance of COO (Usunier, 2006, p. 67)	In all, 20.9% of studies (14.25% of total sample size)
Country image construct (Roth & Diamantopoulos, 2009, pp. 729-732)	Three (3) studies out of 30
Literature review 2000-2010 (Magnusson & Westjohn, 2011, p. 303)	Only six (6) studies (out of 114 reviewed) including COO in service
Maiden literature review on COO studies from industrial buyers' perspective (Andersen & Chao, 2003, p. 341)	Only 20 studies in B2B area (recognising 200-300 COO studies in consumer behaviour area)
Literature review of COO articles, examined 118 articles, 12 from 1960s/1970s/1980s, 55 from 1990s, 51 from 2000s (Samiee & Leonidou, 2011, p. 86)	Three (3) studies out of 118 reported business managers as unit of analysis
Research on import activities 1960-2010 (Aykol et al., 2013, p. 228)	Thirty-nine (39) studies concerning COO out of 321 import-related articles

## 2.2 Review of existing B2B COO literature

A key foundation of this thesis is B2B centric COO literature that can be segmented from several perspectives. An important basis for segmentation is the single cue study (only the COO-related cue is considered) and the multi-cue study (other cues in addition to the COO cue). Regarding the use of antecedents, there is very little difference among the studies as almost all the studies hovered around using the basic marketing mix elements (the four Ps: product, price, place and promotion) as a short cut of the country/country product/country supplier perceptions, although using different terminologies. In another way, most of the studies explicitly examined the COO perceptions but some studies explicitly examined importers' perceptions regarding foreign sourcing. Another segmentation basis is survey-based studies and interview-based studies.

Another key focus of this COO investigation is to integrate several distinct fields of academic literature dealing with B2B-centric COO studies. In this endeavour, several fields of studies have been identified and included in this literature review. The COO literature from the B2B perspective has conceptual overlaps or interconnectedness with the global purchasing, international supplier selection and international trade literature. This part of the review has been undertaken with the purpose of identifying reported variables from B2B COO literature together with identifying the significance of country-related factors reported in other areas of literature. The following table (Table 2.2.1) presents an outline of this literature review.

**Table 2.2.1 Research areas and reviewed studies**

<b>Broader dimension of research area</b>	<b>Specific dimension of research area or research settings</b>	<b>Reviewed studies</b>
B2B centric COO studies	COO as single cue represented by marketing mix antecedents	Nagashima (1970, 1977); Chasin and Jaffe (1979); White (1979); Niffenegger, White and Marmett (1980, 1982); Chasin and Jaffe (1987); Kaynak (1989); Saghafi, Varvoglis and Vega (1991); Kraft and Chung (1993); Chang and Kim (1995); Gdm and Kavas (1996); Saghafi and Puig (1997); Kaynak and Eronen (2004)
	COO along with marketing mix antecedents in multi cue settings	White and Cundiff (1978); Ahmed, d'Astous and Adraoui (1994); Alpert, Kamins, Sakano, Onzo and Graham (1997); Bradley (2001); Baldauf, Cravens, Diamantopoulos and Zeugner-Roth (2009)
	Decomposed COO cues in single cue setting	Chetty, Dzever and Quester (1999); Dzever and Quester (1999); Dzever, Quester and Chetty (2000); Insch (2003)
	COO studies based on personal interviews	Keown (1985); Turnbull (1985); Khanna (1986); Yavas, Cavusgil and Tuncalp (1987); Kaynak and Kucukemiroglu (1991); Knight, Holdsworth and Mather (2007); Knight, Gao, Garrett and Deans (2008); Oke, Maltz and Christiansen (2009); Maltz, Carter and Maltz (2011); Insch, Prentice and Knight (2011)
	COO studies related to imports	Ghymn (1983); Ghymn and Jacobs (1993); Ghymn, Liesch and Mattsson (1999); Overby and Servais (2005)
	Case studies on COO effect	Kleppe, Astrid, Iversen and Stensaker (2002); Amine, Chao and Arnold (2005)
Other research fields having interconnectedness with B2B centric COO studies	Global/International purchasing	Kotabe and Murray (2004); Quintens, Pauwels and Matthyssens (2006)
	International supplier selection	Halln and Johanson (1985); Min and Galle (1991); Min (1994); Katsikeas and Kaleka (1999); Kaufmann and Carter (2006); Locke, Qin and Brause (2007); Joshi (2009); Ho, Xu and Dey (2010)
	International trade	Boisso and Ferrantino (1997); Frankel (1997); Canning (1998); Dunning (1998); Limao and Venables (2001); Irwin and Tervi (2002); Clark, Dollar and Micco (2004); Nords and Piermartini (2004); Brun, Carrere,

Broader dimension of research area	Specific dimension of research area or research settings	Reviewed studies
		Guillaumont and Melo (2005); Carrère and Schiff (2005); Swenson (2005); Djankov, Freund, and Pham (2006); Harrigan and Venables (2006); Hummels, Minor, Reisman and Endean (2007); Leamer (2007); Disdier and Head (2008); Jacks, Meissner and Novy (2008); Melitz (2008); Behar, Nelson and Manners (2009); Cantwell (2009); Felbermayr and Toubal (2010); Behar and Venables (2011); Portugal-Perez and Wilson (2012)

### *2.2.1 COO as a single cue represented by marketing mix antecedents*

As the pioneer of using B2B samples in COO studies, Nagashima (1970) investigated the perceptions of US and Japanese businessmen about products ‘Made in’ the USA, Japan, Germany, England and France. The antecedents used for measuring the ‘Made in’ image were price and value, service and engineering, advertising and reputation, and design and style. The study also associated the ‘Made in’ image with the consumer profile (US businessmen regarded English products as being oriented to the older generation and to masculinity). Using a mail survey and a bipolar 7-point semantic differential scale, the study analysed the data by mean value, percentile and descriptive information. The sample size used in this study was 230 for USA and 100 for Japan. Products considered by this study were automobiles, electrical appliances, textiles, cosmetics, foods and pharmaceuticals. According to the findings of the study, Japanese business people considered products ‘Made in Japan’ as inexpensive, common and necessary, and associated Japanese products with poor workmanship. They thought that Japanese products were reasonably priced as English and German products. In comparison, US businessmen thought that Japanese products were inexpensive, technically advanced, mass produced and globally distributed. Businessmen from both the USA and Japan agreed on the point about Japanese imitateness. The aesthetic quality of Japanese products also fascinated the US businessmen. Japanese businessmen had a higher regard for German products than for US products, especially in terms of the

reliability, reasonable price and performance factors of products. US businessmen ranked German products as almost equal to US products, relative to the technical and engineering aspects. US and Japanese businessmen agreed that German manufacturers were more concerned with performance than with outward appearance, and paid little attention to colour, size and model variations. Taking into consideration similar levels of price, quality and styling, 93% of US businessmen would choose US products as their first preference. As a second preference, they would choose products from Germany (60%), England (30%), Italy (4%), Japan (3%) and France (3%). In contrast, Japanese business people chose their sequence of first preference as being products from Japan (57%), Germany (21%), England (14%), France (4%) and USA (3%).

Nagashima's (1977) follow-up study was also the first COO study that investigated change in perception from a longitudinal perspective. Considering similar antecedents and methodology, the author investigated Japanese businessmen's perceptual change about the 'Made in' image of products over an eight-year period (1967–1975). Regarding price and the value of 'Made in USA', little change was detected. With the higher price of Japanese and German products, the relative status of US products had declined. US products' reliability had fallen from third to last place. Japanese products moved to first place in terms of careful and meticulous workmanship, while the US products rated as last in this category. US products lost their first place in technical advancement to Germany and in worldwide distribution to Japan. US products also slipped down in the inventiveness rating. However, Japanese businessmen still believed in the high prestige value of owning US products. Within this eight-year period, the 'Made in Japan' image had progressed considerably in the eyes of Japanese businessmen. They no longer considered Japanese products as inexpensive and unreliable. Moreover, the Japanese products had become as expensive as US products. Most noticeably, Japanese products were considered to be as reliable and as reasonably priced as

German products. The image of 'Made in Japan' products being necessary and common stayed at the 1967 level. Japanese products moved ahead of US products regarding workmanship although still falling behind German, English and French products. Significant improvements of Japanese products were detected in the areas of technical advancement, mass production and worldwide distribution. However, the image of their imitativeness stayed the same as it had been in 1967. In short, the overall image of Japanese products had improved dramatically. Considering a similar level of price, quality and styling, Japanese businessmen's first preference for COO changed as follows: USA 3% to 0%; England 14% to 13%; Germany 21% to 37%; and Japan 57% to 46%. With the exception of France (8% to 14%), the sequence of second choice had not changed significantly. Substantial differences were revealed regarding the product country which had the image of the greatest value for automobiles, cosmetics, foods and pharmaceutical products within the eight-year period. Differences were documented as follows: automobiles (USA 54% to 19%, Germany 25% to 55%, Japan 5% to 12%); cosmetics (France 81% to 68%); foods (USA 44% to 58%, Japan 39% to 17%); and pharmaceutical products (Germany 68% to 76%, Japan 18% to 9%, USA 12% to 2%).

Using the same antecedents as Nagashima (1970, 1977), Niffenegger, White and Marmett (1980) studied the product stereotype image of British retail managers regarding products that originated from France, USA and Britain. For the research design, the study used a self-administered questionnaire (personal drop-off and pick-up), a 7-point semantic differential scale and quota sampling ( $n = 92$ ), and analysed the data by the mean score and graphical plots. Product categories considered by this study were automobiles, electrical appliances, textiles, cosmetics, foods and pharmaceutical products. The findings of the study showed that, with regard to price and value, British products were considered more as necessities and as being relatively cheap compared to French and American products. In addition, French



products were perceived as more luxurious and exclusive than US and UK products. In advertising and reputation, US products were more heavily advertised than French products, but owning French products conveyed definite prestige. Even though British products were well known on their home ground, they were well advertised. Moreover, French brand names were less recognisable. Concerning service and engineering, US products were considered to be more technically advanced and as following mass-production methods. In contrast, French products were seen as more 'handmade' and with a higher level of technical advancement than British products. Most notably, British workmanship was very negatively perceived. No major difference was observed regarding the perception of design and styling of the three countries studied. However, limited choices in size and model were disadvantages of French products. None rated well in their use of colour. When associating each segment of consumers with the countries' products, US products were seen as being relatively young-focused and slightly biased towards masculinity. On the other hand, French products were viewed as a little more appealing to the feminine market and British products as being a little better perceived by older consumers.

Using the similar methodology and antecedents to Niffenegger et al. (1980), Niffenegger, White and Marmett (1982) measured British and French retail managers' country stereotype attitude towards US products. The *t*-test of mean score ratings of US products by British and French retailers revealed that four out of 15 attributes showed a statistically significant difference: they were reliable/unreliable ( $p < .01$ ); recognisable/unrecognisable brand names ( $p < .05$ ); mass-produced/handmade ( $p < .01$ ); and easily obtainable/difficult to obtain ( $p < .001$ ). In addition to statistical significance, the mean ratings in different attributes showed that US products were a bit more expensive, reliable (French managers thought more reliable), seen as more towards luxury rather than necessity, and not very exclusive. US products were advertised more than average, and had brand names that were more

recognisable to French managers (and less by the British managers). US products were seen as technically well advanced, mass produced (more French managers thought this than British managers), and more easily obtainable (seen as average availability by British managers). The variety in offerings and use of colour in products that were US in origin were about average. US products were seen as having a younger image and could be said to be neutral with regard to masculinity/femininity, although a little skewed towards masculinity.

Chasin and Jaffe (1979) studied generalised perceptions of products that originated from several Eastern European countries. They considered two groups of variables which they named as product attributes (quality, workmanship, style, dependability and advanced technology) and marketing values (credit/terms, value for money, on-time delivery, reputation and maintenance/service). The study used personal interviews to collect data, a 9-point rating scale to measure perceptions, and analysed data by rank order, percentage and correlations. The sample included 82 firms based in New York: the product categories considered by the study were building materials, chemical products, electrical equipment, farm equipment, machine tools, paper products, passenger aircraft, scientific precision equipment, textiles, turbines and generators. The sequence of performance attributes according to importance in the eyes of surveyed industrial buyers were quality, dependability, advanced technology, value for money, on-time delivery, workmanship, maintenance/service, credit/terms, style and reputation. The USA ranked highest (75.5/100) out of six countries with the top three highest rankings in advanced technology, style and reputation and the bottom three rankings in on-time delivery, value for money and maintenance/service. The USSR ranked second (53.7/100) with the top three highest rankings in advanced technology, quality and workmanship and the bottom three rankings in style, credit/terms and on-time delivery. Czechoslovakia ranked third (48.1/100) with the top three highest rankings in workmanship, value for money and quality and the bottom three rankings in style,

credit/terms and maintenance/service. Poland ranked fourth (43.6/100) with the top three highest rankings in workmanship, value for money and quality and the bottom three rankings in style, credit/terms and maintenance/service. Hungary ranked fifth (42.4/100) with the top three highest rankings in workmanship, value for money and quality and the bottom three rankings in style, credit/terms and maintenance/service. Romania ranked last (40.6/100) among the six countries studied with the top three highest rankings in value for money, workmanship and quality and the bottom three rankings in style, credit/terms and maintenance/service. This study reported the general perceptions of industrial buyers about industrial goods manufactured in selected Eastern European countries. Results showed that products from Eastern European countries were quite inferior compared to US products in the evaluation of US industrial buyers. As most of the sample interviewed reported no actual buying experience from these six countries, these results represent generalisations of attitudes.

In a later study, Chasin and Jaffe (1987) again measured industrial buyers' perceptions about the performance attributes of industrial products from Eastern European countries. In addition to what was done in the 1979 study, performance attribute ratings between two survey years (1979 and 1985) were compared. The country groups considered were the Western-oriented bloc (USA, Japan and Austria) and the Eastern European bloc (USSR, Poland and Hungary). The sequence of performance attributes according to their importance in the eyes of the surveyed industrial buyers was product reliability/dependability, materials quality/workmanship, price/value for money, uniformity/consistency, on-time deliveries, field service/technical support, reputation/guarantees, innovative/advanced technology, supplier contact/ample information, full product lines and credit extension/terms. The USA ranked highest (80.7/100) out of the six countries; Japan ranked a very close second (79.6/100); Austria was just above average (54.9/100); USSR was somewhat below the

midpoint (45.4/100) indicating below average performance; whereas Poland (40.9/100) and Hungary (41.7/100) had poor performing profiles. The three Eastern European countries' average was about 38 points lower than the USA's average. In comparing country profiles between 1979 and 1985, the USA showed a significant upward shift in eight of the nine common attributes of both studies. However, the reverse happened to the USSR as its image sharply declined over this six-year period and eight out of the nine attributes followed this negative progression. Poland and Hungary show mixed movement among the attributes and their difference to the USSR was reduced in the 1985 profile.

White (1979) examined organisational buyers' country stereotypes about products from Western industrialised countries including the USA, West Germany (now a part of unified Germany), France, Italy and England. Three dimensions used in the study actually considered marketing mix aspects, which were named as: the product quality dimension (quality, reliability, durability, workmanship, level of technical advancement and inventiveness); the marketing characteristics dimension (highly advertised and promoted, recognised brand names, easy to service, large choice of size and model); and the price dimension (expensive and reasonably priced). The study used a mail survey with a structured questionnaire and a 7-point semantic differential scale: data analysis was conducted using principal component analysis, mean, standard deviation, analysis of variance (ANOVA) and pair wise comparisons. The final sample size was 213 with participants being US purchasing managers with over 10 years of experience.

Regarding the product quality dimension, results showed that West Germany received the highest ratings among all the countries. There were no statistically significant differences with respect to the product quality between France, England and the USA. The product quality dimension of the USA and England was significantly higher than that of Italy. Products from the US were clearly ahead of those from all the other countries in the

marketing characteristics dimension. However, no statistically significant differences were found among products from Italy, France, England and West Germany. The price dimension showed statistically significant differences between West Germany and Italy, and between the US and Italy, as West German and US products were considered more expensive than Italian products. Products from two sets of countries were seen as comparable, namely: (1) England, France, West Germany and the USA; and (2) Italy, England and France.

Kaynak's (1989) work was one of the early studies that focused the investigation lens on developing country samples. In this study, Chinese industrial buyers evaluated product quality from major sourcing countries (West Germany, USA, Japan, Italy, France, Romania, Soviet Union (USSR), Switzerland, UK, Australia and Hong Kong). The data collected were from 81 Chinese government purchasing officials and were analysed by mean value, a *t*-test of mean difference and a Chi-square test. The most preferred quality preference sequence for general products, vehicles and motorcycles was West Germany and Japan/USA; for steel, it was USA/West Germany and Japan; for electronic and telecommunication equipment, it was Japan and USA/West Germany; and for industrial equipment and technology, it was USA/West Germany and Japan/Switzerland. In addition, the study reported that young (aged 35 or less), high-income and university-educated respondents favoured Western European and US products whereas older respondents favoured products from Romania and the Soviet Union.

In the first study examining Latin American import sources, Saghafi, Varvoglis and Vega (1991) analysed US managers' assessment of Latin American suppliers' marketing mix incompetence. The assessment criteria included marketing mix attributes (basic product quality, product quality benefits, promotion and price) and exporter attributes (supplier reliability and supplier capacity). The study used a 5-point Likert scale to measure perceptions and analysed the data using mean, ranking, percentile, factor analysis and a *t*-test

of group difference. The 304 respondents represented medium to large US companies. The study reported that around 50% of respondents had not directly dealt with the Latin American region and their perceptions were based on indirect information sources. Latin American products were well rated only on the price dimension (mean score 4 out of 5), and were poorly perceived for the promotion (2 out of 5) and product (around 2.5 out of 5) dimensions. With regard to exporter attributes, Latin American exporters were perceived as technically and financially weak, less efficient in communicating and providing promotional assistance to buyers, lacking variety in product offerings and lacking a research facility. Conversely, they were trusted to deliver products on or close to schedule, fairly reliable in delivering large product quantities and providing an adequate storage facility, capable of maintaining an average level of managerial efficiency and fairly honest in their dealings. The group difference analysis showed some statistically significant differences between the group who had dealt with Latin America before and the group who had not ever dealt with Latin America: these differences were in basic product quality (3.02 | 2.72,  $p < .001$ ), product quality benefits (2.99 | 2.79,  $p < .05$ ) and price (4.18 | 3.70,  $p < .001$ ). Other dimensions did not come up with statistically significant differences; however, the study clearly provided evidence that US purchasing managers had pre-conceived negative notions about Latin American exporters.

Using a structured questionnaire, Kraft and Chung (1993) examined Korean purchasing agents' perceptions about US and Japanese industrial product suppliers. Based on factor analysis results, two groups of factors were identified: exporter attributes (reputation, negotiation style, customer orientation, cultural awareness and personal communication) and product offer factors (good product information, quality products, improved products, well-designed products, good technical training with the product and competitive prices). Measuring perceptions with a 7-point Likert scale, the study analysed the data from

190 managers using common factor analysis, a *t*-test and regression analysis. In all three product categories (raw materials, finished materials, and equipment and machinery), US product offer factors were rated significantly lower than those from Japan, most specifically on product quality and product information. Regarding the exporter attributes, a similar sort of perceptual superiority was revealed for Japanese exporters with the exception of personal communication. The largest US rating deficiency relative to those of Japan was observed to be the cultural awareness factor that not only indicated US suppliers' insensitivity to Korean culture but also their lack of knowledge about Korean business regulations. Reputation was another such factor and, in this dimension, the difference was in favour of Japan which rated the highest in the category of equipment and machinery. US exporters surpassed (by mean difference without statistical significance) Japanese exporters in only one dimension, that is, negotiation style. Specific questionnaire items indicated that Japanese exporters were comparatively impatient and less straightforward. Therefore, the authors have suggested that US exporters capitalise on this factor through their training of US export sales representatives. Korean government pressure (30%) and better quality (20%) were the reasons given for increasing imports from the USA. The reasons given for decreasing imports from the USA were that Korean importers preferred dealing with suppliers other than US suppliers (36%), poor service (24%) and high price (16%). Regression analysis results showed that, for all three product categories, no significant predictors were identified for the dependent variable – percentage of imports from Japan. Conversely, significant predictor variables were found for purchases from the USA in all three product categories. In the case of the percentage of raw materials imported from the USA (adjusted  $R^2 = .10$ ), the only significant ( $\beta = .39$ ) predictor was exporter reputation. Customer orientation ( $\beta = .58$ ) and product quality ( $\beta = .61$ ) were significant predictors of finished material imports from the USA (adjusted  $R^2 = .42$ ). With regard to equipment and machinery imports (adjusted  $R^2 =$

.30), customer orientation ( $\beta = .70$ ) and product information ( $\beta = -.43$ ) were the significant predictors. It was considered important to note that in all three regression equations, factors related to exporter attributes played a major predictive role.

Chang and Kim (1995) studied import source ratings of industrial products from newly industrialised countries (NICs) as assessed by South Korean managers. The questionnaire collected information on respondent and firm profiles and assessed 16 attributes using 7-point Likert scale statements. The antecedent items comprised technological advancement, brand reputation, economic price, options, overall quality, technical assistance, long-term viability, durability, communication, local knowledge, delivery, instructions, reliability, after-sale service, finishing and non-substitutability. Data from 100 respondents were analysed by mean, a paired significance test, ANOVA, principal component analysis and regression analysis. Japanese suppliers were rated highly in 11 out of the 16 attributes, among which 'delivery and instructions' received the highest score. US suppliers did not receive the highest rating individually in any attribute, but were tied for the highest ranking in brand reputation, technical assistance and durability. As with the USA, no individual highest rating was received by Germany. However, Germany tied with the highest rating in nine items. Korea rated the lowest in all the attributes except 'economic price'. Four factors were derived by factor analysis results, namely, product quality, dependability, brand image and long-term relationship. Factor scores for each country showed statistically significant differences in all factors except 'long-term relationship'. Regression analysis results showed that product quality, dependability and brand image were statistically significant predictors of country preference ( $R^2 = .35$ ). The only statistically significant variable that explained the country purchase ratio ( $R^2 = .21$ ) was 'dependability'. Situational variables were associated with three dimensions, namely, quality, dependability and brand image. The product quality dimension was significantly associated with company sales, number of employees and technology



transfer mode. The dependability dimension was related to product type, company sales, technology relationship, technology transfer mode and job title. Brand image variation occurred on the basis of product type, age of company, company sales and number of employees.

Güdüm and Kavas (1996) investigated Turkish industrial buyers' attitudes towards local (Turkish) and foreign (Japanese, German and US) suppliers. Four broad factors were considered as antecedents, namely: (1) marketing quality (customer satisfaction, delivery speed, sensitivity to post-sales complaints, product quality, technological soundness, quality consistency over time, availability of technical information, reliability, informed about order updates, after-sales follow-up, information adequacy, speed of complaint handling, informed about product updates, conformance to international quality standards and order-related problem handling); (2) sensitivity to the environment (concerned about business customs, product adaptation, language of product instructions, commercially competent marketing staff and courteous marketing staff); (3) business relationship (problems due to cultural barriers, cooperation difficulty, difficulty in establishing personal relationship and nice to work with); and (4) price (lower price). The study analysed 105 managers' responses, with respondents from large manufacturing firms and working in roles related to raw materials and capital goods purchase. In the 'marketing quality' dimension, Turkish suppliers were more negatively perceived in all items than all the foreign suppliers (Germany, Japan and USA). In addition, all the foreign suppliers were perceived with closely similar positivism regarding product quality, international quality standards, consistent quality and providing technical information. The overall mean value of the marketing quality dimension for all the foreign countries was also in close proximity (Germany 3.84, Japan 3.84 and USA 3.99). Conversely, only an unfavourable overall mean, indicating poor marketing performance, was received by Turkish suppliers (2.94). With regard to 'sensitiveness to environment', Japanese suppliers

(3.94) were ahead of the other three countries, which shared similar perceptions (Germany 3.57, USA 3.64 and Turkey 3.59). For the 'business relationship' factor, all four supplying countries received similar perception scores. Turkish suppliers had the highest overall mean (3.80) indicating the ease of relationship within the same cultural setting. It was considered important to note that, despite the non-native cultural origin, foreign suppliers were rated fairly closely to Turkish suppliers (Germany 3.61, Japan 3.40 and USA 3.61). With regard to 'price', Turkish suppliers were perceived as low cost among the others: this consistently reflected the poorly perceived 'marketing quality' of Turkish suppliers. The question of country preference forced respondents to disregard geographical distance and to consider the industrial products from all four sources as being similar in price, quality, style and service facilities. In response to this question, the most preferred country (i.e. the first preference) was Turkey (36.9%) followed by Germany (26.3%), Japan (25.2%) and the USA (11.6%). In the least preferred country suppliers, again preference for Turkish suppliers was ahead of suppliers from the other countries. Nearly half of the respondents (44.2%) considered Turkey as their least preferred source of supply. The second and third least preferred suppliers were Japanese (24%) and US (23%) suppliers, respectively. According to the weighted average of preference ratings, the order of preference stood at Germany (28.2%), Japan (25%), Turkey (23.5%) and the USA (23.3%). The highest ratings of Turkish suppliers in both the extremes may be a combined reflection of emotional behaviour (for ethnocentrism and patriotism) and rational behaviour (for the poor rating on the 'marketing quality' dimension).

Saghafi and Puig (1997) studied the perceptual differences of managers regarding products made in developed and developing countries, according to US purchasing managers. The differentiating factors were: price, workmanship, reliability, technical advancement, performance and timely delivery. Using data from 100 managers, the study reported the

results of mean, ranking and a *t*-test of group difference. Results from the average criteria ratings showed that Latin American countries rated above average only for the price attribute, whereas Japan and Germany ranked first and second in reliability, workmanship, performance and technical advancement, respectively. The USA placed first only on timely delivery (usual when domestic land transportation) and third on all other attributes. The *t*-tests of mean differences showed that all were statistically significant at  $p < .05$  level. In price perception, with Germany (2.49) the lowest, the USA (3.39), Mexico (3.85), Brazil (3.57) and Argentina (3.28), all were in a comparable range and offered better prices than Japan. All differences were statistically significant. Japan (4.30) and Germany (4.27) were top rated with very little difference in workmanship and, in this factor, the USA rated better than all other developing countries (3.68). Latin American countries were poorly rated in workmanship with little difference between Brazil (2.87) and Mexico (2.79), and Argentina as the lowest (2.56). Developed countries were rated as significantly more reliable (Japan 4.16, Germany 3.97 and USA 3.68) than the Latin American countries (Brazil 2.62, Argentina 2.51 and Mexico 2.58). Regarding technological advancement, no significant differences were found among advanced nations (Japan 4.37, Germany 4.19 and the USA 4.12). Among the Latin American countries, Brazilian (2.45) products were considered to be more technically advanced (a statistically significant difference) than products made in Mexico (2.20) or Argentina (2.20). Japanese products (4.09) were well ahead of German (3.79) and US (3.69) products in the product performance attribute. As usual, advanced nations were well ahead of the Latin American countries (Brazil 2.71, Mexico 2.54 and Argentina 2.51). Being the domestic country, the USA (3.87) scored highest in timely delivery and Japan (3.37) scored higher than Germany (2.98). Despite closer proximity to the USA, Latin American countries were poorly rated in on-time delivery (Brazil 2.57, Mexico 2.42 and Argentina 2.27). When buying from developed nations, the sources of primary

competence were reliability (4.29), workmanship (4.13), timely delivery (4.09) and performance (4.05). Technical advancement (3.76) was considered as the next highest ranked level of important criterion and price (3.33) was considered the least important criterion for purchasing from developed countries. There were statistically significant differences between the three levels. According to the Latin American means, price (4.31) was the prime source of competitive advantage: the next ranked levels of considered factors were workmanship (3.38), performance (3.35), reliability (3.34) and timely delivery (3.29), while the least considered factor for purchasing decisions was technical advancement (2.84). Again, the differences between the different levels were statistically significant. As 38% of the sample had never dealt with Latin American suppliers whereas 62% regularly purchased from Latin America and other parts of the world, some statistically significant differences were detected between these two groups. Respondents without any experience with Latin America rated the relative price of Japanese products as better than respondents who bought from Latin America. Therefore, globally experienced buyers considered Latin American products more price competitive than products from advanced nations. Respondents who bought from Latin America rated the relative technical advancement of Germany higher than respondents who had never bought from Latin America. Moreover, globally experienced respondents also rated the technical advancement for Brazil and Argentina as higher than respondents who had never bought from Latin America.

Kaynak and Eronen (2004) examined Finnish industrial buyers' evaluation of and attitudes towards products and suppliers from Eastern and Central Europe. Motivating factors for outsourcing from this region included high product quality, less expensive price, high product durability, high product reliability, high technical content, wide assortment of features and good value for money. The study collected data using a mail survey with a self-administered questionnaire that analysed data by rank order, percentile and correspondence analysis.

Responses from 74 buyers working in Finnish industrial companies were considered in the final analysis. In the overall preference rating, the Czech Republic and Hungary were ranked in the first and second position, respectively, with a very marginal difference. The individual preference rating showed that one-quarter of the respondents gave the highest score to Russia as a source of imports but, at the same time, Russia was also ranked among the least popular by other respondents. Estonia and Poland, which were ranked third and fourth in the overall evaluation, were consistently favoured by a good percentage of respondents as the first to fourth preferred option. The Slovak Republic, which is the least known of the countries studied, had the lowest ranking. Finnish industrial managers were also asked to ascertain the development of competitiveness in the selected Eastern and Central European countries in the course of their transition into market economies. It was found that competitiveness in general in these countries had worsened. In the early days of economic reforms, differences in competitiveness emerged. Among the countries studied, the most notable change took place in marketing communication, indicating substantial improvement in Russia and Hungary. The price competitiveness factor showed very little improvement for some countries, according to some respondents, but it substantially deteriorated for Russia and Hungary. Finnish buyers recognised the significant improvement in product quality and delivery developments in all the countries studied. The major motivating factors for Finnish importers were low price and good value for money spent. With the help of Westernisation and privatisation in these countries, product quality improvement had mostly occurred due to increased joint ventures, strategic alliances and foreign investment activities. On the other hand, it was expected that the price factor would decline in importance in the future. In assessing the quality of products from Eastern and Central European countries, significant perceptual differences were detected. Industrial products from Hungary and the Czech Republic were considered to be at the highest level of quality, whereas Russian industrial goods were rated as the lowest in

quality. When the Finnish industrial buyers suggested competitiveness improvement factors for Eastern/Central European suppliers, they attached most importance to product quality and product adaptation, price competitiveness and on-time delivery in addition to effective communication between the buyer and seller. Marketing efforts, such as market research, providing sales promotion brochures and literature or pro-activeness in seeking out buyers did not have a high priority among Finnish industrial buyers. Moreover, it was not expected that the countries included in this study would produce technologically unique products. The correspondence analysis explained 98.64% of the total variance. The study results showed that different product attributes were more attuned with different sourcing countries. For instance, products from the Slovak Republic were found to be reliable; Estonian products were observed as being good value for money; Czech and Hungarian products were perceived as durable; Polish products were believed to be technically superior with a wider assortment available; and products originating from Russia were found to be reasonably priced.

The antecedents used as the criteria to evaluate country products or suppliers in single cue COO studies are mostly marketing mix elements. Even using the ‘exporter characteristics’ term, some attributes (fulfilment of promise, delivery of products in good condition, delivery of products on schedule, good promotional material and storage facilities) included in the antecedents are ultimately related to delivery and marketing communications (place and promotion from the four Ps of the marketing mix). Despite the well-accepted use of a proxy in research settings, using company marketing mix elements as a proxy for country may be subject to extreme abstraction that could lead to overestimation or underestimation of COO perceptions. Although the chance of either direction (overestimation or underestimation) is evident depending on the assessed supplier group, COO research has been well criticised for overestimation (Peterson & Jolibert, 1995; Samiee et al., 2005). In addition, marketing mix

elements are considered to be company-controllable parameters (Brassington & Pettitt, 2003; Kotler, 2003). For instance, one exception is that some relationship issues reported in the literature could be considered as associated with a country's cultural orientation (such as being concerned about business customs, product adaptation, language of product instructions, problems from cultural barriers, cooperation difficulty and difficulty in establishing personal relationship). Table 2.2.1.1 below presents the summary of variables used in single cue studies.

**Table 2.2.1.1 Antecedents reported in single cue studies**

<b>Study</b>	<b>Variables reported</b>
Nagashima (1970, 1977)	Price and value (inexpensive, reasonable pricing, reliability, luxury, exclusivity, heavy industry product), service and engineering (workmanship, technical advancement, mass production, spread of distribution, inventive), advertising and reputation (pride of ownership, level of advertising, brand recognition), design and style (variety of size and model, external appearance, use of colour) and consumers' profile (for young people, for male or female, for social class)
Chasin and Jaffe (1979)	Product attributes (quality, workmanship, style, dependability, advanced technology) and marketing values (credit/terms, value for money, on-time delivery, reputation, maintenance/service)
White (1979)	Product quality dimension (quality, reliability, durability, workmanship, level of technical advancement, inventiveness), marketing characteristics dimension (highly advertised and promoted, recognised brand names, easy to service, large choice of size and model) and price dimension (expensive, reasonably priced)
Niffenegger, White and Marmett (1980, 1982)	Price and value (inexpensive/expensive, reliable/unreliable, luxury items/necessary items, exclusive/ common), advertising and reputation (great prestige in ownership, much advertising, recognisable brand names), service and engineering (technically advanced, mass-produced, easily obtainable, inventive, careful workmanship), design and style (large choice of size and model, more concerned with outward appearance, clever use of colour) and consumer profile (more for young people, for men, for upper class).
Chasin and Jaffe (1987)	Product attributes (product reliability/dependability, product uniformity/consistency, materials quality/workmanship, fullness of product lines, product reputation/guarantees) and marketing attributes (innovative/advanced technology, field service/technical support, credit extensions/terms, on-time deliveries, price/value for money, supplier contact/ample information)
Kaynak (1989) Saghafi, Varvoglis and Vega (1991)	Quality perception Marketing mix attributes: basic product quality (workmanship, product imitation, labour sophistication, materials quality), product quality benefits (reliability, durability, quality, packaging), promotion (well-promoted, well-known attributes) and price (reasonably priced, expensive) Exporter attributes: supplier reliability (compliance with instructions and specifications, fulfilment of promise, honesty, delivery of products in good condition, quality professional management, delivery of products on schedule), supplier capacity (production capacity, large variety of products, good promotional material, storage facilities)
Kraft and Chung (1993)	Exporter attributes (reputation, negotiation style, customer orientation, cultural awareness, personal communication) and product offer factors (good product information, quality products, improved products, well-designed products, good technical training with the product, competitive prices)
Chang and Kim (1995)	Technological advancement, brand reputation, economic price, options, overall quality, technical assistance, long-term viability, durability, communication, local knowledge, delivery, instructions, reliability, after-sale service, finishing and non-substitutability.
Güdüm and Kavas (1996)	Marketing quality (customer satisfaction, delivery speed, sensitivity to post-sales complaints, product quality, technological soundness, quality consistency over time, availability of technical information, reliability, informed about order updates, after-sales follow-up, information adequacy, speed of complaint handling, informed about product updates, conformance to international quality standards, order-related problem handling), sensitivity to the environment (being concerned about business customs, product adaptation, language of product instructions, commercially competent marketing staff, courteous marketing staff), business relationship (problems with cultural barriers, cooperation difficulty, difficulty in establishing personal relationship, nice to work with), price (lower price)
Saghafi and Puig (1997)	Price, workmanship, reliability, technical advancement, performance and timely delivery
Kaynak and Eronen (2004)	High product quality, less expensive price, high product durability, high product reliability, high technical content, wide assortment of features and good value for money



### *2.2.2 COO along with marketing mix antecedents in multi cue settings*

One important reason for overestimation in extant COO studies is the use of single cue settings. As the COO cue is one of several extrinsic cues, it is rational that the effect of the COO cue will be less, owing to the fact that it shares impacts with other cues. In multi-cue settings, research investigations have included COO with other cues of product evaluation (such as price, store image, actual physical product, brand name and warranty) and, as a result, findings have typically reported diminishing COO effects in multiple cue situations (Johansson et al., 1985; Wall et al., 1991; Agrawal & Kamakura, 1999). Despite the importance of this shortcoming, surprisingly multi-cue studies have not been well reflected in the later B2B-based COO studies. Details of these few studies are presented in this review.

In their very early multi-cue study, White and Cundiff (1978) investigated the psychological influence of price and country of manufacture (COM) on purchasing managers' assessment of product quality. In addition, the study considered delivery and service as control variables. The countries, USA, West Germany, Japan and Brazil, were included as the country of manufacture (COM). The experimental design-based study used a 7-point semantic differential scale to measure consumer choice levels and analysed data from 236 respondents by ANOVA. The study results showed that COM and perceived quality had a statistically significant relationship ( $p < .01$ ) for all three products (industrial lift truck, metal working machine tool and dictation system). The relationship between price and perceived quality was not statistically significant ( $p > .05$ ) for any product. The interaction effect between price and country of manufacture had no statistically significant relationship ( $p > .05$ ) on perceived quality for the lift truck and machine tools, whereas a significant relationship ( $p < .10$ ) was detected for the dictation system. The study findings concluded that products manufactured in

a particular country could be affected by a built-in positive or negative stereotype of the perception of product quality.

Approximately 16 years later, the next multi-cue COO study in the B2B domain appeared in the academic literature. Ahmed, d'Astous and Adraoui (1994) introduced the decomposed COO cue (country of design [COD] and country of assembly [COA]) in B2B settings in addressing multinational production systems. They also compared the results of single cue and multi-cue settings, which is a rare phenomenon in COO studies. The study investigated the influence of COD, COA, brand name, price, warranty or delivery, industrial buyers' perceptions of product quality and purchase value. The mail survey questionnaire was based on a conjoint profile: the final analysis included 173 responses. The conjoint analysis results showed that developed countries were more favourably evaluated than newly industrialising countries for both COD and COA. Among the countries evaluated, newly industrialising countries were better evaluated for COA than for COD for industrial products. For all three of the product categories, COD explained a greater proportion of variance than COA in perceived quality and purchase value. Moreover, the influence of COD on perceived quality was more than its influence on purchase value. In addition, the effect of COD was more than that of COA for technologically complex products. The influence of brand name on the perceived quality and purchase value of a computer system and a fax machine was statistically significant but its explanatory power was much smaller than that of the COO cues. Price and warranty/delivery had almost no impact on perceived quality, whereas both variables had a substantial and statistically significant impact on the purchase value of a computer and ballpoint pens. Inter-country differences between multiple-cue mean values were considerably narrower than those between single cue mean values for the dependent variables, perceived quality and purchase value. The magnitude of these differences was greater for COD than COA. Purchasing managers' perceptual differences between newly

industrialising countries and developed countries were statistically significant. In multi-cue settings, negative perceptions about newly industrialising countries were considerably reduced and differences between developed countries were practically non-existent. Country of design (COD) was a more important indicator of product quality and purchase value than COA, and the importance of COD was positively related to product complexity.

Alpert, Kamins, Sakano, Onzo and Graham (1997) investigated factors affecting US sellers in selling to Japanese retail buyers. Multiple factors identified for the study were the entry order of the supplier's brand (how new and unique it is); loyalty or commitment to established suppliers; interaction style between supplier and buyer; size of the supplier; and suppliers' country of origin (COO). The study analysed data from 103 respondents using conjoint analysis along with mean and ANOVA. According to the results of direct rating, brand entry order (7.49) was rated as the most significant factor. Among the remaining four factors, the nature of interaction style was rated second (7.15), the size of supplier was ranked third (5.96), the supplier-buyer relationship was rated fourth (5.66), and the supplier's country of origin was rated the lowest among the variables (5.60). One-way ANOVA results showed that the importance of entry order and interaction style were not statistically distinguishable. Moreover, supplier size, length of relationship and supplier's country of origin were of similar importance but were substantially less important than entry order and interaction style. Conjoint analysis results show that the country of origin was rated the most important factor among the five variables, followed by entry order, interaction style, length of relationship and size of supplier. According to multiple comparison procedure estimates, the supplier's country of origin was indeed more important than the other four factors. Authors have concluded that despite a low mean value in direct ratings, the actual importance of the country-of-origin (COO) variable is revealed as a concrete choice in the trade-off format.

Among all the B2B-focused COO studies, there is an absolute dearth of studies that reflect higher statistical, methodological and conceptual rigour. In this regard, only two studies warrant mentioning: they are Bradley (2001) and Baldauf, Cravens, Diamantopoulos and Zeugner-Roth (2009). Bradley's (2001) study first addressed the necessity of separating country and company variables that can also be effective multi-cue settings. Despite the designation of marketing mix elements as company-controllable factors, past B2B studies have repeatedly used marketing mix variables as a proxy of country effect, which is not controllable by the firm (Bradley, 2001, p. 512). Therefore, a detailed explanation regarding Bradley's (2001) study will be worthwhile for this review. Bradley (2001) estimated the effect of company marketing mix variables along with country effect variables on the supplier preferences of industrial buyers. The company effect was measured by 27 items that were subdivided in four categories, named as: product (wide range of products, high manufacturing standard, design excellence, compliance with technical specifications, quick to incorporate new technical developments, quick adaptation for buyers); price (good value for money, good discounts, good credit terms, competitively priced, use of non-price factors); advertising and communications (dissemination of new information, high quality information content, helpful and knowledgeable salespeople, truthful product claims, frequency of imaginative/creative advertisements); distribution and service (receive personal attention, good after-sales service, products' and spares' availability from stock, efficient order-processing system, good emergency service, adheres to delivery promises); and innovation (strong international reputation, knowledge of market and competitors, progressive technology, company's internal cooperation and coordination, professionally managed). The country effect was measured by 10 items named as: excellent international reputation; innovative manufacturing; produced from reliable materials and components; acceptable international technical standards; good value for money; competitively priced; free from

adverse exchange rate effects; knowledgeable and helpful salespeople; receive excellent after-sales service; and manufactured in professionally managed companies. The study collected data by personal interviews using a structured questionnaire with 60 final respondents. Considering the four top-ranked countries and their corresponding companies, a total of 240 cases were examined through analysis. For analysing the data, the study initially used mean and standard deviation, and also used correlation and discriminant analysis to explain relationships between dependent and independent variables. The study results showed that the largest supplying countries were UK and the USA, followed by Germany. The attitude towards countries was highest for the Netherlands (5.53), Germany (5.50) and Italy (5.16), and lowest for France (4.50) and Switzerland (4.49). Italian (4.92), US (4.86), and German (4.67) companies were the most favoured, while French (4.26) and Swedish (4.26) companies were the least favoured. All correlation coefficients had the expected positive sign and indicated the presence of relationships between constructs. Low correlation between country and company preference (0.12) indicated that the country effect might not be a powerful explanatory variable. The direct effects of product and innovation on company preference were significant ( $p < .01$ , while advertising and distribution were significant at 0.10 level). The relationship direction of all the constructs was positive as expected. Only two interactive relationships were worth mentioning: between advertising and country, and between product and advertising. Additional analyses of significance led to the interaction effect between product and advertising being dropped. The interaction between advertising and country was statistically significant, and the coefficients on the direct effect changed very little after the effect of interaction. The country effect parameter was proven to be very weak as the coefficients and significance of the direct effects changed very little and the interaction effects changed hardly at all. The weakness of the country effect also exerted the dominance of the company effect, as seen in the correlation results. Therefore, the buyers might not be

strongly influenced by the country variable. However, country association and interaction with the marketing mix variables, especially advertising, appeared to have considerable significance. The most parsimonious model showed that product (.33,  $p < .001$ ) and innovation (.25,  $p < .001$ ) exerted the most influence on company preference along with the interaction effect of advertising and country (.16,  $p < .05$ ) in terms of their coefficients and statistical significance. Although internal company factors were more important and served to enhance the country effect, the country effect by itself had a very weak influence on company preference, and one interaction variable (country and company advertising) influenced company preference.

Similar study settings were detected in Baldauf, Cravens, Diamantopoulos and Zeugner-Roth's (2009) study that investigated the impact of product-country image (PCI) and marketing mix elements on retailer-perceived brand equity (RPBE) and the consequent influence on brand profitability performance (BPP). Unlike Bradley's (2001) research, the Baldauf et al. (2009) study specifically considered PCI in measuring country impact. Moreover, Baldauf et al. (2009) did not adhere to the basic marketing mix elements (comprised of supplier image, price level, price deals and promotion) and did not consider the issues of delivery and service, which should normally be a crucial issue for brand image development and subsequent profitability performance. The PCI construct was measured by innovation, exclusivity, workmanship and external appearance. Retailer-perceived brand equity (RPBE) was represented by quality, loyalty and awareness; and Brand profitability performance (BPP) was estimated by relative profitability, realised margin and overall financial attractiveness. Data from 142 respondents were analysed by confirmatory factor analysis (CFA), path analysis and stepwise regression analysis. The study was estimated by using a 5-point Likert scale and a 7-point semantic differential scale. Among the marketing mix variables, supplier image ( $\beta = .33$ ) and promotion activities ( $\beta = .27$ ) were positively

associated with RPBE: price levels ( $\beta = -.19$ ) and price deals ( $\beta = -.22$ ) were negatively related to RPBE. The study findings showed that the relationship between PCI ( $\beta = .32$ ) and RPBE was statistically significant. In explaining the final outcome variable BPP, supplier image was positively influencing BPP in the presence ( $\beta = .21$ ) and in absence ( $\beta = .37$ ) of RPBE in the model thus indicating partial mediation through RPBE. The negative influence of price level on BPP was statistically significant in the absence ( $\beta = -.23$ ) of RPBE but was statistically insignificant in the presence of RPBE in the model, therefore, supporting full mediation. Full mediation was detected for three other relationships, namely, price deals  $\rightarrow$  RPBE  $\rightarrow$  BPP; promotion  $\rightarrow$  RPBE  $\rightarrow$  BPP; and PCI  $\rightarrow$  RPBE  $\rightarrow$  BPP. Therefore, the study delivered strong evidence that marketing mix and PCI antecedents were collectively mediated by RPBE linking to BPP.

One notable issue detected in both the studies (i.e. Baldauf et al., 2009; Bradley, 2001) was the use of the single COO construct. Bradley's (2001) 10-item country effect included variables related to overall country image and to the country's product-related and industry-specific image (i.e. PCI). Therefore, these 10 items did not capture the specific country-related impact on company preference. On the other hand, Baldauf et al. (2009) specifically estimated the impact of PCI on RPBE and subsequently on BPP. Therefore, academic research using the marketing mix framework along with COO in studies on the B2B buyer perspective has fallen short of using multiple COO constructs, which can be an avenue for future COO research.

### *2.2.3 Decomposed COO cues in single cue settings*

The popular decomposition of the COO construct by Chao (1993) addressed the reality of globally scattered production processes and the spread of multinational enterprises (MNEs). These two decomposed COO constructs (country of assembly [COA] and country of design

[COD]) have shown significant impact on consumer product evaluation. In the B2B space, Ahmed et al. (1994) first investigated the impact of these two COO constructs along with other external cues, named as brand name, price, warranty and delivery. Details of Ahmed et al.'s (1994) research, as a multi-cue study, have already been presented in this review. However, the other B2B studies that have investigated the same issue have been single cue studies, thus meaning that only country-related constructs have been considered in these studies.

Chetty, Dzever and Quester (1999) studied New Zealand (NZ) purchasing agents' quality perceptions of industrial products (component parts and equipment) that originated from different countries with regard to COD and COA. Quality perceptions of COO were measured in this study by COD and COA. The country blocs considered were developed countries (Japan, France, USA, Sweden, Germany, United Kingdom and Norway); newly industrialised countries (South Korea, Singapore, Taiwan and Hong Kong); and newly industrialising countries (Brazil, Mexico, India, Russia, Thailand and Philippines). The study analysed 230 respondents' data by ranking, a *t*-test and ANOVA.

With regard to COD for machine tools and component parts, developed countries were ranked around an average score of 4, newly industrialised countries were around 3 and newly industrialising countries were around 2.5. Considering COA for machine tools and component parts, similar ratings in average scores were identified among the group of countries. Of the newly industrialising countries, Brazil had slightly higher scores for perceived quality and COA for machine tools and for perceived quality and COD for component parts. Among the developed countries, Norway had the lowest score. All differences were significant at  $p < .05$  level. The study results illustrated that COO perception was still important in the decision making of purchasing managers.



Dzever and Quester (1999) investigated Australian purchasing agents' quality perceptions of products (component parts and equipment) sourced from a similar group of countries as reported by Chetty et al. (1999) with regard to COD and COA. The study measured quality perceptions by the nature of technology used in the product; the nature of training provided by the supplier; the product's ease of operation/ maintenance; and the degree of space utilised (ease of stock or installation) by the product. A 5-point Likert scale was used in the study to measure quality perception and data from 277 respondents were analysed by employing descriptive statistics, correlation coefficients and a paired sample *t*-test. The study results showed that quality perceptions were directly influenced in a consistent fashion by both COD and COA. Although a pattern was still noticeable, the ranking under all the quality indicators for COD and COA was not consistently higher for some countries and lower for other countries. The indicator-wise evaluation showed that most of the developed countries were highly ranked for both COD and COA in terms of technology used, training provided and ease of operation/maintenance under both the categories of equipment and component parts. The majority of the newly industrialised and newly industrialising countries were well ranked in terms of the space utilised under both the product categories and dimensions. Homogeneity within the three groups (industrialised, newly industrialised and newly industrialising) was not supported by the study findings. Nonetheless, between the groups, heterogeneity was evident due to the statistically significant difference for all three pairs considering both the dimensions (COD and COA) and product categories (component parts and equipment). Differences among the three groups indicated some sort of country stereotype influence on the quality perceptions of the purchasing agents.

Quester, Dzever and Chetty (2000) compared the quality perceptions of purchasing agents in Australia and New Zealand with products that originated from 17 different countries with regard to COD and COA, in a study similar to their earlier reported studies (Chetty et al.,

1999; Dzever & Quester, 1999). The study also measured quality perceptions in a similar way to their study as reported in Dzever and Quester (1999). Data from 277 Australian purchasing managers and 250 New Zealand purchasing managers were analysed by mean, standard deviation and correlation coefficient. Results clearly showed that quality perceptions were directly affected by source country information for both Australian and New Zealand samples and that the results were identical in terms of COD and COA. Moreover, the established industrialised countries' rankings were consistently higher than their newly industrialised or newly industrialising counterparts. Some notable differences between the perceptions of the two samples were that Japan was ranked first by Australian respondents as both COD and COA, but was ranked third for COD and second for COA by New Zealand respondents. France, placed second by Australians as COD and third as COA, was ranked sixth in the case of machine tools for both COD and COA by the New Zealand sample, and fifth in the case of component parts, again for both COA and COD. Such perceptions may reflect more anti-French feelings (due to nuclear tests in the Pacific) among New Zealand respondents than were felt by Australian respondents. In the eyes of Australian respondents, India was ranked higher than another three newly industrialising countries (Russia, Thailand and Philippines) for both COD and COA for machine tools as well as for component parts. The overall ranking as well as the magnitude of the ranking differed between the two samples. For Australian respondents, the top ranking only exceeding the bottom ranking by 1.794 in the case of COD and by 1.835 in the case of COA, whereas New Zealand respondents were more discriminating, showing a difference of 2.18 for COD and of 2.05 for COA. Similar patterns were observable for component parts. The results of correlation coefficients between each country and for each of the four quality indicator variables for machine tools showed that the similarity in significant correlations were observable from both countries for technology, training and ease of operation/maintenance with regard to developed nations for COD and

COA. However, significant correlations were identified for developing countries' COD and COA of the space utilised from the Australian sample but not from the New Zealand sample. Results of the same analysis for component parts showed that the similarity in significant correlations was identifiable from both countries only for the technology attribute of developed nations and the associated COD and COA. Another type of similarity in significant correlations was seen from both countries' samples for COA of developed nations' training and ease of operation/maintenance but not for COD (only significant from the Australian sample). Moreover, significant correlations were identified for developing countries' COD and COA of space utilisation from the Australian sample but not from the New Zealand sample.

Insch (2003) examined the COO effect on product quality by using COD, COA and COP (country of parts manufacture) by measuring product design quality; parts quality; assembly quality; manufacturing quality; conformance to product design specifications quality; other quality biases; and overall product quality. The study used several data analysis techniques, namely, the Q-sort method, factor analysis, mean ratings, multivariate analysis of variance (MANOVA) and ANOVA. In addition, the study used a multi-country sample from both USA (330) and Mexico (187). Results showed that the influence of COD was significant for the electric motor among the US sample ( $p < 0.01$ ), but not for the Mexican sample. Conversely, COD was significant for the Mexican purchasing managers for the power relay ( $p < 0.05$ ) but not for the US managers. Regarding COA, both US ( $p < 0.05$ ) and Mexican ( $p < 0.01$ ) samples were significant for the electric motor and power relay. The effect of COP was significant ( $p < .001$ ) for both the products and both the samples. None of the interaction effects were significant at .05 level. According to one-way ANOVA test results, all the quality ratings were significantly ( $p < 0.01$ ) influenced by COD for the electric motor as observed by US purchasing managers but none were considered significant as observed by

Mexican purchasing managers. Virtually the opposite was true for the power relay, as all quality ratings were significant ( $p < .10 - .01$ ) except for parts quality from the Mexican sample and none from the US sample. The effect of COA for the electric motor was significant ( $p < .10 - .01$ ) for assembly quality (both the samples) and manufacturing quality (the Mexican sample only). Concerning the power relay, the influence of COA was significant ( $p < .10 - .01$ ) on the five quality measures (overall quality, assembly quality, manufacturing quality, conformance quality and other quality aspects) from the Mexican sample, whereas only the assembly quality was significant ( $p < .10$ ) from the US sample. The impact of COP associated with the electric motor was significant ( $p < .05 - .01$ ) on all the quality dimensions except for design quality as perceived by the Mexican managers. However, for US managers, the significant ( $p < .10 - .01$ ) impact was on overall quality, manufacturing quality and parts quality. Concerning COP for the power relay, all the quality dimensions were significant ( $p < .10 - .01$ ) except for design quality according to both samples, and design quality was significant only for the Mexican sample. In measuring the country-specific image based on the raw mean ratings of the US sample, the ascending sequence of countries' positions for manufacturing quality were Japan, Germany, USA, Malaysia, China, Mexico and Brazil; and regarding design quality, the sequence was Japan, USA, Germany, Malaysia, China, Brazil and Mexico. The sequence from the Mexican sample for manufacturing quality was Japan, Germany, USA, Mexico, Brazil, Malaysia and China; and the sequence for design quality was Japan, Germany, USA, Mexico, Brazil, Malaysia and China.

Studies that considered the decomposed COO image revealed one straightforward finding which was that purchasing managers' perceptions of COD, COA and COP were highly correlated with the development level of the country. In other words, the higher the

development level of a country, the higher was the quality perception of that country regarding COD, COA and COP.

#### *2.2.4 COO studies based on personal interviews*

The paucity of studies in B2B-centric COO research has been somewhat ameliorated by a handful of interview-based studies. All these studies have unearthed insightful details of COO significance from the B2B perspective with multi-faceted real-world relevance. All these personal interview-based studies are presented below in this review with a detailed explanation.

Using a semi-structured survey instrument in an interview setting, Keown (1985) conducted a very insightful study that presented the findings not as a traditional academic paper but rather explained it from the perspective of practising international purchasing managers. The absolute dearth of such real-world focused studies may have led to the strength of the relevance debate of COO research in recent times. In Keown's (1985) study, the author examined the perceptions of 28 Asian importers (from Japan, South Korea, Taiwan, Singapore and Hong Kong) about US exporters with some comparative evaluation to Japanese and European exporters. The study findings showed that US exporters' product design was considered poor in the areas of aesthetics, functionality and adaptability compared to that of Japan. Regarding product quality, mixed reactions were observed. Some considered that US product quality was superior/equivalent to that of Japanese and European products, and some considered it as worse and deteriorating. US food products received good ratings despite complaints about quality control. Products from the USA were perceived as more durable. Regarding packaging, US packaging was considered as less attractive and less creative than that from Japan, and also had less shelf life, was less protective in terms of handling product damage during transportation and product information was unavailable in

the local language. In terms of registering brand names in the Asian market, US exporters were reluctant as they sought to avoid their products being counterfeited. Exporters from the USA were rated as very poor in new product development, modification and adjustment to local system requirements. In pricing, US exporters were rated rigid and took a stance of ‘take it or leave it’ whereas Japanese and European exporters were more flexible. In addition, US exporters were less price-competitive in the Asian market, changed prices frequently, kept quantity discounts level and spare parts costs high, and were suspicious of the Asian practice of bargaining over prices. Exporters in the USA were also rated as unsupportive on distribution issues. They sold products to competing competitors, created problems of parallel imports, specified a FOB (free on board) price instead of a CIF (cost insurance and freight) price, did not support the importer with the lowest possible cost of transportation to the sea port, and appointed multiple agents in a small market. Exporters from the USA expected that the importer would assume all the promotion costs whereas Japanese and European exporters include an allowance for promotion when negotiating the price. The US sales incentive scheme was not acceptable to Asian culture: in Asia, they also did not take up the opportunity of using highly acceptable American advertisements dubbed in the local language owing to the promotion responsibility being left to the importers. In the case of regulatory matters, US companies were not prompt in preparing documents that helped their importers to get licences from the government; US government documentation was detrimental to trade; and approval for high technology products took a long time. Regarding buyer–supplier interaction issues, US manufacturers visited once a year which seemed less to Asian importers. Their selection of representatives indicated that they were serious about the export business, but these representatives were strictly oriented to legal documents or contracts and were not focused on building informal and long-term relationships. In addition, they were slow in

giving feedback, and did not follow up an enquiry whereas Japanese exporters would acknowledge the request, promise a date and ensure that they fulfilled that promised date.

Turnbull (1985) studied attitudes of purchasing executives from Western Europe towards British suppliers. This article formed part of a large research project in which 416 purchasing executives were personally interviewed. The variables considered for rating British suppliers were: customer orientation; technical competence; commercial competence; delivery performance; after-sales service; new product technology; product quality; and like dealing with. The study analysed the rating scale data by weighted average scoring and graphical plots. Regarding the overall image and reputation of industrial products, Germany (average score of eight criteria 97.63) was well ahead of both France (57.88) and UK (29.75) in all evaluation criteria. Each country's first three and last three attributes were: Germany (first three: technical competence, commercial competence and product quality; last three: customer orientation, after-sales service and new product technology); France (first three: commercial competence, technical competence and like dealing with; last three: new product technology, delivery performance and customer orientation); and the UK (first three: commercial competence, technical competence and like dealing with; last three: delivery performance, new product technology and after-sales service).

Khanna (1986) attempted to collect data through a mail survey but later moved towards personal interviews owing to a low response rate. He analysed empirical evidence on COO perceptions about Asian developing countries (South Korea, Taiwan and India) and used basic marketing mix elements as the assessment criteria for the supplier country. The antecedents were price (price competitiveness, price reasonable for value, price range offered, and discounts offered); product (product quality, creativity and invention, fashionability, and technology); promotion (emphasis on advertising and publicity, market exposure of products, sales promotion and brand name recognition); and service (delivery schedules, supplier

reliability, business communication speed and terms of payment). Including both sides of the coin, Khanna (1986) considered responses from a 93-foreign/importer (Japan, Thailand, Singapore and the Philippines) sample and a 140-Indian/exporter sample. The data analysis was done through mean value ranking. The study's findings showed that country image was considered detrimental for the success of Indian exports. In the case of new foreign buyers, 76% of Indian exporters faced this negative attitude; however, this was 5% in the case of existing foreign buyers. Overall, 51% felt that the COO image was helpful for export success. In the same way, most importing countries' respondents (87%) felt that COO was very important for new clients. Regarding existing clients, 92% of respondents felt that COO as not so important. This was an important finding as the significance of company over country was unearthed by this study. Among the Indian importers, 94% believed that their company image was positively associated with their export success. Concerning overall image, Japanese products usually rated the highest with an overall index value of +64.70 (+63.70 by Japanese respondents and +65.26 by respondents from three Association of Southeast Asian Nations [ASEAN] countries) on a scale of +100 to -100. Taiwan was ranked second with an index value of +23.28 (+14.12 by Japanese respondents and +27.71 by respondents from three ASEAN countries). South Korea stood third with +16.22 (+13.70 by Japanese respondents and +17.47 by respondents from three ASEAN countries); and India was fourth with -3.58 (-0.28 by Japanese respondents and -5.35 by respondents by three ASEAN countries). In the choice of country ranking, 95.7% of respondents stated that Japan was their first choice. For their second choice, 46.2% of respondents chose Taiwan while 31.2% chose South Korea. For their third choice, 32.2% chose Taiwan and 30.1% chose South Korea, while for their last choice, 46.2% chose India.

Yavas, Cavusgil and Tuncalp (1987) studied how Saudi importers evaluated suppliers from the USA, Japan, England and Taiwan. The antecedents considered by this study were: price;



suitability to local market; quality; style/appearance; repair/maintenance service; order placement; middlemen's willingness to carry; promotion; suitability to expatriate segment; warranty/guarantee; preference by local consumers; timely delivery; terms of payment and credit; dependability for long-term supply; past experience; preference by expatriate consumers; transportation cost; and financial risk. Using personal interviews as the data collection method, the study measured the variables in a 5-point Likert scale and analysed the data by mean, two-way analysis of variance and a multiple comparison test. Results of the study showed that Saudi importers evaluated Japanese products most favourably. Japanese suppliers gained the top spot among the compared countries for variables including: advertising support; attractive styles and appearance; ease of placing order; and repair and maintenance service. Other areas of strength associated with Japanese suppliers were liberal credit policies; timely delivery; reliability for long-term supply; retailers' willingness to carry Japanese products; suitable for local and expatriate consumers; and little financial risk in importing Japanese products. The only variable where Japanese products ranked low is product quality. The image of US suppliers was closely behind that of Japanese suppliers according to the evaluation of Saudi importers. Suppliers from the USA received the highest rating in only two areas, namely, product quality and warranty/guarantee. In most areas, US suppliers' rankings were immediately behind the Japanese rankings for the variables named as: repair and maintenance service; attractive styles; convenience in order placing; preferred by local and foreign consumers; and retailers' willingness to offer. Two important disadvantages of US suppliers were high price and high transportation cost. Although price was an important consideration in purchase decisions, US suppliers' high price was at least consistent with their high quality ratings. Despite the favourable image historically enjoyed by British exporters in the Middle East, the study's findings told a different story. With regard to most variables, British suppliers were ranked as third choice among the four

countries considered. Only in product quality did they rank second. British suppliers ranked last in credit and payment terms and in retailers' preference to carry British stock. Taiwanese suppliers ranked lowest in 13 of the 18 characteristics. The most positive remarks for Taiwanese suppliers were for low price and low transportation cost. The advantage of low transportation cost, however, may not be beneficial if an exporter was poorly performing in timely delivery, as was reflected by Taiwanese exporters in this study. As a consequence, Taiwanese suppliers were the lowest ranked in terms of being a dependable source of long-term supply. Significant dissimilarities were detected between three pairs of country profiles, namely, Japan vs. Taiwan; USA vs. Taiwan; and Japan vs. England. On the other hand, relatively similar profiles were found between USA vs. Japan; England vs. Taiwan; and, to a lesser extent, USA vs. England.

Kaynak and Kucukemiroglu (1991) studied Chinese industrial buyers' perceptual differences about the quality of products sourced from different regions. Data were collected from 96 officials representing public sector enterprises and joint venture multinationals through personal interviews with a self-administered questionnaire. Mean ranking and pairwise comparisons were used as data analysis techniques. Chinese industrial buyers gave their highest preference to North American products; European countries received the second highest ratings except for electronic and telecommunications equipment (for which Europe tied with Asian countries); and socialist countries ranked lowest in every aspect except for iron and steel products (where they tied with Asian countries). Managers younger than 45 years old rated Asian suppliers more favourably than their older counterparts except for industrial equipment and technology, and iron and steel products. European vehicles and motorcycles, and iron and steel products from socialist countries were favoured by managers in the age group younger than 45, while managers belonging to the age group 36–45 viewed vehicles and motorcycles from former Soviet countries more favourably than other age

groups. Vehicles and motorcycles, iron and steel products, and products in general from North America are more favoured by managers younger than 35 years. Vehicles and motorcycles from Asian countries, and iron and steel products from former Soviet nations are more preferred by male managers than by female managers whereas the latter favoured industrial equipment and technology products from North America more than male managers. Electronic items and iron and steel products from North America were more preferred by the high-income group managers. General products from Asian countries were favoured more by the low-income group managers. Products in general from Asia, Europe and North America were more positively rated by less experienced managers. In addition, electronic products from Asian and North American countries, vehicles and motorcycles from all regions, and industrial equipment and technology products from Asian countries were more preferred by less experienced managers. Somehow surprisingly, industrial equipment and technology products from former Soviet countries were more favoured by managers with higher levels of experience. Vehicles and motorcycles from European countries and North America; electronic products from Asian countries and North America; iron and steel products and products in general from North America; and industrial equipment and technology products from Asian countries were more preferred by highly educated respondents. Among the developed countries, the quality rating ranking appeared in ascending order as Japan, USA, Singapore, Hong Kong and Australia. Among the countries with a dissimilar political environment, the product quality rating by source country appeared as Germany, Hong Kong, Singapore and Australia. Within a similar political environment, the USSR's product quality rating seemed a little higher than that of Singapore. Regarding familiar countries, the quality ratings sequence was Japan, Hong Kong and Singapore while among unfamiliar countries, Germany rated a little higher than Japan, and France rated a little lower than Hong Kong.

Another well-regarded study in the B2B domain looked at food products and relevant COO issues surrounding food imports. Knight, Holdsworth and Mather (2007) interviewed food manufacturers, importers, distributors or food industry experts from Germany, Greece, Italy, the Netherlands and UK. The study interviewed food distributors to reveal the following key issues: factors considered in choosing source countries; most important aspects considered about sourcing country; product-country image (PCI) in food purchase decisions; and the elements of food category-specific PCI. The authors linked the components of the price-perceived value model that led to the purchase decision in relation to imported foods. The study outcomes showed that 'quality in relation to price' was the major concern. The country's price consciousness differentiated the price-quality judgement (not bad quality but certain quality/more quality at a higher price). Cleanliness; the country's reputation for microbiological problems; regulation and external certification; reputation of the government and corporate intermediaries; capacity; quality maintenance; credibility of sourcing company itself; quality control visits by buyers; and visual perception demonstrated by appearance, colour and packaging were major components of forming trust in a supply source. Varied perceptions regarding the importance of COO were detected among the respondents. There was a strong opinion that COO was irrelevant, especially in food service and manufacturing. Another compelling view was that trustworthiness of supplied products and their quality were highly associated with the supplier company not the supplier country. Product-specific country image was a well-accepted criterion for sourcing as well as for the consumer purchase decision. Industrial buyers also signalled the reality of consumers' limitations in knowing COO information owing to multiple source of different ingredients (COO is often lost before products reach the end-consumer) and for incorrect knowledge about COO (Dutch people consider apples as local, although they are bought from South America).

Another food import sourcing-related study was conducted in the face-to-face interview setting in China. Knight, Gao, Garrett and Deans (2008) also used a semi-structured questionnaire with pre-selected topics to guide the interviews. The study objectives were to reveal major risk factors regarding food imports; the importance of COO in food purchase decisions; relative importance of COO compared to other extrinsic cues; COO as an indicator of quality and trustworthiness; and the association of symbolic value with a particular COO or country of brand (COB). The qualitative outcome of the study indicated that price was most frequently mentioned as the major determinant. In addition, Chinese consumers were price-sensitive and, therefore, imported beef faced trouble with competition from low-cost local beef. According to the Chinese B2B food managers, price sensitivity did not mean low price but the value that it generated was deeply associated with Confucian philosophy. They actually asked for better quality with a lower price: price was comparatively important but must not supersede quality which was what retained customers in the long run. In addition, younger people were interested in paying a higher price for better quality: shopping in prestigious supermarkets with higher prices and the money-saving tendency of shopping in crowded marketplaces were observed. Chinese consumers felt that while paying a higher price for a product was certainly a waste of money, at the same time, cheap products could never be good. Some consumers felt it was better to choose the expensive item not necessarily for better quality but as it certainly ensured social safety or 'face saving'. Consumers' lack of knowledge persuaded them to rely on price as an indicator of quality and a pricey purchase would compensate as they could show off among their social group as being in the prestigious product segment. Imported products delivered a better image and more respect: presenting imported gifts increased social standing despite the giver's inability to purchase and use that item for himself or herself. With regard to important food quality attributes, taste was considered as a more important determinant of quality than health

concerns, and packaging was another important determinant of quality. Consumers in China purchased famous brands despite being unfamiliar with them: such behaviour was for status and prestige but not due to knowledge about the brand's origin.

Chinese consumers are considered as the world's most loyal customers. Products made by joint ventures have a local image and have lower prices. Brands that produce products for a long time in China are considered as local (*Kraft*). The existence of counterfeit brands was also welcomed and consumers purchased these items for the social value sacrificing the risk of buying a fake product. The term 'imported' works as a 'halo brand'. Imported food products carry higher social status for consumers. Widespread mistrust in the Chinese production process and low social trust in China has allowed consumers to think that products with a brand origin are much better than locally manufactured products. The term 'imported' is evaluated along with the packaging quality. Moreover, 'imported' means fully imported to consumers and they do not think that it could be half-imported. Locally produced foods need not pass through stringent quarantine procedure, as do foreign food products: this procedure has also elevated the acceptability of foreign food. Imported foods from developed countries are perceived with a higher reputation for quality than those from less developed countries. However, Japanese products, although from a developed country, are not welcomed by Chinese buyers owing to animosity with Japan which originated from the colonial time. The sophisticated traceability system of developed countries ensures a high dependability on developed countries' products. No significant differences are made between developed and developing countries. Food-related scandals in a developed country are seen as a 'one-off' incident and are forgiven too quickly but the same occurring in a less-developed country is considered as a natural happening. Sellers have capitalised on this favourable attitude towards developed countries, placing false stickers on local produce. The widespread availability of counterfeit products forces customers to rely on retail outlets or supermarkets. Moreover, one

can sue supermarkets if quality problems are detected, which is not possible with low-cost traditional shopping options. In the case of COO, buyers are not able to determine from where the product has originated, especially in the case of food ingredients. Chinese people like Western-style foods but do not know the actual origin of these foods. Image association with the source country is weak in the Chinese market. Raw food materials are imported from several countries and the country association is later lost when they are transformed into manufactured products. Regarding wine, the country image is strong. Nestlé is not associated with Switzerland: it is just sold for the taste and flavour that consumers associate with Switzerland. People have very limited knowledge about foreign products and the associated country of origin. Country-associated decoration influences people as products are differentiated from those available in local food service outlets.

In B2B-centric COO research, country- and company-related issues mostly overlap with one another; however, those that are a purely country-level concern for managers are much less reported. Oke, Maltz and Christiansen (2009) have conducted one such study that revealed country-level concerns in relation to choosing suppliers from developing economies. The personal interview-based study included six firms: three lead manufacturers (from Scandinavia, UK and USA), one intermediary (from Scandinavia), and two suppliers (from Estonia and Mexico). Sourcing criteria indicated by the investigated firms were: cost (logistics cost, labour cost and material cost); physical proximity (supplier nearness, ensure supply for own facility offshore, availability of materials, logistics cost related to distance and closeness to market); quality (quality of raw materials); reliability (referrals from customers, work experience with other manufacturers, relevant external certifications, competence and work ethics, historical delivery performance, supply risk, risk assessment, response time, specialisation, service and delivery reliability); cultural proximity (similarity in humour); and the political factor (political situation). The study findings showed that the

primary driver for global sourcing was cost, and that cost reduction would be the key consideration for years to come for choosing suppliers from developing countries. Two often cited issues were labour cost and logistics cost. Supplier selection based solely on cost might be counterproductive. Buyers' primary preference went to nearby suppliers owing to less transportation lags and the low logistics cost due to proximity. Although geographic distance was important to all the companies interviewed, respondents also emphasised the accessibility of suppliers and ease of face-to-face interaction. With regard to interaction, proximity was measured by time not distance. Cultural proximity was considered by respondents basically in terms of the similarity in humour and having a common language. Although cultural proximity could generate a low transaction cost, it could also be detrimental for the supply chain due to a poor work ethic and lack of sourcing experience. The quality and reliability criterion was explained as the ability to deliver correctly what is required on time or as promised. This was considered as a secondary criterion for sourcing from developing countries. However, lead manufacturing firms valued referrals from their own customers and having a working history with large manufacturers from developed countries. In addition, complexity of components associated with required expertise, political instability and border delays were related to delivery times and external certifications in portraying consistency with commitments. Respondents frequently cited the push to buy from Far East suppliers in order to achieve quality and reliability which, in turn, necessitated accepting higher logistics costs and, sometimes, low cultural proximity. Unreliable delivery and higher transaction costs were often the result of political instability.

As was done in a well-connected study by Oke et al. (2009), Maltz, Carter and Maltz (2011) sought to identify the criteria that buying firms from developed countries considered in choosing and locating suppliers from low-cost regions. The study was firstly conducted by personal interviews with 15 managers to identify the important criteria. This was followed by



an online survey ( $n = 101$ ) to collect data for quantitative analysis. Interview locations were the USA, UK, Scandinavia and Mexico, while North America, Western Europe, Asia, Middle East, Australia and South America were the survey locations. The study analysed data by mean, a two-sample  $t$ -test and perceptual mapping. Attributes considered by the B2B buyers when purchasing from low-cost regions were: work ethic; security of intellectual property; attraction of local market; reliably meet customer requirements (deliver complete orders on time); transportation reliability (consistency of lead times); transportation cost (cost from source to buyer's location); government support for business; political stability; flexibility (ability to react to changes in requirements); predictable border clearance times; government corruption; overall attractiveness for sourcing; and labour cost. Results from the mean scores on each attribute showed that no region was the clear winner as only one statistically significant difference was detected from the highest scoring regions. Although Coastal China ranked highest on six attributes (work ethic, local market attraction, reliability, transportation reliability, government support, and flexibility), only the score for local market attractiveness was statistically different ( $p = .05$ ) from the next highest region. Inland China and Less Developed Asia (Vietnam, Cambodia, etc.) were tied on labour cost; Mexico and Urban India were almost equally rated on intellectual property, political stability, border clearance and corruption; and Mexico and Coastal China were fairly equal on transportation issues. The reliability and predictability criterion meant meeting customer requirements and meeting delivery deadlines. In this criterion, Coastal China and Urban India were at the top, while Russia and Less Developed Asia were seen as much more unpredictable and risky locations. Both parts of China, Coastal and Inland, scored very well on labour cost but badly on intellectual property safeguards, while Mexico was performing poorly on labour cost but very well on safeguarding intellectual property. The trade-off between reliable and risky sourcing accounted for around 35% of the variance explained in the study: the second dimension (the

trade-off between cost and intellectual property protection) accounted for nearly 16% of the explained variance. These results explained that purchasing managers were more concerned about reliability when sourcing from developing countries. The reliability axis included meaningful attribute vectors, as flexibility, political stability and reliable production contributed to internal order filling capability; and transport cost, transport reliability, border crossing predictability and government corruption contributed to consistent transportation times. Naturally, the ideal vector of a region would reflect high reliability and low labour cost. Coastal China was very close to the end of the average for the ideal vector and Russia was one of the least desirable regions. Among the three triangular regions representing the large number of ideal vectors in the study, 43.21% of respondents favoured cost and reliability with a higher focus on cost, with this indicating that the desirable sourcing regions were Coastal China, Inland China and Less Developed Asia. Another 23.46% of respondents were focused on cost and reliability of whom more were skewed to reliability and thus were likely to prefer Coastal China as the strongest sourcing destination. Another group with 23.46% of respondents had ideal vectors focused on reliability and the protection of intellectual property (but more focused on reliability) and might look at Urban India as the preferred source. Overall, respondents preferred to buy from regions characterised by high reliability with low labour costs. However, there was another group that sought reliable delivery but had higher concern with protecting intellectual property than they had for lowering labour costs, with Mexico falling into that group.

The next interview-based study by Insch, Prentice and Knight (2011) studied the importance of COO and the relevance of 'buy national' campaigns in purchase decisions made by retail buyers. The study hypothesised that retail buyers used intuitive judgements based on their experiential system in making their purchase decisions, and that they used a categorisation approach, considered COO as an unimportant factor and might employ COO as a 'specific'

summary construct. The study conducted face-to-face in-depth interviews with a semi-structured questionnaire using pre-selected topics. In all, 16 interview participants represented large full-service and discount supermarket chains, sporting goods and home wares chains in New Zealand. Factors that retail buyers considered in making purchase decisions on their product range were financial return (profit/margin); above-the-line marketing (advertising and promotion); below-the-line marketing (opening deals, marketing spend in-store and merchandising support [considered most important in the product launch]); fit (product lines and in-store variety, competition, store size and space, store location and demographics); indication of success (success of similar products, range in other stores and host support categorisation); price (customer perception of price [another important factor along with profit or margin]); supplier characteristics (company history, reputation and size, relationships and experience, dedication of sales representatives, logistics performance and brand); visual appeal (appearance and packaging); uniqueness (fill a gap and category growth); and health and safety (meets regulations and labelling requirements). Only one respondent out of 16 explicitly mentioned COO as an important evaluative factor in decision making and considered COO as an indication of supplier reliability. Responses of the other 15 buyers on COO (after prompts) provided mixed reactions. Most respondents might not consider COO as an important product cue or they placed greater significance on other attributes. In responding from the perspective of consumers, as gatekeepers of consumer choice, retail buyers stated that a small group of consumers could place higher preference on COO for particular product categories (wine, chocolates) but for the larger majority, COO was considered unimportant. Consumer awareness about COO (as in a 'buy national' campaign) was mostly a result of media presence which may fade as the media presence reduces. Consequently, the effect of 'buy national' campaigns on the product evaluation might be very negligible in the long term. Problem areas in distinguishing COO

were the reliability and availability of appropriate labelling and lack of mandatory COO labelling in New Zealand. This situation was an obstacle in using COO as a product evaluation criterion.

Respondents of the interview-based studies also recognised the importance of the marketing mix elements. Price, quality and price relative to quality or realised value from a product were considered as major driving forces behind purchasing from international sources. Delivery and service were another marketing mix-related issue repeatedly indicated by interview respondents. Evidence from these studies also showed the association of higher quality perception with the higher development level of a country. More specifically, food-related import sourcing was highly associated with the country's regulatory and quality standards which were perceived as being higher in developed countries. The interview-based studies explicitly recognised the significance of company over country in international sourcing, a conceptual appropriateness that has to date been neglected in COO research, with a few exceptions. In addition, the effectiveness of a 'buy national' campaign or emotional attachment to locally produced sources was considered to be very negligible on product evaluation in the long term. However, the significance of product-country image (PCI) was also well evidenced in particular product categories. Studies often revealed the primary preference was for nearby suppliers owing to less transportation lags and low logistics cost due to proximity. Not only in the personal interviews but also in the survey-based studies, the issue of geographic distance was often termed as an important concern for international sourcing in ensuring the accessibility of suppliers and the ease of face-to-face interaction. In international sourcing, interaction and proximity are measured by time not distance. Another proximity concern was cultural proximity that could be explained in terms of common language, humour and other cultural characteristics, which usually could result in a low transaction cost. Both the proximities (geographic and cultural) were purely related to the

country and could have a significant impact on international purchase behaviour. In addition, although reliably meeting customer requirements (delivering complete orders on time) was a company responsibility, it substantially depended on the country's transport infrastructure and political stability. The significance of country-related attributes was also relevant for the: security of intellectual property; transportation reliability (consistency of lead times); transportation cost (cost from source to the buyer's location); government support for business; political stability; predictable border clearance times; government corruption; etc.

#### *2.2.5 COO studies related to imports*

Ghymn (1983) studied the determinants of import decisions by US managers and also identified differences in important sourcing criteria between Western European countries and least developed countries (LDCs). The two broad categories of import decision variables were: (1) product-oriented variables (brand recognition, product quality, price, product safety, marketability based on domestic demand, product style/feature, packaging and product uniqueness); and (2) service-oriented variables (timely delivery, dependable long-term supply, ordering/shipping procedures, transport cost, payment method, length of association and product promotion). Most of these variables were related to marketing mix elements: the exception was those which focused on relationship issues. The study collected data with a structured questionnaire survey, which were analysed with descriptive statistics and multivariate discriminant analysis. Respondents from the USA sequentially ranked import decision variables as: timely delivery; price; dependability of long-term supply; transportation; ordering; and shipping procedure. Service-oriented variables (mean score 3.57) were considered more important than product-oriented variables (mean score 2.91). The overall discriminant model showed that import decision variables differed significantly between sourcing by Western European countries and sourcing by LDCs. Major contributors

to the differences between the groups were ranked, according to the beta coefficient value, and appeared as price ( $\beta = .691$ ); timely delivery ( $\beta = .637$ ); dependability for long-term supply ( $\beta = .504$ ); transportation cost ( $\beta = .422$ ); quality ( $\beta = .384$ ); brand recognition ( $\beta = .351$ ); and ordering/shipping procedure ( $\beta = .247$ ). Importers from LDCs relied more heavily on price; dependability for long-term supply; transportation; and timely delivery. In contrast, importers from Western Europe placed more importance on variables such as brand association, quality and, to some extent, product style/feature.

Ghymn and Jacobs (1993) conducted another study based on similar settings to those used earlier by Ghymn (1983). This study (Ghymn & Jacobs, 1993) revealed the purchase decision variables considered by Japanese import managers and how those variables differed from the purchase decision variables of US purchasing managers. An additional variable category added to Ghymn and Jacobs' (1993) study was legal or regulation variables (home government laws, host government laws). The data collection method was a mail survey and data were analysed by descriptive statistics and ANOVA. According to the results of the study, the most important concerns for Japanese importers were product quality rated the highest followed by timely delivery, price and dependability of long-term supply. In contrast, the US respondents sequentially ranked timely delivery, price, dependability of long-term supply, transportation, ordering and shipping cost. The sequence of the least important variables for Japanese importers was ranked as: promotion help from suppliers, product uniqueness, length of association, payment method and packaging. For their US counterparts, the sequence of the least important variables was ranked as: product safety, promotion help from suppliers, brand name reputation, product uniqueness, product style/feature/technology and packaging. Results from the composed measures (product-oriented and service-oriented components) showed that Japanese importers placed significantly higher importance on product-oriented components; however, the opposite (service-oriented factors) was true for

the US managers. The statistically significant group differences in the issues were identified as: timely delivery being more important when importing a large import volume; home government regulation was of more concern for large importers; price influenced indirect importers more whereas direct importers were more concerned with the payment method; and managers making more overseas import trips was considered less important than brand reputation. The study also identified the problem areas of importing as indicated by the Japanese importers which were: quality control of product; lack of dependable suppliers/distributors; timely delivery; communication problems between importers and exporters; lack of suppliers' effort to satisfy local market and supplier indifference; price/exchange rate; lack of post-purchase service; Japanese import regulations/laws; and transportation/distribution costs.

In similar settings, Ghymn, Liesch and Mattsson (1999) assessed the importance of import decision variables among Australian small and medium enterprise (SME) importers. The antecedents, survey procedure, type of questions asked and data analysis tools in this study were similar to those in the earlier study of Ghymn and Jacobs (1993). The study (Ghymn et al., 1999) reported that the most important import decision variables were: product quality; long-term dependability of export suppliers; product style/features; price and timely delivery, whereas trade laws/regulations of the exporter country were the least important factor. The results of group variations showed that those who were less experienced in import business, had less overseas trips, and mainly imported consumer products were more concerned about packaging for direct merchandise. Importers who had less overseas trips and mainly imported consumer products were more concerned about packaging for transit safety. Large volume importers were more concerned about brand name reputation, whereas consumer product importers were more concerned about the local duty and tariff structure. Australian importers considered several variables as impediments to importing. These variables were identified as:

timely delivery; exchange rate changes; estimation in demand change; lack of information about suppliers; import financing and payment conditions; product quality control; transportation/freight costs; availability of new products and sourcing; competition/price; minimum quantity order requirement; need for supplier continuity; quality inconsistency; tariffs and duties; country of origin and quality perception; language barrier/communication; custom clearance/paperwork; and lack of technical support by suppliers. Among these, the most important impediments were timely delivery, exchange rate fluctuations and estimation in demand change.

Overby and Servais (2005) also studied international purchase behaviour by Danish manufacturing firms that were categorised as small and medium enterprises (SMEs). Data from 105 respondents were analysed by mean, percentile, ANOVA and the  $\lambda^2$  test. Antecedents related to choosing foreign suppliers were: lower price; better quality; better reliability of delivery; better lead time; more amenable to negotiation; better for the environment; and better geographical location. The profile of the importing activities showed that the proportion of suppliers belonging to different regions were Nordic countries (81%); Germany (85.7%); UK (59%); rest of Europe (76.2%); and outside Europe (46.7%). Firms with a local orientation (n=30) were sourcing from nearby and culturally close markets. European-oriented firms (n=30) sourced locally, from the UK and from the rest of Europe. Globally-oriented firms (n=45) sourced locally, from Europe and from the rest of the world. Price and quality were considered the most important motives driving the buyers' choice of suppliers. Reliability of delivery, better lead time and negotiation were considered as moderate motivators, and the remaining issues (better environment and better location) were perceived to have very little influence upon the decision. Firms placing a high level of significance on the source product were more likely to purchase from abroad, and choose suppliers that could ensure reliable delivery and maintain a stronger relationship and more



frequent contact with them. The ANOVA test results revealed that quality was rated as more important for sourcing machinery ( $p = 0.003$ ) than for products for resale and raw materials. However, with regard to components, quality was considered relatively non-contributory in choosing a supplier. In addition, high import-intensive firms placed greater importance on product issues ( $p < .01$ ) and the supplier relationship ( $p < .001$ ) than low import-intensive firms. Respondents indicated the problem areas in dealing with foreign suppliers were: negotiations in a foreign culture (1%); lack of knowledge of trade regulations (0%); negotiations in a foreign language (0%); lack of knowledge of foreign business practices (0%); distance to the supplier (3%); fluctuations in currency exchange rates (9%); and problems in own organisation (2%).

#### *2.2.6 Case studies on COO effects*

While findings from personal interviews were skewed towards the insignificance of COO, two well-cited case studies (Amine, Chao, & Arnold, 2005; Kleppe, Astrid, Iversen, & Stensaker, 2002) reiterated the importance of country image advertising and the way that a positive country image can supplement the company image. With regard to Taiwan's national image campaign, Amine et al. (2005) described how a very modest country depiction image of a "map of a country indicating its location in the heart of Asia" has gradually been transformed to very strong slogan "Taiwan stands tall: reaching out to the world, soaring toward the future" within a 13-year period. Associating prominent company names along with this country image promotion strategy also placed these company images as moving forward over time. Similarly, Kleppe, Astrid, et al. (2002) highlighted the marketing strategies for COO image promotion for the Norwegian fish industry in the Asian market, where consumers had very little or no knowledge about Norway. Therefore, it is evident that

the debate on COO significance will continue and that further studies can shed more light on our stock of knowledge about COO prominence in purchase decisions.

### *2.2.7 Insights from the global/international purchasing literature*

The COO literature from the B2B perspective has conceptual overlaps or interconnectedness with other established fields of study that have been clearly emphasised in the extant literature. Global purchasing, international supplier selection and international trade literature are of practical significance in this regard. Very limited content examples from this literature is presented in this review to identify more country-related factors and to substantiate the significance of existing country-related factors that have already been represented in COO studies.

The ‘global purchasing’ literature is clearly relevant to the question of the importance of COO in B2B purchasing. In a major review of the global purchasing literature, (Quintens et al., 2006, p. 174) summarised findings from 19 studies that outlined the environmental drivers of global purchasing as being: cost advantages (labour); satisfying countertrade requirements; guarding against currency fluctuations; stimulating foreign government policies; and creating an advantageous legal and economic environment. All these factors were highly dependent on the source country. Moreover, as facilitators, better foreign transport and communication and capable intermediaries (for generating logistics strengths) were products of the source country’s infrastructure. As barriers, import quotas and an adverse political and economic environment generated source country disadvantage for purchasing. Kotabe and Murray (2004, p. 9) also emphasised several aspects for successful global sourcing in addition to reduced manufacturing cost: exchange rate fluctuations; available infrastructure (including transportation and communications); industrial and cultural environments; etc. In addition, they specified several barriers, including logistics; inventory

management; distance; nationalism and the lack of working knowledge about foreign business practices.

#### *2.2.8 Linkages with the international supplier selection literature*

Another field of research, international supplier selection, has a significant association with COO research. Katsikeas and Kaleka (1999, p. 27) differentiated international purchasing from local purchasing owing to the additional factors associated with international purchasing, such as: exchange rate fluctuations; complex documentation requirements; trade regulations; customs duty; cultural differences; complex payment procedure; and transportation difficulties (Min & Galle, 1991). These areas can influence country-level differences and can impact on B2B buyers' purchasing decisions. In a recent literature review on supplier selection and evaluation, Ho, Xu, and Dey (2010, p. 201) reported many variables used in the extant literature. Among those variables, the following could have significant country-related impacts: shipment quality; delivery reliability; distance; geographical location; number of shipments to arrive on time; order-to-delivery lead time; on-time delivery; percentage of orders delivered by the due date; supplier proximity; waiting time; logistics cost; and total cost of shipments. Min (1994) used a multi-attribute utility approach to aid managers in choosing international suppliers through specifying weights on different variables. Among the seven criteria, three directly captured country influence in selecting foreign suppliers (perceived risks, cultural and communication barriers, and trade restrictions). Perceived risks criteria (analogous to barriers in Quintens et al., 2006) included political stability, foreign exchange rate, legal claims, labour disputes and local price control. Cultural similarity, ethical standards and electronic data interchange comprised the criteria of cultural and communication barriers. Trade restrictions criteria for supplier selection considered tariffs and customs duty, and countertrade as variables. In addition, freight terms,

on-time delivery, negotiability (a cultural reason) could also be influenced by country with significant dependence on company capabilities. Therefore, among the 19 attributes considered by the study, nine were directly and three were indirectly related to country. In a similar vein, Hallén and Johanson (1985) identified the supplier country's industrial climate and cultural affinity with trading partners as antecedents of industrial marketing. According to Joshi (2009) and Kaufmann and Carter (2006), reduced trade barriers and information technology (IT) improvements dramatically increased opportunities for global purchasing relationships. Another environmental aspect related to country was regulatory strength. Notwithstanding this, importers/industrial buyers may naturally consider that trade-related 'country' information and attributes are, for all practical purposes, not controllable by producers or suppliers. This may lead them to preclude (or even exclusively include) particular countries as their source countries.

The impact of an origin country's regulatory strength is of particular importance regarding current international trade practices. The regulatory limitations of developing countries are primarily related to poor human resource practices, the so-called 'sweat shop'. As developed countries source a substantial part of their products from developing countries through outsourcing, developed countries and their companies cannot avoid the responsibility of regulation. Ben Blanchard (2012) of Reuters reported that three people from Foxconn (the firm assembling Apple's iPad and iPhone) died in a blast in 2011 due to a mishap related to iPad polishing. Other reports of forcing employees to do overtime, underpaying them, and high suicide and attempted suicide rates among Foxconn employees have tarnished the image of Apple. As a consequence, Apple has initiated voluntary steps together with Foxconn to limit excessive overtime (Bradsher & Duhigg, 2012; Economist, 2012b). However, ensuring safe working conditions should be a result of regulatory standards imposed by the country (Locke, Qin, & Brause, 2007). Similar enforcement of standards regarding safe working

conditions from the side of the buyers can be seen in the Adidas (2012, p. 13) and Target Australia websites (regarding Bangladesh factories and Uzbek cotton). Despite increasing buyer concerns about controlling human rights abuses, environmental hazards and the use of toxic materials, establishment of these standards in the developing world is still far from being accomplished. There are less reported incidents of this type in the developed world (a recent exception is the horse meat scandal in the UK) can be attributed to the regulatory strength of those countries.

It is also noticeable that some marketing mix issues are not fully controllable by a company and are inseparable from a country's broader environment. Many of the studies reported transport cost and reliable delivery performance under the marketing mix aspect of 'place', but there are broader infrastructural issues that require significant government support. In the case of international purchases, from a B2B perspective, the delivery and transportation costs are particularly significant owing to the associated longer distance, higher cost and risk. A company on its own cannot ensure reliable delivery and transport costs. In addition to COO studies, country aspects related to trade are substantially discussed in the global purchasing, supply chain management, international supplier selection and international trade-related literature. In connection with this, (Usunier, 2006, p. 71) described COO research as a too narrowly defined research area that has cross-disciplinary associations with international marketing, consumer behaviour and international trade. Responding to this criticism, this review includes some findings from the international trade literature that can substantiate the link between international trade and COO literature.

#### *2.2.9 Associations with the international trade literature*

The international trade literature has never been associated with COO research despite COO research having grown substantially. This may be simply due to the sheer magnitude of

international trade and its exponential growth. However, several aspects of international trade issues reveal country-related trade impacts. The relevance of country in international trade issues from the B2B perspective are related to distance or proximity, transport cost, transport infrastructure, transport mode, logistics, trade facilitation, etc. One of the most extensively studied areas of international trade is the gravity model that deals with distance and international trade (Behar & Venables, 2011). Despite the concept of the ‘flat world’ of Friedman (2005), economic data suggest that the world is still far from flat (Leamer, 2007). It has been reported that gross domestic product (GDP) and distance together account for 70% of the cross-country variation in trade (Behar & Venables, 2011). According to other recent studies (Cantwell, 2009; Dunning, 1998), global firms typically consider geography as an important decision attribute as part of the overall economic environment—especially the distance and proximity of markets. By analysing 103 studies undertaken between 1870 and 2001 that considered distance as an explanatory variable of trade flows, Disdier and Head (2008) found a continued effect of distance on bilateral trade. Moreover, according to Swenson (2005), sourcing strategies are significantly dependent on geographic dimensions. In another study, (Irwin & Terviö, 2002) showed that around 30–40% of the variance of the bilateral trade share of GDP (in log form) is explained by geographic characteristics. According to the findings of Brun, Carrere, Guillaumont, and Melo (2005), long-distance trade has not reduced over time but the importance of distance is evidenced as short-distance trade has increased more than that of long distance. In addition, Carrère and Schiff (2005) reported that the distance of the average trade flow has reduced gradually over the period 1962–2000.

In addition to geographical proximity, cultural proximity generally makes communication easier and helps to build up trust by reducing misunderstandings thus consequently reducing transaction cost in international trade. There is a widespread agreement in the literature that

cultural proximity plays a significant role in determining bilateral trade flows (Felbermayr & Toubal, 2010, p. 279). Cultural proximity has been measured by different variables such as a common language, religion or ethnicity (Boisso & Ferrantino, 1997; Frankel, 1997; Melitz, 2008). An opposite measure of cultural proximity is cultural distance that has been well differentiated from psychic distance by Sousa and Bradley (2006). In this study, Sousa and Bradley (2006, p. 52) clearly attributed cultural distance as a cultural or country-level phenomenon as opposed to psychic distance, which is considered to be a personal level characteristic. It is important to note that geographical and cultural proximity are not controllable by companies and that therefore they are more ‘country-related’.

The impact of infrastructure on trade is well recognised. Nordås and Piermartini (2004) considered rail, roads, telecommunications, ports and airports as infrastructure and reported that ports have the biggest impact on trade. Canning (1998) pioneered the stock of infrastructure that is measured by an index of road, rail and telecommunications capacity. Limao and Venables (2001) estimated that variation in infrastructure accounts for 40% of the variation in predicted transport costs in coastal countries and up to 60% in landlocked countries. In another estimate, Clark, Dollar, and Micco (2004) found that if a port quality deteriorates from the 75<sup>th</sup> percentile to the 25<sup>th</sup> percentile, shipping costs can increase by 12%, which is similar to being 60% further away from a destination market.

Along with physical infrastructure, trade facilitation can have a significant impact on trade. (Wilson et al., 2005) evaluated port facilities, customs handling, the regulatory environment and the availability of service sector infrastructure as the four measures of trade facilitation. The Logistics Performance Index (LPI), a dataset developed by the World Bank, is estimated using six measures, namely, efficiency of customs clearance, transport and IT infrastructure, ease and affordability of international shipments, competence of local logistics, tracking and tracing facility of shipments and timeliness of shipments in reaching their destination. In

measuring the impact of logistics, Behar, Nelson, and Manners (2009) estimated that one standard deviation improvement in logistics can increase exports by about 46% for an average-size developing country. Another study on international trade substantiated the impact of trade facilitation on export performance (Portugal-Perez & Wilson, 2012) which can also mean a higher performance evaluation by an international buyer.

The transport cost and a broader term 'trade cost' are associated with the origin country and may logically impact upon international buyers. The international trade literature uses cost insurance and freight (CIF)/free on board (FOB) as a measure of transport cost. Limao and Venables (2001) reported that, on average, the CIF/FOB ratio was 1.28 in 1990 meaning that to transport material costing \$1, one needed to spend around \$0.28 including insurance. Therefore, the cost of transportation in international trade was around one-quarter of the cost of materials in 1990. Economists also use the term 'trade costs' which includes transport cost and international trade policy restrictions. In an estimate, Jacks, Meissner, and Novy (2008) found that trade expansion in the period from 1950–2000 was 31% attributable to trade cost.

Delay or delivery uncertainty is another attribute that influences international trade and consequently international buyers. B2B buyers have seen reliable delivery as a consistent criterion in evaluating the COO. Reliability of the supplier and the supplier country can reduce delivery uncertainty which is particularly important for intermediate goods (the product category of this study) or seasonal products where the waiting time becomes too costly (Harrigan & Venables, 2006). Hummels, Minor, Reisman, and Endean (2007) calculated that savings of one day's delay can be worth 2% of the value of a shipment that contains road vehicles. As another impact of delay, Djankov, Freund, and Pham (2006) estimated that an extra day in transit reduces trade by more than 1%. For example, if Uganda could reduce its transit times from 58 days to the global average of 27 days, this would be equivalent to reducing its distance from its trading partners by 2200 kilometres (Behar &



Venables, 2011). One important aspect of delay is the delay due to border clearance time (a measure of World Bank's Logistics Performance Index). Wilson (2003) estimates that the average waiting time spent at a border can be used to travel 1600 kilometres inland. Consequently, the cost of delay has a similar level of significance to the cost of transportation in affecting trade volume (Behar & Venables, 2011). Any aspect that influences trade volume at a macro level also impacts on international buyers at a micro level, as every cost related to trade is ultimately borne by the buyer. In the light of the above literature, it can be argued that geographical proximity and a country's trade infrastructure may exert significant COO influence on B2B buyers.

### **2.3 Identified gaps in the literature**

The detail literature review presented above leads to the identification of a number of gaps in the COO research field. One undoubted and conspicuous gap in COO research (already discussed in the introduction chapter) is the insignificant attention paid to B2B buyers despite the enormous level of global trade in intermediate goods. Considering the existing B2B-centric COO literature the following gaps has been identified.

- ❖ At present, trade in intermediate goods constitutes more than 50% of global trade. Most of these goods lose their COO identity when transformed into finished goods on their way to consumers. The extant COO research has consistently neglected to consider the possible impact of COO in the industrial goods sector and, similarly, little effort has been made to estimate the COO impact for intermediate goods that represent half of global trade.
- ❖ In considering the impact of COO examined in the extant literature along with other intrinsic and extrinsic product cues, it is well evidenced that COO effect diminishes in presence of other product cues. Hence, multi-cue investigation has gained greater

acceptance in COO research. In the B2B context, there are a few investigations that studied the COO impact along with other cues; however, only one study considered the country impact along with the company impact in B2B purchase decisions despite the fact that company, along with country, is a major source of performance variance. Therefore, it is expected that extending the company-country setting in B2B centric COO research may deliver new insights.

- ❖ Measuring the impact of multiple COO cues (i.e. overall country image and product country image) in one investigation is well justified, but rarely tested in consumer centric COO studies. However, to date, there has been no such investigation in the B2B setting.
- ❖ A statistically significant pattern of influence among the COO cues and outcome constructs has been consistently observed in consumer-based studies, but is clearly absent in the B2B domain.
- ❖ International trade and purchase related studies have reported significant impacts of trade related dimensions of COO on trade performance. Clearly, trade related country dimensions need to be closely evaluated by the B2B managers before making source country selection decision. Unfortunately and surprisingly, despite severe criticism of its diminished relevance, COO research to date has neglected to develop and validate trade related COO constructs.
- ❖ Product preference by source countries is an established finding in COO research. At the same time, cost and delivery benefits produced by trade related country dimensions might have impacts on source country selection decisions. Although these advantages may not be evident to, or a concern for, consumers, they are highly likely to be important for B2B managers. Notwithstanding, there has been no such investigation to date to unearth this impact in the COO literature.

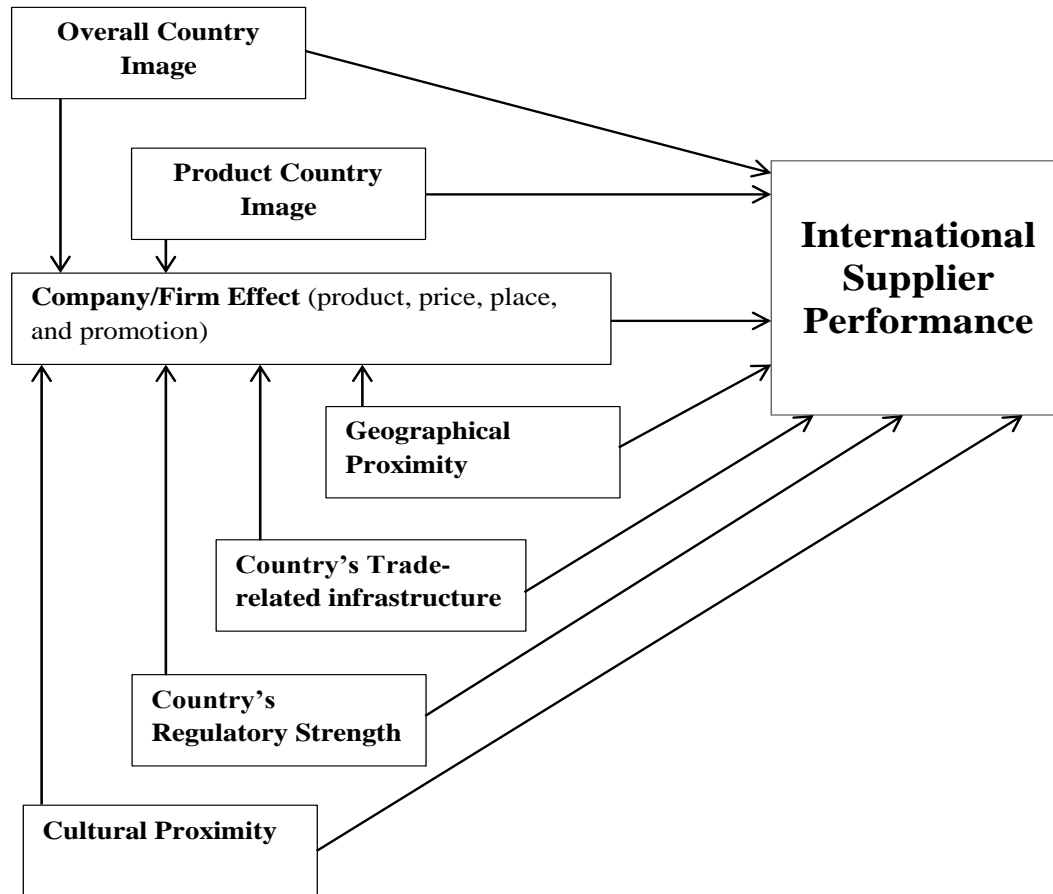
- ❖ Estimating the impact of COO using multiple COO cues is still comparatively rare in COO research. Moreover, the absence of trade related COO constructs in the literature has revealed an opportunity to develop trade related COO constructs, and to investigate the relative impacts of traditional and trade related constructs.
- ❖ According to the international trade literature, cultural proximity is another aspect that impacts trade performance between and among countries. The COO literature has also examined the impact of cultural and psychic distance in the internationalisation decisions of firms. However, to date, little or no effort has been to measure the impact of cultural proximity on international supplier performance as a COO cue.

The above-mentioned gaps in the B2B centric COO literature highlight a number of specific areas of investigation that may enrich this field of study with new insights. This doctoral research attempts to address the gaps indicated above through three empirical papers included in this thesis. Among the gaps discussed above, the first and second will be directly addressed as this study considers buyers of intermediate goods as survey respondents and adopts a multi cue research design in a company-country framework. The third and fourth will be addressed in the empirical paper #1. The fifth and sixth will be addressed in empirical paper #2 and seventh will be addressed in empirical paper #3. The issue of cultural proximity will not be specifically addressed in this thesis but is recommended in future research agenda discussed at the conclusion of this study.

## **2.9 The conceptual framework**

Based on the extensive literature and the identified gaps reported above, a conceptual framework can be developed. Firstly, it is important to distinguish company- and country-level issues that can capture unique impacts as opposed to many COO studies that have used marketing mix variables to capture the supplier country image. Secondly, multiple country

image facets need to be addressed, more specifically to understand the relative impact of overall country image (macro) and product-country image (PCI) (micro), a question asked in the latest meta-analysis in the COO field by Magnusson and Westjohn (2011, p. 307). In addition, the use of both dimensions (overall country image and PCI) avoids the limitation of using only one dimension, as is typical of the majority of consumer-based COO studies (Pappu et al., 2007, p. 728) and is fully absent in the B2B-based COO studies. Thirdly, there are no COO constructs related to trade despite the extensive literature support already presented in this review. In addition, in the wake of COO criticism, new constructs with real-world significance will not only add value to COO literature but will also dilute the effect of criticism. In this regard, Magnusson and Westjohn (2011, p. 309) concluded their meta-analysis by saying, "... the introduction of new constructs, and the continued globalization of markets compel researchers to seek answers to a new set of questions in this field of study". Finally, there has been repetitive use of country preference/supplier country preference as the outcome or dependent variable in the COO research. However, from the perspective of the global purchasing and international supplier selection literature, it is evident that the common goal or expectation from global purchasing and from selected international suppliers is to achieve cost- or price-related advantage, better delivery performance and higher quality products (Quintens et al., 2006, p. 174). As with domestic purchase, this means that the international purchase is also directed to achieving higher supplier performance. Therefore, this review, for the first time and unlike previous B2B-focused COO studies, wants to propose supplier performance as the outcome construct in the conceptual framework.



**Figure 2.9.1 Conceptual framework**

The conceptual framework hypothesises that all the country-related constructs simultaneously have a direct impact on international supplier performance and an indirect impact through supplier company/firm effect. In simple terms, the impact of country constructs may or may not be substantially large in the presence of the company effect. If it is not large enough, the influence may occur through the company effect and, in that case, country constructs will directly influence the company effect. In testing this conceptual framework with empirical data, three hypothesised models will be tested in this thesis.

- ❖ Model in empirical paper #1 includes overall country image, product country image, company/firm effect and the outcome construct of international supplier performance.
- ❖ Model in empirical paper #2 includes geographical proximity, the country's trade related infrastructure, the country's regulatory strength, company/firm effect and the outcome construct of international supplier performance.
- ❖ Model in empirical paper #3 includes all the constructs in empirical paper 1 and 2.

The cultural proximity construct will not be within the scope of this thesis. Hence, the impact of cultural proximity on international supplier performance will be considered in future research agenda.

## Empirical Paper 1

### International Supplier Performance: Impact of Country and Company Antecedents<sup>1</sup>

**Purpose** –Purchasing managers’ international procurement decisions are likely to be based on multiple country and company criteria. This study seeks to understand the relative impact of company- and country-specific effect on international suppliers’ performance with a focus on business-to-business buyers.

**Design/methodology/approach** – Data were collected using a web-based structured questionnaire. A conceptual model was developed, with the constructs in the model taken from the extant COO literature. Structural equation modelling was used as the data analysis technique.

**Findings** – Company effect is a valid second-order construct derived from four first-order constructs comprising marketing mix components. Company effect is significantly influenced by product-country image and company effect partially mediates the relationship between product-country image and supplier performance. The direction of country image influence is also tested using halo, summary construct and flexible models, with the study finding that the halo model is the best fit.

**Practical implications** – The study reveals that company effect and country image have a significant impact on the decision making of international purchasing managers. Managers should work towards both company and country competitiveness as company competitiveness alone cannot achieve a superior supplier image to international buyers.

**Originality/value** – The study uses a supplier performance construct that is assessed by existing buyers. Use of multiple country facets, multi-cue settings and direction of country image influence in one single study from a business-to-business perspective has not been reported in previous COO studies.

**Keywords** Country image, company effect, product-country image, supplier performance, intermediate goods, B2B, COO relevance, purchasing managers, multi-cue settings

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<sup>1</sup>Abridged version of this paper presented in a conference:

- Uddin, J., Elliott, G., & Hamin, H. (2014). Influence of country-of-origin on overseas supplier performance. Paper presented at the *ANZMAC Conference*, Brisbane, Australia.

### 3.1 Introduction

It is well established in the academic literature that country of origin (COO) influences consumers' product evaluations and purchase decisions (Balabanis & Diamantopoulos, 2011; Demirbag, Sahadev, & Mellahi, 2010; Phau & Chao, 2008; Roth & Diamantopoulos, 2009; P. Sharma, 2011; Verlegh & Steenkamp, 1999). It is also evident that the overwhelming majority of published COO studies have investigated consumers as users of COO information, with few studies considering business-to-business (B2B) buyers' perceptions of COO (Andersen & Chao, 2003).

From a broad understanding of the COO literature, there is currently a disconnect between traditional COO research and consumers' actual purchase behaviour, perhaps explained by a research focus on consumers and the implicit assumption that consumers are free to exercise their COO preferences. In reality, consumers' choices are heavily constrained by the purchasing and procurement policies of retailers and purchasing/procurement managers. Such decisions fall squarely in the B2B domain — an area which has been almost ignored in the COO literature. Thus, while COO researchers focus on consumers' decision making, it can be argued that focusing on the B2B purchasing/procurement setting can provide greater insight.

Globalisation has seen a change in production, highlighted by Ferdows (1997), who introduced the term 'Made in the world (MIW)' to describe the emerging geographical dispersion of production locations. Many products are no longer produced in one country; multinational organisations exploit value creation opportunities by using a globally scattered supply chain. Apple's iPhone is a case in point. Complete assembling of iPhones is done in China by Foxconn (a Taiwanese contract manufacturer) and later imported by Apple, USA at a factory gate price of \$194.04 (Gereffi & Lee, 2012). The total value adding input for iPhone4 is significantly dispersed around the globe as presented in Table 3.1.1.



**Table 3.1.1 Sourcing countries by input price for Apple iPhone4**

Country Name	Input price
USA	\$24.63
China	\$6.54 (only assembling; Gereffi & Lee, 2012)
South Korea	\$80.05 (display panels and memory chips; Keller 2010)
Japan	\$0.70
Germany	\$16.08
France	\$3.25
Rest of the world	\$62.79
Total (Factory gate price)	\$194.04

Source: OECD (2011, P. 40)

It is evident that the origin labelling statement(s) of the iPhone 4 do not enable a final user to be accurately informed about the whole COO story from the product to the package. Surprisingly, however, COO research is almost silent about the MIW concept. This paper seeks to add to the COO literature by incorporating both MIW and COO into its analysis of the decisions of B2B purchasing/procurement decisions and relative impact of company- and country-specific image on judgements of international suppliers' performance. A further contribution is its focus on the important role of B2B buyers.

Perceptions of a country's image are typically complex (Cialdini, 2001, p. 7). Because of this complexity consumer analysis often relies on shortcuts (Magnusson et al., 2011b), which incorporate stereotypes, rules of thumb (Magnusson et al., 2011a) and peripheral information processes (Petty & Cacioppo, 1986) to minimise complexity (Chaiken, 1987). Over time these judgements automatically take place in the cognitive repository as 'thoughtless' responses (Greenwald & Banaji, 1995). The country image shortcut is a very complex level of abstraction. According to (Martin & Eroglu, 1993, p. 193) country image can be described "as the total of all descriptive, inferential and informational beliefs one has about a particular country". In simple terms, quality, price, people, culture, economy, technology, politics, competence, interaction and feelings all contribute to the ways in which one can perceive a country. The short-cuts and abstractions of total country image together create a rounding-off effect for more detailed, in-depth information. The rounding off effect eliminates individual

differences in and between people, organisations. This rounding off is widely accepted in the COO literature, but such extreme abstraction may have contributed significantly to the recent COO research criticism for overestimation (Usunier & Castre, 2008). And more recent studies has incorporated company aspects in COO research investigations (studies include Baldauf et al., 2009; Bradley, 2001; Hsieh et al., 2004; Wang, Zhou, Mou, & Zhao, 2014).

In addition, corporate image may also work as summary information in the consumer decision- making process (Erickson, Johansson, & Chao, 1984). As consumers are mostly the focus of studies, the term ‘brand’ used is subject to a higher level of abstraction (or rounding off) given the limited ability of consumers to use brand origin knowledge in their decision making (Liefeld, 1993; Samiee et al., 2005, p. 392; Usunier, 2011). B2B buyers are commonly considered to avoid this short-cutting process because they are ‘better informed’, ‘policy-driven and rationalised’ and have ‘familiarity and experience’ (Samiee, 1994). Recognition of company and brand activities are expected to be more accurate by B2B buyers because of their direct dealings with companies owning different brands, higher familiarity with the product classes and competing brands and availability of the latest industry information. Cross border mergers and acquisitions and evolving business practices continuously change origin information in today’s globally integrated economy and consumers are unlikely to be able to keep pace with this changing information landscape. In contrast, B2B buyers are considered “expert consumers” (Sternquist, 1994, p. 171) and more likely to collect “accurate information on intrinsic variables” (Bradley, 2001, p. 513).

When examining the source country selection decisions of purchasing/procurement managers, it is evident that such decisions required the selection of both a country and a company simultaneously. Samiee (1994, p. 586) stressed the need to extend COO research to firm level aspects as a gap in the literature. This study responds to that gap and seeks to understand the relative impact of company- and country-specific image on B2B buyers’

perceptions of their international suppliers' performance. In addition, the study attempts to know the direction of influence among COO constructs leading to the outcome construct of supplier performance.

This paper is structured as follows. First the COO literature is discussed; then the literature focusing on COO and the B2B perspective is identified. This section is followed by an outline of the conceptual framework and method used in this study. The results section is next, followed by discussion and implications and the final section discusses the study's limitations and avenues for possible future research.

### **3.2 The country-of-origin (COO) literature**

COO research is a major contributor to the international marketing field with around 1000 published articles since 1965 (Heslop, Lu & Cray, 2008; Papadopoulos, Banna, Murphy, & Rojas-Méndez, 2011, p. 88) providing a range of evidence of the significance of COO on purchase evaluation and intention. In a meta-analysis (Verlegh & Steenkamp, 1999) reported a COO effect size of 0.39 and argued for the importance of COO in product evaluations. In a more recent review (Magnusson & Westjohn, 2011) analysed publications from top international business journals in the decade 2000-2010 and reported 114 COO publications. This research has been undertaken against a background in which the impact of globalisation has prompted multinational companies to expand their production facilities around the globe, usually at the expense of domestic manufacturing. This has arguably had the effect of making COO information more blurry or fuzzy to consumers (Samiee, 2010, 2011; Samiee & Leonidou, 2011; Usunier, 2011; Usunier & Cestre, 2008).

COO research can be broadly divided between multi-cue studies and single-cue studies. While using COO with other cues of product evaluation (such as price, store image, actual physical product, brand name, warranty), findings typically report diminishing COO effects

in multiple cue situations (Agrawal & Kamakura, 1999; Bilkey & Nes, 1982; Chattalas, Kramer, & Takada, 2008; Dinnie, 2004; Johansson, Douglas, & Nonaka, 1985; Wall, Liefeld, & Heslop, 1991), which, in turn are likely to generate response biases (Andersen & Chao, 2003, p. 340). More specifically, Peterson and Jolibert (1995, p. 891) found the extent of effect size of COO as a quality/reliability perception is 0.30 in single cue studies and 0.16 in multi-cue studies. Moreover, they calculated the size of COO effect regarding purchase intention is 0.19 in single cue studies and 0.03 in multi-cue studies. Regarding industrial products, there is evidence that COO perception reduces significantly when incorporating other information along with the 'Made in' label (Ahmed & d'Astous, 1995; Ahmed et al., 1994). Therefore, this study adopts a multi-cue research design that incorporates both company- and country-specific cues together.

### **3.3 Country-of-origin (COO) literature from the B2B perspective**

While COO is widely researched (Herz & Diamantopoulos, 2013; Koschate-Fischer, Diamantopoulos, & Oldenkotte, 2012; Magnusson, Westjohn, & Zdravkovic, 2011a; Martín & Cerviño, 2011), there is a comparative scarcity of studies in the B2B context (Bilkey & Nes, 1982; Kaynak & Kucukemiroglu, 1992; Oszomer & Cavusgil, 1991; Quester et al., 2000), despite its significance in terms of 'real-world' practice. The dearth of COO focused B2B studies is well evidenced by the information presented in the Table 3.3.1. In one of the two major meta-analyses in the COO field, Peterson and Jolibert (1995, p. 891) reported that statistically significant COO effect size is 0.14 as a perception of purchase intention for consumer products and 0.32 for industrial products. In the other meta-analysis, Verlegh and Steenkamp (1999, pp. 536-537) found that the COO effect size is not significantly less for industrial products than for consumer products.

**Table 3.3.1 Representation of B2B samples in extant COO research**

<b>Study source</b>	<b>B2B representation</b>
Literature Review 1965-1997 (Al-Sulaiti & Baker, 1998, pp. 179-199)	18 studies out of 99 presented in the appendix
Research relevance of COO (Usunier, 2006, p. 67)	20.9% of studies (14.25% of total sample size)
Country image construct (Roth & Diamantopoulos, 2009, pp. 729-732)	3 studies out of 30
Literature Review 2000-2010 (Magnusson & Westjohn, 2011, p. 303)	Only 6 studies (out of 114 reviewed) including COO in service
Maiden literature review on COO studies from industrial buyers' perspective (Andersen & Chao, 2003, p. 341)	Only 20 studies in B2B area (recognising 200-300 COO studies in consumer behaviour area)
Research on import activities 1960-2010 (Aykol et al., 2013, p. 228)	39 concerning COO out of 321 import-related studies

Among the COO-centric B2B studies identified and reviewed, there is a clear dominance of ranking as an analysis technique, using either mean value or rank order (see Table 3.3.2). Eight studies purely use ranking; 25 articles use some sort of statistical significance tests and, of those 23 also use ranking, with qualitative personal interview data analysed by five articles. Regarding the use of multivariate data analysis, two studies use discriminant analysis, two use conjoint analysis, four use regression analysis, five use factor analysis and only one uses structural equation modelling (SEM). COO studies in the B2B field rarely use sophisticated data analysis techniques when compared to consumer-based COO studies.

**Table 3.3.2 Data analysis techniques used in B2B-focused COO studies**

<b>Data analysis technique used</b>	<b>No. of Studies</b>
Purely ranking attribute and country wise	8
Analysis with any sort of statistical significance tests (23 also used ranking)	25
Personal interview (including one also used significance tests on survey data)	6
Company- and industry-specific case study	2
<b>Breakdown of multivariate techniques used</b>	
Factor analysis (including CFA)	5
Regression analysis (including hierarchical regression in SEM paper)	4
Multiple Analysis of variance (MANOVA)	1
Multidimensional scaling or perceptual mapping	1
Discriminant analysis	2
Conjoint analysis	2
SEM	1

Among the papers analysed data with ranking only, Nagashima (1970) is the most prominent as the first of its kind to consider the industrial buyer as the subject for COO study.

Nagashima (1970) studied the perception of the 'Made in' image for products originating from the US, Japan, Germany, England and France. The study considered several factors of perceived differences, such as price and value, service and engineering, advertising and reputation, design and style and consumer profile. At the time of this study Japanese business people considered 'Made in Japan' as inexpensive, common and functional and associated Japanese products with poor workmanship. In comparison, US business buyers considered Japanese products to be inexpensive, technically advanced, mass-produced and globally distributed. Reporting the perceptual change in the 'Made in' image after eight years, (Nagashima, 1977) reported Japanese products were no longer considered inexpensive and unreliable. Most noticeably, Japanese products were considered reliable and as reasonably priced as German products. Japanese products moved ahead of US products regarding workmanship but still fell behind German, English and French products. Significant improvements were found for Japanese products in the areas of technical advancement, mass production, and world-wide distribution. It is important to note that (Nagashima, 1970, 1977) are two important studies providing evidence of the dynamic nature of COO perception, which is a rare focus, despite its relevance to practice, in the COO literature.

White and Cundiff (1978) tested the psychological influence of price and country of manufacture on purchasing managers' perception of product quality. Their results showed that country of manufacture (COM) and perceived quality had a statistically significant relationship ( $p < .01$ ) for all three products. The relationship between price and perceived quality was not statistically significant ( $p > .05$ ) for all the products. The interaction effect between price and country of manufacture had no statistically significant relationship ( $p > .05$ ) for the two product categories.

Ghymn (1983) used discriminant analysis to investigate the purchasing behaviour of US import managers and revealed major determinants of their import decisions. He used two

categories of variables, namely, product-oriented and service-oriented. All statistically significant contributors to the group differences were ranked according to a beta coefficient value that appears as price ( $\beta = .691$ ), timely delivery ( $\beta = .637$ ), dependability for long-term supply ( $\beta = .504$ ), transportation cost ( $\beta = .422$ ), quality ( $\beta = .384$ ), brand recognition ( $\beta = .351$ ) and ordering/ shipping procedure ( $\beta = .247$ ). Using regression analysis, Kraft and Chung (1993) examined Korean purchasing agents' perceptions about US and Japanese products. In all three product categories (raw materials, finished materials, equipment and machinery), US product offer factors are rated significantly lower than Japan and most specifically on product quality and product information. Regression analysis results show that no significant predictors were identified for the dependent variable (percentage of imports) for Japan. Conversely, significant predictor variables were found for purchases from the US in all three product categories. In the case of percentage of raw materials imported from US (adjusted  $R^2 = .10$ ), exporter reputation is the only significant ( $\beta = .39$ ) predictor. Customer orientation ( $\beta = .58$ ) and product quality ( $\beta = .61$ ) were significant predictors of finished material imports from the US (adjusted  $R^2 = .42$ ). Regarding equipment and machinery imports (adjusted  $R^2 = .30$ ), customer orientation ( $\beta = .70$ ) and product information ( $\beta = -.43$ ) were identified as significant predictors. It is important to note that in all three regression equations, factors related to exporter characteristics played a major predictive role.

Ahmed et al. (1994) used conjoint analysis and a partitioned COO cue (COD and COA) along with brand name, price, and warranty/delivery to undertake the first true multi-cue COO investigation in the B2B setting. In general, developed countries were found to be more favourably evaluated than newly industrialising countries for both country of design (COD) and country of assembly (COA). Among the countries evaluated, newly industrialising countries were evaluated more highly for COA of industrial products than for COD. For all three product categories, COD explained greater proportion of variance in perceived quality

and purchase value than COA. Moreover, the influence of COD on perceived quality was more than on purchase value. In addition, the effect of COD was more for technologically complex products than COA. Further, the influence of brand name on the perceived quality and purchase value of a computer system and fax machine was statistically significant, but its explanatory power was much smaller than for COO cues. Price and warranty/delivery had almost no impact on perceived quality, whereas both variables had a substantial and statistically significant impact on the purchase value of computers and ballpoint pens. Ahmed et al. (1994) found that in multi-cue settings, negative perceptions about newly industrialising countries are reduced considerably and differences between developed countries are practically non-existent.

Three further studies (Chetty et al., 1999; Dzever & Quester, 1999; Quester et al., 2000) examined the effect of COD and COA on the quality perceptions of purchasing agents in Australia and New Zealand. Chetty et al. (1999) found that COD and COA for machine tools and component parts from developed countries were ranked around an average score of 4; with newly industrialised countries around 3; and newly industrialising countries around 2.5 on a scale of 5. All the reported differences are significant at  $p < .05$  level. According to (Dzever & Quester, 1999), quality perceptions were directly influenced by both COD and COA in a consistent fashion. Their results further indicated that most of the developed countries were highly ranked for both COD and COA in terms of the technology used, training provided and ease of operation/maintenance under both the categories of equipment and component parts. The majority of the newly industrialised and newly industrialising countries were ranked highly in terms of the space utilised under both the product categories and dimensions. In comparing the samples for both countries, Quester et al. (2000) reported that quality perceptions were directly affected by source country information for both Australian and New Zealand samples and the results were identical in terms of COD and



COA. Moreover, the rankings for established industrialised countries were consistently higher than for their newly industrialised or newly industrialising counterparts. The results for correlation coefficients between each country and for each of the four quality indicator variables for machine tools showed similar significant correlations for both countries for technology, training and ease of operation/maintenance with regard to developed nations for COD and COA. However, significant correlations were identified for developing countries' COD and COA in terms of space utilised (for ease of installation or warehousing) from Australian, but not from New Zealand, samples.

Two studies with higher conceptual and statistical rigour are similar in their conceptual and methodological underpinnings. Bradley (2001) examined COO perceptions in a multi-cue setting, along with company marketing mix factors, introducing the 'company effect', along with the 'country effect', in explaining industrial buyers' COO preference. Baldauf et al. (2009) also used marketing mix elements along with the COO (product-country image [PCI]) cue in explaining retailer-perceived brand equity (RPBE) and brand profitability performance (BPP). Bradley (2001) showed that the direct effects of product and innovation on company preference are significant ( $p < .01$ ), while advertising and distribution were significant at the 0.10 level. In addition, two interactive relationships were noted, namely, advertising and country, and product and advertising. The interaction between advertising and country was statistically significant, although coefficients on the direct effect changed very little after the effect of interaction. The country effect parameter proved very weak as the coefficients and significance of the direct effects changed very little and the interaction effects changed hardly at all. The weakness of the country effect also showed the dominance of the company effect. This suggests that, *prima facie*, buyers may not be strongly influenced by the country variable but that the country association and interaction with the marketing mix variables appear to have considerable significance.

Such a scenario has not previously been discussed in the literature; however, Baldauf et al. (2009) considered marketing mix elements as antecedents of retailer-perceived brand equity (RPBE) with this defined as “a set of brand assets and liabilities linked to a store brand, its name and symbol, that add to or subtract from the perceived value of the store brand by its customers” (Arnett, Laverie & Meiers, 2003, p. 168). For marketing mix antecedents, they considered supplier image, price level, price deals and promotion. In addition, product-country image (PCI) was considered as a country-related antecedent of RPBE with this measured by inventiveness, exclusivity, workmanship and external appearance. Three aspects, namely, quality, loyalty and awareness were used to measure RPBE. Brand profitability performance (BPP) was considered as the final outcome construct and was assessed by the managers’ perceptions of relative profitability, realised margin and overall financial attractiveness of the focal brand. The authors conceptualised marketing mix elements and PCI as the antecedent constructs that affect the final outcome variable BPP through the mediator RPBE. According to Baldauf et al. (2009) results, supplier image ( $\beta = .33$ ) and promotion activities ( $\beta = .27$ ) are positively associated with RPBE. Price levels ( $\beta = -.19$ ) and price deals ( $\beta = -.22$ ) are negatively related to RPBE. There is a strong relationship between PCI ( $\beta = .32$ ) and RPBE at  $p < .001$  level. Supplier image also positively influences BPP in the presence ( $\beta = .21$ ) and in the absence ( $\beta = .37$ ) of RBPE in the model, thus indicating partial mediation through RPBE. The negative influence of price level on BPP is statistically significant in the absence ( $\beta = -.23$ ) of RPBE but statistically insignificant in the presence of RBPE in the model, therefore supporting full mediation. Three constructs, namely, price deals, promotion and PCI have a fully mediated impact on BPP through RPBE. Therefore, Baldauf et al.’s (2009) study delivers strong evidence that marketing mix and PCI antecedents are collectively retailer-perceived brand equity (RPBE) that finally affects brand profitability performance (BPP). Thus, it can be argued that supplier

company-related outcomes can particularly consider company- and country-related constructs as antecedents in understanding the disintegrated effect of company and country.

In addition to the range of published empirical studies, some insightful studies have used personal interview data and, among them, two (Knight et al., 2008; Knight et al., 2007) are related to food products sourcing. Summarising the inputs collected from 17 European informants, Knight et al. (2007) reported that quality in relation to price is the major concern; a country's price consciousness differentiates price-quality judgement. Cleanliness, a country's reputation for microbiological problems, regulation and external certification, reputation of government and corporate intermediaries are some major components in forming trust in relation to a supply source. Varied perceptions regarding the importance of COO are detected among the respondents. Product-specific country image is an accepted criterion for product sourcing as it is in consumer purchase decisions. In the other study conducted in China, Knight et al. (2008) reported price as the most frequently mentioned determinant; more particularly, value generated was more important than low cost, or better quality with lower price was more important. At the same time, a lack of knowledge from consumers end means that price was relied on as an indicator of quality, with more expensive purchases associated with prestige. Regarding quality, taste was considered as more important determinant of quality than health concerns and packaging was also an important determinant of quality. Knight found that consumers purchased famous brands regardless of familiarity based on status and prestige, rather than knowledge about the brand's origin. Additionally, imported food products carry higher social status and there is widespread mistrust in the Chinese production process. In particular, low social trust in China means that Chinese consumers rely on brand origin when assessing imported products as superior to locally manufactured products.

Another depth interview-based study specifically focused on sourcing from low cost emerging economies (Oke et al., 2009), found that cost was the primary driver of global sourcing for B2B buyers, and cost reduction was the key consideration for choosing suppliers from developing countries. Geographic distance was also found to be important to all the companies interviewed, both in terms of accessibility and ease of face-to-face interaction. Regarding interaction, proximity was measured by time, not distance, with assessment of quality and reliability based on the ability to deliver correctly what is required and on time or as promised. Other criteria considered important were political instability and border delays related to delivery times, external certifications and cultural proximity. However, geographical proximity that generated low transaction costs may ultimately be detrimental for supply chains because of a poor work ethic and lack of sourcing experience.

Recently Insch, Prentice, and Knight (2011) studied the importance of COO and the relevance of a 'buy national campaign' by interviewing purchasing managers of retail chains. Factors which retail buyers considered in making purchase decisions on product range were financial return, advertising and promotion, in-store marketing spending, product line fit, price, supplier characteristics, visual appeal, uniqueness and health and safety. Significantly, most respondents did not consider COO as an important product cue or placed greater significance on other attributes. In responding from the perspective of their consumer customers, as gatekeepers of consumer choice, retail buyers stated that a small group of consumers may place higher preference on COO for particular product categories (wine, chocolates) but for most COO is unimportant. In addition, consumer awareness about COO (as a buy-national campaign) was mostly a result of media presence, which may fade as media presence reduces. More generally, these findings give weight to the view that the estimates of the impact of COO that have been extensively reported in the literature in the

past may, in fact, overstate the true importance of the COO cue, due largely to the artificial and simplistic scenarios from which the COO effect is measured.

Amine et al. (2005) and Kleppe, Iversen, and Stensaker (2002) examined the importance of country image advertising and the way positive country image can supplement its company image. Regarding Taiwan's national image campaign, Amine et al. (2005) described how gradually a very modest country image was transformed to very strong slogan "Taiwan Stands Tall: Reaching Out to the World, Soaring Toward the Future" within a 13-year period. Associating prominent company names along with this country image promotion strategy had a positive impact on company image over time. Similarly, Kleppe, Iversen, et al. (2002) highlighted marketing strategies for COO image promotion of the Norwegian fishing industry in the Asian market, where consumers had little or no knowledge about Norway.

By reviewing most of the COO studies in the B2B field, it is clearly evident that extant studies have mostly examined issues related to marketing mix (the classical framework publicised by McCarthy, 1964; product, price, place, promotion) components. One important observation is that variables used in B2B-centric COO studies depict country perception by letting respondents evaluate country image surrounding marketing mix factors and later summarise that evaluation as country image. In doing so, researchers overlook that focussing on marketing mix elements can be regarded as an 'extreme abstraction' and marketing mix elements are basically company controllable parameters (Brassington & Pettitt, 2003; Kotler, 2003). In this context, reviewing the extant literature indicates that it is better to consider company and country issues separately, and in detail, as used by Bradley (2001) and Baldauf et al. (2009). Therefore, for the purposes of this paper and the current study, variables used in the prior literature have been classified for this study under separate company and country dimensions. By summarising (Table 3.3.3) around 300 variables (repetitive count) used in past studies, it is evident that the variables fall clearly under company controllable (marketing

mix) factors and factors that are not controllable by the company (country-related factors). Consequently, this study captures B2B buyers' assessments from two major perspectives, that is, company image and country image.

**Table 3.3.3 Classifying variables of B2B-based COO studies**


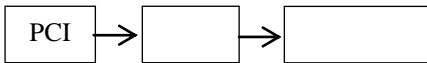
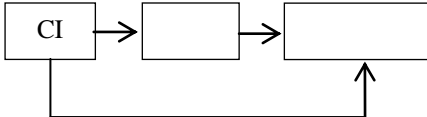
<b>Study</b>	<b>Variable classification</b>
(Ahmed et al., 1994; Cattin, Jolibert, & Lohnes, 1982; Chang & Kim, 1995; Chasin & Jaffe, 1987; Dzever & Quester, 1999; Ghymn & Jacobs, 1993; Ghymn, Liesch, & Mattsson, 1999; Gill & Ramaseshan, 2007; Güdüm & Kavas, 1996; Kaynak & Eronen, 2004; Khanna, 1986; Kraft & Chung, 1993; Min, 1994; Niffenegger, White, & Marmet, 1980; Oke et al., 2009; Saghafi & Puig, 1997; Thorelli & Glowacka, 1995; Turnbull, 1985; White, 1979; White & Cundiff, 1978)	<p><b>Product issues:</b> Product quality, brand reputation, reliability, technical superiority and competence, performance, design and style, uniformity, product line fullness, guarantees, innovativeness, product safety, information accuracy, non-substitutability, workmanship, safety packaging, ease of operation/maintenance, wide assortment of features, quality control and inspection.</p> <p><b>Price and payment issues:</b> price, value for money, price competitiveness, transport cost, material cost, discount offerings, payment terms, credit extensions, payment method.</p> <p><b>Delivery and service issues:</b> Reliable delivery performance, after sales service, field support, supplier adaptability, long-term supply dependability, training, technical assistance.</p> <p><b>Marketing communications and relationship issues:</b> Promotion, commercial competence, prompt business communication, supplier contacts, negotiation style, cultural awareness, personal communication, information exchange, relationship commitment, business association history, customer orientation, negotiability, Electronic data interchange (EDI) capability.</p>
(Ghymn et al., 1999; Keown, 1985; Maltz, Carter, & Maltz, 2011; Min, 1994; Oke et al., 2009)	<p><b>Country level issues:</b> Import/export duties and regulations, compliance with safety standards, labour cost, physical proximity, cultural proximity, work ethic and standards, security of intellectual property, attraction of local market, transportation system reliability, logistics cost, government support for business, political stability, predictable border clearance times, government corruption, cultural appeal, foreign exchange rate, legal environment, labour disputes, price control mechanism, counter trade opportunity.</p>

Examining the antecedents from majority of the B2B-centric COO studies, it is evident that this field of research basically used company (marketing mix elements) and country-related variables for assessing B2B buyers' perceptions about their international suppliers. However, the country-related abstraction is very multidimensional and widely conceived (natural landscape, climate, competence, people, political situations, country description, product evaluation, geo-cultural, socio-economy, conative component, people personality, product beliefs, economic, technological) as reported by Roth and Diamantopoulos (2009, p. 727) in the recent literature review on country image construct. In setting the basic COO domain

from more wider view point the same study (Roth & Diamantopoulos, 2009, p. 727) identified three definitional domains named as country image, product-country image, and country-related product image. Another definitional domain suggested by Heslop and Papadopoulos (1993, p. 61) through an eight country consumer survey; their COO definition is two dimensional, also incorporating product and country. Pappu et al. (2007) termed these two dimensions as “macro” and “micro” country image, where micro country image is related to specific product categories. In addition, it has been observed that considering both dimensions in one study is unusual (Papadopoulos & Heslop, 2003, p. 425; Pappu et al., 2007, p. 725) in extant COO studies. Therefore, the current study includes two dimensions (macro and micro) of COO in capturing country aspects, a conceptual setting never comprehended in B2B-centric COO studies. These two dimensions are more popularly known as overall country image (CI) and product-country image (PCI). The CI or macro country image is associated with the development level of a country that is evidenced by the sub dimensions (economic, technological, and government) used in Pappu et al. (2007). In COO studies, it is well evidenced that B2B buyers clearly distinguished product quality image of developed and developing countries (Ahmed et al., 1994; Chetty et al., 1999; Dzever & Quester, 1999; Quester et al., 2000). In addition, PCI has been evidenced as an important predictor of product quality in specific product categories (Knight et al., 2008; Knight et al., 2007) and of brand equity (Baldauf et al., 2009) in B2B settings. Regarding CI, clear distinction between developed and developing countries is well evidenced from B2B perspective as reflected in Knight et al. (2008), “For products from developed countries, consumers tend to believe they are good ...They don’t really care if they are from the US, Canada, or Germany”. As a consequence, importance of both concepts (CI and PCI) in capturing country influence on B2B buyers is supported by empirical evidences.

Another important issue investigated in previous consumer-centric COO research is that of the sequential direction of influence while using CI and PCI as COO constructs. By addressing this directional influence of COO constructs, this current study not only modifies the Bradley (2001) framework but also integrates country image (CI) influence structure into the conceptual framework which has never previously been tested in the B2B domain. In extant COO literature, there are three competing models that address the cognitive processing of COO information, namely, the ‘halo model’ and ‘summary construct model’ by Han (1989) and the flexible model by Knight and Calantone (2000).

**Table 3.3.4 Country image influence structure models**

Name of the Model	Sequence of influence	Model description
Halo model (Han, 1989)		Consumers primarily make inferences about product quality from CI. Next, consumers use CI to form their perception about PCI, product attributes or product beliefs (Erickson et al., 1984; Johansson et al., 1985). And finally, PCI affects consumers' overall evaluation of products.
Summary construct model (Han, 1989)		Consumers familiar with a country's products summarise their beliefs about the product attributes or PCI and form the overall country image (CI) that directly affects their attitude.
Flexible model (Knight & Calantone, 2000)		There is a higher probability that consumers use both cues, CI and PCI (when known to them), simultaneously and to varying degrees irrespective of the state of their knowledge. The flexible model represents an all-encompassing explanation of attitude formation that allows attitudes to be directly influenced by CI along with indirect influence through PCI.
CI = Overall country image; PCI = Product-country image/product beliefs/product attributes; Attitude = Buyer attitude/purchase intention/product evaluation/behavioural intention.		

The ‘halo model’ proposes that the country image influence sequence works as CI → PCI → attitude. The ‘halo model’ is proposed on the basis that when consumers are unfamiliar with a country's product, they perceive PCI based on their knowledge of CI with this finally affecting their attitude. The ‘summary construct model’ applies in the case of higher product



familiarity. Therefore, the relationship sequence is  $PCI \rightarrow CI \rightarrow \text{attitude}$ . The ‘flexible model’ (Knight & Calantone, 2000), in contrast, proposes two directional influences originating from CI. This means that CI directly influences attitude and, at the same time, CI leads consumers to their perceptions about PCI and later PCI leads to their attitude ( $CI \rightarrow \text{attitude}$ ;  $CI \rightarrow PCI \rightarrow \text{attitude}$ ). Moreover, the flexible model describes the cognitive processing of the country image (CI) influence structure in a dual antecedent framework that is pertinent to different purchase situations, such as when there are low or high knowledge levels or familiarity.

The proposed model of the current study is based on the cognitive component of attitude theory, and the evaluative outcome construct is supplier performance (SPLP) which indicates that, according to the three different models, the possible paths of influence are  $CI \rightarrow PCI$ ,  $PCI \rightarrow SPLP$ ;  $PCI \rightarrow CI$ ,  $CI \rightarrow SPLP$ ;  $CI \rightarrow SPLP$ . This study will test the three competing models to make a comparative evaluation as has been done in earlier studies (Knight & Calantone, 2000; Laroche, Papadopoulos, Heslop, & Mourali, 2005) and find the model with the best fit. Therefore, the discussions related to the results of these three models in extant studies are worth mentioning. The findings of Han’s (1989, p. 227) study showed that the halo model was accepted for US (represents high familiarity) automobiles, Korean (represents low familiarity) television sets and automobiles, whereas the summary construct model was accepted for US automobiles and television sets. Interestingly, in the case of Japanese (represents medium familiarity) automobiles and television sets, none of the models were accepted. With regard to the two paths in the halo model ( $CI \rightarrow PCI$ ;  $PCI \rightarrow \text{attitude}$ ), the study reported statistically significant coefficients. In the summary construct model, the direction  $CI \rightarrow \text{attitude}$  was also significant in all cases. In contrast, PCI items as weight parameters of the CI construct performed poorly as, among five parameters, only two were significant in most instances (p. 28). Therefore, there was no strong evidence of a relationship

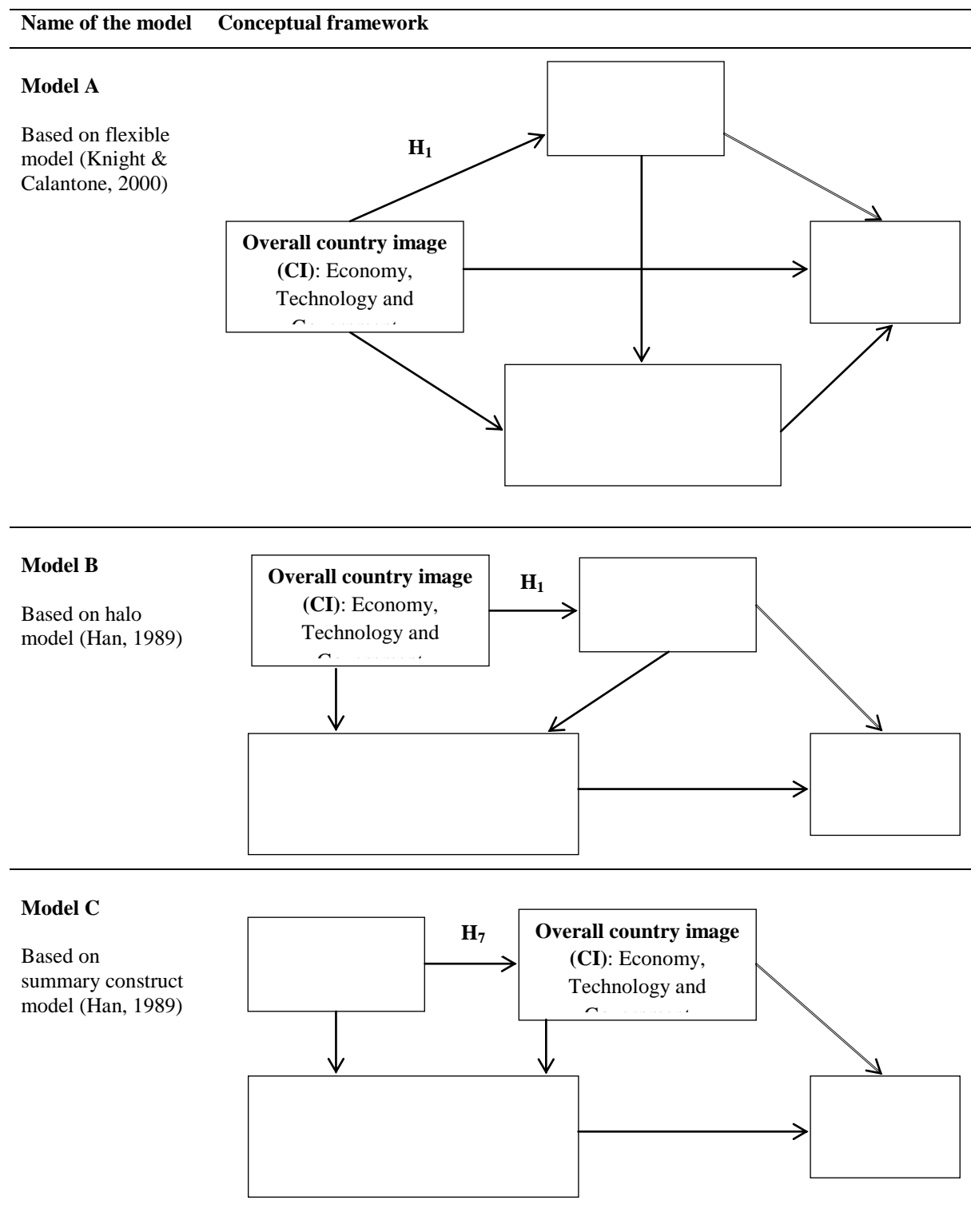
between low familiarity and the halo model. When proposing and testing the flexible model, Knight and Calantone (2000) also tested the halo and summary construct models. In their study, the results of the flexible model were not consistent between different samples. The  $CI \rightarrow$  attitude path was insignificant twice; once at the low knowledge levels of Japanese students and the second at the high knowledge levels of US students. Another path,  $PCI \rightarrow$  purchase intention was insignificant at the high knowledge levels of Japanese students and at the low knowledge levels of Japanese households (Knight & Calantone, 2000, pp. 135-136). In contrast, the halo and summary construct models did not generate any instance of insignificance in any path. The results of the halo and summary construct models also raise questions as both the models are significant at high and low knowledge levels, but, Han (1989) associated low knowledge or low familiarity with the halo model and high knowledge or high familiarity with the summary construct model.

Accepting the theoretical foundation of the flexible model, Laroche et al. (2005) tested the direction of the country image (CI) relationship based on the flexible, halo and summary construct models. All the paths from the three models were significant for Japanese and Swedish samples irrespective of low and high product familiarity. Again, the relationship between familiarity and the halo or summary construct model was not substantiated. Therefore, the conceptual basis of association between low familiarity and the halo model and high familiarity and the summary construct model is not supported by very influential evidence. Moreover, the familiarity level and importance of COO is still a debatable issue (Johansson, 1989; Magnusson & Westjohn, 2011, p. 303). However, another study (Josiassen, Lukas, & Whitwell, 2008, p. 430) has shown that, in the case of high familiarity ( $\beta = .23$ ), the importance of COO on product evaluation is comparatively less than that of low familiarity ( $\beta = .67$ ). This also provides evidence that the obvious association between the summary construct model and high familiarity is not the reflection of reality: rather, it may

have more chances. As a result, testing all three of the models on B2B buyers as respondents, with their high levels of familiarity, seems a rational approach.

### **3.4 The conceptual framework**

One important objective of this study is to find the model with the best fit from three competing models. The three conceptual models are primarily based on the cognitive components of attitude theory. As B2B buyers have a “rich cognitive structure regarding country effects” and a “wealth of experience and information”(Samiee, 1994, p. 591), it is expected that they are more “rational and informed”(Ahmed et al., 1994). Moreover, B2B buyers tend to gather accurate information on products’ intrinsic variables when evaluating suppliers (Bradley, 2001, p. 513) and have greater familiarity with a country of origin’s product and country image (Askegaard & Ger, 1997, p. 14). While it has been argued that industrial buyers use the same cognitive processes as consumers (Fern & Brown, 1984; Wilson, 2000), others (Insch, 2003) argue that industrial buyers have to deal with additional organisational and interpersonal variables. For measuring the variables, this study uses a linear compensatory multi-attribute attitude model which has been used extensively as an instrument for collecting and gathering data on attitudes towards companies (Ajzen & Fishbein, 1977; Bradley, 2001; Fishbein, 1975; Ryan & Bonfield, 1980; Sampson & Harris, 1970).



**Figure 3.4.1 Conceptual frameworks based on flexible, halo and summary construct models**

Unlike Bradley (2001), the current study introduced international supplier performance as the outcome construct. International supplier performance is used because buyers' supplier

preference is obviously directed at getting higher performance from a supplier. Moreover, supplier performance is an outcome assessment of the total supplier selection process: in the B2B domain, it can be considered as a surrogate of 'purchase intention' (Granzin & Painter, 2001; Klein et al., 1998; Verlegh, 2007) in consumer-centric COO studies (Verlegh & Steenkamp, 1999, p. 530). At the same time, perceptions of performance will intrinsically relate to actual past performance, as distinct from an expectation of future performance. In this sense, it is likely to be a more reliable predictor of actual supplier choice in the future.

The current study uses two separate COO constructs; rather than one, as used in (Bradley, 2001). In measuring the country effect as one construct, (Bradley, 2001) considered ten macro and micro variables (p. 516) that may influence buyer attitudes. The current study includes two widely accepted constructs of COO, overall country image (CI) and product-country image (PCI) in measuring country effect. CI is operationalised through the 'macro country image' scale refined and validated as a second-order construct by (Pappu et al., 2007), which was originally developed by Martin and Eroglu (1993). The components of macro country image incorporate all aspects of country image perception that are usually "outside the firm's control" (Bradley, 2001, p. 512) and based on a cognitive assessment. Whereas, Bradley (2001, p. 517) used both overall country image issues and country's product-related aspects (6 out of 10) in measuring country effect. Therefore, the study (Bradley, 2001) has not successfully captured either CI or PCI. Regarding the PCI construct, the operationalisation used by Maher and Carter (2011) and (Leong et al., 2008), is also based on cognitive assessment. In capturing country image, Heslop and Papadopoulos (1993, p. 61) reported two dimensions, product and country, out of the findings from a large research project involving consumer surveys in eight countries from North America and Europe. Therefore, the use of both dimensions (country image and product-country image) avoids the

limitation of using only one dimension, as is typical of the majority of COO studies (Pappu et al., 2007, p. 728). The list of constructs is presented in Table 3.4.1.

**Table 3.4.1** List of constructs and respective sources

Constructs in second-order model	Constructs in first-order model	Source
Company effect (CompE)	i) Product aspects (PDA) ii) Pricing aspects (PRA) iii) Marketing communications aspects (MCA) iv) Distribution and service aspects (DSA)	Adapted from Bradley (2001)
Overall country image (CI)	i) Economy (ECO) ii) Technology (TCH) iii) Government (GOV)	Adapted from Pappu et al. (2007)
Product-country image (PCI)	Product-country image (PCI)	Adopted from Maher and Carter (2011)
Supplier performance (SPLP)	Supplier performance (SPLP)	Most reported variables from multiple studies (also validated in the Empirical Paper 2, see Table 4.6.3)

It has been noted earlier that company image can be captured by its controllable variables, the marketing mix elements. Two closely relevant studies (Baldauf et al., 2009; Bradley, 2001) already used these marketing mix elements to portray the company effect. More recently, in explaining a country's performance image, Wang et al. (2014) identified the antecedent relationships of product quality, price advantage and firm competence. All three antecedents are deeply connected to company; rather than country. Drawing on strong evidence from past studies, the present study conceptualises company effect ('CompE' hereafter) as a composite measure of marketing mix elements, and proposes to measure and validate CompE as a second-order construct.

The outcome construct, 'supplier performance' ('SPLP' hereafter) has been used in previous studies in the wider perspective of purchasing, but not in COO studies. A review of supplier performance measures used in extant studies has been made (see Table 3.4.2). This study measure the SPLP construct as incorporating product quality performance, delivery performance, and price performance for measure simplification and in accordance with expert

(experts associated to the questionnaire development) advice. Later, at the pre-test stage the construct was validated (see Chapter 4, Table 4.6.3) and checked for reliability.

**Table 3.4.2 Variables reported in past literature for measuring supplier performance**

Study	Considered variables
Olsen and Ellram (1997, p. 106)	Performance factors: Delivery, quality, price.
Humphreys, Li, and Chan (2004, p. 142)	Supplier evaluation: Certification program to certify supplier quality, evaluate suppliers' price, quality and delivery performance regularly, evaluation results as the basis to determine required assistance.
Prahinski and Benton (2004, p. 51)	Supplier's performance: Product quality, delivery performance, price, responsiveness to requests for changes, service support, overall performance.
Terpend and Ashenbaum (2012, p. 77)	Supplier performance indicators: Delivery, quality, cost innovation, flexibility.
Shin, Collier, and Wilson (2000, p. 218)	Supplier performance: Cost, quality, delivery reliability, lead time, on-time delivery.
Ho et al. (2010, p. 21) Literature review of 78 journal articles from 2000 to 2008	The most popular criterion for evaluating and selecting most appropriate supplier as reported in the percentage of articles reviewed: Quality (87.18%), delivery (82.05%), price/cost (80.77%).

### 3.5 Research hypotheses

$H_1$ : Overall country image (CI) is positively related to product-country image (PCI).

$H_1$  is proposed based on flexible model of Knight and Calantone (2000) and halo model of Han (1989) for cognitive processing of country image measures that shows the relationships sequence as follows: CI → product belief → attitudes. They considered the overall country image measure (CI for this study) as an antecedent of the product belief measure, which is actually similar to the PCI measure used earlier by Han (1988), Nagashima (1977), and Parameswaran and Yaprak (1987). According to the results, in all three studies the antecedent relationship of CI to PCI is statistically significant. Moreover, the results of Knight and Calantone's (2000) study show that the CI → PCI path consistently achieved high coefficients in both low and high knowledge conditions. As the current study considers B2B buyers as the high knowledge condition buyers, the findings of the flexible model allow the testing of the hypothesis that CI positively influences PCI. In addition, other research

findings(Diamantopoulos, Schlegelmilch, & Palihawadana, 2011, p. 518; Roth & Romeo, 1992) have substantiated this relationship.

*H<sub>2</sub>*: Overall country image (CI) is positively related to company effect (CompE).

The current study uses the company-and country-related constructs, used previously by (Baldauf et al., 2009; Bradley, 2001), although, in these studies, the constructs were not operationalised and tested in the same manner. Both studies considered marketing mix elements separately and did not propose a second-order construct for the company marketing mix elements. In contrast, majority of the B2B-centric COO studies used marketing mix elements as a measure to evaluate country products and most of these B2B studies reported significant COO influence (Magnusson & Westjohn, 2011, p. 303). But the use of marketing mix elements as a short-cut for country perception neither capture company nor country perceptions correctly. So, the use of marketing mix elements as company effect indicators has a sound theoretical basis. Regarding the relationship between country and company, Hsieh et al. (2004) evidenced the joint effect of corporate image and country image on brand purchase behaviour. In addition, other studies substantiated the direct impact of COO on brand equity (Pappu et al., 2007; Shimp, Samiee, & Madden, 1993; Yasin et al., 2007). In COO studies brand is mostly used as a proxy for company. COO studies also find that developed countries' products are of better quality or more preferable (Ahmed et al., 1994; Crawford & Lamb, 1981; Dzever & Quester, 1999; Knight et al., 2008; Saghafi & Puig, 1997). Thus, it is proposed that country image and company image are positively related.

*H<sub>3</sub>*: Overall country image (CI) is positively related to supplier performance (SPLP).

According to the results reported by Knight and Calantone (2000), both the flexible model and summary construct model substantiates a statistically significant relationship from country image to attitude. Moreover, Peterson and Jolibert (1995, p. 891) found in their meta-



analysis, that the effect size (though very small) of country image on purchase intention is statistically significant. Such evidence of country image relationship with a positive behavioural outcome variable supports the proposition that overall country image is positively related to judgements of that country's supplier performance. The flexible model of Knight and Calantone (2000) shows two statistically significant directional relationships originating from overall country image. One, already discussed, as directing to PCI and another toward attitude, operationalised as purchase intention. The other is directed from country image to purchase intention. According to the study results, this relationship is significant in all the cases examined for the flexible model and summary construct model except two cases in flexible model, namely, Japanese student data with low knowledge and US student data with high knowledge. Laroche et al. (2005, p. 108) reported a statistically significant and moderately strong relationship between country image and purchase intention for both the samples from Japan ( $\beta = .41, p < .05$ ) and Sweden ( $\beta = .33, p < .05$ ) but an insignificant relationship between these two constructs was reported by Diamantopoulos et al. (2011, p. 518) and Bradley (2001). Based on the mixed results regarding the relationship significance, the current study proposes the hypothesis with caution.

*H<sub>4</sub>: Product-country image (PCI) is positively related to supplier performance (SPLP).*

Similar mixed results were observed for the relationship between PCI and the common consequential constructs in COO, such as purchase evaluation or purchase intention. Parameswaran and Pisharodi (2002) found statistically significant and strong relationships ( $\beta > .55$ ) between specific PCI and purchase intention for all the categories studied. In comparison, the flexible model (Knight & Calantone, 2000) demonstrated mixed results regarding the hypothesised positive relationship from PCI to purchase intention. This relationship was statistically insignificant in case of high knowledge level students from Japan and low knowledge level households from Japan. In other cases the flexible model

showed a significant relationship between these two constructs. The significant relationship was found between PCI and purchase intention from both the countries' samples in the study conducted by Laroche et al. (2005, p. 108). Conversely, Diamantopoulos et al. (2011, p. 518) found no significant relationship between these two constructs. Once again the mixed results suggest that the hypothesis is proposed with caution.

*H<sub>5</sub>*: Product-country image (PCI) is positively related to company effect (CompE).

In consumer-based COO studies, the PCI construct plays a very significant role. Three important models describe the importance of PCI in explaining the relationship between overall country image and consumer attitude or purchase intentions. In the halo model (Han, 1989) PCI mediates the relationship between country image and purchase intention. In the summary construct model (Han, 1989) PCI directly influences country image. Both models show similar results in Knight and Calantone (2000). In addition, the flexible model of Knight and Calantone (2000) found evidence of the mediating role of PCI between country image and attitude. At the same time, the flexible model also shows that country image directly impacts PCI and purchase intention simultaneously. Notwithstanding these results, the impact of PCI on company image is not evidenced in consumer-based COO studies. In addition, COO studies have mostly used brand as an additional cue that can be seen as proxy of company. Pappu et al. (2007, p. 741) used brand associations as one measure of brand equity and the brand association construct seems to be highly related to country macro (overall country image) and micro (PCI) image (Pappu et al., 2007, p. 735). In a later study, Diamantopoulos et al. (2011, p. 518) found a statistically significant relationship between PCI and brand image. In the B2B context, Baldauf et al. (2009, p. 447) also reported similar findings that PCI directly impacts retailer perceived brand equity ( $\beta = .32$ ) and brand profitability performance ( $\beta = .24$ ). Therefore, it can be hypothesised that PCI directly impacts company image.

*H<sub>6</sub>*: Company effect (CompE) is positively related to supplier performance (SPLP).

A company's marketing mix elements should substantially influence its overall performance. The construct CompE is a composite image of a supplier company's marketing mix elements in the eyes of the B2B buyer. This image should consequently be related to the supplier's overall performance measure, SPLP. Bradley (2001, p. 521) reported a significant relationship of company effect variables (all variables except price are statistically significant at  $p < .01-.10$  level) on company preference. While, Baldauf et al. (2009, p. 447) found that all the marketing mix elements are significantly associated with retailer-perceived brand equity; supplier image and price levels are significantly related to brand profitability performance. Based on this strong evidence, the current study proposes that CompE is positively related to SPLP.

*H<sub>7</sub>*: Product-country image (PCI) is positively related to country image (CI).

*H<sub>7</sub>* is only associated with the summary construct model. According to Han (1989), consumers' familiarity with a product and knowledge of product origin mean that if the product performs better, then consumers start perceiving that country's product positively through summarising the product image and transferring it to country image. Therefore, the country image influence structure stands as  $PCI \rightarrow CI \rightarrow$  brand attitude or purchase intention. As a consequence, the relationship for this study stands as  $PCI \rightarrow CI \rightarrow SPLP$ . Therefore, based on the summary construct model, it can be rationally argued that PCI is positively related to CI.

### **3.6. Study focus, survey respondents, survey country and product category**

This study uses an online survey questionnaire designed using Qualtrics survey software and the survey was administered online to professional purchasing managers in Australia by

Research Now. The study concentrated on international purchasing (Motwani & Ahuja, 2000) that can be synonymous to import sourcing (Swamidass, 1993), global sourcing (Kotabe, Murray, & Javalgi, 1998), worldwide sourcing (Monczka & Trent, 1992), international procurement (Scully & Fawcett, 1994) and so on. Note also that the study did not ask respondents about local or home country sourcing, which is the dominant focus of the extant COO literature, and which could be expected to reveal strong home country bias. Rather the focus of the current study is on COO effects in international procurement (excluding local procurement).

The survey country Australia plays an important part in the global economy; no less in relation to its imports. Regarding global imports, Australia ranked 18<sup>th</sup> (*Trade at a Glance*, 2013, p. 14), contributing 1.5% of global imports, putting behind countries like, Brazil, Taiwan, Thailand, Turkey, Switzerland, Malaysia, Indonesia, Austria, and Sweden. According to KOF Index of Globalisation 2014, Australia is ranked 19 among 191 countries. In studying COO it is important to create a diverse pool of countries to reduce bias towards a particular country or country group. One important bias in COO is toward developed country products over developing countries (Ahmed et al., 1994; Crawford & Lamb, 1981; Dzever & Quester, 1999; Knight et al., 2008; Saghafi & Puig, 1997). Similarly, buyers tend to select suppliers from geographically proximate countries over those from more distant countries (Oke et al., 2009). Another global pattern is the regional concentration of global trade (Rugman & Verbeke, 2004), which is also geographically concentrated, albeit in a wider distribution. Considering all these kinds of trade biases, Australia's top ten import sources include representation of Asia (physically proximate supplier markets and mostly developing countries), Europe and North America (mostly developed countries), and also newly industrialised countries of Asia (see Chapter 1, Table 1.4.1). In addition, this study argues that develop countries are suitable for COO study. Because, higher purchasing capacity and

more variety seeking tendency of developed country consumers necessitate B2B buyers to create a wider sourcing pool of developed and developing country products. Whereas, in developing countries, limited buying capacity of buyers often restrict B2B managers to import costly products from developed countries. As a consequence, purchasing managers in developed countries are having increasing opportunities to deal with, and inspect products from, a wider number of countries, and to receive customer feedback about them. Moreover, the growth of e-commerce, e-business and e-procurement are all recent phenomena, and developed countries are having better quality technological backbone and less restriction on foreign currency transactions to reap maximum benefits of these recent developments. Such environmental characteristics of the developed countries increased the opportunities for purchasing/procurement managers to source products from a larger and more diverse range of suppliers and countries.

The product category of the current study is 'raw materials and components'. By investigating trade of 'raw materials and components' or intermediate goods, this study also aligns with an obvious reality of global trade in recent times. Additionally, no previous B2B focused COO studies explicitly addressed intermediate goods as a product category. The exponential growth of the global supply chain not only covers finished goods but also components and sub-assemblies (Gereffi & Lee, 2012, p. 25), which has given rise to the global trade in intermediate goods. In 2009, global exports of intermediate goods exceeded the export values of final goods plus capital goods, representing 51% of non-fuel merchandise exports (WTO & IDE-JETRO, 2011, p. 81). Therefore, a shift has occurred from 'trade in goods' to 'trade in value added' and 'trade in tasks' (OECD, 2011; WTO & IDE-JETRO, 2011). The increased use of the statement 'Made in country X from local and imported materials/ingredients' in 'Made in' labelling clearly evidences the increasing nature of intermediate goods trade. In representing intermediate goods imports (excluding fuel),

Australian imports of processed industrial supplies and parts for industrial goods grew on average 6.8% per annum from the period 1990-91 to 2010-11 (Andrew, 2012). In comparison, the global average of annual growth rate in intermediate inputs trade between 1995 to 2006 was 6.2% (OECD, 2011, p. 30). This demonstrates that the growth of Australian intermediate inputs trade is representative of the global growth rate. In addition, the yearly intermediate goods trade, excluding fuel, is AUD 66.9 billion, equal to the two-way trade of Australia with Japan, the second largest two way trading partner of Australia (Andrew, 2012).

### **3.7 The questionnaire, data collection procedure and sample characteristics**

Data were collected using a standard self-completion questionnaire. Purchasing managers were asked to rate their existing major foreign supplier on their product, price, marketing communications, and delivery and service issues. Another set of questions were related to the supplier country, and respondents were required to rate their major existing foreign supplier's country on the country image (CI) and product-country image (PCI) issues specified earlier in the conceptual framework. Before rating the country-related scale items, the respondents were asked to write the country name of their major supplier in an open ended space. Next, respondents were asked to rate the respective supplier's performance based on scale items. In addition, some organisational and personal classification information was asked. Although all the items in the questionnaire were taken from previously used scales, five experts (three purchasing managers and two academics) checked the items for measurement appropriateness, language simplicity and their ability to be easily understood. In measuring the company effect (CompE) construct, Bradley's (2001) scale for four marketing-mix elements was used with several modifications recommended by experts. Firstly, the influence of brand name association was included under the product dimension as brand name is

extensively considered in both consumer-centric and B2B-centric COO studies (Ahmed et al., 1994; Baldauf et al., 2009; Batra et al., 2000; Ghymn & Jacobs, 1993; Ghymn et al., 1999; Gill & Ramaseshan, 2007; Khanna, 1986; Knight et al., 2008; Knight et al., 2007; Li, Monroe, & Chan, 1994). Secondly, statements of the scale items have been modified to make them suitable for different industry users and not specific to electrical or electronic products, for example. Thirdly, there were a few inclusions and exclusions of items to make it simpler and more realistic for purchasing managers of intermediate goods. After expert review, 19 items were considered for the pretesting stage (under four dimensions named as marketing communications, delivery and service, product, and price). After pretesting, 17 items produced high loadings under their expected factors, and were thus included in the final questionnaire. All the 17 items were measured using a 7-point Likert scale ranging from excellent (7) to poor (1).

Regarding the overall country image or CI construct, nine country image variables were used in the final analysis based on those variables used by Pappu et al. (2007). Here, political stability of the government (Maltz et al., 2011) was also included because it is considered important by purchasing managers. In the pretesting stage ‘civilian government’ was loaded very low with the factor government, and was thus excluded. Therefore, nine items remain for the final survey under CI construct. All the nine items were measured by a 7-point Likert-type scale ranging from highest (7) to lowest (1).

Regarding the product-country image or PCI construct, no change from five items used by Maher and Carter (2011) was necessary in the items as they loaded well at the pretesting stage, but these five items (value for money, reliability and durability, aesthetics and design, quality of workmanship, and level of technological advancement) were re-phrased to capture the product-specific country image. The 7-point Likert-type scale used for the five scale items ranged from highest (7) to lowest (1) under the statement ‘rate the product category you have

purchased from this country based on the following issues’. The three items for measuring supplier performance or SPLP were also measured with a 7-point Likert-type scale ranging from excellent performance (7) to poor performance (1). All the three items resulted in high loadings with SPLP construct.

Data were collected from the online panel members provided by commercial panel provider company, Research Now and who were from all around Australia. Respondents were filtered using two screening questions: “are you significantly involved in making international purchase decisions?” and “are you involved in purchasing intermediate goods (e.g. non-fuel raw materials, parts and components for industrial use) from foreign suppliers?” Because organisational purchasing decisions are often a group decision (Andersen & Chao, 2003) the amount of involvement was considered and both questions were asked about international purchasing. In the final survey 1863 panel members were requested to participate in the survey and, following the screening questions, 293 completed questionnaires were received, giving a 15.7% response rate. Among the 293 responses, 276 were found usable for analysis. Sample characteristics of the respondents are presented in Table 3.7.1.

**Table 3.7.1 Demographic profile of respondents and organisations**

Gender	Highest level of completed education	Experience in purchasing profession	Type of materials purchased	Size of Business
Male: 62.7	Doctoral degrees 2.5	Less than 10 years: 38.8	Raw materials: 39.5	Small Business 43.1
Female: 37.3	Master’s degree: 29	10 to 20 years: 43.8	Components and parts 60.5	Small to medium: 46.7
	Bachelor honours/Graduate certificate/ Graduate diploma: 22.1	More than 20 years: 17.4		Large business: 10.1
	Bachelor degree: 20.7			
	Advanced diploma/ Associate degree: 9.8			
	Diploma: 10.1			
	High school: 8.3			
Note: Business size defined as Australian Taxation Office (ATO) criteria; Small: Annual turnover less than AUD 2 million, Small to medium enterprises: Annual turnover AUD 2 million to AUD 250 million, Large: Annual turnover more than 250 million. All values are in percentage				



As each respondent reported the country of their major foreign supplier, the composition of sourcing countries appeared in Table 3.7.2.

**Table 3.7.2 Percentage of cases reported by sourcing country**

Supplier country	Percentage of cases
China	24.6
USA	14.1
Singapore	9.4
Germany	6.8
South Korea	6.2
New Zealand	4.7
Japan	3.9
UK	3.2
Malaysia	3.2
Indonesia	2.9
India	2.9
Italy	2.2
Thailand	1.8
Others	10.8

### 3.8 Study results

#### *3.8.1 First-order measurement model*

The conceptual model of the study was tested with covariance-based Structural Equation Modelling (SEM), using the two-step process suggested by Anderson and Gerbing (1988). Consequently, assessment of fit and the validity of two key tests (measurement model and structural model) need to be established. The conceptual model consists of nine first-order constructs. Initial estimation considered 34 measured variables under nine constructs. Factor loadings (.5 or higher and ideally .7; Hair, Black, Babin, & Anderson, 2010, p. 709) and standardised residuals, (close to 4; Hair et al., 2010, p. 725) of the variables were examined and three variables were excluded (see Tables 3.8.2.1 and 3.8.2.2). Model fit of the 31 item confirmatory factor analysis (CFA) was assessed using multiple indices. As suggested by (Hair et al., 2010, p. 672), at least one absolute (RMSEA, SRMR, Normed  $\lambda^2$ ) and one incremental index (CFI, TLI, NFI, RNI) need to be used along with  $\lambda^2$  value and associated degrees of freedom (*df*). In addition, fit indices are sensitive to model complexity (number of

constructs and indicators) and sample size (Anderson & Gerbing, 1984; Bearden, Sharma, & Teel, 1982; Bentler, 1990; Marsh, Balla, & McDonald, 1988; McDonald & Marsh, 1990; Sharma, Mukherjee, Kumar, & Dillon, 2005). Therefore, researchers suggest flexibility in evaluating fit indices considering model complexity (Hair et al., 2010, p. 673; Sharma et al., 2005, p. 941). In this vein, (Hair et al., 2010, p. 672) indicated liberal cut-off values for the model consisting of 30 or more observed variables and sample size of more than 250. Additionally, (Sharma et al., 2005, p. 939) found that RMSEA is the least affected index and is insensitive to sample sizes over 200 and the number of indicator variables. Based on the specifications regarding fit indices, the complex CFA model of this study (31 measured variables and sample size of 276) fits the data well.

**Table 3.8.1.1 First-order CFA model fit indices**

GoF Measures	Calculated value	Threshold value
$\chi^2 (df)$	849.64 (398)	
Sig.	.000	Significant p-value expected (Hair et al., 2010, p. 672)
Normed $\chi^2$	2.14	3 or less associated with better fitting models (Hair et al., 2010, p. 668)
CFI	0.91	.90 or better for acceptable model fit (Hair et al., 2010, p. 669; McClelland & Judd, 1993); For normed indices, cut-off value of 0.90 recommended by (Bentler & Bonett, 1980); models with more than 24 indicators and sample size around 200, liberal cut-off value for normed indices is .80 (Sharma et al., 2005, p. 939)
TLI	0.90	.90 or better for acceptable model fit (Hair et al., 2010, p. 669; McClelland & Judd, 1993)
RMSEA	0.064	.05 suggests close fit, .051–.08 suggests acceptable model fit to data (Browne, Cudeck, & Bollen, 1993; Jöreskog, 1993)
SRMR	0.049	.08 or less (Hair et al., 2010, p. 672)
In comparison, the null model ( $\chi^2 = 5520.66$ ; $df = 465$ ; $\chi^2/df = 11.87$ ; $RMSEA = .199$ ) in which the correlations among the latent constructs are constrained to zero shows a significantly worse fit ( $\Delta\chi^2 = 69.72$ ; $\Delta df = 1$ ; $p < .001$ ).		

### 3.8.2 First-order measurement model validity

One important assessment of construct validity includes measurement relationships between observed variables and constructs (Hair et al., 2010, p. 707). The first-order measurement model consists of nine constructs: marketing communications aspects (MCA); delivery and service aspects (DSA); product aspects (PDA); pricing aspects (PRA); economy

(ECO);technology (TCH), government (GOV), product-country image (PCI); and supplier performance (SPLP). The measurement model estimates of standardised item loadings exceeded the suggested threshold (at least .5 and ideally .7; Hair et al., 2010, p. 708). Among the 31 item loadings only three are in the .5 range, only two in the .6 range and the remaining are above .7 (see Tables 3.8.2.1 and 3.8.2.2). Moreover, all the item loadings are significant at .001 level (see Tables 3.8.2.1 and 3.8.2.2), which is also considered as a minimum requirement by Anderson and Gerbing (1988). In addition, high item loadings on intended constructs and average item loading for CompE variables .73, for country variables .82 and for SPLP variables .73 show convincing evidence of convergent validity (Fornell & Larcker, 1981).

The study computed average variance extracted (AVE) and composite reliability (CR) as an estimate of reliability of all measurement scales (Chin, 1998a; Fornell & Larcker, 1981). All the AVE estimates are above cut off value .5 (Fornell & Larcker, 1981) and all the CR estimates are well above .7, (indicate good reliability; Hair et al., 2010, p. 710). So both the measures (AVE and CR, see Tables 3.8.2.1 and 3.8.2.2) explain adequate reliability and convergent validity (Chin, 1998a; Fornell & Larcker, 1981) of the constructs.

**Table 3.8.2.1 Factor loadings of the supplier company/firm variables (CFA model)**

<b>Marketing communication aspects (MCA)</b> <b>CR: 0.84; AVE: 0.57</b>	<b>Standardised loadings (t value)</b>
Active dissemination of new information on products and services	0.75 (11.92)*
Knowledge level of sales executives about company products and applications	0.76 (12.07)*
Truthfulness in product claims	0.77 (12.26)*
Quality of information content in company communications	0.73 (NE)
<b>Distribution and service aspects (DSA)</b> <b>CR: 0.75; AVE: 0.51</b>	
Adherence to delivery promises	0.84 (8.36)*
Efficiency of order processing system	0.74 (7.93)*
Level of after sales service	0.51 (NE)
Competency in providing emergency services	Variable excluded
<b>Product aspects (PDA)</b> <b>CR: 0.87; AVE: 0.53</b>	
Manufacturing quality	0.66 (10.79)*
Degree of product variety	0.78 (12.89)*
Design excellence	0.80 (13.17)*
Compliance with technical specifications	0.70 (11.38)*
Products associated with recognisable brand names	0.69 (11.30)*
Quick to adapt product to user needs	0.74 (NE)
<b>Pricing aspects (PRA)</b> <b>CR: 0.76; AVE: 0.52</b>	
Attractiveness of quoted pricing	0.78 (NE)
Value for money	0.79 (11.95)*
Usefulness of supplier provided credit terms	0.56 (8.71)*

\* Significant at .001 level.

NE = Not estimated as loading set to fixed value 1.

**Table 3.8.2.2 Factor loadings of the supplier country and supplier performance variables (CFA model)**

<b>Economy (ECO)</b> <b>CR: 0.86; AVE: 0.68</b>	<b>Standardised loadings (t value)</b>
Standard of living	0.89 (NE)
Welfare concentration of government	0.78 (15.03)*
Cost of labour	0.79 (15.37)*
<b>Technology (TCH)</b> <b>CR: 0.88; AVE: 0.72</b>	
Level of economic development of the country	0.83 (NE)
Level of industrialisation	0.88 (16.99)*
Level of technological research	0.83 (15.87)*
<b>Government (GOV)</b> <b>CR: 0.80; AVE: 0.67</b>	
Freedom of market forces	0.77 (NE)
Political stability	0.86 (13.31)*
Democratic practices in forming government	Variable excluded
<b>Product-Country Image (PCI)</b> <b>CR: 0.87; AVE: 0.63</b>	
Technological advancement in country's product	0.79 (NE)
Aesthetics and design image of country's product	0.80 (14.11)*
Value for money perception of country's product	0.80 (14.12)*
Reliability and desired performance length perceived about country's product	0.77 (13.44)*
Country's workmanship image	Variable excluded
<b>Supplier Performance (SPLP)</b> <b>CR: 0.78; AVE: 0.55</b>	
Product quality performance	0.80 (NE)
Delivery performance	0.86 (13.94)*
Price performance	0.52 (8.41)*

\* Significant at .001 level.

NE = Not estimated as loading set to fixed value 1.

To demonstrate adequate discriminant validity, correlations between pairs of constructs should be less than 1 (Bagozzi, 1982). Chin (1998b) argues that correlation between constructs should be less than .90. A more rigorous test of discriminant validity (Hair et al., 2010, p. 710) is that the square root of AVE should be higher than inter-construct correlations (Fornell & Larcker, 1981). Table 3.8.2.3 shows inter-construct correlations with the square root of AVE in the diagonal. The constructs show adequate discriminant validity as suggested by Chin (1998b) and Bagozzi (1982), but according to the specifications of Fornell and Larcker (1981), the study detected a discriminant validity problem.

**Table 3.8.2.3 Composite reliability, AVE estimates and inter-construct correlation matrix**

	<b>PCI</b>	<b>MCA</b>	<b>PDA</b>	<b>PRA</b>	<b>TCH</b>	<b>ECO</b>	<b>GOV</b>	<b>DSA</b>	<b>SPLP</b>
<b>PCI</b>	<i>0.79</i>								
<b>MCA</b>	0.58	<i>0.75</i>							
<b>PDA</b>	0.67	0.84	<i>0.72</i>						
<b>PRA</b>	0.48	0.65	0.76	<i>0.72</i>					
<b>TCH</b>	0.71	0.47	0.46	0.22	<i>0.84</i>				
<b>ECO</b>	0.62	0.41	0.42	0.17	0.65	<i>0.82</i>			
<b>GOV</b>	0.73	0.53	0.52	0.32	0.74	0.73	<i>0.81</i>		
<b>DSA</b>	0.58	0.86	0.82	0.62	0.38	0.38	0.41	<i>0.70</i>	
<b>SPLP</b>	0.61	0.67	0.76	0.58	0.42	0.36	0.48	0.74	<i>0.74</i>
<b>CR</b>	<b>0.87</b>	<b>0.84</b>	<b>0.87</b>	<b>0.76</b>	<b>0.88</b>	<b>0.86</b>	<b>0.80</b>	<b>0.75</b>	<b>0.78</b>
<b>AVE</b>	<b>0.63</b>	<b>0.57</b>	<b>0.53</b>	<b>0.52</b>	<b>0.72</b>	<b>0.68</b>	<b>0.67</b>	<b>0.51</b>	<b>0.55</b>

Note: Square root of AVE on the diagonal

It is important to note that the first-order constructs that subsequently form the second-order construct may not demonstrate discriminant validity (Gerbing & Anderson, 1984, p. 574; Ping Jr, 2004, p. 133). In accordance with Fornell and Larcker (1981) specification, the company marketing mix constructs (MCA, DSA, PDA, and PRA) evidences little problem in discriminant validity. But, as the marketing mix constructs will form subsequent second-order construct CompE (company effect) discriminant validity problem is not a major concern (Gerbing & Anderson, 1984, p. 574; Ping Jr, 2004, p. 133). Yet, the problematic pairs of constructs are used for additional tests of discriminant validity. To overcome this potential problem, a pair wise  $\lambda^2$  difference test (Anderson & Gerbing, 1988, p. 416; Bagozzi & Phillips, 1982, p. 476; A. M. Farrell, 2010, p. 325; Jöreskog, 1971) was performed for the pairs of constructs under question. Constraining covariance of each pair was done for each pair at a time as suggested by Anderson and Gerbing (1988, p. 416).

**Table 3.8.2.4 Pairwise Chi-square difference tests for discriminant validity**

Pair of Constructs	Constrained model		Unconstrained model	
	$\lambda^2$	<i>df</i>	$\lambda^2$	<i>df</i>
MCA $\leftrightarrow$ PDA	860.29**			
MCA $\leftrightarrow$ DSA	873.63***			
DSA $\leftrightarrow$ PDA	874.89***			
DSA $\leftrightarrow$ SPLP	885.22***	399	<b>849.64</b>	<b>398</b>
PDA $\leftrightarrow$ PRA	863.18***			
PDA $\leftrightarrow$ SPLP	866.33***			

\*\*Significant at .002 level, and \*\*\* Significant at .001 level

Pairwise  $\lambda^2$  difference tests (Table 3.8.2.4) subsequently showed that five pairs produced significant  $\lambda^2$  differences at .001 level, and one pair at .002 level. Consequently, all the pairs can be considered to exhibit discriminant validity. Therefore, based on satisfactory first-order CFA model validity, model estimation could now move toward a higher-order measurement and structural model.

### *3.8.3 Common method bias and non-response bias*

Common method variance (variance attributed to the measurement method) is a potential problem in behavioural research (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003, p. 879). One important reason for encountering this problem is that data are collected at one point in time using the same method (Podsakoff et al., 2003). The study considered some steps, as suggested by Podsakoff et al. (2003), to reduce the risk of common method bias. The respondents were assured of anonymity and subsequently requested to answer questions as honestly as possible. Additionally, respondents were informed that there were no right or wrong answers, and the scale items were improved through pre-testing and reduced item ambiguity. Moreover, the study used Harman (1967) one factor test to assess the model for common method bias. The one factor CFA model resulted in  $\lambda^2$  value 2312.212 with *df* 434 that indicates the fit of one factor model is significantly worse ( $\Delta\lambda^2 = 1462.572$ ,  $\Delta df = 36$ ,  $p < .001$ ). This result indicates that common method variance does not pose a serious threat in explaining the measurement model results (Baldauf et al., 2009; Jayachandran & Varadarajan,

2006; Josiassen, 2011; Kandemir, Yaprak, & Cavusgil, 2006; Yenyurt, Henke Jr, & Cavusgil, 2013).

Data were also tested for non-response bias by analysing early and late respondents (Armstrong & Overton, 1977) for significant differences. The sample of early 25% respondents and late 25% respondents was used to perform a *t*-test for mean difference. Mean values for early respondents (ER) and late respondents (LR) and respective *t*-value is reported in Table 3.8.3.1. As *t*-values of ER and LR for all the constructs are well below 1.96, non-response bias can be considered as not a major problem for data analysis.

**Table 3.8.3.1 Results of *t*-test for significant differences between ER and LR**

Constructs	ER	LR	<i>t</i> -value
MCA	4.792	4.614	1.302
DSA	3.509	3.383	1.307
PDA	5.302	5.266	0.240
PRA	4.646	4.652	0.028
ECO	4.156	4.093	0.333
TCH	4.612	4.653	0.157
GOV	4.256	4.180	0.513
PCI	4.922	4.787	0.944
SPLP	4.706	4.633	0.535

In addition to testing the constructs for non-response bias, some respondent characteristics were compared between ER and LR. For example, ER raw materials were sourced by 40% respondents and component parts sourced by 60% respondents while among the LR the same is 36% and 64% respectively. In addition, the average year of experience among the ER is 14.07 and among the LR it is 12.83, which is not statistically different (*t* value .979).

### ***3.8.4 Second-order measurement model***

The second-order CFA model includes two second-order constructs and two first-order constructs. The company effect (CompE) construct consists of four first-order constructs named as marketing communications (MCA), delivery and service aspects (DSA), product aspects (PDA), and pricing aspects (PRA). Bradley (2001) conceptualised company effect



(CompE) but did not measure it as a second-order construct. Another second-order construct is overall country image (CI) including ECO, TCH, and GOV as first-order constructs. The CI construct was operationalised in similar fashion to the construct in the source study (Pappu et al., 2007). The product-country image (PCI) and supplier performance (SPLP) constructs remain as first-order constructs in the second-order CFA model. The second-order CFA model fits the data well according to the threshold values of fit indices specified earlier [ $\chi^2(df) = 894.92 (421)$ , Normed  $\chi^2 = 2.13$ , CFI = .91, TLI = .90, RMSEA = .064, SRMR = .053].

### *3.8.5 Second-order measurement model validity*

Item loadings (see Table 3.8.5.1) of the second-order constructs are substantially higher than the ideal threshold value .7 (Hair et al., 2010, p. 708). Additionally, the *t*-values of all the item loadings are significant at the .001 level (see Table 3.8.5.1). The item loadings of the first-order constructs changed minimally at fractional level and were not reported again. Average item loadings of the four construct second-order CFA model is .81 that signals strong support of convergent validity (Fornell & Larcker, 1981). AVE and CR estimates for the second-order constructs convincingly exceeded the threshold value (AVE > .5, CR > .7). Considering all the constructs of the second CFA model, AVE and CR values show substantial evidence of convergent validity.

Regarding discriminant validity, inter-construct correlations and square root of AVE estimates for the four constructs were examined. The results (see Table 3.8.5.2) indicated little deviation from the (Fornell & Larcker, 1981) specification. Therefore, the pairwise  $\chi^2$  difference test (Anderson & Gerbing, 1988, p. 416; Bagozzi & Phillips, 1982, p. 476; A. M. Farrell, 2010, p. 325; Jöreskog, 1971) was employed. Both the pairs of constructs passed the

discriminant validity test with significant  $\lambda^2$  differences (see Table 3.8.5.3). Consequently, the discriminant validity of second-order CFA model was established.

**Table 3.8.5.1 Standardised loadings of second-order factors**

<b>Company Effect (CompE)</b> <b>CR: 0.93; AVE: 0.77</b>	<b>Variable code</b>	<b>Standardised loadings (t value)</b>
Marketing communication aspects	MCA	0.89 (NE)
Distribution and service aspects	DSA	0.90 (7.43)*
Product aspects	PDA	0.96 (10.33)*
Price aspects	PRA	0.76 (8.95)*
<b>Overall Country Image (CI)</b> <b>CR: 0.88; AVE: 0.73</b>		
Economy	ECO	0.79 (NE)
Technology	TCH	0.83 (10.71)*
Government	GOV	0.91 (10.21)*

\* Significant at .001 level.

NE = Not estimated as loading set to fixed value 1.

**Table 3.8.5.2 CR, AVE estimates and inter-construct correlation matrix of second-order CFA model**

	<b>CompE</b>	<b>PCI</b>	<b>SPLP</b>	<b>CI</b>
<b>CompE</b>	0.87			
<b>PCI</b>	0.67	0.79		
<b>SPLP</b>	0.79	0.61	0.74	
<b>CI</b>	0.56	0.81	0.50	0.84
<b>CR</b>	<b>0.93</b>	<b>0.87</b>	<b>0.78</b>	<b>0.88</b>
<b>AVE</b>	<b>0.77</b>	<b>0.63</b>	<b>0.55</b>	<b>0.73</b>

**Table 3.8.5.3 Pairwise Chi-square difference test for discriminant validity**

<b>Pair of Constructs</b>	<b>Constrained model</b>		<b>Unconstrained model</b>	
	$\lambda^2$	<i>df</i>	$\lambda^2$	<i>df</i>
PCI $\leftrightarrow$ CI	901.13**	422	<b>894.92</b>	<b>421</b>
SPLP $\leftrightarrow$ CompE	917.03***			

\*\* Significant at .025 level, and \*\*\* Significant at .001 level

### 3.8.6 Second-order structural model

As the measurement model provided sufficient evidence of construct validity, the structural relationships can now be estimated. Three competing structural models estimated. Fit indices of all the three structural models and the second-order measurement model are almost similar

(see Table 3.8.7.1) and  $\Delta\lambda^2$  with each structural models and CFA model are insignificant at .10 level. Therefore, the insignificant  $\Delta\lambda^2$  value between CFA model and structural model strongly evidences adequate structural model fit (Hair et al., 2010, p. 738).

### 3.8.7 Hypotheses testing

As predicted in  $H_1$ , there is a strong positive relationship from CI to PCI ( $\beta = .82$ ,  $t = 10.19$ ,  $p < .001$ ):  $H_1$  is thus *supported*. However, the relationship between CI and CompE ( $H_2$ ) is *not supported* as the relationship is not statistically significant ( $\beta = .05$ ,  $t = .40$ ,  $p = .687$ : in Model C,  $\beta = .03$ ,  $t = .27$ ). The  $\beta$  value and  $t$ -statistic for  $H_2$  in all the models are so negligible that it is impossible to draw any conclusions. Evidence of the negative relationship between CI and SPLP ( $H_3$ ) is detected in Model A but is not meaningful as both the coefficient and  $t$ -value are close to zero ( $\beta = -.01$ ,  $t = -.07$ ,  $p = .945$ ). In addition,  $H_3$  in Model C shows a positive relationship between CI and SPLP ( $\beta = .10$ ,  $t = 1.47$ ,  $p = .143$ ) but it is not statistically significant:  $H_3$  is therefore *not supported*. Hypothesis 4 ( $H_4$ ) indicates a positive relationship from PCI to SPLP with considerable magnitude but is still not sufficient to reject the null hypothesis ( $\beta = .15$ ,  $t = 1.16$ ,  $p = .248$ ) in Model A. However, in Model B ( $\beta = .14$ ,  $t = 1.86$ ,  $p = .064$ ),  $H_4$  is statistically significant. The positive relationship between PCI and CompE ( $H_5$ ) is *supported* with large coefficients and strong significance ( $\beta = .63$ ,  $t = 4.75$ ,  $p < .001$ ) in all the models. The relationship between CompE and the main outcome variable SPLP ( $H_6$ ) is strongly *supported* by the path estimate and significance level ( $\beta = .70$ ,  $t = 7.42$ ,  $p < .001$ ) in all the models. The relationship from PCI to CI ( $H_7$ ) estimated only in Model C is statistically significant and strong in magnitude ( $\beta = .82$ ,  $t = 10.26$ ,  $p < .001$ ).

**Table 3.8.7.1 Structural model results**

Constructs/Paths	Hypotheses	Standardised path coefficients ( <i>t</i> -value)		
		Model A (based on flexible model)	Model B (based on halo model)	Model C (based on summary construct model)
CI → PCI	<i>H</i> <sub>1</sub>	<b>0.82</b> (10.19**)	<b>0.82</b> (10.19 **)	
CI → CompE	<i>H</i> <sub>2</sub>	0.05 (.40)	0.05 (.40)	0.03 (.27)
CI → SPLP	<i>H</i> <sub>3</sub>	-0.01 (-.07)		0.10 (1.47)
PCI → SPLP	<i>H</i> <sub>4</sub>	0.15 (1.16)	<b>0.14</b> (1.86*)	
PCI → CompE	<i>H</i> <sub>5</sub>	<b>0.63</b> (4.75**)	<b>0.63</b> (4.77**)	<b>0.65</b> (4.88**)
CompE → SPLP	<i>H</i> <sub>6</sub>	<b>0.70</b> (7.42**)	<b>0.70</b> (7.43**)	<b>0.74</b> (8.27**)
PCI → CI	<i>H</i> <sub>7</sub>			<b>0.82</b> (10.26**)
R <sup>2</sup> : SPLP		0.64	0.64	0.64
R <sup>2</sup> : PCI		0.66	0.66	
R <sup>2</sup> : CompE		0.45	0.45	0.46
R <sup>2</sup> : CI				0.67
λ <sup>2</sup> ( <i>df</i> )		894.92 (421)	894.93 (422)	896.23 (422)
Normed λ <sup>2</sup>		2.13	2.12	2.12
CFI		0.91	0.91	0.91
TLI		0.90	0.90	0.90
RMSEA		0.064	0.064	0.064

\* indicates  $p < .05$  (critical  $t$ -value at 5%, one-tailed 1.645); \*\* indicates  $p < .001$

As stated in the conceptual framework, the nested models comparison shows that all the models are fairly close in their  $\lambda^2$  values and fit indices. Therefore,  $\Delta\lambda^2$  is non-significant among the three models ( $\Delta\lambda^2 < 2.71$ ,  $\Delta df = 1$ ). In this situation, all the models statistically fit the data well but the more restricted model (fewer free parameters and more degrees of freedom) should be favoured (Schermele-Engel, Moosbrugger, & Müller, 2003, p. 34). On that basis, Models B and C are preferred. Another interesting aspect is that estimation of more parameters increases the probability that any parameter will be significant (Cribbie, 2000). According to Table 3.8.7.1, Model A estimates more parameters (six) than Model B or Model C (five), but Model A results in equal or fewer significant parameters. Therefore, considering the number of significant parameters against the number of parameters tested, Model B is the preferred model. In addition, Model C demonstrates that the basic premise of the model, that overall country image impacts on supplier performance (CI → SPLP), is insignificant. Therefore, in Model C, the country image influence structure proposed by the summary construct model (PCI → CI → SPLP) cannot be satisfied. Although Model B

contains similar model fit strengths to Model C, together with the significance of basic premises and the number of significant paths compared to estimated paths, this suggests that Model B (the multi-cue model considering company and country based on the halo model) is preferable.

As can be seen on Table 3.8.7.1, the results also show that Model B explains 64% of variance in the outcome variable SPLP, which is mainly for CompE. Overall country image (CI) contributes 66% of the variability in PCI and PCI explains around 45% of the observed variance in CompE.

### *3.8.8 Mediation analysis*

The significant structural paths of the most preferred model, Model B (based on the halo model), signal the possibility of mediating relationships among constructs. Considering all the path estimates tested by Model B, three relationships can be considered for mediation. They are  $CI \rightarrow PCI \rightarrow CompE$ ;  $CI \rightarrow PCI \rightarrow SPLP$ ; and  $PCI \rightarrow CompE \rightarrow SPLP$ . In the three possible mediating relationships, two constructs (PCI and CompE) are mediators. In examining the mediating relationships, four conditions related to mediation, in accordance with Baron, need to be fulfilled. The first condition is fulfilled if all the antecedents affect the mediator. With regard to two of the antecedent to mediator relationships ( $CI \rightarrow PCI$  and  $PCI \rightarrow CompE$ ), Table 3.8.8.1 shows that both the paths are significant at .001 level and associated fit indices are also acceptable. The second condition can be satisfied if the mediating construct influences the dependent/outcome construct. Again, Table 3.8.8.1 shows that three paths from the mediator to outcome construct ( $PCI \rightarrow CompE$ ;  $CompE \rightarrow SPLP$ ; and  $PCI \rightarrow SPLP$ ) are statistically significant with acceptable model fit indices. Therefore, the second condition is fulfilled. In the third condition, the antecedent construct needs to directly affect the outcome construct without the mediator. All three antecedent to outcome

relationships (CI → CompE; CI → SPLP; and PCI → SPLP) are significant without the mediator construct at different levels of significance (.05 to .001) as shown in Table 3.8.8.1. Therefore, the third condition is fulfilled. Finally, according to the fourth condition, a decision on mediation can be taken if the direct paths (CI → CompE; CI → SPLP; and PCI → SPLP) become non-significant (full mediation) or reduced (partial mediation) after introducing the mediator. Table 3.8.8.1 shows that two direct paths (CI → CompE, CI → SPLP) become non-significant after adding the mediator construct PCI to the model. Therefore, the relationships from CI → CompE and CI → SPLP are fully mediated by PCI. The strength of relationship of the remaining direct path, PCI → SPLP, is reduced from .30 to .14 after including the mediator CompE, but still remains insignificant at the .05 level (critical t value of one-tail test at 5 percent 1.645, one tail test as hypothesis is unidirectional; Lisboa, Skarmeas, & Lages, 2013, p. 223). Therefore, the relationship from PCI to SPLP is partially mediated by the CompE construct. In addition, the path coefficients of mediating relationships are used to calculate the Sobel test statistic. The Sobel test statistic results show that all three mediating relationships (CI → PCI → CompE; CI → PCI → SPLP; and PCI → CompE → SPLP) are statistically significant ( $p < .001$ ).

**Table 3.8.8.1 Results of mediation tests**

Paths	Antecedent → Mediator	Mediator → Outcome	Antecedent → Outcome	After adding Mediator	Sobel test stat.
CI → PCI	0.82 (10.21)***				
PCI → CompE	0.67 (8.66)***				
PCI → CompE		0.67 (8.51)***			
CompE → SPLP		0.70 (7.43)***			
PCI → SPLP		0.14 (1.81)*			
CI → CompE			0.68 (8.03)***	0.05 (.44)	
CI → SPLP			0.36 (2.11)**	0.02 (.16)	
PCI → SPLP			0.30 (1.77)*	0.14 (1.81)*	
CI → PCI → CompE					4.30***
CI → PCI → SPLP					3.89***
PCI → CompE → SPLP					5.59***
$\chi^2 (df)$	735.52 (341)	497.58 (223)	1002.99 (465)		
Normed $\chi^2$	2.15	2.23	2.37		
CFI	0.91	0.92	0.90		
RMSEA	0.065	0.067	0.071		

\* indicates  $p < .05$  (critical  $t$ -value at 5%, one-tailed 1.645); \*\* indicates  $p < .025$ ; \*\*\* indicates  $p < .001$

### *3.8.9 Results summary*

In summing up the results of this study, among the hypothesised models, Model B, based on the halo model (Han, 1989), has explained the maximum number of significant relationships with good model fit indices. Despite their higher familiarity with product category and country, the B2B buyers' responses result in the acceptance of the halo model. This result contradicts the basic premises of the halo model. The relationship between overall country image (CI) and product-country image (PCI) is statistically significant with high magnitude. Therefore, it can be suggested that purchasing managers may use the direction from CI → PCI (as conceived by the halo and flexible models) but may also use the opposite direction (as conceived by the summary construct model). Despite the potential influence in both directions, the impact on supplier performance (SPLP) can be significantly explained by PCI but not by CI. These findings strongly signify that the B2B respondents in this study support the country image influence structure of the halo model. In addition, the statistically significant mediating relationship, CI → PCI → SPLP, also substantiates the acceptance of the halo model. With regard to company, the company effect (CompE) can be conceived, through the actions of the marketing mix variables, as CompE is a valid second-order construct derived from four first-order constructs. In addition, the direct influence of CompE on SPLP is substantiated by the study results, both in direction and magnitude. In turn, CompE is significantly influenced by CI and PCI (see Table 3.8.8.1) but in the presence of PCI, the impact of CI on CompE becomes insignificant (see Table 3.8.8.1). Furthermore, the impact of PCI on CompE is very strong, and the influence of PCI on SPLP is partially mediated by CompE. Finally, this company country model in a multi-cue setting clearly demonstrated the direction of country image influence (CI → PCI → SPLP), explained the strong influence of company on supplier performance (in presence of country influence), and

provided evidence of strong country influence on company effect and weaker country effect on supplier performance.

### **3.9 Discussion and implications**

The study results support the previous COO literature, which emphasises the importance of company association (Baldauf et al., 2009; Bradley, 2001; Hsieh et al., 2004). The current study supports the previous literature that relies on attitude theory in arguing that B2B buyers are more rational than consumers. However, as this is a survey-based study, it is more likely to capture rational and verbally-expressed country associations than emotionally-held COO aspects (Boddy, 2005; Koll et al., 2010). The study also avoids the pitfalls of the majority of COO studies, which ask for perceptions requiring extreme abstraction in typically superficial situations. Assessing the existing supplier company and its associated country is likely to be well known to B2B buyers, and their opinions regarding their familiar industry and product categories does not require them to imagine hypothetical scenarios. Therefore, by using a research instrument that captures rational aspects and a respondent group who answers questions based on real-world experience, the study avoids some elements of previous COO research in which it has been criticised for its “lack of realistic managerial relevance”; “consumers’ impoverished origin knowledge base”; “explaining more of the variance than reality” (Samiee, 2011); “lack of familiarity”; “uninformed responses” (Usunier & Cestre, 2008); etc. In addition, this study contributes to the COO literature by adopting a multi-cue and multidimensional country image perspective, two aspects that have been suggested in the COO literature (Chattalas et al., 2008; Dinnie, 2004; Hsieh et al., 2004; Peterson & Jolibert, 1995; Verlegh & Steenkamp, 1999).

With regard to the direction of country image influence, three theoretical models (halo, summary construct and flexible) are used in the COO literature but have not been previously



used in a B2B setting. This study therefore initiated the directional test of overall country image, product-country image and the evaluation/attitude measure in the B2B domain. The study provides evidence that the direction based on the halo model (CI→PCI→SPLP) best describes the data. This finding contradicts Han's (1989) claim that buyers with higher levels of familiarity such as B2B buyers use the direction of the summary construct model (PCI → CI → SPLP). However, the current study's findings provide evidence that overall country image (CI) does not directly influence supplier performance (SPLP) in the presence of product-country image (PCI) in the model. Therefore, this theoretical debate needs to be investigated more in B2B settings.

This study incorporates the prominence of the global supply chain and the reality of 'Made in the world (MIW)' that has eventually transformed the trade of intermediate goods as a significant part of global purchasing. Therefore, this study's focus on raw materials and component parts reflects the opinion related to current trade practices. In purchasing raw materials and component parts, B2B buyers need to work more closely with suppliers as the quality and performance of final products ultimately depends on the quality of raw materials and component parts. The findings of this study also substantiate the dominance of company effect over country image (PCI  $\beta = .14$ , CompE  $\beta = .70$ ). At the same time, the significance of product-country image (PCI) on supplier performance (SPLP) in the purchase of raw materials and component parts is noteworthy. The reason is that no previous study that used company and country constructs together (Baldauf et al., 2009; Bradley, 2001; Hsieh et al., 2004) has provided evidence of such a high coefficient ( $\beta = .14$ ) of the country construct. The significance of PCI influence on B2B buyers' assessment of supplier performance (SPLP), as evidenced in this study, may be due to the raw materials and component parts playing a crucial role in determining the quality of final products.

A further analysis of the direction of country image influence is necessary to adequately portray the findings of this study. Overall country image (CI) is measured by country economy, country technology and country government: when CI is high, this means that the country is a developed country. According to the study results ( $CI \rightarrow PCI \rightarrow SPLP$ ), developed countries normally have a higher product-country image (PCI) which leads to higher supplier performance (SPLP). This finding is easily acceptable based on numerous COO studies that have provided evidence of the high quality bias of B2B buyers (Ahmed et al., 1994; Chetty et al., 1999; Dzever & Quester, 1999; Insch, 2003; Quester et al., 2000) with regard to developed country products. Again, the insignificant relationship between overall country image (CI) and supplier performance (SPLP) indicates that the developed country image alone is not enough to generate superior supplier performance: rather, the findings indicate that only a developed country with a high product-country image can generate higher supplier performance. For example, with regard to industrial chemicals imports, developed countries will be preferred by the buyers: if the USA and Germany are the options, Germany has the higher PCI for chemicals and a German supplier generates higher supplier performance. Therefore, this study has revealed the crucial role of the PCI construct over the country's development image in B2B-centric COO research. This finding also answers an important question of the most recent COO meta-analysis (Magnusson & Westjohn, 2011, p. 307), *"is macro country image (overall country image) more or less influential than micro country image (product-country image)?"*

In connection with this, the study also provides evidence of the statistical significance of the relationship from product-country image (PCI)  $\rightarrow$  overall country image (CI). However, the path from overall country image (CI)  $\rightarrow$  supplier performance (SPLP) is not statistically significant. This means that the summary construct model conceived by Han (1989) as appropriate for buyers with their higher level of familiarity is not supported by the highly

familiar B2B buyer respondents of this study. From one perspective, the direction from  $PCI \rightarrow CI$  cannot be true for the highly familiar and more knowledgeable respondent group because a country's high PCI does not lead a B2B buyer to perceive the country as a developed country (high CI). For instance, a B2B buyer interested in buying high quality cotton must know of the name, Egyptian cotton, but being familiar with this high quality cotton as a raw material (high PCI) will not lead him/her to consider that Egypt has a high CI: if it did, this would mean that Egypt is a developed country (as perceived by the summary construct model). Moreover, a B2B buyer at least knows the current state of Egypt and those B2B buyers who purchase cotton from Egypt are even more aware of its current state. Therefore, in such instances, the summary construct model does not make sense. However, the more usual direction is that a developed country normally produces high quality products to satisfy the high living standards of its citizens and thus their PCI will usually be high ( $CI \rightarrow PCI$  as shown by the halo model). Currently, the significance of the relationship from  $PCI \rightarrow CI$  can arguably be attributed to component parts. Automobile parts, parts for mining equipment, tempered glass, etc. are more technology-based products. Someone who purchases any of these products from a country with this purchase resulting in a positive experience (i.e. a positive PCI) may lead the purchaser to conclude that the overall CI of this country is also good (which implies that the purchaser generalises from the particular purchase and thus the summary construct is accepted). However, the direction  $PCI \rightarrow CI$  is still not convincing as the B2B buyers deal constantly with the wider world: consequently, they have good knowledge about developed and developing countries and also about the high/low PCI about the product category with which they are familiar.

A country's PCI is clearly strongly associated with a particular industry's strength or competitiveness. Gaining substantial advantage from a country's PCI requires coordinated efforts from industry participants and government. Domestic rivalry within industry plays a

vital role in gaining national competitiveness according to the determinants of national competitiveness (Porter, 1990). This phenomenon of within-industry rivalry is a prerequisite for the development of PCI. However, the COO facet 'PCI' is rarely applied in addressing national competitiveness in COO research. For example, if Sony was the only electronics company in Japan, people would not necessarily associate Japan with electronics; however, when companies that collectively belong to a particular industry originating from one country deliver consistently high performance, the product's origin country gains a high PCI. Moreover, the involvement of government with industry complements PCI and enhances global positioning. This has implications for government policy makers. For example, Indonesia is the global leader in producing palm oil and two other major producers are Malaysia and Thailand. Owing to combined government and industry efforts, the highest PCI for palm oil is attributed to Malaysia not Indonesia or Thailand. In this regard, there is also the importance of country image advertising in developing a high PCI (as the Malaysian government does in the case of palm oil). In another instance, being a large producer of quality milk with a small local demand, Australia has a positive PCI in the world for milk and dairy products. In comparison, a very small country, New Zealand, not only holds a higher PCI than Australia for dairy products in the world, but also holds ninth position in global milk production, while Australia is nineteenth. A major differentiating factor in this case is industry and government support for developing PCI. Notwithstanding this, there are instances where global achievement is too strongly associated with company strength without sufficient justifiable common industry strength domestically, such as with IKEA and Fisher & Paykel. These results suggest that governments are better advised to focus more on specific competitive industries; rather than on the overall country image. The generalisability behind the source of competitive strength is, therefore, that it is both company and product-country image.

The mediating role of company effect (CompE) in the PCI → CompE → SPLP (supplier performance) relationship supports the significance of PCI in purchasing intermediate products from international sources. As both the paths are strongly significant, this explains that a company's actions in the marketing mix elements have a significant positive relationship with PCI. In other words, a high PCI leads to higher CompE, and higher CompE leads to higher SPLP. Based on the mediating relationship, it can be conceived that B2B buyers of intermediate goods consider PCI before selecting a supplier. As B2B buyers are more informed buyers and obviously encounter source country issues in import purchase communications, purchasing intermediate products from any country without major or minor PCI relevance seems unrealistic. As this study asked for responses on existing suppliers and respective suppliers' performance, its results show the reflection of post-purchase evaluation. The buyers' post-purchase evaluation corroborates that a high PCI significantly increases supplier company effect in achieving higher supplier performance.

Previous COO studies have established the diminished significance of country influence in multi-cue settings, to the point that negative country image can even be neutralised in multi-cue COO studies (Ahmed et al., 1994). This current study also measured a significant reduction in COO importance after including company effect in measuring impact on supplier performance. The beta coefficients of significant country and company factors (PCI = .14 and CompE = .70) deliver an indication to B2B buyers about the level of importance to place on each of these components when sourcing intermediate products internationally. The results of this study suggest that, as the business activities between buyer and supplier take place in the multi-cue environment, the impact of the country cue is likely to be reduced.

### 3.10 Limitations and future research

As with any study, the present study has limitations. First, the extant research suggested the use of cognitive, affective and conative components of attitude theory, while this study captured only the cognitive component because this study was not undertaking a preference study where emotion plays an important role. There is scope in future research to accommodate several attitudinal components of country image. Second, the model testing took place only in Australia because of resource limitations. Future studies can use this model and extend the findings of this study by including multinational samples and can test cross-country validation of this model. In addition, the model can also be tested for specific industry segments. By accommodating more generalised scale items used in previous studies and some refinements in this study this model may be used in different industry classes with minor changes. The respondents were representative of purchasing managers working in Australia, but the inclusion of managers in the survey was not purely random, but was random within selected panels. Therefore, more randomly selected members could have different views to those included through panels. Fourthly, there are more attributes in the past COO literature considered in B2B studies which were not considered in this study, for example, transportation cost, distance, regulations and social and political culture. As reported in this study, multiple country involvement is increasingly the nature of global trade, which necessitates more interaction among countries to complete one production process. Therefore, the above-mentioned aspects need to be integrated with COO research from a B2B perspective.

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### Empirical Paper 2

#### International Supplier Performance: The Role of the Infrastructure and Proximity of the Country of Origin

**Purpose** –Purchasing managers’ international procurement decisions are likely to be based on trade-related country characteristics; however, this is under-explored in the country of origin (COO) literature. This study intends to fill this gap and also seeks to understand the relative impact of company and country’s trade-related effect on international suppliers’ performance with a focus on business to business (B2B) buyers.

**Design/methodology/approach** – The data were collected using a web-based structured questionnaire. A conceptual model was developed with three new constructs along with a second-order company construct. Structural equation modelling was used as the data analysis technique.

**Findings** –International supplier performance is significantly influenced by company-specific attributes and geographical proximity of the source country. In addition, the company effect fully mediates the relationship between trade-related country infrastructure and supplier performance, and partially mediates the relationship between geographical proximity and supplier performance. A country’s regulatory strength has no significant impact either on company or on international supplier performance.

**Practical implications** – The study reveals that company effect and trade-related country image have a significant impact on the decision making of international purchasing managers. Managers should work to reap the benefits for both company and trade-related country competitiveness.

**Originality/value** – The study measured and validated three trade-related country constructs and supplier performance, specifically in relation to B2B purchasing, which is novel in the COO literature.

**Keywords** Geographical proximity, trade-related country infrastructure, country’s regulatory strength, supplier performance, company effect, intermediate goods, B2B, purchasing managers, multi-cue settings

## 4.1 Introduction

There is overwhelming consensus that country of origin (COO) is an extensively researched topic in the field of international marketing (Herz & Diamantopoulos, 2013; Koschate-Fischer et al., 2012; Magnusson et al., 2011a; Martín & Cerviño, 2011; Peterson & Jolibert, 1995; Samiee, 2011; Samiee & Leonidou, 2011; Usunier, 2006). However, some areas of COO research remain under-researched.

It is important first to establish a definitional domain of COO; in itself a subject on which the prior research has had difficulty reaching consensus. In defining COO domain, Roth and Diamantopoulos (2009, p. 727), in their recent literature review, identified three domains for COO: country image, product-country image, and country-related product image. Another definition was provided by Heslop and Papadopoulos (1993, p. 61) through an eight country consumer survey; their definition is two dimensional, also incorporating product and country. Pappu et al. (2007) termed these two dimensions as “macro” and “micro” country image, where micro country image is related to specific product categories. Considering both dimensions in one study is unusual (Papadopoulos & Heslop, 2003, p. 425; Pappu et al., 2007, p. 725). In addition, in COO research there are a very limited number of studies addressing the business-to-business (B2B) or industrial marketing perspective (Andersen & Chao, 2003, p. 341; Magnusson & Westjohn, 2011, p. 303; Maltz et al., 2011, p. 797; Quester et al., 2000, p. 479) in comparison to those focusing on consumer-centric COO studies. Among these rare phenomena in COO research, there is unconditional agreement in favour of multi-cue research design over single cue research design (Bilkey & Nes, 1982; Herz & Diamantopoulos, 2013, p. 96; Usunier, 2006, p. 62), and consumer-centric studies extensively tested COO cue along with other extrinsic cues such as price, store image, brand name, brand equity, advertising and promotion etc. (Batra et al., 2000; Liefeld, 1993; Miyazaki, Grewal,



&Goodstein, 2005; Srinivasan et al., 2004; Verlegh, Steenkamp, & Meulenbergh, 2005; Zellner & Durlach, 2002). Further, in B2B-centric COO studies use of multi-cue design is very scarce, more specifically, there are very few studies that consider company- along with country-specific attributes (studies include Baldauf et al., 2009; Bradley, 2001; Hsieh et al., 2004; Wang et al., 2014) despite the extensive use of brand in COO studies, which encompasses a narrower domain than company.

Usunier (2006) argues that COO cues are often too narrowly defined. He (p. 71) indicates that the multidimensional aspects of COO cues should comprise international marketing, consumer behaviour (if include B2B buyers then industrial buyer behaviour) and international trade or international economics. Yet, international marketing research focuses on product origin information, buyers' origin-related perceptions and decisions without any concern for international trade activities. In the COO domain, however, such a broad perspective is typically absent.

The current study contributes to the literature by attempting to address the gaps outlined above and by testing the relationship of COO constructs with international supplier performance as the outcome construct. More specifically, this study uses multiple COO cues, adopting a multi-cue research design that includes the company effect as a directly associated antecedent to reduce COO overestimation (Balabanis & Diamantopoulos, 2008; Samiee, 2010, 2011; Usunier, 2006, 2011) and involves B2B buyers as the most relevant respondent group. It also incorporates international trade aspects from an industrial marketing perspective and measures the impact of a comprehensive array of antecedents on international supplier performance.

## 4.2 Study background and rationale

Over 50 years ago, Ernest Dichter (1962, p. 116) wrote that “[t]he little phrase ‘Made in’ can have a tremendous influence on the acceptance and success of products”. Since then, the number of COO investigations in the academic literature has grown exponentially and is an extensively researched area in international marketing/international consumer behaviour (Peterson & Jolibert, 1995; Samiee & Leonidou, 2011; Tan & Farley, 1987; Usunier, 2006). Starting from almost the same point, and moving in parallel, the change in the international trade environment and international industrial marketing has been very dynamic. In the mid-1960’s, the march of global outsourcing began through the ‘twin plant’ program with Mexico to perform simple assembly for US manufacturers (Gereffi & Lee, 2012, p. 25). Since then, the growth of such production has moved forward dramatically (Dicken, 2011) with US retailers in the 1970’s and 1980’s initiating the next phase by allowing offshore suppliers to produce a major segment of consumer goods under their brand names. This shift arguably marked a change from ‘producer driven’ to ‘buyer driven’ supply chains (Gereffi & Lee, 2012). While this pace of growth moved exponentially, the value of global trade rose 270% and global output doubled from 1970 to 1991 (UNCTAD, 1993). In the last decade of the 20th century, the globalisation of supply chains included sub-assemblies, components and finished goods across industrial sectors like energy, food, services, medical procedures, core research and development and manufacturing (Engardio, Bernstein, & Kripalani, 2003; Engardio & Einhorn, 2005; Wadhwa, De Vitton, & Gereffi, 2008). In the meantime, the value of global trade reached US\$17.9 trillion in 2012 (WTO, 2013) from US\$3.6 trillion in 1993 (WTO, 2005); that is, it almost quintupled within 17 years.

Beyond the numbers but also conceptually, transformation in global trade is clearly noticeable. After 1990, the trend of unbundling of industrial processes, assisted by low cost

and fast communication, made manufacturing a truly global phenomenon. Such global production characteristics are described by Friedman in *The World Is Flat*. According to Richard Baldwin (2006) this global spread of production processes can be described as ‘sliced and diced’ while Grossman and Rossi-Hansberg (2006) named this paradigm ‘trade in tasks’. With global production, the exclusivity of single country contents in a finished product has become increasingly obsolete and individual countries focus instead on specialising in one, or limited aspects of the total production process. Therefore, the notion of the ‘value chain’ incorporates the total sequence of productive activities (Sturgeon, 2001) spread over product conceptualisation to manufacturing and commercialisation.

Against the background of this new pattern of global trading, to accurately describe the ‘Made in’ of complex production inputs for many components and sub-assemblies, final producer will require a small size booklet to let it known to consumers. Whereas, in reality, the ‘Made in’ label of today accounted for a very small space (with so tiny font size) of product packaging (often the backside) with many legally binding product information that may require a magnifying glass to read it! (See Exhibit 4.2.1 and Exhibit 4.2.2). Only the most COO-conscious buyers and COO researchers would make the effort required to seek out this information, and certainly not the majority of consumers. Because brand name is exclusive to a company and is now more meaningful to the average consumer, that information typically comes first in consumers’ evaluations, also garnering maximum visual importance on packaging. As Liefeld (2004) reported, only 2.2% of respondents are aware of the COO of their just purchased merchandise.

Coumarin, Hexyl Cinnamal, Limonene, Linalool, CI 77891.  
Testé dermatologiquement - Testado dermatologicamente - Dermatologisch bestätigt  
**D** Unilever Deutschland, Hamburg (Tel: 0180-2258278 / 6ct/Anruf, Mobilfunk max. 42ct/min)  
Austria, 1023 Wien (Tel: 0800-208526 / Nulltarif) - **CH** Unilever Schweiz, 8240 T  
0848-850010 / Normaltarif) - **UK** Unilever UK, Freeport, Admral 1000, London SW1A 2XX (Call free: 0800 065  
Ireland, Citywest, Dublin 24, Phone Callave 1850 40 40 60 - **F** Unilever France, 92842 Rueil-Malmaison Ca  
Consommateurs 09 69 32 04 08 (appel non surtaxé) - **I** Unilever Italia Mkt Operations S.r.l. - Milano (Numero v  
**B** Unilever Belgium, Humaniteitslaan/Bd de l'Humanité 292, 1190 Brussels/Bruxelles, Tel. 078-15.22.15 (Verlaag  
**NL** Unilever Nederland B.V., Rotterdam (bel gratis 0800-9991197) - **S** Unilever Sverige AB, Solna, Tfn: 020-78  
Denmark A/S, 2300 København S, Tlf. 70277784 - **N** Ved salg i Norge: Lilleborg as, Oslo, Tlf. 800 33 444 - **FIN** U  
PL 560, 00101 Helsinki, Puh. 01080-2255 - **E** Unilever España S.A., C/tecnologia, 19, 08840 Viladecans (Barcelona)  
**P** Unilever Jerónimo Martins, Lda, Largo Montemorlo Mascarenhas, 1, 1099-061 LISBOA (Tel: 808 200 391 Cust  
das úteis das 10h às 17h) Fabricado na Alemanha - **GR** ELLAT-UNILEVER  
HELLAS A.E., 15125 Μαρούσι, Γραφεία Καταναλωτή: 800-11-99099  
**CY** Unilever Tseriotis Cyprus Ltd, 2234 Αλικυρία, τηλ. 22507999  
**ANZ** Unilever Australasia, 20 Cambridge St Ennoble MFM 3201 Australia  
1800 061 027, 486 Jackson St Blenheim, New Zealand 0800 105 505  
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should be given precedence over manufacturing origin, despite the very poor brand origin recognition capacity of consumers reported by earlier studies (Anderson Analytics, 2007; Balabanis & Diamantopoulos, 2008; Samiee et al., 2005). Usunier (2011, p. 488) recognises that branding information is also an inexact means by which to understand brand origin. It is a simple axiom of business to minimise or hide weaknesses and promote strengths. So, when companies consider their country image is weak, they often try deliberate origin evocation through language and linguistic cues (Usunier, 2011, p. 489). Brand names like Sony, Samsung, LG and Lenovo disguise their origins with the aid of their English spelled logos. As consumers experience intrinsic product cues, extrinsic product cues, such as COO and brands become secondary.

Further, COO information is also manipulated by sellers. For example, Australian supermarket giant Coles was recently fined AU\$61,200 by the Australian Competition and Consumer Commission (ACCC) for displaying imported navel oranges and kiwi fruit under two local produce promotion signs reading 'Helping Australia Grow' and showing the triangular 'Australian Grown' symbol (news.com.au, 2013, July 1). Though the company claimed it was accidental and denied any wrongdoing, it shows that consumers are often in the dark regarding COO information.

An exception, however, can be seen in clearly visible origin labelling with big font size, coloured text and a highly recognisable country symbol for native country products, and products falling under the product ethnicity concept (Usunier & Cestre, 2007), such as pasta with Italy, Switzerland with watches and chocolate, France with wine and perfume. In addition, legal restrictions in locating clothing labels in the centre back of garments and unobscured by any other label, COO information access is made easier for consumers. Notwithstanding, even this product-related country significance is of secondary importance to

brand. Therefore, it can be argued that company or brand associations are of greater importance than country associations.

When recognising and integrating the company aspect, COO research typically considers brand as a proxy for the company in the consumer space. However, in the B2B domain brand does not encompass the whole picture, as B2B managers typically consider many other factors in addition to brand. For example, an international delivery delay from BMW may restrict a BMW dealer from competing for car supply, which may eventually generate sales for an Audi dealer. Clearly, availability and delivery can be crucial. In another instance, an easy installation guide for a 'Schindler' elevator compared to an 'OTIS' elevator may influence a building construction company to buy elevators from 'Schindler' in future if there is minimal performance variation. COO research in the B2B domain has generally not considered such factors but relied too heavily on country image.

In parallel with COO research, industrial marketing, as a branch of international marketing, created strong research sub-fields, such as global purchasing, international supplier selection, global supply chain, and global value chain, all of which have significant real-world relevance associated with COO issues. Mainstream COO research has arguably not integrated industrial marketing developments, thus creating a disconnect from real-world practice. Therefore, this study attempts to integrate COO research with additional wider industrial marketing aspects and addresses contemporary issues in the global trade environment.

#### **4.3 Brand name, company, country, international trade and B2B buyers**

Consumer-focused COO research typically investigates brand as an additional cue to the COO cue. This form of investigation is suitable in the consumer space, where consumers associate publicly communicated information, word of mouth, and product/service experience etc. to form an image about a particular brand. However, there are many factors

not reflected in consumers' perceived brand image. Steenkamp's article (2014) "How global brands create firm value" explores this issue using a 4V model, in which the outcome variable is firm value and global brand(s) is a means to this end, finding that "brand value translates into firm" (Steenkamp, 2014, p. 21) The concept of global brand arbitrage (Ghemawat, 2007) can make this argument clearer. Economic and administrative arbitrages (Ghemawat, 2007) take brand activities away from the consumer domain. Economic arbitrage, (Steenkamp, 2014, p. 17) writes, "[is] when the company purposefully produces the marketing activity in a particular country to achieve lower cost production or to tap into specific expertise". This is how the term 'company' is the locus of decision making and 'brand' is a subordinate term of the company. As stated earlier, the insignificance of manufacturing origin in consumers' perceptions (Liefeld, 2004; Pharr, 2005; Phau & Chao, 2008; Samiee, 2010; Samiee et al., 2005; Usunier, 2006) allow companies to tap the advantages of economic arbitrage through globally scattered sourcing activities, with significant cost benefits—up to 70% of total cost (Farrell, 2004). Companies can use these cost savings to compensate for poor country image through a variety of means, such as price reduction, larger quantity, add on value, and so on. In the case of administrative arbitrage, companies take advantage of tax rate differences between countries. Widely reported examples are Starbucks tax savings in the Netherlands (The Economist, 2012a) and Apple's tax benefit through Ireland (Waters, 2013). Steenkamp (2014, p. 18) argues that it is unlikely that the consumers view this activity positively but the negative impact on brand image is offset by value added to the company.

Unlike these two arbitrages, cultural arbitrage is directly associated with brand significance and can be an important concern from the consumer perspective. This arbitrage delivers benefits to the brand through the 'Made in' label (Verlegh & Steenkamp, 1999). Retention of Jaguar's production plant in Britain after its purchase by Tata Motors of India (Kumar

&Steenkamp, 2013), with associated high prestige but high cost is a good example of cultural arbitrage. Cultural arbitrage can also be a concern in the B2B sphere. Green (2013) reported a substandard component supplied by a Chinese supplier to Aston Martin, which detected a counterfeit material in an accelerator pedal arm and started contacting customers to fix the problem. In this case, customers were not aware of the problem and no accident was reported but the cost to Aston Martin for fixing the defect for 17,590 cars was substantial. Aston Martin reported that it intends to produce parts in the UK in the future. This highlights the complexity of the manufacturing process for some products, where many parts are used and global sourcing means they come from various locations and countries. This sourcing decision is a B2B concern and customers are unaware of the origin of components. In the case of Aston Martin, the company used cultural arbitrage to counteract the negative outcome of economic arbitrage. The culture of counterfeiting in China actually proved costlier for Aston Martin than the benefit of economic arbitrage.

Ranking outputs by different globally accepted brand ranking platforms provides insight into the real-world difference between brand and company. According to the ranking of the ‘World’s Most Valuable Brands 2014’ by Forbes, the top brand is Apple with the value generated by its brand in a range of product classes (iPhone S/C, iPad, MacBook, and iPod) but all condensed into one instantly recognisable brand name. In case of the next in the list, Microsoft Inc., its brand is Microsoft, not Windows, Xbox, Skype, or Office. In addition, among the top 50 brands of the Forbes 2014 list, 46 are company brands indicating that company effect is manifested through brand image. The remaining four are Gillette owned by P&G, Nescafé owned by Nestlé (both are within top 50, Nescafé 27 and Nestlé 39), Marlboro owned by Altria (in USA) and Philip Morris International (outside USA), Frito-Lay a sub-brand of PepsiCo (both are within top 50, PepsiCo 25, Frito-Lay 40). A similar picture emerges from the top 50 of the Best Global brands in 2013 by Interbrand, as only three



(Gillette and Pampers both owned by P&G; Nescafé ranked 37 and Nestlé ranked 56) of that list are under other company's ownership. Further evidence of this same pattern is noticeable in the 2014 Top 100 BrandZ by Millward Brown. Again only three non-company brands Marlboro, Pampers and Movister (owned by Telefónica of Spain) are in the list. The pre-eminence of company brands is also reflected in the COO research literature. In measuring the COO effect on brand equity, Pappu et al. (2007) considered the car brand Toyota (not specific subordinate brand names such as Camry, Corolla or Prius), Mitsubishi (not Lancer, Galant or Mirage); Magnusson et al. (2011b) considered company brands for origin recognition, for example, Sony (not brands for product classes like Bravia, PlayStation or Xperia), Land Rover (not Discovery or Defender); Balabanis and Diamantopoulos (2008) similarly use company brands for origin recognition testing like Daewoo, LG, Matsui, Panasonic, Samsung, Sharp, Whirlpool etc. It is relatively easy to identify brand origin for companies using company branding (Ford, Samsung, Sony, Toyota) when compared to companies using individual brand names, where the company name is less visible than a brand name (moderately true for Chrysler and General Motors, highly true for Philip Morris International and P&G). As the world moves toward global branding strategies, the company name and brand name merge in order to tap a transferable image advantage and reduce per unit branding costs. Berner and Kiley (2005, p. 55) explain the attraction and power of global branding in *BusinessWeek*:

It's no accident that most of the companies with the biggest increases in brand value operate as single brands everywhere in the world [...]. The goal today is to create consistency and impact, both of which are a lot easier to manage with a single worldwide identity. It's also a more efficient approach, since the same strategy can be used everywhere.

Another quote highlights the importance of global branding. A senior manager at Procter & Gamble says, "... if you are a big company like P&G, you don't want 100 detergents in 100 countries. You want one detergent brand that you are going to take to every country and start

paring down”(see Steenkamp, 2014, p. 13). Even Unilever, which has around 400 brands, now displays its corporate logo on product packaging and clearly shows it in advertising (Steenkamp, 2014, p. 13).

Globalisation delivers unceasing transformation to international trade, with significant impacts on all the concepts included in this study, including brand name, company, country, and B2B buyers. Because of this change, it is important that the COO literature keeps pace with developments in country-related trade practices. However, the question of the relevance of COO research has gained critical attention only recently. While first raised by Samiee (1994, p. 585) “the literature has clearly paid insufficient attention to customer awareness and saliency of CO”, little has changed. A decade later, Liefeld (2004) put forward a similar question, finding empirical evidence that very few consumers knew the COO information of their recent purchases. Pharr (2005) found COO to be of ‘decreased salience’ because of widely accepted global brands. Similarly, Samiee et al. (2005) found that consumers’ capacity to recall correct brand origins is very limited. This question of the relevance of COO research has been extended by Usunier (2006). In describing how COO research does not incorporate real-world business practices, he questions the importance of country of manufacturing (COM), consumer perceptions and the behaviour gap, accessibility of made-in information, and brand image diminishing origin labelling information. In combination and individually, these factors operate to diminish the salience of COO.

Ferdows (1997) first used the term ‘Made in the world (MIW)’ to reflect the nature of global trade. Calling this phenomenon transnational manufacturing, Ferdows (1997, p. 102) put forward some examples: “Ford Fiesta is assembled in South Korea, Volvo 850 in Belgium, Nissan Quest in the United States, and Dodge Ramcharger in Mexico. The parts that have gone into these cars come from factories in over two dozen countries”. However, just as the COO research has been slow to keep up with developments in globalisation and customer

awareness, so too has it failed to embrace the importance of the MIW concept. In 2011, the WTO Public Forum (Geneva, 19-21 September) launched the 'Made in the World Initiative (MIWI)' that seeks to promote the correct documentation of global trade statistics by calculating trade in value added (multiple country value addition in one single product). That this notion has begun to gain greater acceptance is also reflected in the title of a recent article by two prominent global supply chain authors, Gary Gereffi and Joonkoo Lee (2012), "Why the World Suddenly Cares about Global Supply Chains".

There has been some momentum in the second half of the immediate past decade in relation to research that considers the relevance of MIW to COO (Balabanis & Diamantopoulos, 2008; Bulik, 2007; Liefeld, 2004; Pharr, 2005; Samiee, 2010, 2011; Samiee et al., 2005; Sapsford & Shirouzu, 2006; Usunier, 2006). More recently, Samiee (2011, p. 474) emphasised the globally scattered production location and relevance of this to COO by saying "Given the broad customer knowledge regarding multi-locational nature of production and sourcing for components, sub-assemblies, and finished products, it is difficult to realistically attribute the production of a particular product to a single country, something that research conditions often impose or ask". More recently, a prominent COO researcher, Steenkamp, emphasised firm value creation through global brands and explained several real-world sourcing aspects that prevent consumers knowing true COO information. In addition, the frequently seen labelling practice as 'Made in country X from local and imported materials/ingredients' blurs origin information for consumers. An effort to shift toward brand origin recognition in COO research has also not generated evidence that suggests the importance of origin information in consumer purchase decisions (Anderson Analytics, 2007; Balabanis & Diamantopoulos, 2008; Samiee et al., 2005). The insignificance of COO information in the consumer domain suggests that B2B purchasers have much responsibility in decision making and perceptions of COO, in the sense that their merchandising decisions,

which include COO fundamentally influence consumers' ultimate purchase decisions. In recent time, the rise of buyer driven chains has significantly shaped globally dispersed production locations and trade networks (Gereffi & Lee, 2012). The significance of B2B buyers in international trade is also driven by the powerful role of large retailers (Walmart, Carrefour, Tesco) and strong brand name merchandisers (Adidas, Gap, Nike) through strict standard specifications on suppliers (Dolan & Humphrey, 2004; Gereffi, 1994). In such circumstances, buyers can dictate both technical and production standards and the sourcing of materials in the whole production chain. As Lee, Gereffi, and Beauvais (2010) argue, powerful retailer-driven private quality standards enable retailers to control decisions regarding product type, production process, delivery quantity and timing, and production location. In this context, the production location decision is inextricably linked to the COO issue because of widespread global sourcing practices. For instance, the retailer Target Australia recently signed the Responsible Sourcing Network's Cotton Pledge (152 brand name retailers and merchandisers joined the pledge as at July 2014) where it is committed to not knowingly source cotton from Uzbekistan for their products until Uzbekistan eliminates forced child and adult labour practices (target.com.au, 2014b). In addition, Target Australia signed the 'Bangladesh Fire and Safety Agreement' to ensure that products produced for Target in Bangladesh are made in factories that ensure safety for workers (target.com.au, 2014a). In another instance, Adidas outsources almost all of its products (Adidas, 2012, p. 34), but has set standards for manufacturers to use 40% better cotton by 2015. The Better Cotton Initiative is not only aimed at reducing the use of pesticides but also efficient use of water, crop rotation and fair working conditions. Through a target of 100% traceability Adidas can control the whole supply chain (farm → Gin → Yarn spinner → Fabric mill → cut and sew → Adidas group) from the farm level (Adidas, 2012, p. 37). These examples

show the level of control over sourcing decisions that can be exerted by B2B buyers in a global context.

The use of a globally dispersed sourcing networks became better known and consequently more researched and studied after two studies (Dedrick, Kraemer, & Linden, 2009; Linden, Kraemer, & Dedrick, 2009) showed the breakdown of the total value chain of Apple's iPod, and later its iPhone 4. The sourcing breakdown of Apple's iPhone presented below in this study includes greater detail to align the information with the study objective that emphasises company-country aspects and the intermediate nature of the goods being traded in the global sourcing context. Table 4.3.1 presents country-wise value addition in the iPhone 4 and shows company names and their respective countries.

**Table 4.3.1 iPhone4 components, suppliers, countries and cost**

Country	Component	Manufacturer	Cost (US\$)
Chinese Taipei	Touch screen, camera	Largan Precision, Wintek	20.75
Germany	Baseband, power management, transceiver	Dialog, Infineon	16.08
Korea	Applications processor, display, DRAM memory	LG, Samsung	80.05
United States	Audio codec, connectivity, GPS, memory, touchscreen controller	Broadcom, Cirrus Logic, Intel, Skyworks, Texas Instruments, TriQuint	22.88
Rest of the world	Other	Misc.	47.75
Total		Total	187.51

Source: OECD-WTO (2012, p. 2); Xing and Detert (2010)

The additional cost incurred in Mainland China in assembling the iPhone 4 is US\$6.54. The total cost of an iPhone 4 at factory gate is US\$194.04 OECD (2011, p. 40). The detail of the sourcing of the iPhone 4 exemplifies the global spread of value addition and trade. Yet this picture does not tell the whole story, as each of these suppliers do not produce all the components through their own or domestic value added. The long chain of parts and components and their sourcing includes a mixture of domestic and foreign content as intermediate inputs to all these iPhone 4 suppliers. Therefore, the global value chain and

international trade is so intertwined it cannot be separated. Further, the Chinese value addition may not be limited to assembly costs as the other suppliers also have factories in China, which may increase Chinese value addition (Xing & Detert, 2010). For example, Infineon and Samsung having several factories in China that may have produced any of these components finally supplied for iPhone 4. COO information is also obscured for the rest of the world part of iPhone sourcing and thus total supplies worth US\$47.75 (25% of total factory gate price) come from unspecified countries. Each of these can be considered significant in light of the total 115 million iPhone sales in the immediate past four quarters before the launch of iPhone 5 on 12 September 2012(Statista.com, 2013; accessed on March 2, 2013). Since the primary drivers of global sourcing are considered as achieving lower cost or tapping into specific expertise (Steenkamp, 2014, p. 17) the countries included in the rest of the world may accordingly be motivated by cost or specialisation. The use and prominence of intermediate goods sourcing allows global trade to be widely dispersed in the constant search for greater levels of specialisations, cost differentiations, reliability considerations, and so on. Therefore, country specialisation is an increasingly important factor in global sourcing.

There are other examples of globally scattered production facilities that are aided and complemented through international trade and validate the MIW concept. The details of the manufacture of the Boeing 787 Dreamliner clearly depict how the components of the 787 travelled around the globe to make it possible for a 787 Dreamliner to then travel around the world. Table 4.3.2 shows the country and company component sourcing for 787 Dreamliner assemblies.

**Table 4.3.2 Boeing 787 Dreamliner global sourcing**

<b>Location and Country</b>	<b>Component</b>	<b>Manufacturer</b>
Busan, Korea	Wing tips	KAL-ASD (Korean Air Aerospace Division)
Nagoya, Japan	Wing	Mitsubishi
California, USA	Nacelles	Goodrich
Nagoya, Japan	Fixed trailing edge	Kawasaki
Melbourne, Australia	Moveable trailing edge	Boeing
Busan, Korea	Flap support fairings	KAL-ASD
Washington, USA	Tail fin	Boeing
Washington, USA	Tail cone	Boeing
Busan, Korea	Aft fuselage	KAL-ASD
Foggia, Italy	Horizontal stabilizer	Alenia
South Carolina, USA	Aft fuselage	Boeing
Toulouse, France	Passenger entry doors	Latécoère
Nagoya, Japan	Main landing gear wheel well	Kawasaki
Kansas, USA	Forward fuselage	Spirit
Linköping, Sweden	Cargo access doors	Saab
Nagoya, Japan	Mid forward fuselage	Kawasaki
Grottaglie, Italy	Center fuselage	Alenia
Nagoya, Japan	Center wing box	Fuji
Winnipeg, Canada	Wing/body fairing Landing gear doors	Boeing
Ohio, USA	Engines	GE
Derby, UK		Rolls Royce
Oklahoma, USA	Fixed and moveable leading edge	Spirit
Gloucester, UK	Landing gear	Messier-Dowty

Source: (*Trade at a Glance*, 2013, pp. 24-25)Department of Foreign Affairs and Trade, Australian Government

The sourcing of 787 shows that only five major components are supplied by Boeing itself from its plants in three different countries. The remaining 17 major components are supplied by other companies. Nine countries participate in the supply network spreading almost the entire circumference of the world.

Global sourcing with a narrow scope can also be insightful to understand less complicated supply chains. Though the supply chain of IKEA operates on a large scale, the sourcing activities of one IKEA supplier regarding one single product category can be less complicated to describe. Sapa Profiler AB is the supplier for the PAX wardrobe system to IKEA, and their sourcing for a single product category depicts the nature of global sourcing scattered over fewer countries.

**Table 4.3.3Sapa Profiler AB sourcing for major components of PAX wardrobe system**

<b>Components and parts</b>	<b>Assembly unit for PAX in Sweden</b>	<b>Assembly unit for PAX in Slovakia</b>	<b>Assembly unit for PAX in China</b>
Tempered glass	Sourcing from China with local back up supplier in Sweden	Sourcing from China with local back up supplier in Sweden	Sourcing from China with local back up supplier in China
Sliding profiles	Sourced from Germany		
Packaging materials	Local sourcing	Local sourcing	Local sourcing
Rubber components	Sourced from Sweden		
Steel components	Sourced from Sweden		Sourced from Sweden combined with local source in China
Assembly fittings	Sourced from Slovakia		
Aluminium frames	In-house production and locally sourced processing	In-house production and in-house processing	Local sourcing with in-house processing
Bristle seals	Sourced from China		

Source: Hultman, Johnsen, Johnsen, and Hertz (2012, p. 16)

The several examples of sourcing presented above exemplify the reality of fragmented production processes scattered over the globe, irrespective of small or large final assembly. In this manufacturing environment, component-specific searches around the globe for cost, specialisation, ease of trading and movement dictates producer or buyer driven chains to make location-based decisions. Therefore, it can be concluded that sourcing in this globalised era is inextricably related to COO research.

There are several points to be noted from the perspective of COO research in these instances of global sourcing. Firstly, all the sourcing indicates that each country selection evidently relates to a company selection and vice versa. Another very important driver of ensuring quality in globalised outsourcing is ‘traceability’. In several interview-based COO and sourcing articles the term ‘traceability’ has considerable significance (Ivarsson & Alvstam, 2010, p. 16; Knight et al., 2008, p. 151; Knight et al., 2007, p. 116). In addition, being a part of the ‘Better Cotton Initiative’ by Adidas (as already described) is actually possible through a sophisticated traceability system, a major breakthrough to ensure reliability of every step of the whole supply chain. The relevance of traceability is important in this discussion because the traceability for any buyer starts with company. In the consumer space, traceability comes



primarily from the brand and, therefore, brand is the dominant focus of promotion by a company. However, in manufacturing, for example our iPhone 4, the company is more important than brand and in sourcing the supplier companies—frequently German, Korean and US companies that are very prominent in their respective fields. Furthermore, reliability is most important—an aspect that firstly based on company, and later may be for country. As already specified, China's value addition is greater because of Infineon's factory in China but the reliability is that of Infineon, not that of China.

At the same time it can be argued that the reliability of a German company is not considered the same as that of a Chinese company. Similarly, the Boeing suppliers are mostly companies that are globally renowned in business but not necessarily for aircraft (GE, Rolls Royce, SAAB, Mitsubishi, Fuji, Kawasaki). It's clear that the company's image is first and foremost, followed by the country. In the case of IKEA's wardrobe systems, though the spread of countries is narrower, IKEA ensures reliability by giving supply responsibility to a Swedish company, Sapa Profiler AB. It is also important to note for COO research purposes that the origin information of companies is not blurry or vague to B2B purchasing managers as they are directly dealing with the industry and therefore have great familiarity with the industry players and national competitive strengths. Further, as the level of sophistication of the final product increases, more of the sourcing comes from developed countries and their companies. More specifically, components and parts sourcing for the Boeing 787 (highly sophisticated design and manufacturing) involve all the G7 countries, Australia and South Korea. Regardless, the extensive fragmentation of production processes does not ensure that the listed components are wholly manufactured in that developed country. In the case of iPhone 4 the share of developing country sourcing increases because the sophistication level of the product is significantly less than that of the Boeing 787. In the case of IKEA's PAX wardrobe system, significant sourcing independence is given to the Chinese assembly plant

as two core materials (tempered glass and steel components) are sourced simultaneously from Sweden and China.

Beyond cost considerations, component reliability and scale economies are also noticeable issues in sourcing. To ensure a reliable quality standard and higher performance for IKEA's PAX wardrobe systems, the sliding profiles are fully sourced from Germany. Steel components for European manufacturing facilities are purely sourced from Sweden but in Chinese assembly plant both Swedish and Chinese components are used. In addition, several components from a single source (sliding profiles: Germany, rubber components: Sweden, assembly fittings: Slovakia, bristle seals: China) ensures production efficiency through scale economies. Despite the doubt about the real value addition location of all the components in a company's home country, iPhone 4's major scale economies are achieved through assembly in China. Component types for the iPhone 4 are also sourced from the USA; as the core controlling components are highly integrated with software (audio codec, connectivity, GPS, and touch screen controllers), in which the USA has expertise, creating scale economy combined with reliability .

The role of logistics is of prime significance to the present international trade regime because of the increasing requirement to connect dispersed locations in the physical movement of goods. Considering transport, communication and information costs, the spatial significance of each production stage needs to be placed in the most cost-effective location (Jones & Kierzkowski, 2005). Effectively managing distance in a highly fragmented production system is considered a relatively new capability (Rodrigue, 2012, p. 15). As a consequence, physical capabilities including transportation modes, terminals, and infrastructure are of primary significance in managing the geography of global supply chains (Hesse & Rodrigue, 2004). Currently there is , in general, inadequate knowledge of the geographical and functional integration of production, distribution and consumption aligned with complex production

networks (Coe, Hess, Yeung, Dicken, & Henderson, 2004; Dicken, 2011). The 'smile' (U-shaped) curve presented by Gereffi in a joint OECD-World Bank Workshop on the global value chain clearly indicates the greater significance of logistics because of its value added actions in both sides of the production process. In the case of all three examples of the globally fragmented production processes discussed above, the physical movement from one location to another location requires well-tuned integration within strict production and delivery schedules of horizontal and vertical actors in the whole chain. In making such production processes successful, two important aspects are most important: distance and time. For electronic components (like iPhone), air transport is a very popular option because of their high value-to-weight ratio (Rodrigue, 2012, p. 17). In the case of the Boeing 787, the extent of logistics is not only massive but also technically complex. Highly sophisticated synchronisation is required. Because of massive weight and size, connectivity through sea and land ports with high quality infrastructure is imperative. In the current context of the supply chain, the emergence of firms specializing in transport and logistics, known as third-party logistics (3PL) firms, are of increasing practical significance (Kohler, 2001). Supplying firms' own capabilities in developing such specialised knowledge may require a shift from its core competencies and therefore this service is now mostly outsourced (Hertz & Alfredsson, 2003) through 3PL firms. The involvement of 3PL firms contributes to supply chain complexities through asset-based operational models including transportation modes, terminals or distribution centres, or through knowledge-based expertise in managing specific supply chains (Selviaridis & Spring, 2007). The efficiency of managing time and location along with reliable handling of physical components is the final value addition of the 3PL firms to the global supply chains.

This location and time dimension of international trade further extends the scope of the current study. In this context, COO association in B2B value chains is not limited to product

and brand origin, but rather must incorporate distance, cost of transportation, travel time of merchandise, availability of infrastructure, and so on, all factors of importance to B2B managers when considering trading complexity. Such considerations are more commonly associated with the source country than a specific company. In addition, location and distance is constant from one country to another so the significance of country in the matters related to geography and trade is of obvious practical relevance. For instance, the low labour cost of China contributed substantially to it becoming the top global sourcing destination for IKEA, but China's importance as a supply source recently declined because of rising production costs, and most importantly, longer lead times for finished products due to time of travel and distance (Ivarsson & Alvstam, 2010, p. 1578). In contrast, Poland is increasing its share as a global supplier because of the advantage arising from proximity to major markets, high labour skills and low cost. More recently, IKEA's global sourcing has become more region-centric to take advantage of proximity that will result in lower logistics cost (Ivarsson & Alvstam, 2010, p. 1578).

Based on points noted above, the following issues are of primary importance in globally dispersed and fragmented supply chains.

- ❖ Company selection and performance
- ❖ Association of countries' development level and reliability level as producer
- ❖ Geographical placement of country, importance of distance
- ❖ Successful management of time and distance and countries' policy and physical infrastructure

The next section considers the relevant academic literature relating to COO, B2B, global supply chain (purchasing and outsourcing), and international trade.

#### 4.4 Country-of-origin (COO) literature from the B2B perspective

International trade transactions involve two parties, exporter and importer. The global supply chain has shifted over time from ‘producer driven’ toward ‘buyer driven’ (Gereffi & Lee, 2012). In buyer driven supply chains, more power is exerted by the importer. Despite this, ‘a striking imbalance’ has emerged in the academic literature (Liang & Parkhe, 1997), with the importer largely neglected by comparison with the exporter. The most recent comprehensive academic literature review on importing by (Aykol et al., 2013, p. 228) reported findings from 321 articles published from 1960 to 2010. Conversely, an export literature review of a similar nature by Leonidou et al. (2010) reported findings from 821 articles published from 1960 to 2007. The current study explores the importer side of international transactions.

A further gap in the literature stems from the very limited number of COO studies in the B2B context despite significant purchasing decisions made by buyer-driven global supply chains. COO is a highly researched topic in the international marketing literature (Herz & Diamantopoulos, 2013; Koschate-Fischer et al., 2012; Magnusson et al., 2011a; Martín & Cerviño, 2011) generating more than 1000 published papers in less than 50 years (Heslop, Lu, & Cray, 2008; Papadopoulos, el Banna, Murphy, & Rojas-Méndez, 2011, p. 88). Table 4.4.1 shows that B2B representation in COO research is indeed sparse despite the real-world significance of the B2B buyer.

In one of the two major meta-analyses in the COO field, Peterson and Jolibert (1995, p. 891) reported that the statistically significant COO effect size is 0.14 as a perception of purchase intentions for consumer products and the same is 0.32 for industrial products. In the other meta-analysis, Verlegh and Steenkamp (1999, pp. 536-537) found that the COO effect size is not significantly less for industrial products than for consumer products. Therefore, COO studies in the B2B segment may have a greater scope to contribute to the literature.

**Table 4.4.1 Representation of B2B samples in extant COO research**

<b>Study source</b>	<b>B2B representation</b>
Literature Review 1965-1997 (Al-Sulaiti & Baker, 1998, pp. 179-199)	18 studies out of 99 presented in the appendix
Research relevance of COO (Usunier, 2006, p. 67)	20.9% of studies (14.25% of total sample size)
Country image construct (Roth & Diamantopoulos, 2009, pp. 729-732)	3 studies out of 30
Literature Review 2000-2010 (Magnusson & Westjohn, 2011, p. 303)	Only 6 studies (out of 114 reviewed) including COO in service
Maiden literature review on COO studies from industrial buyers' perspective (Andersen & Chao, 2003, p. 341)	Only 20 studies in B2B area (recognising 200-300 COO studies in consumer behaviour area)
Literature review of COO articles, examined 118 articles, 12 from 1980s/1970s/1980s, 55 from 1990s, 51 from 2000s (Samiee & Leonidou, 2011, p. 86)	3 studies reported business managers as unit of analysis out of 118
Research on import activities 1960-2010 (Aykol et al., 2013, p. 228)	39 studies concerning COO out of 321 import-related articles

Among the B2B focused COO studies, there are some dimensions that this study intends to address. Among them, the first is the contribution of marketing mix elements.

After investigating many of the COO studies in the B2B field, it is evident that the extant studies mostly used issues related to the conventional marketing mix (the classical framework publicised by McCarthy, 1964; product, price, place, promotion) components (see Table 4.4.2).

**Table 4.4.2 Marketing mix variables reported by B2B-centric studies in COO**

<b>Study</b>	<b>Factors associated with marketing mix</b>
(Nagashima, 1970, 1977; Niffenegger et al., 1980; Niffenegger, White, & Marmet, 1982)	Price and value, service and engineering, advertising and reputation, design and style
(White & Cundiff, 1978)	Price, delivery, and service
(Chasin & Jaffe, 1979; Chasin & Jaffe, 1987)	Product attributes, marketing values/attributes
(White, 1979)	Product quality dimension, marketing characteristics dimension, price dimension
(Ghymn, 1983; Ghymn & Jacobs, 1993; Ghymn et al., 1999)	Product-oriented variables, service-oriented variables
(Keown, 1985)	Marketing framework
(Khanna, 1986)	Price, product, promotion, service
(Saghafi, Varvoglis, & Vega, 1991)	Marketing mix attributes: Basic product quality, product quality benefits, promotion, and price.
(Kraft & Chung, 1993)	Product offer factors
(Ahmed et al., 1994)	Price, warranty, and delivery
(Güdüm & Kavas, 1996)	Marketing quality, price
(Saghafi & Puig, 1997)	Price, delivery
(Bradley, 2001)	Company effect: Product, price, advertising and communications, distribution and service, innovation.
(Overby & Servais, 2005)	Price, quality, reliability of delivery
(Baldauf et al., 2009)	Marketing mix elements: Supplier image, price level, price deals, and promotion

As the first B2B respondent focused COO studies, Nagashima (1970) investigated US and Japanese businessmen's perceptions about the images of products 'Made in' the USA, Japan, Germany, England and France. He reported that Japanese businessmen have a higher regard for German products than US products, especially products' reliability, reasonable price, and performance factors. US businessmen rank German products almost equal to US products relative to technical and engineering aspects. Reflecting the fact that COO image is not static, the first longitudinal effect is reported in (Nagashima, 1977). The study reported significant differences in the image of Japanese products compared with the earlier reported study. Regarding price and value of 'Made in the USA' little change was detected. With the higher price of Japanese and German products, the relative status of US products declined. The reliability of US products fell from third to last place. Japanese products moved to first place in careful and meticulous workmanship, while the US products rated as last in this category. US products lost first place in technical advancement to Germany and worldwide distribution

to Japan. US products also slipped down the inventiveness rating but Japanese businessmen still believed in the high prestige value of owning US products. In short, the US image declined considerably over the course of the study.

White and Cundiff (1978) studied the psychological influence of price and country of manufacture on purchasing managers' perception of product quality. The findings reported that country of manufacture and perceived quality had a statistically significant relationship ( $p < .01$ ) for all three products investigated. The relationship between price and perceived quality was not statistically significant ( $p > .05$ ) for all the products. The study concluded that products manufactured in a particular country can be affected by a built-in positive or negative stereotype of the perception of product quality. In a later study, White (1979) showed that West Germany received the highest ratings for the product quality dimension among all the countries examined. There were no statistically significant differences with respect to the product quality of France, England and the USA. In marketing characteristics, US products are clearly ahead of the other countries, while there were no statistically significant differences between the products from Italy, France, England and West Germany. Price dimension showed statistically significant differences with both West Germany and the USA rated higher than Italy.

Niffenegger et al. (1980) considered price and value, advertising and reputation as direct marketing mix elements together with two other variables to represent product issues (service and engineering, design and style) in the marketing mix. Results showed that British products fell into the category of necessities and were relatively cheap compared to French and American products. In addition, French products were perceived as more luxurious and exclusive than US and UK products. Regarding advertising and reputation, American products are more highly advertised than French products. However, there is definite prestige in owning French products. British products are well known domestically with French brand



names less recognisable. Among the variables considered by Ghymn (1983), US respondents ranked timely delivery and price as the two most important factors, which are directly related to marketing mix factors. An overall discriminant model shows that import decision variables differ significantly from western European countries' sourcing to least developed countries (LDCs) sourcing. According to the beta coefficient value the marketing mix variables are a statistically significant source of difference between sourcing from western European countries and LDCs. They are price ( $\beta = .69$ ), timely delivery ( $\beta = .64$ ), quality ( $\beta = .38$ ) and brand recognition ( $\beta = .35$ ). In a later study, Ghymn et al. (1999) reported that the most important factors regarding import sourcing are product quality, long-term dependability of export suppliers, product style/features, price and timely delivery.

Chang and Kim (1995) investigated South Korean importers' perceptions of industrial products from the USA, Japan and Germany. Regression analysis results show that product quality, dependability and brand image were statistically significant predictors of country preference ( $R^2 .35$ ). The importance of product quality was also reported in a later study by Overby and Servais (2005). According to this study, the most important motives driving buyers' choice of suppliers are price and quality respectively. Reliability of delivery, better lead time and negotiation are considered as moderate motivators.

One important observation is that variables used in B2B-centric COO studies have typically tried to depict country perception by letting respondents evaluate marketing mix factors and using that evaluation as the country image for the supply source. In doing so, this exposed a conceptual flaw in the research. The 4Ps framework of marketing has been termed 'the heart of their (marketers) structure' (Cowell, 1984) and also identified as the controllable parameters that can influence the customers' buying process and decisions (Brassington & Pettitt, 2003; Kotler, 2003). As the marketing mix explains company controllable factors, this ensures that performance variations in these four areas can produce a large range of disparity

among companies and very little chance of similarity. So, estimating country image based on performance in marketing mix elements can be considered as ‘extreme abstraction’ that is too far from reality and may be a reason to question the relevance of recent B2B-centric COO research.

In addition, all the studies judging import sources by marketing mix variables, in principle accept that in the case of international purchasing they actually deal with supplier(s) and a supplier can be assessed on the basis of marketing mix variables. As differences among suppliers within a country can be substantial, it is better to consider both these aspects to capture their influence separately. Surprisingly, measuring country image of supply sources has significantly reduced since 2000 (see Table 4.4.2).

Two relevant articles after the year 2000, published in high ranking journals, have considered company and country issues separately (Baldauf et al., 2009; Bradley, 2001). Bradley (2001) considered marketing mix elements as the company effect and used ten variables to measure macro and micro aspects of country. The study results show that direct effects of product and innovation on company preference were significant ( $p < .01$ ), while advertising and distribution were significant at the 0.10 level. The relationship direction of all the constructs are positive and low correlation between country and company preference (0.12) indicates that the country effect may not be a powerful explanatory variable, although this may be due to using a several directly influencing constructs (marketing mix factors) in multi-cue settings (Verlegh & Steenkamp, 1999). In other words, the country effect may be indirect, albeit significant. In another study, (Baldauf et al., 2009) considered supplier image, promotion, price level and price deals to represent marketing mix elements as antecedents of retailer-perceived brand equity (RPBE) defined as “a set of brand assets and liabilities linked to a store brand, its name and symbol, that add to or subtract from the perceived value of the store brand by its customers” (Arnett, Laverie & Meiers, 2003, p. 168). The study results showed

that supplier image ( $\beta = .33$ ) and promotion activities ( $\beta = .27$ ) were positively associated with retailer perceived brand equity (RPBE) and price levels ( $\beta = -.19$ ) and price deals ( $\beta = -.22$ ) are negatively related to RPBE. The country image construct used in Baldauf et al. (2009) study is product-country image (PCI). The relationship between PCI ( $\beta = .32$ ) and RPBE is statistically significant. But in explaining the final outcome variable, brand profitability performance (BPP), supplier image was the only statistically significant marketing mix element with ( $\beta = .21$ ) and without ( $\beta = .37$ ) the mediating effect of RPBE. This result indicates the partial mediating role of RPBE in the relationship from supplier image to BPP. A negative influence of price level on BPP is statistically significant in absence ( $\beta = -.23$ ) of RPBE but statistically insignificant in the presence of RBPE in the model, therefore supporting full mediation. Regarding the country image construct, PCI directly influences RPBE ( $\beta = .32$ ,  $p < .001$ ) and BPP ( $\beta = .24$ ,  $p < .01$ ), but PCI's influence on BPP becomes non-significant in the presence of RPBE, indicating the full mediating role of RPBE linking PCI and BPP.

Therefore, variables used in the past literature have been classified under company and country dimension in the current study. As stated by Bradley (2001), “[c]ompany preferences may, therefore, derive from the joint influence of marketing mix effects, which are controlled by the firm, and country-of-origin effects, which are outside the firm’s control”.

**Table 4.4.3 Classifying variables of B2B-based COO studies**

Study	Variable classification
(Ahmed et al., 1994; Cattin et al., 1982; Chang & Kim, 1995; Chasin & Jaffe, 1987; Dzever & Quester, 1999; Ghymn & Jacobs, 1993; Ghymn et al., 1999; Gill & Ramaseshan, 2007; Güdüm & Kavas, 1996; Kaynak & Eronen, 2004; Khanna, 1986; Kraft & Chung, 1993; Min, 1994; Niffenegger et al., 1980; Oke et al., 2009; Saghafi & Puig, 1997; Thorelli & Glowacka, 1995; Turnbull, 1985; White, 1979; White & Cundiff, 1978)	<p><b>Product issues:</b> Product quality, brand reputation, reliability, technical superiority and competence, performance, design and style, uniformity, product line fullness, guarantees, innovativeness, product safety, information accuracy, non-substitutability, workmanship, safety packaging, ease of operation/maintenance, wide assortment of features, quality control and inspection.</p> <p><b>Price and payment issues:</b> price, value for money, price competitiveness, transport cost, material cost, discount offerings, payment terms, credit extensions, payment method.</p> <p><b>Delivery and service issues:</b> Reliable delivery performance, after sales service, field support, supplier adaptability, long-term supply dependability, training, technical assistance.</p> <p><b>Marketing communications and relationship issues:</b> Promotion, commercial competence, prompt business communication, supplier contacts, negotiation style, cultural awareness, personal communication, information exchange, relationship commitment, business association history, customer orientation, negotiability, Electronic data interchange (EDI) capability.</p>
(Ghymn et al., 1999; Keown, 1985; Maltz et al., 2011; Min, 1994; Oke et al., 2009)	<p><b>Country level issues:</b> Import/export duties and regulations, compliance with safety standards, labour cost, physical proximity, cultural proximity, work ethic and standards, security of intellectual property, attraction of local market, transportation system reliability, logistics cost, government support for business, political stability, predictable border clearance times, government corruption, cultural appeal, foreign exchange rate, legal environment, labour disputes, price control mechanism, counter trade opportunity.</p>

By summarising around 300 variables (in a repetitive count) used in past studies, and following Bradley, it is observed that the variables almost precisely fall under company controllable (marketing mix) factors and factors uncontrollable to a company that usually has a common structure within a country. Consequently, this study captures B2B buyers' assessments from the two major perspectives, named as company and country.

It is also noticeable that some marketing mix issues are not fully controllable by a company and are inseparable from a country's broader environment. Many of the studies reported transport cost and reliable delivery performance under the marketing mix aspect of 'place', but there are broader infrastructural issues that require significant government support. In cases of international purchases, from a B2B perspective, the delivery and transportation

costs are particularly significant because of the associated longer distance, higher cost and risk. In Table 4.4.3, among the country level issues, physical proximity, transportation system reliability and logistics costs clearly indicate country level importance. A company cannot ensure reliable delivery and transport costs by itself. In addition to COO studies, country aspects related to trade are substantially discussed in the global purchasing, supply chain management, international supplier selection and international trade-related literatures. In this connection, (Usunier, 2006, p. 71) described COO research as a too narrowly defined research area that has cross disciplinary associations with international marketing, consumer behaviour and international trade. Responding to this criticism, one of the objectives of this study is to develop trade-related COO constructs. The next section links COO issues with international trade-related aspects.

#### **4.5 Country-of-origin (COO) associations with international purchase and international trade**

The ‘global purchasing’ literature is clearly relevant to the question of the importance of COO in B2B purchasing. In a major review of the global purchasing literature, (Quintens et al., 2006, p. 174) summarised findings from 19 studies that outline environmental drivers of global purchasing cost advantages (labour), satisfy countertrade requirements, guard against currency fluctuations, stimulate foreign government policies and create an advantageous legal and economic environment. All these factors are highly dependent on the source country. Moreover, as facilitators, better foreign transport and communication and capable intermediaries (as generating logistics strengths) are products of the source country infrastructure. As barriers, import quotas and an adverse political and economic environment generate source country disadvantage for purchasing. Kotabe and Murray (2004, p. 9) also emphasised several aspects for successful global sourcing in addition to reduced

manufacturing cost: exchange rate fluctuations, available infrastructure (including transportation, communications), industrial and cultural environments, and so on. In addition, they specified several barriers, including logistics, inventory management, distance, nationalism and lack of working knowledge about foreign business practices.

From the global sourcing literature, sourcing from low cost countries has important implications as getting products at low cost is a driver for global purchasing (Cho & Kang, 2001; EyeforTransport, 2006; Min & Galle, 1991; Rexha & Miyamoto, 2000). In addition, Birou and Fawcett (1993) argue that acquiring products at the lowest possible price is the main motivator for cross-border trade. This cost reduction motive is mostly achieved by purchasing from low cost countries. Oke et al. (2009) investigated the reasons for choosing suppliers from developing countries. By conducting structured depth interviews, they found cost is the primary driver of global sourcing, with two often cited issues being labour cost and logistics cost. Supplier selection based solely on cost may be counterproductive, and primary preference often goes to nearby suppliers for less transportation lags and low logistics cost due to proximity. Geographic distance was important to all the companies interviewed, and was also emphasised for accessibility of suppliers, and ease of face-to-face interaction. Regarding interaction, proximity is measured by time not distance. Cultural proximity, in terms of common language, humour and other cultural characteristics, is also important. Though cultural proximity can generate low transaction costs, it can be detrimental for the supply chain because of poor work ethic and lack of sourcing experience. Though quality is the secondary criteria for sourcing from developing countries, quality and reliability are explained as the ability to deliver correctly what is required and on time or as promised. This criterion is considered a secondary criterion, behind price, for sourcing from developing countries. Besides this, complexity of components, required expertise, political instability and

border delays relating to delivery times are concerns when sourcing from developing countries.

In another study focused on low cost countries, Maltz et al. (2011) considered several reasons such as work ethic, security of intellectual property, attraction of the local market, reliably meeting customer requirements (deliver complete orders on time), transportation reliability (consistency of lead times), transportation cost (cost from source to buyer's location), government support for business, political stability, flexibility (ability to react to changes in requirements), predictable border clearance times, government corruption, overall attractiveness for sourcing and labour cost. It is important to note that several of these aspects are also applicable to sourcing from any country (e. g. deliver complete orders on time, consistency of lead times, transportation cost). In a similar vein, Hallén and Johanson (1985) identified the supplier country's industrial climate and cultural affinity with trading partners as antecedents of industrial marketing. According to Joshi (2009), and Kaufmann and Carter (2006), reduced trade barriers and information technology (IT) improvements dramatically increase opportunities for global purchasing relationships. Another environmental aspect related to country is regulatory strength. Notwithstanding, importers/industrial buyers may naturally consider that trade-related 'country' information and attributes are, for all practical purposes, not controllable by producers or suppliers. This may lead them to preclude (or even exclusively include) particular countries in their source countries.

A country's image is also dependent on its political, economic, scientific, natural, and cultural institutions (Allred, Chakraborty, & Miller, 2000). Because B2B buyers are a more informed and familiar group, the impact of institutions can be even more direct on them. In similar vein, institution is rated first among the 12 pillars of competitiveness in the World Economic Forum's Global Competitiveness Report. Moreover, among the seven components of institution measures, five (property rights, ethics and corruption, undue influence,

government efficiency, and security) are related to public institutions, indicating the strength of government regulators in delivering competitiveness. The impact of an origin country's regulatory strength is of particular importance regarding current international trade practices. The regulatory limitations of developing countries are primarily related to poor human resource practices, the so called 'sweat shop'. As developed countries source a substantial part of their products from developing countries through outsourcing, developed countries and their companies cannot avoid the responsibility of regulation. Ben Blanchard (2012) of Reuters reported that three people from Foxconn (the firm assembling Apple's iPad and iPhone) died in a blast in 2011 because of a mishap related to iPad polishing. Other reports of forcing employees to do overtime, underpaying them, high suicide and attempted suicide rates among Foxconn employees tarnish the image of Apple. As a consequence Apple has initiated voluntary steps together with Foxconn to limit excessive overtime (Bradsher & Duhigg, 2012; Economist, 2012b). But ensuring safe working conditions should be a result of regulatory standards imposed by the country (Locke et al., 2007). Similar enforcement of standards regarding safe working conditions from the side of buyers can be seen in the Adidas (2012, p. 13) and Target Australia website (regarding Bangladesh factories and Uzbek cotton). Despite increasing buyer concerns to control human rights abuses, environmental hazards and use of toxic materials, establishment of these standards in the developing world still far from accomplished. There are many fewer reported incidents of this type in the developed world (a recent exception is the horse meat scandal in the UK), which can be attributed to the regulatory strength of those countries.

In a recent COO study, Wang et al. (2014, p. 773) included 'national institution' as a component of country image. In defining national institution, the authors include numerous aspects of regulations that a country's government can enforce. The institutions are: political institution system (ideology, legal system, religion, territory, and military policies), economic



institution system (hygiene control, quality control, safety supervision, and labour policies), scientific institution system (knowledge protection and technology policies), and eco institution system (environmental protection and pollution). The economic institution system is particularly important for international buyers.

The dynamic nature of global competitive economic activities constantly pushes global sourcing activities to find location-based advantages. China's present five year plan indicates that China will be the second most expensive Asian manufacturing country (behind Malaysia) by 2015 ("China Briefing," 2011). In addition, steady appreciation of the Chinese Renminbi against the US dollar is pressuring international buyers to shift production to lower cost regions of China or to other countries like Vietnam, India and Bangladesh. Some have also started to transfer a part of their production to countries close to them(Jia, Lamming, Sartor, Orzes, & Nassimbeni, 2014).

Interaction between dynamic components, like economic activities and global sourcing, means a new paradigm is continuously evolving in the economic and business landscape. Global sourcing terminologies are multi-faceted and constantly changing. Since the end of the last decade, terms like 'on-shoring', 're-shoring', 'back-shoring', 'in-shoring', 'reverse shoring', 'international re-concentration' and 'reverse globalisation' have started to appear in the economic press and in white papers by consulting firms (Sirkin, Zinser, Hohner, & Rose, 2012). Apparently, in recent times, this issue has attracted academics (Holz, 2009; Kinkel, 2012; Kinkel & Maloca, 2009; Leibl, Morefield, & Pfeiffer, 2011).The terminology gained more popularity when Apple's CEO Tim Cook announced on December 6, 2012 that one of the Mac lines will be entirely manufactured in the USA by around 2013(Polidoro, 2012). A similar trend can also be seen from industry giants (e.g. General Electric, Caterpillar, Ford) and small to medium sized enterprises (SMEs) in the USA (Fratocchi et al., 2013, p. 2). In addition, the OECD (2013, p. 11) also reported that US firms are back-shoring some of their

activities to the USA because of rising costs in emerging economies, intellectual property concerns and so on. While the back-shoring trend may reduce the volume of international trade, it is not relevant to this study. However, another recent trend, near-shoring (Kinkel, 2012), is relevant to this study. Some US and European firms have relocated their manufacturing plants in Mexico and Eastern European countries (Jia et al., 2014), for example, recent IKEA sourcing practices. The major motivation behind such practices is to reduce logistics costs, environmental concerns and the establishment of new IKEA stores in emerging markets (Ivarsson & Alvstam, 2010, p. 1578).

As active players in understanding business practices, management consulting firms (e. g. Accenture, McKinsey, KPMG) have already investigated the new trend of staying closer to the market. Ferreira and Heilala (2011) of Accenture conducted a survey of 287 manufacturing companies to reveal different aspects of on-shoring and near-shoring. They found many offshoring companies have started to realise that the distance between supply operations and demand locations is too far to meet customer expectations for unique products and to maintain fast delivery/response times, low inventories and competitive costs (p. 3). The majority of the respondents (61%) in the study were currently considering moving manufacturing facilities in proximity to customers. The major problems faced with offshoring facilities are delivery time (49%), product quality (46%), customer responsiveness (31%) and bottlenecks in logistics networks (26%). Less important problems are product customisation (11%), product safety (11%), political and legal issues (12%), intellectual property theft (10%), process efficiency (9%) and exchange rate (3%). On the converse side, the study also identified important factors responsible for offshoring decisions. Five major offshoring location determining factors are labour costs (74%), proximity to the customer/market (67%), skills of workforce (61%), taxes (45%) and transportation costs (44%). The significance of price changes in recent times has made the sourcing decision very crucial for manufacturers

and therefore for B2B buyers. Table 4.5.1 presents the variables that have created the most significant price increases for manufacturers from 2007 to 2010.

**Table 4.5.1 Variables undergoing sharp price increase for manufacturers from 2007 to 2010**

<b>Variables</b>	<b>% of price increase</b>
Supplier material or component price	73
Logistics and transportation	57
Overhead and administrative cost	36
Exchange rate differentials	31
Inventory	26
Cost of quality	25
Material handling and warehousing	18

Source: Ferreira and Heilala (2011, p. 5)

This price increase information indicates that international purchase or outsourcing decisions put B2B managers under severe cost pressure. Consequently, choosing the source country by location, cost, quality, economic strength and infrastructure support becomes an important part of the purchasing decision. As country is a very important source of variation in these above mentioned areas, COO research can be integrated with this global sourcing aspect.

Another field of research, international supplier selection, has significant association with COO research. Katsikeas and Kaleka (1999, p. 27) differentiated international purchasing from local purchasing because of additional factors associated with international purchasing, such as exchange rate fluctuations, complex documentation requirements, trade regulations, customs duty, cultural differences, complex payment procedure and transportation difficulties (Min & Galle, 1991). These areas can influence country level differences and can impact B2B buyers' purchasing decisions. In a recent literature review on supplier selection and evaluation, Ho et al. (2010, p. 201) reported many variables used in the extant literature. Among those variables, shipment quality, delivery reliability, distance, geographical location, number of shipments to arrive on time, order- to-delivery lead time, on-time delivery, percentage of orders delivered by the due date, supplier proximity, waiting time, logistics cost and total cost of shipments can have significant country-related impacts. Min (1994) used a

multi-attribute utility approach to aid managers in choosing international suppliers through specifying weights on different variables. Among the seven criteria, three directly capture country influence in selecting foreign suppliers (perceived risks, cultural and communication barriers and trade restrictions). Perceived risks criteria (analogous to barriers in Quintens et al., 2006) included political stability, foreign exchange rate, legal claims, labour disputes and local price control. Cultural similarity, ethical standards and electronic data interchange comprised the criteria of cultural and communication barriers. Trade restrictions criteria for supplier selection considered tariffs and customs duty and counter trade as variables. In addition, freight terms, on-time delivery, negotiability (cultural reason) also can be influenced by the country with significant dependence on company capabilities. Therefore, among 19 attributes considered by the study, nine are directly and three are indirectly related to country. Hence, the variables reported in the international supplier selection literature will generate insightful detail in developing trade-related country constructs in the current study.

The international trade literature has never been associated with COO research despite COO research having grown substantially. This may be simply because of the sheer magnitude of international trade and its exponential growth. There are several aspects of international trade issues that reveal country-related trade impacts. The relevance of country in international trade issues from the B2B perspective are related to distance or proximity, transport cost, transport infrastructure, transport mode, logistics, trade facilitation and so on. One of the most extensively studied areas of international trade is the gravity model that deals with distance and international trade (Behar & Venables, 2011). Despite the concept of the 'Flat World' of Friedman (2005), economic data suggest that the world is still far from flat (Leamer, 2007). It has been reported that GDP and distance together account for 70% of the cross-country variation in trade (Behar & Venables, 2011). According to other recent studies (Cantwell, 2009; Dunning, 1998), global firms typically consider geography as an important

decision attribute as a part of the overall economic environment—especially the distance and proximity of markets. By analysing 103 studies undertaken between 1870 and 2001 that considered distance as an explanatory variable of trade flows, Disdier and Head (2008) found a continued effect of distance on bilateral trade. Moreover, according to Swenson (2005), sourcing strategies are significantly dependent on geographic dimensions. In another study, (Irwin & Terviö, 2002) show that around 30 to 40% of the variance of the bilateral trade share of GDP (in log form) is explained by geographic characteristics. According to the findings of Brun et al. (2005), long-distance trade has not reduced over time but the importance of distance is evidenced as short distance trade has increased more than long distance. In addition, Carrère and Schiff (2005) reported that the distance of the average trade flow has reduced gradually over the period 1962 to 2000.

The impact of infrastructure on trade is well recognised. Nordås and Piermartini (2004) considered rail, roads, telecommunications, ports and airports as infrastructure and reported that ports have the biggest impact on trade. Canning (1998) pioneered the stock of infrastructure that is measured by an index of road, rail and telecommunications capacity. Limao and Venables (2001) estimated that variation in infrastructure accounts for 40% of the variation in predicted transport costs in coastal countries and up to 60% in landlocked countries. In another estimate, Clark et al. (2004) found that if a port quality deteriorates from 75<sup>th</sup> percentile to 25<sup>th</sup> percentile shipping costs can increase by 12%, similar to being 60% further away from a destination market.

Along with physical infrastructure, trade facilitation can have a significant impact on trade. (Wilson et al., 2005) evaluate port facilities, customs handling, the regulatory environment and the availability of service sector infrastructure as the four measures of trade facilitation. The Logistics Performance Index (LPI), a dataset developed by the World Bank, is estimated using six measures, namely, efficiency of the customs clearance, transport and information

technology infrastructure, ease and affordability of international shipments, competence of local logistics, tracking and tracing facility of shipments, and timeliness of shipments in reaching destination. In measuring the impact of logistics, Behar et al. (2009) estimated that one standard deviation improvement in logistics can increase exports by about 46% for an average-size developing country. Another study on international trade substantiated the impact of trade facilitation on export performance (Portugal-Perez & Wilson, 2012) that can also mean higher performance evaluation by an international buyer.

The transport cost and a broader term, trade cost, is associated with the origin country and may logically impact international buyers. The international trade literature uses cost insurance and freight (CIF)/free on board (FOB) as a measure of transport cost. Limao and Venables (2001) reported that on average CIF/FOB ratio was 1.28 in 1990 meaning that to transport material costing \$1 one needs to spend around \$0.28 including insurance. So, the cost of transportation in international trade was around one fourth of the cost of materials in 1990. Economists also use the term ‘trade costs’, which includes transport cost and international trade policy restrictions. In an estimate, Jacks et al. (2008) found that trade expansion in the period of 1950 to 2000 was 31% attributable to trade cost.

Delay or delivery uncertainty is another attribute to influence international trade and consequently international buyers. Reliable delivery has been seen as a consistent criterion in evaluating COO by B2B buyers. Reliability of supplier and supplier country can reduce delivery uncertainty that is particularly important for intermediate goods (the product category of this study) or seasonal products where the waiting time becomes too costly (Harrigan & Venables, 2006). Hummels et al. (2007) calculated that savings of one day’s delay can be worth 2% of the value of a shipment that contains road vehicles. As another impact of delay, Djankov et al. (2006) estimated that an extra day in transit reduces trade by more than 1%. For example, if Uganda can reduce its transit times from 58 days to the global

average of 27 days it would be equivalent to reducing its distance from its trading partners by 2200 kilometres (Behar & Venables, 2011). One important aspect of delay is the delay in border clearance time (a measure of the World Bank's Logistics Performance Index [LPI]). Wilson (2003) estimates that average waiting time spent at a border can be used to travel 1600km inland. Consequently, the cost of delay has a similar level of significance as cost of transportation in affecting trade volume (Behar & Venables, 2011). Any aspect that influences trade volume at a macro level also impacts on international buyers at a micro level, as every cost related to trade is ultimately borne by the buyer. In the light of the above literature, it can be argued that geographical proximity and a country's trade infrastructure may exert significant COO influence on B2B buyers.

#### **4.6 Development of new country-of-origin (COO) measures related to trade**

The literature on measurements related to COO is extensive. In a recent COO literature review, Roth and Diamantopoulos (2009, p. 728), reported 30 studies that measured core country image and another 40 studies that measured product image. Among different studies there are wide ranges of issues measured, such as natural landscape, climate, competence, creativity, negative and positive feelings, country description, product evaluation, people description, country beliefs, desired interaction, geo-cultural issues, socio-economy, agreeableness, wickedness, snobbishness, assiduousness, conformity, unobtrusiveness, technology, economy, political issues and so on (Roth & Diamantopoulos, 2009, pp. 729-732). There are few B2B focused studies so the measurements of COO aspects relevant to B2B buyers have not received comprehensive study. The significance of trade-related country issues is studied in relation to global purchasing, supply chain management, international supplier selection, and international trade literature, as already discussed in the above review. In COO research, trade-related measures are used in isolation as variables and have never

been used as composite constructs. By widening the scope of the literature, this study selected a rich content of variables under different trade-related country dimensions. The selected dimensions are geographical proximity, trade-related country infrastructure and country's regulatory strength. Despite there being many variables used in previous studies related to the three themes, no valid and reliable scales have been identified that can be used in international trade for B2B purchasing purposes. Therefore, it was necessary to develop new scales for this study. The identification and selection of items ensured that the conceptual definition of the respective construct is appropriately reflected by the measurement items (Churchill Jr, 1979; Nunnally & Bernstein, 1994; Schwab, 1980; Spector, 1994). While considering and selecting scale items under each construct, the following suggestions from MacKenzie, Podsakoff, and Podsakoff (2011, p. 301) were followed "(1) How distinctive are the essential characteristics from each other (apart from their common theme)? (2) Would eliminating any one of them restrict the domain of the construct in a significant or important way?"

In creating a pool of measurement items, items identified from existing instruments were drawn from multiple related fields of study. These studies comprise exploratory interviews, literature review, survey instruments later analysed with principal component analysis, survey items used by management consulting firms, and econometric analysis using secondary data and computed variables. The resulting items were subsequently matched with construct definitions (Churchill Jr, 1979; MacKenzie et al., 2011, p. 298; Moore & Benbasat, 1991) by experts in their relevant fields (three purchasing managers, and two university academics specialising in B2B marketing). Among the multiple areas of study, interview-based COO studies (Insch et al., 2011; Keown, 1985; Knight et al., 2007; Maltz et al., 2011; Oke et al., 2009; Turnbull, 1985; Yavas, Tuncalp, & Cavusgil, 1987) provided preliminary insights. In addition, the global purchasing and international supplier selection literature supported the



scale items (Ho et al., 2010; Kotabe & Murray, 2004; Leonidou & Katsikeas, 1996; Min, 1994; Min & Galle, 1991; Quintens et al., 2006) with additional variables. The international trade literature supported the impact of the variables on international trade performance. In addition to developing trade-related country constructs, the outcome construct ‘supplier performance’, underwent the same procedure. A review of supplier performance measures used in extant studies was undertaken (see Table 4.6.1). For the purposes of measure simplification and in accordance with expert advice, the SPLP (supplier performance) construct is measured by the three most commonly identified variables: product quality performance, delivery performance and price performance.

**Table 4.6.1 Variables reported in past literature for measuring supplier performance**

<b>Study</b>	<b>Considered variables</b>
Olsen and Ellram (1997, p. 106)	Performance factors: Delivery, quality, price.
Humphreys et al. (2004, p. 142)	Supplier evaluation: Certification program to certify supplier quality, evaluate suppliers’ price, quality and delivery performance regularly, evaluation results as the basis to determine required assistance.
Prahinski and Benton (2004, p. 51)	Supplier’s performance: Product quality, delivery performance, price, responsiveness to requests for changes, service support, overall performance.
Terpend and Ashenbaum (2012, p. 77)	Supplier performance indicators: Delivery, quality, cost innovation, flexibility.
Shin et al. (2000, p. 218)	Supplier performance: Cost, quality, delivery reliability, lead time, on-time delivery
Ho et al. (2010, p. 21) Literature review of 78 journal articles from 2000 to 2008	The most popular criterion for evaluating and selecting most appropriate supplier as reported in the percentage of articles reviewed: Quality (87.18%), delivery (82.05%), price/cost (80.77%).

A list of selected variables under each construct is presented in Table 4.6.2.

**Table 4.6.2 Items selected for newly measured constructs**

<b>Dimensions</b>	<b>Selected items</b>	<b>Item code</b>
Geographical proximity (GRP)	Geographical closeness to Australia	GRP 1
	Economy in transport cost	GRP 2
	Ease of face to face interaction with country's suppliers	GRP 3
	Travel time of shipments from supplier country (reverse coded)	GRP 4
Trade-related country infrastructure (TCI)	Efficiency of domestic transport infrastructure	TCI 1
	Predictability of port clearance time	TCI 2
	Time consumed in port clearance (reverse coded)	TCI 3
	Competence of financial institutions in performing international trade operations (unselected by the experts)	TCI 4
	State of IT and communication infrastructure	TCI 5
	Stability of currency value	TCI 6
	Ease of using payment interface with the country	TCI 7
	Level of preferential tariff treatment (as an outcome of trade agreements) with the country	TCI 8
Country's regulatory strength (CRS)	Security of intellectual property	CRS 1
	International acceptability of country's standards certification	CRS 2
	Extent of ethical treatment of workers	CRS 3
Supplier performance (SPLP)	Product quality performance	SPLP 1
	Delivery performance	SPLP 2
	Price performance	SPLP 3

After checking the items for content validity by the experts, data were collected for pretesting. The data were gathered for pretesting from an online purchasing managers' panel in Australia. The online survey questionnaire was designed using Qualtrics survey software and the survey was administered online by Research Now. In addition to collecting data for newly developed scale items, the pretesting stage also helped with understanding language clarity, the average time of completing the questionnaire, percentage of missing values, tendency to skip any type of questions and so on. At the pre-test stage, a total of 136 panel members entered the survey and only 29 fulfilled the criteria of two screen-out questions posting a response rate of 21%; 23 responses out of 29 were usable.

Using data from the pre-testing questionnaires, exploratory factor analysis (EFA) was undertaken using principal component analysis (PCA) to assess the measurement scales at the initial level (Martin & Eroglu, 1993; Papadopoulos, 1986). Principal component analysis (PCA) helps to assess construct validity by examining factor loadings, which ensures that individual items load on the right factor (Churchill Jr, 1979; Gerbing & Anderson, 1988).

Additionally, the study used the varimax rotation method as it generates multiple factors maintaining orthogonality, meaning that the factors remain uncorrelated throughout the rotation process (Hair et al., 2010, p. 139; Malhotra, 2010). The results of PCA for the newly constructed scale items from 23 pre-test observations are presented in Table 4.6.3.

**Table 4.6.3 Results of PCA derived from pre-testing data**

Factor	Item code	New code	Item loadings	Item-total correlation	Eigenvalue	% of variance	Cronbach's Alpha
GRP	GRP 1	GRP 1	0.819	0.838	1.481	17.33	0.83
	GRP 2	GRP 2	0.563	0.662			
	GRP 3	GRP 3	0.858	0.608			
	GRP 4	GRP 4	0.674	0.597			
TCI	TCI 2	TCI 1	0.959	0.901	7.322	28.60	0.93
	TCI 3	TCI 2	0.956	0.874			
	TCI 5	TCI 3	0.860	0.815			
	TCI 6	TCI 4	0.757	0.788			
	TCI 7	TCI 5	0.713	0.722			
	TCI 8	TCI 6	0.666	0.720			
	TCI 9	TCI 7	0.666	0.720			
CRS	CRS 1	CRS 1	0.862	0.757	3.464	18.55	0.88
	CRS 2	CRS 2	0.683	0.823			
	CRS 3	CRS 3	0.784	0.768			
SPLP	SPLP 1	SPLP 1	0.903	0.755	1.374	15.76	0.84
	SPLP 2	SPLP 2	0.845	0.792			
	SPLP 3	SPLP 3	0.603	0.671			

According to the PCA results, four factors are considered significant based on latent roots or eigenvalue greater than 1 and all the factors less than one are considered insignificant and omitted (Hair et al., 2010, p. 109). The study used two overall measures of inter-correlation, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity to justify the application of factor analysis. The KMO measure of sampling adequacy for 23 observations is .516 ( $> .50$ ), which is acceptable and this value increases with sample size (Hair et al., 2010, p. 104). Bartlett's test of sphericity shows significant correlation among the variables as it is 365.265,  $df = 136$ , significant at  $p < 0.001$  (Hair et al., 2010, p. 105). Four factors, having eigenvalues greater than 1, were extracted, and after rotation, these values are 1.48, 7.32, 3.46 and 1.37. The sums of squared loadings from all the four factors explain 80.24% (in social science 60% is acceptable, Hair et al., 2010, p. 109) of cumulative variance in data. Only one variable, TCI 1 loaded above .4 (.413, .455, .583, .039)

with three factors and therefore was eliminated from the TCI dimension. Though the variable ‘competence of local logistics’ is a part of the World Bank’s LPI, the variable ‘efficiency of domestic transport infrastructure’ in this study did not load well under any factor. This may be because the B2B managers may not always have a clear idea about supplier countries’ domestic infrastructure. In the case of factor reliability, the minimum Cronbach’s alpha value is .83 for GRP that is far above the cut off of .70 or above for newly developed measures. The minimum corrected-item-total correlation is 0.608, exceeding the cut-off value of 0.50 (Hair et al., 2010, p. 125; Robinson, Shaver, & Wrightsman, 1991). Both the measures thus convincingly establish the reliability of the four factors. In addition, the minimum item loading is .563, which is more than the cut off value .50, of practical significance for factor analysis (Hair et al., 2010, p. 117). Finally, all the constructs are composed of a minimum three items, which is satisfactory as (Chin, 2010) confirmed operationalisation of a minimum of two valid items for a construct in exploratory factor analysis. Therefore, items under all the four constructs were accepted and later used in confirmatory factor analysis (CFA). The next section of the study discusses the conceptual framework followed by hypothesis development.

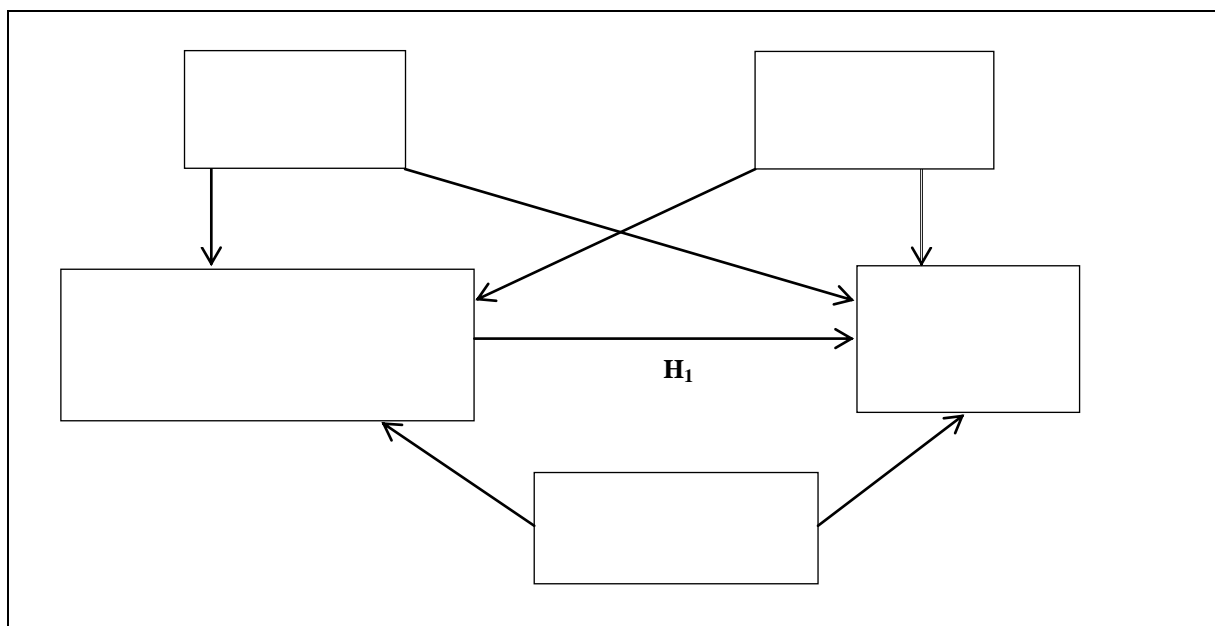
#### **4.7 The conceptual framework**

The conceptual model for this research is presented in Figure 1. The proposed conceptual model is based on the cognitive component of attitude theory. As B2B buyers have “rich cognitive structure regarding country effects” and a “wealth of experience and information”(Samiee, 1994, p. 591), it is expected that they are more “rational and informed” (Ahmed et al., 1994). Moreover, B2B buyers tend to gather accurate information on products’ intrinsic variables when evaluating suppliers (Bradley, 2001, p. 513) and have greater familiarity with a country of origin’s product and country image (Askegaard & Ger, 1997, p.

14). While it has been argued that industrial buyers use the same cognitive process as consumers (Fern & Brown, 1984; Wilson, 2000), others (Insch, 2003) argue that industrial buyers have to deal with additional organisational and interpersonal variables. In a recent COO literature review, (Roth & Diamantopoulos, 2009, p. 728), emphasised the use of all the components of attitude theory, cognitive, affective (feeling or emotions) and conative or intended behaviour (Fishbein & Ajzen, 1975; Zanna & Rempel, 1988). However, it could be argued that incorporating all these components in B2B purchasing research does not make convincing sense; most notably the affective component. The global outsourcing initiated by US companies in the 1970s was essentially concerned with cost reduction. Consider, for example, one of the architects of today's globally scattered manufacturing chain, Steve Jobs in the relevance of cognition in this debate. Duhigg and Bradsher (2012) reported in *The New York Times* on Barak Obama's dinner in California with Silicon Valley leaders in February, 2011. In answering Barak Obama's question—what would it take to make iPhones in the United States?—Steve Jobs' reply was unambiguous, “[t]hose jobs aren't coming back”. The vast scale of overseas factories, coupled with the flexibility and skills of foreign workers have substantially outpaced their American counterparts. Therefore, ‘Made in the USA’ is no longer a viable option for most Apple products. This study's heavy reliance on cognitive components in the case of B2B purchasing is strongly supported by the comment of Betsey Stevenson, once the chief economist at the US Labor Department “[c]ompanies once felt an obligation to support American workers, even when it wasn't the best financial choice ... That's disappeared. Profits and efficiency have trumped generosity” (Duhigg & Bradsher, 2012). Consider also the earlier discussion about back-shoring and the findings of the study of Ferreira and Heilala (2011) of Accenture, which did not identify a single variable related to patriotism or ethnocentrism. Their study showed that industry leaders think that, to win business in the highly competitive marketplace, extensive customisation is the key.

Therefore, back-shoring generates proximity to make response time quicker. Offshoring or back-shoring are not used as an option by B2B managers for reasons of ethnocentrism. In this sense, it can be argued that the affective component which reported possibly as the most overwhelming influence in the COO literature does not reflect the reality, at least for B2B purchasing or procurement. Therefore, this study only includes cognitive components of country image.

For measuring the variables, this study uses a linear compensatory multi-attribute attitude model which is employed extensively as an instrument for collecting and gathering data of attitudes toward companies (Ajzen & Fishbein, 1977; Bradley, 2001; Fishbein, 1975; Ryan & Bonfield, 1980; Sampson & Harris, 1970). The causal model proposed in the current study is shown below.



**Figure 4.7.1 Conceptual framework**

Unlike Bradley (2001), the current study uses ‘international supplier performance’ as the outcome construct. The use of international supplier performance makes sense because buyers’ supplier preference is obviously directed at getting higher performance from a

supplier. Moreover, supplier performance is an outcome assessment of the total supplier selection process; in the B2B domain it can be considered as a surrogate or precursor of 'purchase intention' (Granzin & Painter, 2001; Klein et al., 1998; Verlegh, 2007) commonly used in consumer-centric COO studies of purchasing decisions (Verlegh & Steenkamp, 1999, p. 530). At the same time, perceptions of performance will intrinsically relate to actual past performance, as distinct from, an expectation of future performance. In this sense, it is likely to be a more reliable predictor of actual supplier choice in future.

The current study uses three newly developed COO constructs related to trade. In measuring the country effect as one construct, (Bradley, 2001) considered ten macro- and micro-variables (p. 516) that may influence buyer attitudes. The current study significantly differs as it does not include traditionally used COO constructs that normally represent a country's overall image and product-country image. It is an important limitation in B2B-centric COO studies that a country's trade-related issues generate a macro-level influence on B2B buyers, in addition to company-specific influences. A wide range of literature already reviewed in this study provides ample evidence that international supplier performance can be influenced by supplier company characteristics along with the country's macro-level aspects related to trade. The list of constructs is presented in Table 4.7.1.

**Table 4.7.1 List of constructs and respective sources**

<b>Constructs in second-order model</b>	<b>Constructs in first-order model</b>	<b>Source</b>
Company effect (CompE)	i) Product aspects (PDA) ii) Pricing aspects (PRA) iii) Marketing communication aspects (MCA) iv) Distribution and service aspects (DSA)	Adapted from Bradley (2001)
Geographical proximity (GRP)	Geographical proximity (GRP)	Newly developed construct for this study
Trade-related country infrastructure (TCI)	Trade-related country infrastructure (TCI)	Newly developed construct for this study
Country's regulatory strength (CRS)	Country's regulatory strength (CRS)	Newly developed construct for this study
Supplier performance (SPLP)	Supplier performance (SPLP)	Most reported variables from multiple studies and validated in this study

It has been noted earlier that company effects can be captured by its controllable variables, the marketing mix elements. Two closely relevant studies (Baldauf et al., 2009; Bradley, 2001) already used these marketing mix elements to represent the company effect. More recently, in explaining a country's performance image, Wang et al. (2014) identified the antecedent relationship of product quality, price advantage and firm competence. All three antecedents are deeply connected to the company rather than country. Grounded on strong evidence from past studies, the present study conceptualises company effect ('CompE' hereafter) as a composite measure of marketing mix elements, and proposes to measure and validate CompE as a second-order construct.

In addition to the company effect, this study includes country image as an antecedent of supplier performance. Regarding country image, this study intends to capture trade-related issues that are considered as a country's macro aspect, which is common for the companies that operate within the country. Most importantly, the extant COO literature reports a range of trade-related variables having significant impacts on COO image. However, none of the studies classified those variables under clear dimensions or measured them as a COO construct. In this sense, this study takes the lead in introducing three trade-related COO constructs and testing them with company effect to reveal their impact on international



supplier performance. Additionally, investigating ‘company effect’ along with country image constructs in a multi-cue setting is imperative to overcome the COO overestimation criticism (Usunier & Cestre, 2007, p. 272).

#### **4.8 Research hypotheses**

Many studies reported in this paper offer evidence that the variables included in the trade-related COO constructs GRP, TCI, and CRS may significantly impact international supplier performance. In addition, the country-related components may be influential through company’s internal variables (Bradley, 2001, p. 522; Olson & Jacoby, 1972; Papadopoulos, 1993). Consequently, the hypotheses tested by this study are as follows.

*H<sub>1</sub>*: Company effect (CompE) positively impacts on supplier performance (SPLP).

A company’s marketing mix elements should substantially influence its overall performance. The construct CompE is a composite measure of a supplier company’s marketing mix elements in the eyes of the B2B buyer. Company effect should consequently be related to the supplier’s overall performance measure SPLP. Bradley (2001, p. 521) reported a significant relationship of company effect variables (product, distribution, advertising, significant at  $p < .01-.10$  level) on company preference. While Baldauf et al. (2009, p. 447) found that all the marketing mix elements are significantly associated with retailer-perceived brand equity, supplier image and price levels were significantly related to brand profitability performance. That means, marketing mix elements are significantly influencing company preference and company (brand) profitability performance. So, in a simple sense, a company’s supplier performance will also be substantially influenced by its marketing mix actions.

*H<sub>2</sub>*: Geographical proximity (GRP) positively impacts on supplier performance (SPLP).

Importance of geographical proximity in supplier selection is widely evidenced in already presented literature. Oke et al. (2009) reported that geographic distance was important to all the companies interviewed and buyers' preference often goes to nearby suppliers for less transportation lags and low logistics cost due to proximity. In addition, Ho et al. (2010, p. 201) reported significance of delivery reliability, distance, geographical location, number of shipments to arrive on time, order-to-delivery lead time, on-time delivery etc. on supplier evaluation and selection. Consequently, geographical proximity can play a significant role on supplier performance.

*H<sub>3</sub>: Trade-related country infrastructure (TCI) positively impacts on supplier performance (SPLP).*

The impact of infrastructure is substantial on trade performance, that means trade infrastructure of a country also contribute on that country's exporter performance. Additionally, several factors revealed in the COO literature as considerations of B2B buyers are transportation system reliability, logistics cost, government support for business, political stability, predictable border clearance times, government corruption, cultural appeal, foreign exchange rate etc. (Ghymn et al., 1999; Keown, 1985; Maltz et al., 2011; Min, 1994; Oke et al., 2009). All these variables are associated with country infrastructure that rationally impact on suppliers' performance of that country.

*H<sub>4</sub>: Country's regulatory strength (CRS) positively impacts on supplier performance (SPLP).*

Variables related to B2B sourcing, such as compliance with safety standards, work ethic and standards, security of intellectual property, legal environment (Ghymn et al., 1999; Maltz et al., 2011; Oke et al., 2009) are not controllable by the company rather require strong government actions. Moreover, strength originated from regulations (Wang et al., 2014, p.

773) is associated with country image. Maintaining higher regulatory standard lends a company great support to perform better.

*H<sub>5</sub>*: Geographical proximity (GRP) positively impacts on company effect (CompE).

Geographical proximity directly influences two marketing mix elements price and delivery. Because of geographical closeness a company can ask for less price in terms of CIF (cost, freight, and insurance) value and lag time in delivery can be reduced significantly. Although country proximity contributes to these issues, buyers can realise these benefits through supplier company actions.

*H<sub>6</sub>*: Trade-related country infrastructure (TCI) positively impacts on company effect (CompE).

In the similar vein to *H<sub>5</sub>*, country infrastructure can improve a company's price and delivery-related activities, which eventually increase role of company effect on B2B buyers' supplier evaluation. A country's internal infrastructural efficiency may not be that large to influence overall supplier performance but may enhance a company's specific marketing mix actions.

*H<sub>7</sub>*: Country's regulatory strength (CRS) positively impacts on company effect (CompE).

Higher regulatory standards rationally contribute on product-related aspects of a company. In addition, enforcement of labour regulations and intellectual property rights may not create directly visible impact supplier performance but may increase B2B buyers' perception about a company's product, service and communications aspects.

#### **4.9 Study focus, survey respondents, survey country and product category**

This study uses an online survey questionnaire designed using Qualtrics survey software and the survey was administered online to professional purchasing managers in Australia by

Research Now. The study concentrated on international purchasing (Motwani & Ahuja, 2000) that can be synonymous to import sourcing (Swamidass, 1993), global sourcing (Kotabe et al., 1998), worldwide sourcing (Monczka & Trent, 1992), international procurement (Scully & Fawcett, 1994) and so on. Note also that the study did not ask respondents about local or home country sourcing, which is the dominant focus of the extant COO literature, and which could be expected to reveal strong home country bias. Rather the focus of the current study is on COO effects in international procurement (excluding local procurement).

The survey country Australia plays an important part in the global economy; no less in relation to its imports. Regarding global imports, Australia ranked 18<sup>th</sup> (*Trade at a Glance*, 2013, p. 14), contributing 1.5% of global imports, putting behind countries like, Brazil, Taiwan, Thailand, Turkey, Switzerland, Malaysia, Indonesia, Austria, and Sweden. According to KOF Index of Globalisation 2014, Australia is ranked 19 among 191 countries. According to the KOF Index of Globalisation 2014 (KOF, 2014), Australia is ranked 19 among 191 countries. As this study is focused toward trade-related country constructs and takes the importer side as its standpoint, the significance of Australia is also evidenced as it holds 18<sup>th</sup> position (IHS Global Insight, 2013), according to 2010 data, in global importers of containerised cargo. Therefore, Australia is heavily engaged in global trade, despite its small population.

In studying COO it is important to create a diverse pool of countries to reduce bias towards a particular country or country group. One important bias in COO is toward developed country products over developing countries (Ahmed et al., 1994; Crawford & Lamb, 1981; Dzever & Quester, 1999; Knight et al., 2008; Saghafi & Puig, 1997). Similarly, buyers tend to select suppliers from geographically proximate countries over those from more distant countries (Oke et al., 2009). Another global pattern is the regional concentration of global trade

(Rugman & Verbeke, 2004), which is also geographically concentrated, albeit in a wider distribution. Considering all these kinds of trade biases, Australia's top ten import sources include representation of Asia (physically proximate supplier markets and mostly developing countries), Europe and North America (mostly developed countries), and also newly industrialised countries of Asia (see Chapter 1, Table 1.4.1).

The product category of the current study is 'raw materials and components'. By investigating trade of 'raw materials and components' or intermediate goods, this study also aligns with an obvious reality of global trade in recent times. Additionally, no previous B2B focused COO studies explicitly addressed intermediate goods as product category. The exponential growth of the global supply chain not only covers finished goods but also components and sub-assemblies (Gereffi & Lee, 2012, p. 25), which has given rise to the global trade in intermediate goods. In 2009, global exports of intermediate goods exceeded the export values of final goods plus capital goods, representing 51% of non-fuel merchandise exports (WTO & IDE-JETRO, 2011, p. 81). Therefore, a shift has occurred from 'trade in goods' to 'trade in value added' and 'trade in tasks' (OECD, 2011; WTO & IDE-JETRO, 2011). The increased use of the statement 'Made in country X from local and imported materials/ingredients' in 'Made in' labelling clearly evidences the increasing nature of intermediate goods trade. In representing intermediate goods imports (excluding fuel), Australian imports of processed industrial supplies and parts for industrial goods grew, on average, 6.8% per annum from the period 1990-91 to 2010-11 (Andrew, 2012). In comparison, the global average of annual growth rate in intermediate inputs trade between 1995 to 2006 was 6.2% (OECD, 2011, p. 30). This demonstrates that the growth of Australian intermediate inputs trade is representative of the global growth rate. In addition, the yearly intermediate goods trade, excluding fuel, is AUD 66.9 billion, equal to the two-

way trade of Australia with Japan, the second largest two way trading partner of Australia (Andrew, 2012).

#### **4.10 The questionnaire, data collection procedure and sample characteristics**

Data were collected using a standard questionnaire. Purchasing managers were asked to rate their existing major foreign supplier on their product, price, marketing communications, and delivery and service issues. Another set of questions is related to supplier country, and respondents are required to rate their major existing foreign supplier's country on geographical proximity (GRP), trade-related country infrastructure (TCI), and country's regulatory strength (CRS). Before rating the country-related scale items, the respondents were asked to write the country name of their major supplier in an open ended space. Next, respondents were asked to rate the respective supplier's performance (SPLP) based on scale items. In addition, some organisational and personal information was asked. Although all the items for company effect (CompE) are taken from previously used scales, five experts (three purchasing managers and two academics) checked the items for measurement appropriateness, language simplicity and understandability. In measuring the company effect construct or CompE, Bradley's (2001) scale for four marketing-mix elements was used with few modifications recommended by experts. First, the influence of brand name association was included under the product dimension as brand name is extensively considered in both consumer-centric and B2B-centric COO studies (Ahmed et al., 1994; Baldauf et al., 2009; Batra et al., 2000; Ghymn & Jacobs, 1993; Ghymn et al., 1999; Gill & Ramaseshan, 2007; Khanna, 1986; Knight et al., 2008; Knight et al., 2007; Li et al., 1994). Second, statements of the scale items have been modified to make it suitable for different industry users, not specific to electrical or electronic products. Third, there were a few inclusions and exclusions of items to make it simpler and more realistic for purchasing managers of intermediate goods.

After expert review 19 items in four dimensions were considered for the pretesting stage. After pretesting, 17 items exhibited high loadings under their expected factors. These 17 items were included in the final questionnaire. All the 17 items were measured using a 7-point Likert scale ranging from excellent (7) to poor (1).

Regarding the country dimensions, the details of measurement development for three new constructs (GRP, TCI, and CRS) have been previously discussed in section 4.6. All the items were measured by a 7-point Likert-type scale ranging from highest (7) to lowest (1). The SPLP construct was already validated in the pretesting stage, and was also measured with a 7 point Likert-type scale ranging from excellent performance (7) to poor performance (1).

Data were collected from the online panel members provided by commercial panel provider company, Research Now and who were from all around Australia. Respondents were filtered using two screening questions: “are you significantly involved in making international purchase decisions?” and “are you involved in purchasing intermediate goods (e.g. non-fuel raw materials, parts and components for industrial use) from foreign suppliers?” Because organisational purchasing decisions are often a group decision (Andersen & Chao, 2003) the amount of involvement was considered and both questions were asked about international purchasing. In the final survey 1863 panel members were requested to participate in the survey and, following the screening questions, 293 completed questionnaires were received, giving a 15.7% response rate. Among the 293 responses, 276 were found usable for analysis. Sample characteristics of the respondents are presented in Table 4.10.1.

**Table 4.10.1 Demographic profile of respondents and organisations**

Gender	Highest level of completed education	Experience in purchasing profession	Type of materials purchased	Size of Business
Male: 62.7	Doctoral degrees 2.5	Less than 10 years: 38.8	Raw materials: 39.5	Small Business 43.1
Female: 37.3	Masters degree: 29	10 to 20 years: 43.8	Components and parts 60.5	Small to medium: 46.7
	Bachelor honours/Graduate certificate/ Graduate diploma: 22.1	More than 20 years: 17.4		Large business: 10.1
	Bachelor degree: 20.7			
	Advanced diploma/ Associate degree: 9.8			
	Diploma: 10.1			
	High school: 8.3			
Note: Business size defined as Australian Taxation Office (ATO) criteria; Small: Annual turnover less than AUD 2 million, Small to medium enterprises: Annual turnover AUD 2 million to AUD 250 million, Large: Annual turnover more than 250 million.				

All values are in percentage

As each respondent reported the country of their major foreign supplier, the composition of sourcing countries appears in table 4.10.2.

**Table 4.10.2 Percentage of cases reported by sourcing country**

Supplier country	Percentage of cases
China	24.6
USA	14.1
Singapore	9.4
Germany	6.8
South Korea	6.2
New Zealand	4.7
Japan	3.9
UK	3.2
Malaysia	3.2
Indonesia	2.9
India	2.9
Italy	2.2
Thailand	1.8
Others	10.8

## 4.11 Study results

### 4.11.1 First-order measurement model

The conceptual model of the study was tested with covariance-based Structural Equation Modelling (SEM), using the two-step process suggested by Anderson and Gerbing (1988). So, assessment of fit and validity of two key tests (measurement model and structural model)



need to be established. The conceptual model consists of nine first-order constructs. Initial estimation considered 33 measured variables under eight constructs. Factor loadings (.5 or higher and ideally .7; Hair et al., 2010, p. 709) and standardised residuals (close to 4; Hair et al., 2010, p. 725) of the variables were examined and only one variable (under DSA construct) excluded (see Tables 4.11.2.1 and 4.11.2.2). Model fit of the 32 item confirmatory factor analysis (CFA) was assessed using multiple indices. As suggested by (Hair et al., 2010, p. 672), at least one absolute (RMSEA, SRMR, Normed  $\lambda^2$ ) and one incremental index (CFI, TLI, NFI, RNI) need to be used along with  $\lambda^2$  value and associated degrees of freedom (*df*). In addition, fit indices are sensitive to model complexity (number of constructs and indicators) and sample size (Anderson & Gerbing, 1984; Bearden et al., 1982; Bentler, 1990; Marsh et al., 1988; McDonald & Marsh, 1990; Sharma et al., 2005). Therefore, researchers suggest flexibility in evaluating fit indices considering model complexity (Hair et al., 2010, p. 673; Sharma et al., 2005, p. 941). In this vein, (Hair et al., 2010, p. 672) indicated liberal cut-off values for the model consisting of 30 or more observed variables and sample size of more than 250. Additionally, (Sharma et al., 2005, p. 939) found that RMSEA is the least affected index and insensitive to sample size over 200 and number of indicator variables. Based on the specifications regarding fit indices, the complex CFA model of this study (32 measured variables and sample size of 276) fits the data well.

**Table 4.11.1.1 First-order CFA model fit indices**

GoF Measures	Calculated value	Threshold value
$\chi^2 (df)$	959.36 (436)	
Sig.	.000	Significant p-value expected (Hair et al., 2010, p. 672)
Normed $\chi^2$	2.20	3 or less associated with better fitting models (Hair et al., 2010, p. 668)
CFI	0.90	.90 or better for acceptable model fit (Hair et al., 2010, p. 669; McClelland & Judd, 1993); For normed indices, cut-off value of 0.90 recommended by (Bentler & Bonett, 1980); models with more than 24 indicators and sample size around 200, liberal cut-off value for normed indices is .80 (Sharma et al., 2005, p. 939)
TLI	0.90	.90 or better for acceptable model fit (Hair et al., 2010, p. 669; McClelland & Judd, 1993)
RMSEA	0.066	.05 suggests close fit, .051–.08 suggests acceptable model fit to data (Browne et al., 1993; Jöreskog, 1993)
SRMR	0.052	.08 or less (Hair et al., 2010, p. 672)
In comparison, the null model ( $\chi^2 = 5748.04$ ; $df = 496$ ; $\chi^2/df = 11.59$ ; RMSEA = .196) in which the correlations among the latent constructs are constrained to zero shows a significantly worse fit ( $\Delta\chi^2 = 79.81$ ; $\Delta df = 1$ ; $p < .001$ ).		

#### 4.11.2 First-order measurement model validity

One important assessment of construct validity includes measurement relationships between observed variables and constructs (Hair et al., 2010, p. 707). The first-order measurement model consists of eight constructs: marketing communications aspects (MCA), delivery and service aspects (DSA), product aspects (PDA), pricing aspects (PRA), geographical proximity (GRP), trade-related country infrastructure (TCI), country's regulatory strength (CRS), and supplier performance (SPLP). The measurement model estimates of standardised item loadings exceeded the suggested threshold (at least .5 and ideally .7; Hair et al., 2010, p. 708). Among the 32 item loadings only three are in the .5 range, only two in the .6 range and the remaining are .7 or above (see Tables 4.11.2.1 and 4.11.2.2). Moreover, all the item loadings are significant at .001 level (see Tables 4.11.2.1 and 4.11.2.2), which is also considered as a minimum requirement by Anderson and Gerbing (1988). In addition to that, high item loadings on intended constructs and average item loadings for CompE variables .72, for country variables .79 and for SPLP variables .73 demonstrate convincing evidence of convergent validity (Fornell & Larcker, 1981).

The study computed average variance extracted (AVE) and composite reliability (CR) as an estimate of reliability of all measurement scales (Chin, 1998a; Fornell & Larcker, 1981). All the AVE estimates are above cut off value .5 (Fornell & Larcker, 1981) and all the CR estimates are well above .7, (indicate good reliability; Hair et al., 2010, p. 710). So both the measures (AVE and CR, see Table 4.11.2.3) exhibit adequate reliability and convergent validity (Chin, 1998a; Fornell & Larcker, 1981) of the constructs.

**Table 4.11.2.1 Factor loadings of the supplier company/firm variables (CFA model)**

<b>Marketing communication aspects (MCA)</b> <b>CR: 0.84; AVE: 0.57</b>	<b>Standardised loadings (t value)</b>
Active dissemination of new information on products and services	0.75 (11.90)*
Knowledge level of sales executives about company products and applications	0.76 (12.03)*
Truthfulness in product claims	0.77 (12.16)*
Quality of information content in company communications	0.73 (NE)
<b>Distribution and service aspects (DSA)</b> <b>CR: 0.75; AVE: 0.51</b>	
Adherence to delivery promises	0.85 (8.34)*
Efficiency of order processing system	0.73 (7.89)*
Level of after sales service	0.51 (NE)
Competency in providing emergency services	Variable excluded
<b>Product aspects (PDA)</b> <b>CR: 0.87; AVE: 0.53</b>	
Manufacturing quality	0.66 (10.80)*
Degree of product variety	0.78 (12.91)*
Design excellence	0.80 (13.20)*
Compliance with technical specifications	0.70 (11.37)*
Products associated with recognisable brand names	0.70 (11.35)*
Quick to adapt product to user needs	0.74 (NE)
<b>Pricing aspects (PRA)</b> <b>CR: 0.76; AVE: 0.52</b>	
Attractiveness of quoted pricing	0.78 (NE)
Value for money	0.80 (11.87)*
Usefulness of supplier provided credit terms	0.56 (8.56)*

\* Significant at .001 level.

NE = Not estimated as loading set to fixed value 1.

**Table 4.11.2.2 Factor loadings of the supplier country and supplier performance variables (CFA model)**

<b>Geographical proximity (GRP)</b> <b>CR: 0.84; AVE: 0.58</b>	<b>Standardised loadings (<i>t</i> value)</b>
Geographical closeness to Australia	0.73 (NE)
Economy in transport cost	0.84 (13.06)*
Ease of face to face interaction with country's suppliers	0.60 (9.44)*
Travel time of shipments from supplier country (reverse coded)	0.85 (13.16)*
<b>Trade-related country infrastructure (TCI)</b> <b>CR: 0.91; AVE: 0.62</b>	
Predictability of port clearance time	0.81 (NE)
Time consumed in port clearance (reverse coded)	0.83 (15.81)*
State of IT and communication infrastructure	0.78 (14.48)*
Stability of currency value	0.83 (15.78)*
Ease of using payment interface with the country	0.74 (13.40)*
Level of preferential tariff treatment (as an outcome of trade agreements) with the country	0.73 (13.20)*
<b>Country's regulatory strength (CRS)</b> <b>CR: 0.88; AVE: 0.72</b>	
Security of intellectual property	0.83 (NE)
International acceptability of country's standards certification	0.92 (17.97)*
Extent of ethical treatment of workers	0.78 (14.90)*
<b>Supplier Performance (SPLP)</b> <b>CR: 0.78; AVE: 0.55</b>	
Product quality performance	0.80 (NE)
Delivery performance	0.86 (14.27)*
Price performance	0.53 (8.66)*

\* Significant at .001 level.

NE = Not estimated as loading set to fixed value 1.

To achieve adequate discriminant validity, correlations between pairs of construct should be less than 1 (Bagozzi, 1982). Chin (1998b) argues that correlation between constructs should be less than .90. A more rigorous test of discriminant validity (Hair et al., 2010, p. 710) is that the square root of AVE should be higher than inter-construct correlations (Fornell & Larcker, 1981). Table 4.11.2.3 shows inter-construct correlations with the square root of AVE in the diagonal. The constructs show adequate discriminant validity as suggested by Chin (1998b) and Bagozzi (1982). However, according to the specifications of Fornell and Larcker (1981), the study detected a discriminant validity problem.

**Table 4.11.2.3 Composite reliability, AVE estimates and inter-construct correlation matrix**

	<b>CRS</b>	<b>MCA</b>	<b>PDA</b>	<b>PRA</b>	<b>SPLP</b>	<b>DSA</b>	<b>TCI</b>	<b>GRP</b>
<b>CRS</b>	<i>0.84</i>							
<b>MCA</b>	0.44	<i>0.75</i>						
<b>PDA</b>	0.51	0.83	<i>0.72</i>					
<b>PRA</b>	0.32	0.65	0.76	<i>0.72</i>				
<b>SPLP</b>	0.46	0.67	0.76	0.58	<i>0.74</i>			
<b>DSA</b>	0.42	0.85	0.82	0.62	0.74	<i>0.71</i>		
<b>TCI</b>	0.67	0.46	0.53	0.39	0.49	0.51	<i>0.78</i>	
<b>GRP</b>	0.53	0.56	0.62	0.50	0.70	0.55	0.44	<i>0.76</i>
<b>CR</b>	<b>0.88</b>	<b>0.84</b>	<b>0.87</b>	<b>0.76</b>	<b>0.78</b>	<b>0.75</b>	<b>0.91</b>	<b>0.84</b>
<b>AVE</b>	<b>0.72</b>	<b>0.57</b>	<b>0.53</b>	<b>0.52</b>	<b>0.55</b>	<b>0.51</b>	<b>0.62</b>	<b>0.58</b>

Note: Square root of AVE on the diagonal

It is important to recognise that the first-order constructs that subsequently form the second-order construct may not display adequate discriminant validity (Gerbing & Anderson, 1984, p. 574; Ping Jr, 2004, p. 133). In this study the company marketing mix constructs show a discriminant validity problem according to Fornell and Larcker (1981), which are the indicator variables of the second-order factor of the subsequent analysis. Yet, the problematic pairs of constructs are used for additional tests of discriminant validity. A pairwise  $\lambda^2$  difference test (Anderson & Gerbing, 1988, p. 416; Bagozzi & Phillips, 1982, p. 476; A. M. Farrell, 2010, p. 325; Jöreskog, 1971) was performed for the pairs of constructs under question. Constraining covariance of each pair was done for each pair at a time, as suggested by Anderson and Gerbing (1988, p. 416).

**Table 4.11.2.4 Pairwise Chi-square difference tests for discriminant validity**

<b>Pair of constructs</b>	<b>Constrained model</b>		<b>Unconstrained model</b>	
	$\lambda^2$	<i>df</i>	$\lambda^2$	<i>df</i>
MCA $\leftrightarrow$ PDA	969.99**			
MCA $\leftrightarrow$ DSA	983.65***			
DSA $\leftrightarrow$ PDA	984.58***			
DSA $\leftrightarrow$ SPLP	995.28***	437	<b>959.36</b>	<b>436</b>
PDA $\leftrightarrow$ PRA	972.93***			
PDA $\leftrightarrow$ SPLP	976.08***			

\*\*Significant at .002 level, and \*\*\* Significant at .001 level

Pairwise  $\lambda^2$  difference tests (Table 4.11.2.4) show that five pairs produced significant  $\lambda^2$  difference at the .001 level, and one pair at the .002 level. Consequently, all the pairs can be considered to exhibit discriminant validity. Based on the satisfactory first-order CFA model validity, model estimation can now move toward a higher-order measurement and structural model.

#### *4.11.3 Common method bias and non-response bias*

Common method variance (variance attributed to measurement method) is a potential problem in behavioural research (Podsakoff et al., 2003, p. 879). One important reason for encountering this problem is that data are collected at one point in time using the same method (Podsakoff et al., 2003). The study considered some steps, as suggested by Podsakoff et al. (2003), to lessen the threat of common method bias. The respondents were assured of anonymity and subsequently requested to answer questions as honestly as possible. Additionally, respondents were informed that there were no right or wrong answers, and the scale items improved through pre-testing and reduced item ambiguity. Moreover, the study used Harman (1967) one factor test to assess the model for common method bias. The one factor CFA model resulted in  $\lambda^2$  value 2454.579 with  $df$  464 that indicates the fit of a one factor model is significantly worse ( $\Delta\lambda^2 = 1495.219$ ,  $\Delta df = 28$ ,  $p < .001$ ). This result indicates that common method variance does not pose a serious threat in explaining the measurement model results (Baldauf et al., 2009; Jayachandran & Varadarajan, 2006; Josiassen, 2011; Kandemir et al., 2006; Yenyurt et al., 2013).

Data were also tested for non-response bias by analysing early and late respondents (Armstrong & Overton, 1977) for significant differences. The sample of early 25% respondents and late 25% respondents was used to perform a  $t$ -test for mean difference. The mean values for early respondents (ER) and late respondents (LR) and respective  $t$ -value is

reported in Table 4.11.3.1. As  $t$ -values of ER and LR for all the constructs are well below 1.96, non-response bias can be considered as not a major problem for data analysis.

**Table 4.11.3.1 Results of  $t$ -test for significant differences between ER and LR**

Constructs	ER	LR	$t$ -value
MCA	4.73	4.55	1.331
DSA	3.52	3.40	1.271
PDA	5.27	5.24	.212
PRA	4.74	4.76	.087
GRP	4.27	4.29	.063
TCI	4.51	4.39	.793
CRS	4.67	4.58	.462
SPLP	4.75	4.68	.457

In addition to testing the constructs for non-response bias, some respondent characteristics were compared between ER and LR. For example, ER raw materials were sourced by 40% respondents and component parts sourced by 60% respondents while among the LR the same is 36% and 64% respectively. In addition, the average year of experience among the ER is 14.07 and among the LR it is 12.83, which is not statistically different ( $t$  value .979).

#### *4.11.4 Second-order measurement model*

The second-order CFA model includes one second-order construct and four first-order constructs. The company effect (CompE) construct consists of four first-order constructs named as marketing communications (MCA), delivery and service aspects (DSA), product aspects (PDA) and pricing aspects (PRA). Bradley (2001) conceptualised CE but did not measure it as a second-order construct. All other first-order constructs remain the same in the second-order CFA model. The second-order CFA model fits the data well according to the threshold values of fit indices specified earlier [ $\chi^2(df) = 983.33$  (450), Normed  $\chi^2 = 2.18$ , CFI = .90, TLI = .90, RMSEA = .066, SRMR = .053].

#### 4.11.5 Second-order measurement model validity

Item loadings (see Table 4.11.5.1) of the second-order constructs are substantially higher than the ideal threshold value .7 (Hair et al., 2010, p. 708). Additionally,  $t$ -values of all the item loadings are significant at the .001 level (see Table 4.11.5.1). Item loadings of the first-order constructs changed only minimally and were not reported again. Average item loadings of the five construct second-order CFA model is .78 that signals strong support of convergent validity (Fornell & Larcker, 1981). AVE and CR estimates for the second-order constructs exceeded the threshold value (AVE > .5, CR > .7). Considering all the constructs of the second CFA model, AVE and CR values show substantial evidence of convergent validity.

Regarding discriminant validity, inter-construct correlations and square root of AVE estimates for the five constructs were examined. The results (see Table 4.11.5.2) indicated little deviation from the (Fornell & Larcker, 1981) specification. Therefore, the pairwise  $\lambda^2$  difference test (Anderson & Gerbing, 1988, p. 416; Bagozzi & Phillips, 1982, p. 476; A. M. Farrell, 2010, p. 325; Jöreskog, 1971) was employed. Only one problematic pair of constructs passed the discriminant validity test with significant  $\lambda^2$  difference (see Table 4.11.5.3). Consequently, discriminant validity of the second-order CFA model is established.

**Table 4.11.5.1 Standardised loadings of second-order factors**

Company effect (CompE) CR: 0.93; AVE: 0.77	Variable code	Standardised loadings ( $t$ value)
Marketing communication aspects	MCA	0.89 (NE)
Distribution and service aspects	DSA	0.90 (7.43)*
Product aspects	PDA	0.95 (10.31)*
Price aspects	PRA	0.76 (8.97)*

\* Significant at .001 level.

NE = Not estimated as loading set to fixed value 1.



**Table 4.11.5.2 CR, AVE estimates and inter-construct correlation matrix of second-order CFA model**

	GRP	SPLP	TCI	CRS	CompE
<b>GRP</b>	0.76				
<b>SPLP</b>	0.70	0.74			
<b>TCI</b>	0.44	0.49	0.79		
<b>CRS</b>	0.53	0.47	0.68	0.85	
<b>CompE</b>	0.64	0.79	0.55	0.51	0.88
<b>CR</b>	<b>0.84</b>	<b>0.78</b>	<b>0.91</b>	<b>0.88</b>	<b>0.93</b>
<b>AVE</b>	<b>0.58</b>	<b>0.55</b>	<b>0.62</b>	<b>0.72</b>	<b>0.77</b>

Note: Square root of AVE on the diagonal

**Table 4.11.5.3 Pairwise Chi-square difference test for discriminant validity**

Pair of Constructs	Constrained model		Unconstrained model	
	$\chi^2$	df	$\chi^2$	df
SPLP $\leftrightarrow$ CompE	1005.655***	451	983.331	450

\*\*\* Significant at .001 level

#### *4.11.6 Second-order structural model*

As the measurement models provided sufficient evidence of construct validity the structural relationships could now be estimated. The proposed structural model is a saturated structural model as the number of structural relationships is the same as the number of covariances in the second-order CFA model. Consequently, calculated values of fit indices are exactly the same as the second-order CFA model fit (Hair et al., 2010, p. 738). Hence, this study demonstrates satisfactory fit of the structural model.

#### *4.11.7 Hypotheses testing*

In the hypothesised model, as predicted in  $H_1$ , there is a strong positive relationship between company effect (CompE) and supplier performance (SPLP) ( $\beta = .57$ ,  $t = 6.49$ ,  $p < .001$ ). The relationship between geographical proximity (GRP) and SPLP ( $H_2$ ) is also strongly supported as the relationship is statistically significant ( $\beta = .34$ ,  $t = 4.37$ ,  $p < .001$ ). Hypothesis 3 ( $H_3$ ) is not supported as the relationship is not statistically significant: trade-related country

infrastructure (TCI) shows a small positive influence on SPLP that is not statistically significant ( $\beta = .06$ ,  $t = .754$ ,  $p = .451$ ). The  $\beta$  value and  $t$ -statistic for  $H_3$  is so negligible that it is impossible to draw any conclusion from it. Evidence of the negative relationship between country's regulatory strength (CRS) and SPLP ( $H_4$ ) is detected but cannot be meaningful as both the coefficient and  $t$ -value are very small ( $\beta = -.04$ ,  $t = -.50$ ,  $p = .617$ ). Hypothesis 5 ( $H_5$ ), indicates a positive relationship from GRP to CompE with considerable magnitude and statistical significance ( $\beta = .48$ ,  $t = 6.12$ ,  $p < .001$ ). The positive relationship between TCI and CompE ( $H_6$ ) is also supported with strong significance ( $\beta = .30$ ,  $t = 3.79$ ,  $p < .001$ ). The relationship between CRS and CompE ( $H_7$ ) is not supported by the path estimate and/or significance level ( $\beta = .04$ ,  $t = .53$ ,  $p = .594$ ).

**Table 4.11.7.1 Structural model results**

Constructs/Paths	Hypotheses	Standardised path coefficients ( $t$ value)
CompE $\rightarrow$ SPLP	$H_1$	0.57 (6.49)*
GRP $\rightarrow$ SPLP	$H_2$	0.34 (4.37)*
TCI $\rightarrow$ SPLP	$H_3$	0.06 (.754)
CRS $\rightarrow$ SPLP	$H_4$	-0.04 (-.50)
GRP $\rightarrow$ CompE	$H_5$	0.48 (6.12)*
TCI $\rightarrow$ CompE	$H_6$	0.30 (3.79)*
CRS $\rightarrow$ CompE	$H_7$	0.04 (.53)
R <sup>2</sup> : SPLP		0.70
R <sup>2</sup> : CompE		0.50

\* indicates  $p < .001$

The results on Table 4.11.7.1 also show that four paths out of the seven tested in the hypothesised model are significant. Among the significant paths, the strength of relationships between predictors and outcome variables is fairly impressive. The hypothesised model explains that 70% of variance in the outcome variable SPLP is strongly related to CompE and GRP. In addition, all the country-related variables explain 50% of the variability in CompE.

#### *4.11.8 Mediation analysis*

The significant structural paths of the hypothesised model signal the possibility of mediating relationships among the constructs. Considering all the path estimates tested by the model, three relationships can be considered for mediation. They are  $GRP \rightarrow CompE \rightarrow SPLP$ ;  $TCI \rightarrow CompE \rightarrow SPLP$ ; and  $CRS \rightarrow CompE \rightarrow SPLP$ . In all three possible mediating relationships, company effect (CompE) is the mediator. In examining the mediating relationships, four conditions related to mediation, according to Baron and Kenny (1986), need to be fulfilled. The first condition is fulfilled if all the antecedents affect the mediator. With regard to the three antecedent to mediator relationships ( $GRP \rightarrow CompE$ ;  $TCI \rightarrow CompE$ ; and  $CRS \rightarrow CompE$ ), Table 4.11.8.1 shows that two paths ( $GRP \rightarrow CompE$ ,  $TCI \rightarrow CompE$ ) are significant at .001 level while the  $CRS \rightarrow CompE$  path is not significant. Consequently, the  $CRS \rightarrow CompE \rightarrow SPLP$  relationship failed to be the candidate for mediation analysis. The second condition can be satisfied if the mediating construct influences the dependent/outcome construct. Again, Table 4.11.8.1 shows that  $CompE \rightarrow SPLP$  is the only mediator to outcome path for all three mediating relationships. As already evidenced earlier in the hypotheses testing section, the  $CompE \rightarrow SPLP$  path is statistically significant at the .001 level with acceptable model fit indices. Therefore, the second condition is fulfilled. In the third condition, the antecedent construct needs to directly affect the outcome construct without the mediator. Of the three antecedent to outcome relationships, two ( $GRP \rightarrow SPLP$ ,  $TCI \rightarrow SPLP$ ) are significant without the mediator construct at the .001 level as shown in Table 4.11.8.1. Therefore, the third condition is fulfilled. Finally, according to the fourth condition, a decision on mediation can be taken if the direct paths ( $GRP \rightarrow SPLP$ ,  $TCI \rightarrow SPLP$ ) become non-significant (full mediation) or reduced (partial mediation) after introducing the mediator construct CompE. Table 4.11.8.1 shows that one direct path ( $TCI \rightarrow SPLP$ ) became non-significant after adding the mediator construct CompE

to the model. Therefore, the relationship from TCI to SPLP is fully mediated by CompE. The strength of the relationship of the remaining direct path, GRP → SPLP, has reduced from .61 to .33 after including the mediator CompE, but still remains insignificant at the .001 level. Therefore, the relationship from GRP to SPLP is partially mediated by the CompE construct. In addition, the path coefficients of the mediating relationships were used to calculate the Sobel test statistic. The Sobel test statistics for both the relationships substantiate the statistically significant ( $p < .001$ ) mediation from GRP → SPLP and TCI → SPLP through CompE.

**Table 4.11.8.1 Results of mediation tests**

Paths	Antecedent → Mediator	Mediator → Outcome	Antecedent → Outcome	After adding Mediator	Sobel Test Stat.
GRP → CompE	0.48 (6.12)*				
TCI → CompE	0.30 (3.79)*				
CRS → CompE	0.05 (.55)				
CompE → SPLP		0.80 (9.50)*			
GRP → SPLP			0.61 (7.75)*	0.33 (4.46)*	
TCI → SPLP			0.21 (3.17)*	0.04 (.61)	
GRP → CompE → SPLP					4.61*
TCI → CompE → SPLP					3.96*
$\chi^2$ (df)	777.02 (367)	342.44 (147)	152.80 (62)	834.78 (367)	
Normed $\chi^2$	2.11	2.33	2.46	2.27	
CFI	0.91	0.93	0.95	0.90	
RMSEA	0.064	0.070	0.074	0.068	

## 4.12 Discussion and implications

The study combined new country-related constructs with established company constructs and demonstrated the dominance of company effects over country effects, consistent with the findings of those few studies that have previously considered country and company aspects together (Baldauf et al., 2009; Bradley, 2001; Hsieh et al., 2004). In comparison to Empirical Paper 1 (Chapter 3 of this thesis), the company effect was reduced ( $\beta = .70$  to  $\beta = .57$ ) by around 20% when a stronger country construct, geographical proximity, was taken into account. Such results demonstrate strong significance of geographical proximity (a trade-

related country construct) in explaining the variability of international supplier performance. This significance indicates that in importing raw materials and components the role of geographical proximity is very crucial. Regarding the effect of country constructs on company, trade-related country constructs explain around 50% of variability in the company effect, whereas country image and product-country image (Empirical Paper 1, Chapter 3 of this thesis) explained a slightly lower 45% variability in the company effect. Therefore, companies gain a significant positive impact from the source country but the impact of that effect ultimately depends on the company. These results support the observation of national competitiveness guru Michael Porter (1990, p. 89): “[u]ltimately, only companies themselves can achieve and sustain competitive advantage”.

In the long history of COO research, there are only a very limited number of studies from B2B perspective, despite the strong influence of B2B purchasing in global trade over the last 30 years. Among those studies, trade-related country characteristics were frequently used as antecedents but in an isolated or scattered manner. Integrating these aspects into meaningful constructs is one contribution of this study to the literature. Accommodating research insights and antecedent variables from COO, global purchasing, global value chain, international supplier selection, and international trade studies, in this study, three new COO constructs related to trade have been developed and validated (namely, geographical proximity, trade-related country infrastructure, and country’s regulatory strength). Initial validation of the constructs through PCA and later by CFA lends strong support to the use of the constructs in future COO research. Among the new constructs, geographical proximity is particularly important because it has the most visible and practical impact on B2B purchasing. In recent times, the importance of proximity has also strongly surfaced in the consumer domain because of the increasing popularity of online shopping. Specification of supplier location and country, estimated delivery dates and ‘fast and free’ (by eBay Inc.) to geographically

proximate suppliers shows the significance of geographical proximity, even in consumer purchase decisions. The significance of trade facilitation, evident in this study's results, also substantiates the contribution of this construct in international B2B purchase and supplier evaluation. Despite the inconclusive impact of countries' regulatory strength as a construct, it nevertheless generated significant convergent and discriminant validity and therefore is usable in future research.

As Empirical Paper 1 (Chapter 3 of this thesis), this study's results also support the strong company association with the outcome variable, supplier performance, which is consistent with the few previous COO studies that included company antecedent(s) with COO (Baldauf et al., 2009; Bradley, 2001; Hsieh et al., 2004). The study supports the previous literature that relies on attitude theory to argue that B2B buyers are more rational than consumers. However, because it is a survey-based study it is more likely to capture rational and verbally-expressed country associations, than emotionally-held COO aspects (Boddy, 2005; Koll et al., 2010).

The study also avoids the pitfalls of the majority of COO studies, which ask for perceptions requiring extreme abstraction in contrived, superficial situations. Assessing the existing supplier company and its associated country is likely to be well known to B2B buyers, and seeking their opinions regarding their familiar product category does not require them to imagine hypothetical scenarios. Therefore, by using a research instrument that captures rational aspects and a respondent group that answers questions based on real-world experience, the study avoids some of the contrived artificiality of previous COO research that has been criticised for its "lack of realistic managerial relevance"; "consumers' impoverished origin knowledge base"; "explaining more of the variance than reality" (Samiee, 2011); "lack of familiarity"; "uninformed responses" (Usunier & Cestre, 2008); etc.

In addition, this study contributes to the COO literature by adopting a multi-cue and multidimensional country image perspective, two aspects suggested in the COO literature (Chattalas et al., 2008; Dinnie, 2004; Hsieh et al., 2004; Peterson & Jolibert, 1995; Verlegh & Steenkamp, 1999).

Contrary to the results of Empirical Paper 1 (Chapter 3 of this thesis), GRP (geographical proximity) as a country construct has considerable comparable impact on international supplier performance in presence of more directly associated company effect (CompE) construct. One possible explanation for this high influence of this COO-related construct could be that the GRP construct is composed of issues that are more objective, as they are related to the monetary cost and the cost of time (distance, transport cost, travel time of shipment). In comparison, other previously used COO constructs, such as CI (overall country image) and PCI (product-country image), are expressed at a higher level of abstraction and are more subjective in nature. Moreover, the respondents were B2B buyers of intermediate goods, in many cases, and who, unlike consumers, have to further process and later sell their purchases to other parties at a margin. B2B buyers are more likely to be cost-driven (for a specified minimum level of product quality) than consumer buyers.

Another reason for this considerable impact of geographical proximity, along with the company effect in the model, is the popular ‘tyranny of distance’ (Blainey, 1966) phenomenon attributed to Australia. In a recent working paper for the Australian Treasury Department, Battersby and Ewing (2005) discussed a negative impact on Australia’s trade because of its geographical remoteness. The report argued that Australia is the most remote country of the world from world economic activity, with the exception of New Zealand. Another estimate shows that if Australia were closer to the world economy, when compared to the United Kingdom, Australian trade would be 50% greater (Battersby & Ewing, 2005, p. 15). In addition, Craig Emerson MP (*The Australian*, November 10, 2012) commented “[f]or

Australia, the tyranny of distance from Europe will be replaced by the power of proximity to Asia”. In this connection, the impact of distance found in this study is in line with prior evidence revealed in other areas of study regarding Australian international trade.

In addition to the direct effect on supplier performance, the indirect effect of geographical proximity through the company effect is also significant on international supplier performance. As stated earlier, two important marketing mix elements—price and delivery—may have obvious dependence on a country’s geographical proximity. The results of mediation analysis also substantiate this relationship that geographical proximity significantly influences supplier performance through company effect. This finding is also consistent with the recent changing pattern of the global value chain known as ‘back-shoring’ or ‘near-shoring’, both of which are strongly driven by proximity concerns. More specifically, Gary Dutton of PricewaterhouseCoopers indicated ways to deal with Australian remoteness from importers’ perspective. He suggested establishment of regional hub in Singapore or Hong Kong to merge orders from several suppliers (importantly when importing raw materials and components from several sources) of Asian region to gain economies of scale in international logistics (Dutton, 2012, p. 33). So, significance of proximity is very much visible in international trade, more importantly for Australia because of remoteness.

The results of this study demonstrate that trade-related country infrastructure does play a significant role as a country construct, in the absence of company impact. However, along with the company construct, trade-related country infrastructure plays a significant role on company effect, but not directly on international supplier performance. Significant mediating relationship from trade-related country infrastructure to supplier performance through company effect entails that country infrastructure substantially aid that country’s companies to improve their marketing mix actions that consequently can be transformed into superior



supplier performance. Again, the significance of trade-related infrastructure is comparable to the findings of international trade literature that substantiated the impact of trade facilitation. One unexpected result of this study is the insignificance of a country's regulatory strength on international supplier performance and on company effect. This is surprising because the real-world experience differs from this finding. As the results explain, a country's regulatory strength does not make the supplier company perform better; nor does the regulatory strength directly influence supplier performance. Despite the negative image of ethical treatment to workers in Bangladesh, Target Australia sources from Bangladeshi factories. In this regard Target Australia publishes a full list of factories on their website—these factories are inspected from time to time and ethical treatment of workers is ensured. Similarly, Adidas sources most of its products from factories in China, Indonesia and India (Adidas, 2012, p. 81). None of these countries are well regarded for ethical treatment of workers, high product quality standards or safety of intellectual property rights. In these countries Adidas imposes the regulatory standards; not the sourcing country government. Similarly, Apple sources from China despite the negative image of China in safeguarding intellectual property rights. Therefore, in regard to the regulatory issue, results indicate that country image does not play any significant role on supplier companies' performance; rather the buyer and supplier company work together to enforce standards for their own sustainability.

#### **4.13 Limitations and future research**

As with any study, the present study has limitations. First, the extant research suggested the use of cognitive, affective and conative components of attitude theory, while this study captured only the cognitive component to avoid undertaking a preference study where emotion plays an important role. There is scope in future research to accommodate several attitudinal components of country image. Secondly, the study developed and validated three

new COO constructs and the data drew only from Australia because of resource limitations. Therefore, this suggests the need for future research to apply cross country validation of these constructs. Thirdly, the results of this model indicate the strong influence of geographical proximity; however, this may be because Australia was the survey country. Therefore, future study could use this model and extend the findings of this study to include multinational samples (geographically remote and geographically connected country samples) and could test the change in influence of proximity. In addition, the model can also be tested for specific industry segments. By accommodating more generalised scale items used in previous studies and, with some further refinements of this study, this model could be used in different industry classes with minor changes. Fourthly, the respondents were representative of purchasing managers working in Australia; however, the inclusion of managers in the survey was not purely random but random within selected panels. Therefore, randomly selected members may have different views to those included through panels. Fifthly, this study only considered newly developed trade-related COO constructs and not constructs traditionally used in the extant COO literature, such as country image and product-country image. Therefore, developing all-inclusive COO aspects in a model may be a worthwhile contribution to future COO literature. Notwithstanding these limitations, the results of this study provide new insights into the decision-making processes of B2B purchasing managers.

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## Empirical Paper 3

### Impact of Country-of-Origin (COO) on Business-to-Business (B2B) Purchasing: Modelling an Integrated Relationship

**Purpose** – Incorporating multidimensional country-of-origin (COO) cues in study settings is very limited in the literature. This study intends to fill this gap by using traditional COO cues along with newly developed country-related COO constructs. In addition, the study seeks to understand the relative impact of company- and country-related effects on business-to-business (B2B) buyers' perceptions of international supplier performance.

**Design/methodology/approach** – The data were collected using a web-based structured questionnaire. A conceptual model was developed with five COO constructs along with one second-order company construct. Structural equation modelling was used as the major data analysis technique along with hierarchical regression analysis.

**Findings** – International supplier performance is significantly influenced by company-specific attributes and the geographical proximity of the source country. In addition, trade infrastructure, product-country image and geographical proximity directly influence the company effect. Product-country image and geographical proximity are significant country-related predictors of specific supplier performance criteria.

**Practical implications** – The study reveals that company- and country-related constructs have a significant impact on the decision making of international purchasing managers. Managers, therefore, should work to reap the benefits for both company and country competitiveness.

**Originality/value** – The study measured an integrated model that accommodated five country constructs along with one company construct to measure specific impacts on international supplier performance, specifically in relation to B2B purchasing, which is novel in the COO literature.

**Keywords:** Geographical proximity, trade-related country infrastructure, country's regulatory strength, supplier performance, company effect, product-country image, overall country image, purchasing managers, intermediate goods

## 5.1 Introduction

Globalisation has continuously bred new concepts, actions, debates and dilemmas in the global economic landscape. Change is the everlasting constant of this world and the 'Made in' label and its associated impacts are one such changing phenomenon in the global trade environment. Over time, the increasingly fragmented nature of economic activities has necessitated that firms and nations specialise in tasks and business functions, instead of performing the whole 'end to end' supply chain process. As a consequence, goods and services increasingly need, in a true sense, to be designated as 'Made in the world' (OECD, 2013). The term, 'Made in the world (MIW)', was initiated in the academic literature by Ferdows (1997) to highlight the geographical dispersion of production locations. The effect of such 'sliced and diced' (Baldwin, 2006) production processes has increased the significance of intermediate goods which have contributed more than half of global manufacturing imports in the recent past (OECD, 2013). As is obvious, the decision makers the purchasing or importing of intermediate goods are business-to-business (B2B) buyers. The shift from producer-driven supply chain to buyer-driven supply chain (Gereffi & Lee, 2012) has also made manifest the significance of B2B buyers. Quite surprisingly, all these inter-linked terminologies, the 'Made in the world' phenomenon, the intermediate goods trade and B2B buyers are largely understated in the research field of 'Made in ...', more popularly known as country-of-origin (COO).

This incredibly popular research field has generated more than 1000 published papers in less than 50 years (Heslop et al., 2008; Papadopoulos et al., 2011, p. 88). Alongside this popularity, the recent criticism of the relevance of COO research, based on study findings and commentaries (Balabanis & Diamantopoulos, 2008; Bulik, 2007; Liefeld, 2004; Pharr, 2005; Samiee, 2010, 2011; Samiee et al., 2005; Sapsford & Shirouzu, 2006; Usunier, 2006) is worth



noting. Some of the COO research criticisms, presented below in Table 5.1.1, are used in grounding the core arguments of this study.

**Table 5.1.1 Quotes related to COO criticism**

Study	Quotes
Samiee (1994)	<p>“The CO [country of origin] literature has yet to be extended to firm-level considerations.” (p. 586)</p> <p>“Virtually no effort has been made to assess the influence of the global sourcing of parts and components.” (p. 588)</p> <p>“... because of industrial buyers’ greater knowledge regarding products and their source countries (i.e. COMs [countries of manufacture]), they are more likely to associate intrinsic product cues with their COMs.” (pp. 591-592)</p>
Samiee (2010)	<p>“Complicating the matter is the fact that many are aware that components of today’s products are manufactured and sourced from multiple countries.” (p.443)</p> <p>“Indeed the bulk of CO research ignores the global environmental imperatives, rendering the reported findings as ecologically invalid.” (p. 443)</p> <p>“The absence of relevance, in turn, negatively impacts the value and contribution of CO research in international marketing.” (p. 443)</p> <p>“Available evidence suggests that under ecologically correct conditions, most consumers do not consider the CO of products they purchase.” (p. 443)</p>
Usunier (2011)	<p>“Consumers are still relatively unconcerned. They live in a cluttered environment, with overabundant information which far exceeds their information processing capacity.” (p. 493)</p>
Usunier and Cestre (2008)	<p>“... a massive over-estimation of COO effects, due to lack of familiarity, uninformed responses, and country rather than product-related stereotypes.” (p. 272)</p>
Usunier (2006)	<p>“However, COO effect is no longer a major issue for international marketing operations: multinational production, global branding, and the decline of origin labelling in WTO [World Trade Organization] rules tend to blur the COO issue and to lessen its relevance.” (p. 61)</p>
Samiee et al. (2005)	<p>“... consumers either have limited recognition of brand origins, or find such information relatively unimportant and thus unworthy of retention in memory.” (p. 392)</p>

The quotes in Table 5.1.1 illustrate over two decades of consistent criticism of the limitations of the COO literature. An early call by Samiee (1994) regarding the importance of global sourcing, company-level considerations and industrial buyers has not been reflected in later COO research: as similar criticisms of COO research were further reported by Samiee (2010), over fifteen years later. The first attempt to address globally scattered sourcing practices that reflected this complex reality appeared in Chao (1993). He decomposed COO into country of assembly (COA) and country of design (COD): several other researchers followed this decomposition (Acharya & Elliott, 2001; Ahmed & d'Astous, 2004; Ahmed, d'Astous, & Eljabri, 2002; d'Astous & Ahmed, 1999) and reported the different importance of both cues to

varying degrees. Another decomposition of COO which appears in the extant literature is the distinction between country of manufacture (COM) and country of brand (COB), which proposed to simplify the complexity of multiple COO associations (Phau & Prendergast, 2000). Recent studies have indicated the overwhelming significance of COB compared with COM (Hui & Zhou, 2003; Josiassen & Harzing, 2008; Liefeld, 2004; Pharr, 2005; Phau & Chao, 2008; Samiee et al., 2005; Srinivasan et al., 2004; Usunier & Cestre, 2008). Despite the attempts of COO researchers to address global sourcing and trade practices in their investigations, several research findings (Anderson Analytics, 2007; Balabanis & Diamantopoulos, 2008; Liefeld, 2004; Samiee et al., 2005) regarding consumers' limited ability, and low intention to retain, origin information have again called into question the relevance of COO. Against this background, this study argues that B2B buyers are a more appropriate focal group for COO investigations as they have product and country familiarity about past purchases and involvement in global-sourcing decisions, and they face country-related trading issues. In addition, they are considered as 'expert consumers' (Sternquist, 1994, p. 171) and tend to collect more 'accurate information on intrinsic variables' (Bradley, 2001, p. 513). In addition to all these characteristics, unlike consumers, they are responsible for ensuring higher performance from their suppliers and for maintaining company profitability. Moreover, it should be recognised that the purchasing decisions B2B buyers, who are also resellers, will clearly constrain the COO choices of consumers. Put plainly, if B2B buyers only consider purchasing from international supplier countries and companies, then the COO preferences of consumer purchasers will potentially be ignored in the face of the purchase decisions of the B2B resellers. In this sense, the frequently cited preference of many consumers for locally-made products may be irrelevant in those product categories dominated by international suppliers (such as garments, footwear, electronics and motor vehicles). However, unfortunately in reality, COO research has been overly focused on

consumers (Andersen & Chao, 2003, p. 341; Dzever & Quester, 1999, p. 166; Magnusson & Westjohn, 2011, p. 303; Maltz et al., 2011, p. 797; Quester et al., 2000, p. 479), which may have contribute to a distortion and amplification of the preference for local products which is a characteristic finding of many COO studies.

Beyond having placed inadequate focus on B2B buyers, COO research has also arguably given very limited emphasis to firm-level considerations (Samiee, 1994) with some exceptions (exception includes Baldauf et al., 2009; Bradley, 2001; Hsieh et al., 2004; Wang et al., 2014). Instead, there has been an overwhelming use of the 'brand' as a proxy and short-cut of the 'company' in COO research (Ahmed & d'Astous, 1996; Al-Sulaiti & Baker, 1998; Andersen & Chao, 2003; Cervino et al., 2005; Hsieh & Lindridge, 2005; Hsieh et al., 2004; Kotler & Gertner, 2002; Scott & Keith, 2005; Steenkamp et al., 2003; Thakor & Lavack, 2003). However, this study argues that, as B2B buyers are better informed, and arguably more rational (Samiee, 1994), and that they are familiar and have had dealings with suppliers as corporate entities. Consequently, they have less need to use the brand as a short-cut, as they have more detailed information and experience of what a corporate entity supplier entails. This close relationship between B2B buyers and their supplier 'company' (used hereafter to indicate the firm, company, corporate entity or corporate brand) is evident in the COO literature. Of the above-noted studies, three (exception includes Baldauf et al., 2009; Bradley, 2001; Hsieh et al., 2004; Wang et al., 2014) have considered company-related constructs or measures as major antecedents and all three used B2B buyers as respondents. The use of company-related measures is also aligned with the unquestionable supremacy of multi-cue studies over single cue studies in COO research. As commented by Bilkey and Nes (1982), multi-cue designs have long since replaced single-cue designs. Moreover, in using COO with other product evaluation cues (such as, price, store image, actual physical product, brand name or warranty), findings typically report the diminished impact of COO effects in

such multiple cue situations (Agrawal & Kamakura, 1999; Bilkey & Nes, 1982; Chattalas et al., 2008; Dinnie, 2004; Johansson et al., 1985; Wall et al., 1991) and are less likely to generate response biases associated with single-cue studies (Andersen & Chao, 2003, p. 340). In addition to multiple cue settings, COO researchers have also emphasised the use of multiple COO cues (Amonini, Keogh, & Sweeney, 1998; Heslop & Papadopoulos, 1993; Pappu et al., 2007) in one study to capture the impact of a range of relevant COO aspects. In conducting multiple-cue research designs, the criticism of overestimation of COO (Peterson & Jolibert, 1995; Samiee et al., 2005) can also be addressed.

The intertwined relationship between COO and international trade is obvious, and it would be seemingly self-evident to argue that the growth in international trade has contributed to the growth of COO research. Despite this assumption, COO research has largely ignored trade-related COO measures which have been well addressed in the global purchasing, global supply chain and logistics, global value chain and international trade literature. As the trade-related aspects (e.g. import payments, port facilities, transportation costs and time, tariff rates, currency stability, etc.) mostly concern organisational purchasing, the choice of B2B buyers as respondents in the current study is well justified. Moreover, almost all the multilateral development agencies of the world, in recent times, have consistently reported (Elms & Low, 2013; Mattoo, Wang, & Wei, 2013; OECD-WTO-UNCTAD, 2013; OECD, 2013; WTO & IDE-JETRO, 2011) the obvious importance and growth of the global value chain (GVC). All these reports have emphasised the globally scattered outsourcing practices that form the GVC, especially as regards trade in intermediate goods.

In addition, in modern complex manufacturing assembling parts and components are commonly sourced from a large number of countries (e.g. iPhone 4 and Boeing 787 sourcing), and intermediate goods (non-fuel raw materials, parts and components for industrial use) have contributed more than 50% of global trade in the recent past (OECD,

2013). In aligning with these recent trade trends, this study has focussed on intermediate goods as the subject product category. In this context, it is important to note that the consideration of intermediate goods as a B2B purchase concern has not been explicitly investigated in the previous COO literature. Exceptions, however, are Kraft and Chung (1993) who considered raw materials, and three studies (Chetty et al., 1999; Dzever & Quester, 1999; Quester et al., 2000) which considered parts and components. As well as addressing past limitations and recommendations in the extant COO research regarding antecedents, this research study also adopts the realistic and novel (i.e. not used in earlier COO research) outcome construct of ‘international supplier performance’ which reflects a B2B buyer’s ultimate assessment after experiencing business dealings with a selected overseas supplier. This study design, therefore, considers B2B respondents, multi-cue settings (COO with directly-related company cues), multiple COO cues (including trade-related COO aspects), and measures the impact of all these antecedents on the realistic summary assessment of supplier performance. In this sense, this study endeavours to make the research design as “ecologically valid” (Usunier, 2011, p. 488) as possible, within typical research constraints.

The intended contribution of this study is four-fold. Firstly, this study extends the previous country–company research model (Bradley, 2001) with the use of multiple COO cues along with hierarchical modelling and the distinct outcome construct of ‘international supplier performance’. In addition, the study captures the reality of the GVC and, therefore, has considered the purchase of intermediate goods as a product category. Secondly, taking into consideration the significance of intermediate goods in the GVC, this research includes newly developed trade-related country constructs and measures their impacts on international supplier performance. Thirdly, the dependence relationships among the exogenous constructs have also been hypothesised and tested. Fourthly, this study has sought to gain an

understanding of the relative contribution of directly-related country and company constructs on the specific supplier performance criterion.

## **5.2 Literature review**

The close association between the product and country of manufacture, or origin, is increasingly debatable as, in recent times, products are increasingly globally standardised and sourced. In addition, globally standardised products and sourcing are strongly propagated by multinational enterprises, which, in turn, has allowed new businesses and SMEs (small and medium-sized enterprises) to capitalise and to reap the benefits of producing and supplying already popularised products without the risk and expense of investing in innovation. As a consequence, the ‘company’ has become the powerful differentiating factor over the ‘country’ by associating products with the company through exclusive legal rights to the product and corporate brand names. By extensively promoting the product brand and corporate brand in packaging and in marketing communications, the effect of the company has arguably assumed dominance over the country. In this way, companies in less-developed countries (LDC’s) have been able to associate themselves with dominant MNE’s, despite the sometimes questionable quality image associated with the LDC. However, COO remains significant as a designating label as global nationality is still not a realistic ‘mainstream’ concept (although the dual nationality association persists) and people continue to be identified in their passports by their nationality (and not by their company). Despite companies’ being individually ranked based on the Transnationality Index by the United Nations Conference on Trade and Development (UNCTAD), company origin and product origin will continue to influence purchasers’ and consumers’ decisions. In fact, recent COO studies have detected further evidence of continuing COO bias in the consumer domain (Alden, Kelley, Riefler, Lee, & Soutar, 2013; Balabanis & Diamantopoulos, 2011;

Diamantopoulos et al., 2011; Herz & Diamantopoulos, 2013; Josiassen, 2011; Josiassen et al., 2008; Magnusson et al., 2011b).

Consumer-centric COO studies have been termed an ‘intersection construct’ and a ‘crossroad concept’ (Usunier, 2011, p. 486), and have also been criticised as being too narrowly defined and too highly specialised (Usunier, 2006, p. 71). When thinking beyond COO research in international marketing, however, COO can be seen as a very broad concept within the broader context of international trade. In this wider sense, most multilateral development agencies (such as the UN [United Nations], WTO, IMF [International Monetary Fund], OECD, WB [World Bank], ADB [Asian Development Bank], etc.) are analysing data and findings primarily based on ‘country’ as the focus of analysis and policy development. Thus diplomatic actions and trade negotiations are country-based; immigration regulations include a COO component; tourism is highly country-specific; multinational human resources practices have country-specific associations; and global investment has country-related attractiveness. Therefore, it is evident that COO is an important- and wide-ranging concept, with many intersecting branches. In seeking to reflect some of these intersections, this study firstly considers the inter-relationships between the ‘company’ and the ‘country’ in product evaluations of purchasers. Secondly, the concept of ‘country’ can indicate both an overall macro image and a relatively narrower product-specific country image. Thirdly, B2B buyers are required to be involved with trade-related aspects such as, transport cost and time, port efficiency, proximity or distance, etc. that are not controllable by the company and in which the association with the country is relevant. The next section discusses the literature related to these three issues.

### *5.2.1 Importance of company and country*

The consideration of both country and company together as a relevant research design for B2B respondents was initiated by Bradley (2001). Using ‘supplier company preference’ as the dependent variable, he made a point of clear segregation between country and company. In his words, “[c]ompany preferences may, therefore, derive from the joint influence of marketing mix effects, which are controlled by the firm, and country-of-origin effects, which are outside the firm’s control” (p. 512). In this sense, the marketing mix (the classical framework publicised by McCarthy, 1964; product, price, place, promotion) has been termed ‘the heart of their (marketers’) structure’ (Cowell, 1984) and has been identified as constituting the company-controllable parameters (Brassington & Pettitt, 2003; Kotler, 2003). Although the marketing mix elements are controllable by the company, these four elements have mostly been used in B2B-focused COO studies as antecedents of supplier country product evaluation by B2B buyers. The following discussion considers the impacts of the marketing mix elements as reported in the extant COO literature, while recognising that focussing on company-controlled marketing mix elements is an abstraction and arguably diverts attention away from recognition of the influence of country-level considerations. As the previous discussion has argued, consideration of B2B buyers’ evaluations should separately recognise evaluations for the supplier company and for the supplier country.

One of the first COO studies in the B2B field by Nagashima (1970) rated products from five countries (United States of America [USA], Japan, Germany, England and France) according to such variables as price and value, service and engineering, advertising and reputation, and design and style, reflecting a close conceptual correspondence with the marketing mix elements. White and Cundiff (1978) used price and country of manufacture as dependent variables and delivery and service as control variables. In this sense, price and service



represent marketing mix elements. Chasin and Jaffe (1979) evaluated the impact on B2B buyers' perceptions of product attributes, along with value for money, on-time delivery, reputation and maintenance/service. These company-controllable factors were used as indicators of country performance factors. In order of importance, these were quality, dependability, advanced technology, value for money, on-time delivery, workmanship, maintenance/service, credit/payment terms, style and reputation. Similar types of evaluation criteria were also used by White (1979) including the product quality dimension, marketing characteristics and the price dimension.

Ghymn (1983) used discriminant analysis to investigate the purchasing behaviour of United States (US) import managers and to reveal the major determinants of their import decisions. He used two broad categories of variables, namely, product-oriented and service-oriented. The statistically significant marketing mix elements were price ( $\beta = .691$ ), timely delivery ( $\beta = .637$ ), transportation cost ( $\beta = .422$ ), quality ( $\beta = .384$ ) and brand recognition ( $\beta = .351$ ). The study respondents ranked timely delivery, price, dependability of long-term supply, transportation, ordering and shipping procedures as the major determinants of their import decisions. In this study, it is important to note that delivery- and service-related aspects of the marketing mix (mean score 3.57) were more important than product-oriented issues (mean score 2.91). Keown (1985) considered all the marketing mix elements along with regulations and interactions (these two issues are more country-specific than company-specific) in the assessment of US exporters by Asian importers.

A study by Khanna (1986) used a marketing mix framework in assessing COO perceptions about Asian developing countries, and identified important company and country significance. In particular, he reported that 76% of new foreign buyers and 5% of existing foreign buyers considered the Indian export image detrimental to success. In all, 51% of foreign buyers felt that the COO image was helpful for export success. In the same way, most

of the foreign buyers (87%) felt that new B2B customers considered the COO to be very important. In contrast, for existing suppliers, 92% of respondents felt that the COO was not so important. Yavas, Cavusgil and Tuncalp (1987) reported Saudi importers' assessment of foreign sources and included the following variables: price, quality, style/appearance, repair/maintenance service, order placement, promotion, warranty/guarantee, timely delivery, terms of payment and credit, and transportation cost. All these variables can clearly be regarded as company-specific marketing mix elements. Saghafi et al. (1991) examined the problems of Latin American countries with a specific focus on marketing mix deficiencies in export markets. The study considered basic product quality, product quality benefits, promotion and price as marketing mix attributes. Using regression analysis, Kraft and Chung (1993) examined Korean purchasing agents' perceptions of US and Japanese products. Among the product offer factors, the major variables were: good product information, quality products, improved products, well-designed products, good technical training with products and competitive prices. In addition to these product-related factors, the exporter attributes identified were: reputation, negotiation style, customer orientation, cultural awareness and personal communication. The results of the study showed the clear superiority of Japanese products over US products.

As previously discussed, COO has been decomposed into country of design (COD) and country of assembly (COA). Ahmed et al. (1994) used conjoint analysis, along with brand name, price, warranty or delivery which reflected the representation of marketing mix elements. As would be widely expected, results showed that developed countries were rated more favourably than newly industrialising countries for both COD and COA. Among the countries evaluated, newly industrialising countries were rated better for COA of industrial products than for COD. The brand name's influence on the perceived quality and purchase value was statistically significant for two product types; however, its explanatory power was

much smaller than that of the COO cues. Price and warranty/delivery had almost no impact on perceived quality; whereas both variables had a substantial and statistically significant impact on perceived purchase value. As these findings indicate, in multi-cue settings, negative perceptions about newly industrialising countries are considerably reduced and the differences between developed countries are practically non-existent.

In a further B2B study, Gill and Ramaseshan (2007) investigated the influence of supplier performance on United Kingdom (UK) importers' repurchase intentions. This study also used marketing mix elements as supplier performance indicators. The ranked importance of choice criteria were: price (5.84), relationship commitment (5.75), payment facilities (4.70), product (5.63) and brand recognition (4.22). Relationship commitment, in turn, included dependability of long-term supply; suppliers' ordering procedures; and suppliers' delivery reliability, fairness and trustworthiness, ability to keep promises, positive attitudes towards complaints and regular communication, all of which are clearly associated with marketing mix elements. Relationship commitment ( $\beta = .23$ ), payment facilities ( $\beta = .18$ ) and product quality ( $\beta = .24$ ) were positively associated with repurchase intention. More recently, Insch et al. (2011) studied the importance of the COO and the relevance of 'buy national' campaigns by interviewing purchasing managers of retail chains. The factors considered by retail buyers in making purchase decisions for their product range were: financial return; advertising and promotion; in-store marketing spending; product line fit; price; supplier characteristics; visual appeal; uniqueness; health and safety; etc. These factors also indicated the high significance of marketing mix elements in assessments by the retail buyers. According to most respondents in this study, either the COO can be considered as a relatively unimportant product cue or they place greater significance on other attributes.

Surprisingly, considering B2B studies as a group, very few used variables that were outside of company control and the country-specific variables are usually constant within a country.

Keown (1985) used regulation and interaction issues along with four marketing mix attributes. Asian importers considered US government regulations and documentation and resulting time demands to be detrimental to trade. Although interaction issues can be different between companies, they can often show consistent patterns in one country. Ghymn et al. (1999) used government-related variables that represented country issues including import duties, import regulations and compliance with safety standards. In reporting the impediments to imports, B2B buyers highlighted several country-related issues, such as: exchange rate changes, transportation/freight costs, tariffs and duties, COO and quality perception, language barrier/communication and customs clearance/paperwork.

A study by Min (1994) revealed that of seven criteria, three (perceived risks, cultural and communication barriers, and trade restrictions) mostly reflected a country influence in selecting foreign suppliers. Perceived risk criteria included: political stability, foreign exchange rates, legal claims, labour disputes and local price control. Cultural similarity, ethical standards and electronic data interchange (EDI) comprised the evaluative criteria for cultural and communication barriers. Tariffs and customs duty were considered as trade restrictions criteria for supplier selection, together with counter trade as a predictor variable. Min (1994) also identified other criteria, namely: financial terms, quality assurance, service performance and buyer-supplier relationships, all of which are clearly company-related activities and variables.

Two studies by Oke et al. (2009) and Maltz et al. (2011), which were quite different from previous research, reported country-related issues while exploring reasons for sourcing from developing countries. Oke reported several important criteria that were applicable for sourcing from developing countries, such as: low cost, physical proximity, cultural proximity, political factors, quality and reliability. Maltz et al. (2011) also examined the evaluation processes of managers from developed countries regarding sourcing decisions from low-cost

regions. The attributes identified by their study for sourcing from developing regions were: work ethic; security of intellectual property; attraction of local market; reliably meeting customer requirements; transportation reliability; transportation cost; government support for business; political stability; flexibility; predictable border clearance times; government corruption; overall attractiveness for sourcing; and labour cost.

Examining all these B2B-centric COO studies, an important observation is that most of these studies actually evaluated company-controllable marketing mix elements of the overseas suppliers which were eventually generalised as perceptions of countries. Such a generalisation, therefore, assumes all the companies from one country similarly and can be a source of the 'overestimation' criticism of COO research Usunier and Cestre (2008, p. 272). For example, estimating the perception of the Japanese auto industry can lead one to think of Toyota and Suzuki along the same lines, clearly ignoring reality. In this regard, Knight et al. (2007, p. 124) reported a B2B buyer's comments in which it was stated that "the company is important; traceability is a hot item" and "we source from a certain Spanish company which we know by heart". Another concern for the company or corporate brand is that consideration of the 'company' usually entails greater detail than that of the 'brand'. As the majority of COO studies are consumer-centric, there is an overwhelming preoccupation with the 'brand' (Ahmed & d'Astous, 1996; Al-Sulaiti & Baker, 1998; Andersen & Chao, 2003; Cervino et al., 2005; Hsieh & Lindridge, 2005; Hsieh et al., 2004; Kotler & Gertner, 2002; Scott & Keith, 2005; Steenkamp et al., 2003; Thakor & Lavack, 2003) and usually it is actually used as a proxy or short-cut of the 'company' in COO research. However, with regard to B2B buyers, the company is most often the major concern because they have direct and close relationships with the supplier company and their perceptions are, therefore, less likely to rely on short-cuts. Taking this background into consideration, the decomposition of variables into company and country-related issues may enable both effects to be separately captured. More generally,

it is observed that the variables can be logically grouped under company-controllable (marketing mix) factors and factors uncontrollable by a company that usually have a common characteristics or structure within a country. Table 5.2.1.1 classifies the variables reported in the extant B2B-focused COO literature.

**Table 5.2.1.1 Classifying variables of B2B-based COO studies**

Study	Variable classification
(Ahmed et al., 1994; Cattin et al., 1982; Chang & Kim, 1995; Chasin & Jaffe, 1987; Dzever & Quester, 1999; Ghymn & Jacobs, 1993; Ghymn et al., 1999; Gill & Ramaseshan, 2007; Güdüm & Kavas, 1996; Kaynak & Eronen, 2004; Khanna, 1986; Kraft & Chung, 1993; Min, 1994; Niffenegger et al., 1980; Oke et al., 2009; Saghafi & Puig, 1997; Thorelli & Glowacka, 1995; Turnbull, 1985; White, 1979; White & Cundiff, 1978)	<p><b>Product issues:</b> Product quality, brand reputation, reliability, technical superiority and competence, performance, design and style, uniformity, product line fullness, guarantees, innovativeness, product safety, information accuracy, non-substitutability, workmanship, safety packaging, ease of operation/maintenance, wide assortment of features, quality control and inspection.</p> <p><b>Price and payment issues:</b> Price, value for money, price competitiveness, transport cost, material cost, discount offerings, payment terms, credit extensions and payment method.</p> <p><b>Delivery and service issues:</b> Reliable delivery performance, after-sales service, field support, supplier adaptability, long-term supply dependability, training and technical assistance.</p> <p><b>Marketing communications and relationship issues:</b> Promotion, commercial competence, prompt business communication, supplier contacts, negotiation style, cultural awareness, personal communication, information exchange, relationship commitment, business association history, customer orientation, negotiability and electronic data interchange (EDI) capability.</p>
(Ghymn et al., 1999; Keown, 1985; Maltz et al., 2011; Min, 1994; Oke et al., 2009)	<p><b>Country-level issues:</b> Import/export duties and regulations, compliance with safety standards, labour cost, physical proximity, cultural proximity, work ethic and standards, security of intellectual property, attraction of local market, transportation system reliability, logistics cost, government support for business, political stability, predictable border clearance times, government corruption, cultural appeal, foreign exchange rate, legal environment, labour disputes, price control mechanism and counter trade opportunity.</p>

The studies Bradley (2001) and Baldauf et al. (2009), with their logic and statistical rigour, are very close to each other in their conceptual and methodological underpinnings. Both studies used COO perceptions in a multi-cue setting along with company marketing mix factors. Bradley (2001) study was the first to introduce the company effect along with the country effect in explaining industrial buyers' COO preferences. Similarly, Baldauf et al. (2009) used marketing mix elements along with COO (product-country image [PCI]) cues in explaining retailer-based brand equity (RBBE) and brand profitability performance (BPP). Bradley (2001) measured the company effect with 27 items subdivided into product, price,

advertising and communications, distribution and service, and innovation. The country effect was measured using 10 items that mostly represented product/industry-related country image (somewhat influenced by company also) than overall country image (beyond company's control). The variables comprised: excellent international reputation; innovative manufacturing; produced from reliable materials and components; acceptable international technical standards; good value for money; competitively priced; free from adverse exchange rate effects; knowledgeable and helpful salespeople; received excellent after-sales service; and manufactured in professionally managed companies. The results of Bradley's (2001) study showed that the direct effects of product and innovation on company preference were significant ( $p < .01$ ), while advertising and distribution were significant at 0.10 level. Advertising and country, and product and advertising were the only two interactive relationships worth mentioning. The interaction between advertising and country was statistically significant, and coefficients on the direct effect changed very little after the effect of the interaction. The country effect parameter was proven to be very weak as the coefficients and significance of the direct effects changed very little and the interaction effects changed hardly at all. The weakness of the country effect also emphasised the dominance of the company effect.

Baldauf et al. (2009) considered marketing mix elements as antecedents of retailer-perceived brand equity (RPBE) with this defined as "a set of brand assets and liabilities linked to a store brand, its name and symbol, that add to or subtract from the perceived value of the store brand by its customers" (Arnett, Laverie & Meiers, 2003, p. 168). The marketing mix antecedents are supplier image, price level, price deals and promotion. In addition, product-country image (PCI) was considered as a country-related antecedent of RPBE with this measured by inventiveness, exclusivity, workmanship and external appearance. Quality, loyalty and awareness were considered to represent RPBE. Brand profitability performance

(BPP) was considered as the final outcome variable and was assessed by the managers' perceptions of the relative profitability, realised margin and overall financial attractiveness of the focal brand. According to Baldauf et al. (2009) results, supplier image ( $\beta = .33$ ) and promotion activities ( $\beta = .27$ ) are positively associated with RPBE. Price levels ( $\beta = -.19$ ) and price deals ( $\beta = -.22$ ) are negatively related to RPBE. There is a strong relationship between PCI ( $\beta = .32$ ) and RPBE at  $p < .001$  level. Supplier image also positively influences BPP in the presence ( $\beta = .21$ ) and in the absence ( $\beta = .37$ ) of RBPE in the model, thus indicating partial mediation through RPBE. The negative influence of price level on BPP is statistically significant in the absence ( $\beta = -.23$ ) of RPBE but statistically insignificant in the presence of RBPE in the model, therefore supporting full mediation. The statistically significant relationships indicating full mediation are price deals  $\rightarrow$  RPBE  $\rightarrow$  BPP, promotion  $\rightarrow$  RPBE  $\rightarrow$  BPP and PCI  $\rightarrow$  RPBE  $\rightarrow$  BPP. Baldauf et al.'s (2009) study delivers strong evidence that marketing mix and PCI antecedents are collectively mediated by RPBE linking BPP. Therefore, on the basis of these results, it can be argued that company- and country-related constructs can be considered as independent antecedents to supplier company-related performance outcomes.

### *5.2.2 Operationalising country image*

To understand the consumer's perception regarding country image requires dealing with a complex array of stimuli in varying environments (Cialdini, 2001, p. 7) where the consumer will need short-cuts in their decision-making (Magnusson et al., 2011b). Even when analysing a single person, people often do not employ enough time, energy or capacity to make a detailed objective evaluation; therefore, as a short-cut they can use stereotypes, rules of thumb and a few key features to assess the person (Magnusson et al., 2011a). Therefore, the individual may use peripheral information processes (Petty & Cacioppo, 1986) to



minimise elaboration and deploy cognitive short-cuts (Chaiken, 1987). Over time, these judgements automatically take place in the cognitive repository as ‘thoughtless’ responses (Greenwald & Banaji, 1995). The country image short-cut is a very complex level of abstraction as, according to (Martin & Eroglu, 1993, p. 193), country image can be described “as the total of all descriptive, inferential and informational beliefs one has about a particular country”. Thus, capturing all the descriptive beliefs in a single image is a major difficulty. The most recent literature review on country image reported 30 studies that measured country image and another 40 that measured product image. Although a large number of constructs were used to measure country image, there are two major definitional domains captured in the extant literature; namely, country and product (Roth & Diamantopoulos, 2009, p. 727). Heslop and Papadopoulos (1993, p. 61) also reported two dimensions for country image, product and country, in a large consumer survey involving eight countries from North America and Europe. Moreover, (Pappu et al., 2007, p. 727) associated the COO image with the economic stage of the country or the products produced in the country which they termed ‘macro’ and ‘micro’ country image, respectively. Unlike the studies by Bradley (2001) and Baldauf et al. (2009), their study included both dimensions of country that serve two different purposes. One is to separately capture the macro and micro impacts while the other is to address the one important limitation of COO research which is that the majority of studies consider only one image of country (Pappu et al., 2007, p. 728). Their study conceptualises the overall or macro country image which, as proposed by Martin and Eroglu (1993), comprises three dimensions, namely, economic, political and technological. The micro country image or product-country image (PCI) was conceptualised as the product category-specific country image which is similar to Papadopoulos and Heslop (2003, p. 404) definition: “[p]roduct-country images (PCIs), or the place-related images with which buyers

and/or sellers may associate a product.” This conceptualisation has been adopted by several other studies (e.g. Darling & Wood, 1990; Han & Terpstra, 1988; Roth & Romeo, 1992).

The importance of the overall country image (CI) and product-country image (PCI) on buyers’ evaluation is well evidenced in the extant COO literature. Consumers generally associate higher quality products with the economic and social status of a country (Hong & Wyer, 1989; Klein et al., 1998) which typically leads consumers, even in less-developed countries, to prefer goods from developed nations (Agbonifoh & Elimimian, 1999; Batra et al., 2000; Chao, 1989; Knight & Calantone, 2000; Knight et al., 2008; Lee et al., 2012, p. 45; Phau & Chao, 2008). In addition, extensive evidence reveals that developed countries’ products are typically ranked higher than those from developing countries. Table 5.2.2.1 summarises the findings of developed country product/sourcing preference as reported in the B2B-centric COO studies.

**Table 5.2.2.1 Reported study findings of developed country product/sourcing preference**

<b>Study</b>	<b>Reported findings</b>
Chasin and Jaffe (1979)	Products from Eastern European countries are quite inferior compared to US products in the evaluation of US industrial buyers.
Crawford and Lamb (1981)	The study results showed the country stereotype behaviour of US purchasing managers who prefer buying from developed countries.
Ghymn (1983)	Overall discriminant model showed that import decision variables differ significantly from Western European countries' sourcing to least developed countries' (LDCs) sourcing.
Khanna (1986)	In the choice of country ranking, the preference for Japan is very high; then Taiwan and South Korea are very close to each other; the last choice is India.
Chasin and Jaffe (1987)	USA rated highest (80.7/100), then Japan (79.6/100), then Austria (54.9/100), USSR (45.4/100), Poland (40.9/100) and Hungary (41.7/100).
Yavas et al. (1987)	Statistically significant dissimilarities were detected between three pairs of country profiles named as Japan vs. Taiwan, USA vs. Taiwan and Japan vs. England.
Kaynak, (1989)	Younger (aged 35 or less) respondents prefer European and US products more; older respondents prefer Romanian and Soviet products more.
Saghafi, Varvoglis & Vega (1991)	Latin American products are well rated only on price dimension and are very poorly rated for promotion and product dimensions. US purchasing managers have preconceived negative notion about Latin American exporters.
Güdüm & Kavas (1996)	Overall mean ranking for Germany is 3.84, for Japan 3.84, for USA 3.99 and for Turkey 2.94.
Saghafi & Puig (1997)	The country rating appears as Japan 4.16, Germany 3.97, USA 3.68, Brazil 2.62, Argentina 2.51 and Mexico 2.58.
Ahmed et al. (1994)	Developed countries are more favourably evaluated than newly industrialising countries for both country of design (COD) and country of assembly (COA). In multi-cue settings, negative perceptions about newly industrialising countries are reduced considerably and differences with developed countries are practically non-existent.
Chetty, Dzever & Quester (1999)	Regarding COD, developed countries are ranked at an average score of around 4, newly industrialised countries are around 3, and newly industrialising countries are around 2.5. Considering COA, similar ratings in average scores are identified among the group of countries.
Dzever & Quester (1999)	Homogeneity within groups (industrialised, newly industrialised and industrialising) are not supported by the study findings. Nonetheless, between groups, heterogeneity is evident due to the statistically significant difference for all three pairs taking into consideration both the dimensions (COD and COA) and product categories (component parts and equipment).
Insch (2003)	In measuring country-specific image ratings by the US sample, the sequence, in descending order, of countries for manufacturing quality is: Japan, Germany, USA, Malaysia, China, Mexico and Brazil. According to the Mexican sample for manufacturing quality, the sequence is: Japan, Germany, USA, Mexico, Brazil, Malaysia and China.

The study findings consistently reported that B2B buyers attributed developed country products with higher quality ratings or as coming from a highly preferred source. Even in the decomposed COO cue settings (COD and COA), the supremacy of developed countries is evident. In addition, in a B2B managers' interview-based study (Knight et al., 2008, p. 151), it was stated that, once the distinction between developed and less developed is made, then specific country difference is very small. In the words of one respondent, "[f]or products

from developed countries, consumers tend to believe they are good ... They don't really care if they are from the US, Canada, or Germany" (p. 151).

In the face of this general conclusion however, the global sourcing practices, the GVC environment and the prominence of the intermediate goods trade discussed earlier could suggest a different conclusion when considering actual sourcing, rather than reported perceived preference. In this context, the available evidence shows that the importance of developed countries in sourcing intermediate goods is still substantial. According to the OECD (2011), most intermediate goods even now are traded within large regional economic blocs like the European Union (mainly developed countries) rather than across them. At the same time role of developing countries in intermediate goods trade increased significantly. Thus, the trade between Asia (mainly developing countries) and the European Union and North America represented the two highest inter-regional import flows of intermediate goods in 2008 (Gereffi & Lee, 2012). Therefore, the developed world's preference for developed country sourcing is still strong in the case of intermediate goods. As the current study focuses on supplier performance as the outcome construct, and thus encompassing greater detail than mere preference and evaluating post-purchase B2B buyer behaviour, the impact of country's development level on suppliers' performance can be hypothesised. In this vein, the development levels of countries are measured by overall country image (CI) in this study.

The previous discussion illustrated that both product and country affect B2B buyers' perceptions and that the constructs are interrelated. Product-country image (PCI) is another highly used COO dimension that was initially defined by Nagashima (1970) and later, with a similar meaning, used by others (Darling & Wood, 1990; Han & Terpstra, 1988; Roth & Romeo, 1992). Nagashima (1977) also examined the dynamic nature of PCI, a type of study rarely seen in the COO literature, and he reported significant differences regarding PCI which were greatest for automobile, cosmetics, food and pharmaceutical products within the eight-

year (1967–1975) comparison period. As it is a country image construct, perceptions related to PCI are linked to product evaluations (Hong & Wyer, 1989; Leclerc et al., 1994; Thakor & Lavack, 2003). In addition, PCI has been reported as a significant antecedent of brand image (Tse & Gorn, 1993); brand identification, attitudes and purchase intentions (Aaker, 1991; Knight & Calantone, 2000; Parameswaran & Pisharodi, 2002); consumer-based brand equity (Pappu et al., 2007; Yasin et al., 2007); and retailer-perceived brand equity (RPBE) Baldauf et al. (2009). In a personal interview study of B2B buyers, Knight et al. (2007) reported that product-specific country image is a well-accepted criterion for ‘sourcing’ as well as for ‘consumer purchase decisions’.

Another relevant issue when evaluating the significance of the overall country image (CI) and the product-country image (PCI) is in the steps that form the country image influence structure. In this regard, the extant COO literature has three competing models, named as the ‘halo model’, the ‘summary construct model’ Han (1989) and the ‘flexible model’ (Knight & Calantone, 2000). The ‘halo model’ proposes that the sequence operates as follows: CI influences PCI and PCI influences the attitude/product evaluation/behavioural intention (that is,  $CI \rightarrow PCI \rightarrow \text{attitude/product evaluation/behavioural intention}$ ; ‘attitude’ hereafter). The ‘halo model’ is proposed on the basis that when consumers are unfamiliar with a country’s product, they then perceive PCI based on their knowledge of CI that, in the end, affects their attitude. The ‘summary construct model’ applies in the case of higher product familiarity. Therefore, the relationship sequence is as follows: the PCI abstraction transforms into CI and CI directly influences attitude ( $PCI \rightarrow CI \rightarrow \text{attitude}$ ). The ‘flexible model’ (Knight & Calantone, 2000), in contrast, proposes two directional influences originating from CI. That means, CI directly influences attitude and, at the same time, CI leads consumers to perceive PCI and later PCI leads to attitude ( $CI \rightarrow \text{attitude}$ ;  $CI \rightarrow PCI \rightarrow \text{attitude}$ ). In this context, the current study is about B2B buyers and the evaluative outcome construct is supplier

performance which indicates that, according to the flexible model, both CI and PCI can separately influence the perception of supplier performance.

According to the results of Empirical Paper 1 in this thesis, the data best fit the ‘halo model’. In accordance with the study design, higher PCI results from higher development level of the country, and higher PCI leads to higher supplier performance. The ‘halo model’ basically perceives that the model is suitable in situations of low product familiarity: as B2B buyers are more familiar with the product category that they purchase, this requires additional clarification. However, the familiarity level and importance of COO is still debatable (Johansson, 1989; Magnusson & Westjohn, 2011, p. 303), and one recent study (Josiassen et al., 2008, p. 430) shows that, in the case of high product familiarity, the importance of COO in product evaluation is comparatively less ( $\beta = .23$ ) than with low familiarity ( $\beta = .67$ ). Hence, the ‘halo model’ may also be applicable for highly familiar B2B buyers, as evidenced by the Empirical Paper 1 results. Therefore, this study proposes the country image influence structure as follows:

CI → PCI → supplier performance.

### *5.2.3 Trade-related country dimensions*

The significance of logistics in supply chain management is closely associated with international trade owing to the increasing requirement of physical movements to connect geographically dispersed locations. Despite reductions in transport, communication and information costs, the spatial significance of each production stage needs to be placed in the most cost-effective location associated with internationally fragmented production systems and complex supply chains (Jones & Kierzkowski, 2005). Effectively managing distances between the parts of a highly fragmented supply chain system is considered to be a relatively new capability (Rodrigue, 2012, p. 15). As a consequence, physical capabilities including

transportation modes, terminals and infrastructural establishment assume primary significance in managing the geography of global supply chains (Hesse & Rodrigue, 2004).

In connection with this point, COO, historically seen as an extrinsic cue impacting on product or service quality or purchase intention, becomes a relevant concept. Country-related capabilities are often not controlled by the company: rather, companies within the country are bound to accept and act within those capabilities. For example, a country's port efficiency means a lot for the importing country's firm but a high-quality exporter may not compensate for this inefficiency through its own merits alone. In another instance, the distance between the importing country and the exporting country is an immovable obvious constant. Therefore, the cost of covering a distance in terms of time and money is uncontrollable by the company and can only be smoothed or eased by the country through improved physical facilities, and infrastructural and transportation efficiency. In general, therefore, there are trade-related issues that are significant in the B2B purchase environment which cannot be captured by company constructs but, rather, are captured by country constructs. This study, therefore, incorporates relevant discussion from the global purchasing, supply chain management and logistics, global value chain and international trade literature in establishing the link with COO.

The global purchasing literature is clearly relevant to the significance of COO in B2B purchasing. In a major review of this literature, Quintens et al. (2006, p. 174) summarised findings from 19 studies by outlining the environmental drivers of global purchasing cost advantages (labour) which satisfy countertrade requirements, guard against currency fluctuations, stimulate foreign government policies, and provide an advantageous legal and economic environment. All these factors are highly dependent on the source country. Moreover, as facilitators, better foreign transport and communications are important intermediaries (as they generate logistics strengths) in the source country's infrastructure.

As barriers, import quotas, and an adverse political and economic environment can generate source country's disadvantages when it comes to purchasing. Kotabe and Murray (2004, p. 9) also emphasised several aspects that support successful global sourcing in addition to manufacturing cost. They are: exchange rate fluctuations, available infrastructure (including transportation and communications), and industrial and cultural environments, etc. In addition, they specified several barriers, namely, logistics, inventory management, distance, nationalism and a lack of working knowledge about foreign business practices.

As mentioned in some of the global sourcing literature, sourcing from low-cost countries is a well-recognised driver of global purchasing (Cho & Kang, 2001; EyeforTransport, 2006; Min & Galle, 1991; Rexha & Miyamoto, 2000). Moreover, Birou and Fawcett (1993) claimed that acquiring products at the lowest possible price is the main motivator for cross-border trade. Such a cost reduction motive is mostly achievable by purchasing from low-cost countries. With a COO focus, Oke et al. (2009) investigated the reasons for choosing suppliers from developing countries. They found cost to be the primary driver of global sourcing, and that two often cited issues were labour cost and logistics cost. Their findings included that supplier selection solely based on cost may be counterproductive, and that primary preference usually goes to nearby suppliers as there are less transportation lags and a low logistics cost due to proximity. All the companies interviewed considered geographic distance to be important and it was also emphasised in terms of the accessibility of suppliers and the ease of face-to-face interaction. With regard to ease of interaction, time and not distance was used to measure proximity. Cultural proximity was considered by respondents primarily in terms of similarity in humour and a common language. Although cultural proximity can generate a low transaction cost, it can also be detrimental for the supply chain due to a poor work ethic and/or a lack of sourcing experience.



With quality being the secondary criterion for sourcing from developing countries, behind costs, quality and reliability were explained as the ability to correctly deliver what is required on time and as promised. Quality is considered as one of the secondary criteria for sourcing from developing countries. In addition, the complexity of components is associated with required expertise, and political instability and border delays relate to delivery times which reflect consistency with commitments.

In another study focused on low-cost countries, (Maltz et al., 2011) considered several reasons that are applicable to sourcing from other countries, such as: work ethic; security of intellectual property; attraction of the local market; reliably meeting customer requirements (delivering complete orders on time); transportation reliability (consistency of lead times); and transportation cost (cost from source to buyer's location). Additional reasons were: government support for business; political stability; flexibility (ability to react to changes in requirements); predictable border clearance times; government corruption; overall attractiveness for sourcing; and labour cost. It is important to note that several of these aspects are also applicable to sourcing from any country (e.g. delivery of complete orders on time, consistency of lead times and transportation cost). In a similar vein, Hallén and Johanson (1985) identified the supplier country's industrial climate and cultural affinity with trading partners as antecedents of industrial marketing. According to Joshi (2009) and Kaufmann and Carter (2006), reduced trade barriers and information technology (IT) improvements dramatically increase opportunities for global purchasing relationships. Another environmental aspect related to country is that of regulatory strength. While country-related factors are important in the total cost and quality of B2B purchasing, nevertheless, importers/industrial buyers may naturally consider that trade-related 'country' information and attributes are, for all practical purposes, not controllable by producers or suppliers.

A country's image is also dependent on its political, economic, scientific, natural and cultural institutions (Allred et al., 2000). As B2B buyers are a more informed group, they are likely to be familiar with the impact of institutions which can affect them even more. In a similar vein, 'institutions' is also represented as the first among 12 pillars of competitiveness in the World Economic Forum's Global Competitiveness Report. Moreover, among the seven components of the 'institution' measure, five (i.e. property rights, ethics and corruption, undue influence, government efficiency and security) are related to public institutions, indicating the strength of government regulators in delivering competitiveness. The impact of the origin country's regulatory strength is of particular importance with regard to current international trade practices. The discussion of regulatory limitations of developing countries is generally focused on poor human resource practices or to the so-called 'sweatshop', although poor enforcement of intellectual property rights is also similarly discussed. As developed countries source a substantial part of their products from developing countries through outsourcing, developed countries and their companies cannot avoid their responsibilities.

Ben Blanchard (Blanchard, 2012) of Reuters reported that three people of Foxconn (the firm that assembles Apple's iPad and iPhone) died in a blast in 2011 due to a mishap related to iPad polishing. In addition to this tragedy, forcing employees to work overtime, underpaying employees, and reports of suicides and attempted suicides among Foxconn employees have tarnished the image of Apple. Consequently, Apple, along with Foxconn, has initiated the voluntary step of limiting excessive overtime (Bradsher & Duhigg, 2012; The Economist, 2012b). However, ensuring safe working conditions should be the result of regulatory standards imposed by the country (Locke et al., 2007). Similar enforcement of standards regarding safe working conditions from the side of buyers can be seen in the Sustainability Report of Adidas (Adidas, 2012, p. 13) and the Target Australia (target.com.au, 2014a, 2014b) website regarding Bangladesh factories and Uzbek cotton.

Despite increasing buyer concerns with regard to controlling human rights abuse, environmental hazards and the use of toxic materials, it is a far cry to establish these standards in the developing world. Conversely, the level of happening of these types of issues in the developed world is much less, which can be attributed to the regulatory strength of those countries (exceptions include the recent horse meat scandal in the UK). In a very recent COO study, Wang et al. (2014, p. 773) proposed ‘national institutions’ as a component of country image. In describing ‘national institutions’, the authors include numerous aspects of institutional regulations that can be enforced by a country’s government. These institutions comprise: the political institution system (ideology, legal system, religion, territory and military policies); the economic institution system (hygiene control, quality control, safety supervision and labour policies); the scientific institution system (knowledge protection and technology policies); and the eco institution system (environmental protection and pollution). Among these, the economic institution system is of particular importance for international buyers. Therefore, a country’s regulatory strength can be a source of enhanced reliability for that country and its products.

The most recent sourcing phenomenon has made global sourcing even more multi-faceted in terminology. From the end of the last decade, terms like ‘on-shoring’, ‘re-shoring’, ‘back-shoring’, ‘in-shoring’, ‘reverse shoring’, ‘international re-concentration’ and ‘reverse globalisation’ started to proliferate in the economic press and in white papers by consulting firms (Sirkin et al., 2012). Consequently, in recent times, this issue has also attracted academic attention (Holz, 2009; Kinkel, 2012; Kinkel & Maloca, 2009; Leibl et al., 2011). The terminology gained greater popularity when Apple’s CEO Tim Cook announced on 6 December 2012 that one of the Mac lines will be entirely manufactured in the USA by around 2013 (Fratocchi et al., 2013). A similar trend has been seen among US industry giants (e.g. General Electric, Caterpillar and Ford) and US small to medium-sized enterprises

[SMEs] (Fratocchi et al., 2013, p. 2). In addition, the OECD(OECD, 2013, p. 11) reported that US firms were back-shoring some of their activities to the USA owing to rising costs in emerging economies, intellectual property concerns, etc. Although the back-shoring trend may reduce the volume of international trade, it may not be relevant to this study, except, perhaps, where it is reflected in adverse perceptions of foreign countries and companies. However, this study's significance is well aligned with another recent terminology, that of 'near-shoring'(Kinkel, 2012). In this context, some US and European firms have relocated their manufacturing plants to Mexico and Eastern European countries(Jia et al., 2014). Similar evidence is also available in recent IKEA sourcing practices. IKEA also started to practise the concept of near-shoring by making global sourcing more regionally concentrated, having suppliers in Northern Europe, Southern Europe, Eastern Europe, Asia and North America, and distributing more products within their own geographical areas (Ivarsson & Alvstam, 2010, p. 1577). The major motivations behind such practices are to reduce logistical costs and environmental concerns, and to establish new IKEA stores in emerging markets (Ivarsson & Alvstam, 2010, p. 1577).

As an active player in understanding business practices, management consulting firms (e.g. Accenture, McKinsey and KPMG) have already investigated the new trend of staying closer to the market. Ferreira and Heilala (2011) of Accenture conducted a survey of 287 manufacturing companies to reveal different aspects of on-shoring and near-shoring. This was after significant off-shoring companies started to realise that the distance between supply operations and demand locations was too far to meet customer expectations for unique products, to maintain fast delivery/response times, and to maintain low inventories and competitive total costs (p. 3). The majority (61%) of respondents in this study were currently considering moving their manufacturing facility to a location in closer proximity to customers. The major problems faced by companies with off-shore facilities were reported

as: delivery time (49%), product quality (46%), customer responsiveness (31%) and bottlenecks in logistics networks (26%). Less important problems were reported as: product customisation (11%), product safety (11%), political and legal issues (12%), intellectual property theft (10%), process efficiency (9%) and exchange rates (3%). On the other hand, the study identified important factors that were responsible for the off-shoring decision. Five major determining factors for an off-shore location were reported as: labour costs (74%), proximity to the customer/market (67%), skills of the workforce (61%), taxes (45%) and transportation costs (44%). Despite presenting the arguments for off-shoring and back-shoring, the significance of price changes in recent times has made the sourcing decision crucial for manufacturers and therefore for B2B buyers. Table 5.2.3.1 presents the variables that experienced the most significant price increases for manufacturers from 2007 to 2010.

**Table 5.2.3.1 Variables undergoing sharp price increase for manufacturers from 2007 to 2010**

<b>Variables</b>	<b>% price increase</b>
Supplier material or component price	73
Logistics and transportation	57
Overhead and administrative cost	36
Exchange rate differentials	31
Inventory	26
Cost of quality	25
Material handling and warehousing	18

Source: Ferreira and Heilala (2011)

This price increase information indicates that international purchase or outsourcing decisions have put B2B purchasing managers under severe cost pressure. Consequently, choosing the source country by location, cost, quality, economic strength and infrastructure support has become an important part of the purchase decision. As each country potentially generates a very important source of variation in the above-mentioned areas, COO research can be seen to be an integral aspect of global sourcing.

Another field of research, which is of international supplier selection, can also have a significant association with COO research. Leonidou and Katsikeas (1996, p. 27) differentiated between international purchasing and local purchasing on the basis of the additional factors associated with international purchasing, such as: exchange rate fluctuations, complex documentation requirements, trade regulations, customs duty, cultural differences, complex payment procedures and transportation difficulties (Min & Galle, 1991). These aspects can influence country-level differences and, in turn, can impact on B2B buyers' purchase decisions. In a literature review on supplier selection and evaluation, Ho et al. (2010, p. 201) reported on the many variables used in the extant literature. Among those variables, the following can have significant country-related impacts: shipment quality, delivery reliability, distance, geographical location, number of shipments to arrive on time, order-to-delivery lead time, on-time delivery, percentage of orders delivered by the due date, supplier proximity, waiting time, logistics cost and the total cost of shipments.

Min (1994) used a multi-attribute utility approach to aid managers in choosing international suppliers through specifying the weights of different variables. Among the seven criteria, three directly capture the country influence in selecting foreign suppliers (namely, perceived risks, cultural and communication barriers, and trade restrictions). The perceived risks criterion (analogous to barriers Quintens et al., 2006) included political stability, foreign exchange rates, legal claims, labour disputes and local price controls. Cultural similarity, ethical standards and electronic data interchange (EDI) comprised the criteria for cultural and communication barriers. The trade restrictions criterion for supplier selection considered tariffs and customs duty, and counter trade as variables. In addition, freight terms, on-time delivery and negotiability (for cultural reasons) can also be influenced by the country with significant dependence on company capabilities. Therefore, among the 19 attributes considered by Min (1994), nine are directly and three are indirectly related to country. Hence,

the variables reported in the international supplier selection literature will potentially generate insightful detail in developing trade-related country constructs.

The international trade literature has never been associated with COO research. This is despite the fact that the COO research field has grown substantially, simply due to the existence of international trade and its exponential growth. Several aspects of international trade issues reveal country-related trade impacts. The relevance of country in international trade issues, from the B2B perspective, is related to a range of factors, such as, distance or proximity, transport costs, transport infrastructure, transport modes, logistics, trade facilitation, etc. One of the most extensively studied areas of international trade is the so-called ‘gravity’ model that deals with the impact of distance on international trade (Behar & Venables, 2011). Despite Friedman (2005)’s concept of the ‘Flat World’, which implies that international trade is independent of distance, the evidence from economic data accepts that the world is still far away from being flat (Leamer, 2007).

It has been reported that GDP (gross domestic product) and distance together account for 70% of the cross-country variation in trade (Behar & Venables, 2011). According to other studies (Cantwell, 2009; Dunning, 1998), global firms typically consider geography to be an important decision attribute as part of the overall economic environment—especially the distance to and proximity of markets. By analysing 103 studies conducted between 1870 and 2001 that considered distance as an explanatory variable of trade flows, Disdier and Head (2008) found a continued effect of distance on bilateral trade. Moreover, according to (Swenson, 2005), sourcing strategies are significantly dependent on geographic dimensions. In another study, Irwin and Tervio (2002), show that around 30% to 40% of the variance of the bilateral trade share of GDP (in log form) is explained by geographic characteristics. According to the findings of Brun et al. (2005), long-distance trade has not reduced over time; however, evidence of the importance of distance is seen as short-distance trade has

increased more than that of long distance. In addition, Carrère and Schiff (2005) reported that the distance of the average trade flow has reduced gradually over the period 1962–2000.

The impact of infrastructure on trade is seemingly obvious. Nordås and Piermartini (2004) considered that infrastructure comprised rail, roads, telecommunications, ports and airports and reported that ports have the largest impact on trade. Canning (1998) pioneered the concept of the stock of infrastructure that is measured by an index of road, rail and telecommunications capacity. Limao and Venables (2001) estimated that variation in infrastructure accounts for 40% of the variation in predicted transport costs in coastal countries and up to 60% in landlocked countries. In another estimate, Clark et al. (2004) found that if the quality of a port deteriorates from the 75<sup>th</sup> percentile to the 25<sup>th</sup> percentile, this can increase the shipping costs by 12% and even up to 60% if the port is far away from the market destination.

In addition to physical infrastructure, trade facilitation can have a significant impact on trade. Wilson et al. (2005) evaluated port facilities, customs handling, the regulatory environment and the availability of service sector infrastructure as the four measures of trade facilitation. The Logistics Performance Index (LPI), a data set developed by the World Bank, uses six measures for its estimates, namely, efficiency of customs clearance; transport and IT infrastructure; ease and affordability of international shipments; competence of local logistics; tracking and tracing facilities of shipments; and timeliness of shipments in reaching their destination. In measuring the impact of logistics, Behar et al. (2009), estimated that one standard deviation improvement in logistics can increase exports by about 46% for an average-size developing country. Another study on international trade substantiated the impact of trade facilitation on export performance (Portugal-Perez & Wilson, 2012) in terms of a higher performance evaluation by an international buyer.



The transport cost, and a broader term ‘trade cost’, are associated with the origin country and may logically impact on international buyers. The international trade literature uses cost insurance and freight/free on board (CIF/FOB) as a measure of transport cost. Limao and Venables (2001) reported that, on average, the CIF/FOB ratio was 1.28 in 1990 meaning that to transport material costing \$1, one needed to spend around \$0.28 including insurance. Therefore, the cost of transportation in international trade was around one-quarter of the cost of materials in 1990. Economists also use another term, namely, ‘trade cost’ that includes transport cost and international trade policy restrictions. In one estimate, Jacks et al. (2008) found that 31% of trade expansion in the period 1950–2000 was attributed to trade cost.

Delay or delivery uncertainty is another attribute which influences international trade and, consequently, international buyers. Reliable delivery has been seen repeatedly as a criterion in evaluating COO by B2B buyers. Reliability of the supplier and the supplier country can reduce delivery uncertainty which is particularly important for intermediate goods (the product category of this study) or seasonal products for which the waiting time can become too costly (Harrigan & Venables, 2006). Hummels et al. (2007) calculated that one day’s delay can be worth 2% of the value in a shipment that contains road vehicles. As another impact of delay, Djankov et al. (2006) estimated that an extra day in transit reduces trade by more than 1%. For instance, if Uganda can reduce its transit times from 58 days to the global average of 27 days, this would be equivalent to reducing its distance by 2200 kilometres from its trading partners (Behar & Venables, 2011). One important aspect of delay is the delay in border clearance time (a measure of the World Bank’s Logistics Performance Index [LPI]). In one estimate, Wilson (2003) showed that the average waiting time spent at a border can be used to travel 1600 km inland. Consequently, the cost of delay has a similar level of significance to the cost of transportation in terms of its potential effect on trade volume (Behar & Venables, 2011). If any aspect influences trade volume at the macro level, this means that it must

impact on international buyers at the micro level, as every cost related to trade is ultimately borne by the buyer. In the light of the above literature, it can be concluded that geographical proximity and a country's trade infrastructure may exert significant COO influences on B2B buyers.

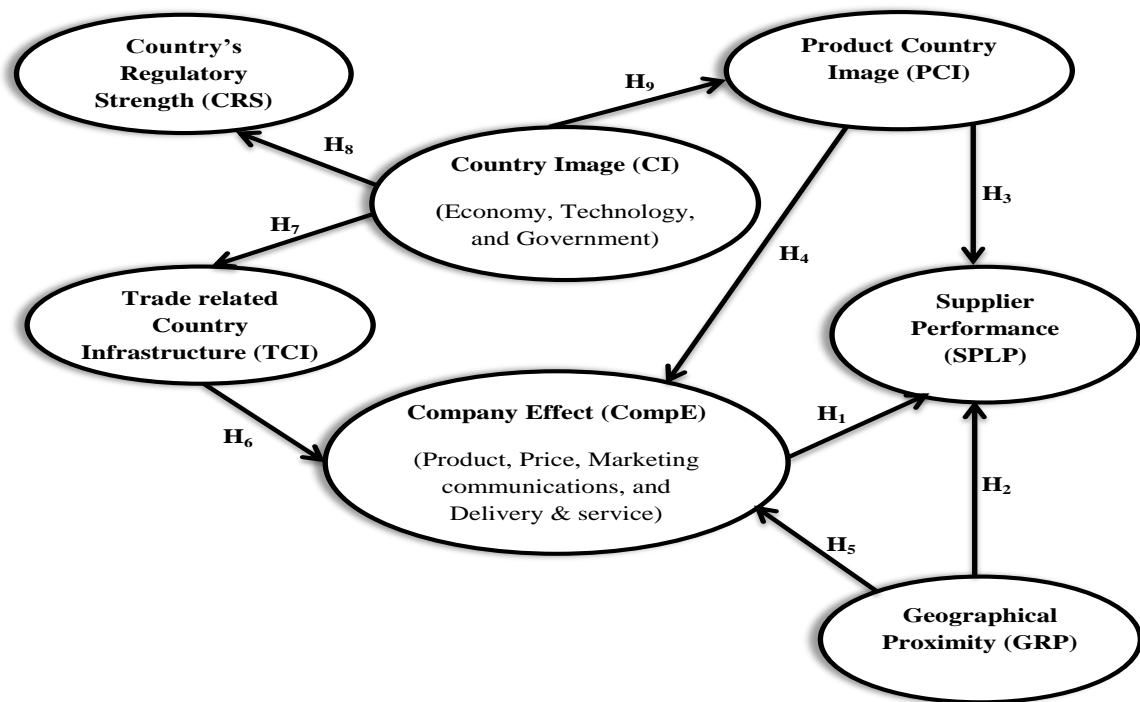
### **5.3 The conceptual framework**

The conceptual model for the current research is presented in Figure 1. The proposed conceptual model is based on the cognitive component of attitude theory. As B2B buyers have a "rich cognitive structure regarding country effects" and a "wealth of experience and information" (Samiee, 1994, p. 591), it is expected that they are more "rational and informed" (Ahmed et al., 1994). Moreover, B2B buyers tend to gather accurate information on products' intrinsic variables to evaluate suppliers (Bradley, 2001, p. 513) and have greater familiarity with a country of origin's product and country image (Askegaard & Ger, 1997, p. 14). While it has been argued that industrial buyers use the same cognitive process as consumers (Fern & Brown, 1984; Wilson, 2000), others (Insch, 2003) argue that industrial buyers have to deal with additional organisational and interpersonal variables. In their COO literature review, Roth and Diamantopoulos (2009, p. 728) emphasised the contribution of all of the components of attitude theory: cognitive, affective (feeling or emotions) and conative or intended behaviour as the outcome (Fishbein & Ajzen, 1975; Zanna & Rempel, 1988).

However, all the studies of globally scattered sourcing practices presented to this point, each have concentrated on the business motives, rather than the emotional motives. One important example to be noted here is from the sourcing practices of IKEA regarding the PAX wardrobe systems. As reported by Hultman et al. (2012, p. 17), in 2003, the tempered glass for PAX overdrive systems was originally fully sourced from Sweden. In 2006, the relationship with a Chinese supplier was established and the volume sourced from China

reached 30%. In 2007, the volume sourced from China reached 75% and some quality problems were detected. In 2008, a second supplier contract was initiated in China to put pressure on the original Chinese supplier; and by 2009, the two Chinese suppliers were supplying more than 90% with the Swedish supply of tempered glass below 10%. In all these actions of IKEA, a global icon of Sweden, in relation to its tempered glass sourcing, there is no evidence of emotion or loyalty towards suppliers; rather, there is strong evidence of rationality. In addition to evidence of the insignificance of emotion to B2B buyers, the data collection instrument of the research was not considered suitable for capturing emotional aspects. As Boddy (2005) and Koll et al. (2010), reported, emotionally held aspects are less likely to be detected by questionnaire-based surveys and experiments. In addition, Zambardino and Goodfellow (2007) pointed out that employing a cognitive discourse to reveal emotional content prompts a bias toward rationality for both respondent and researcher.

Based on the above discussion, the conceptual framework for this current study has been developed based on the cognitive component of attitude theory. In addition, for measuring the variables, this study uses a linear compensatory multi-attribute attitude model which is used extensively as an instrument for collecting and gathering data about attitudes toward companies (Ajzen & Fishbein, 1977; Bradley, 2001; Fishbein, 1975; Ryan & Bonfield, 1980; Sampson & Harris, 1970).



**Figure 5.3.1 Conceptual framework**

The current study uses ‘international supplier performance’ as the outcome variable. Evaluation of international suppliers is an obvious pursuit of B2B buyers and, therefore, the use of this construct is based on its real-world significance. In traditional COO research, supplier preference based on the origin country is a common perceptual measure that may, or may not, reflect perceptual or behavioural reality. In addition, the supplier preference of B2B buyers should also be directed at securing higher performance from the preferred supplier. Moreover, in the B2B domain, as supplier performance is an outcome assessment of the total supplier selection process, it can be considered to be a more realistic measure than ‘purchase intention’. In contrast to the B2B domain, the term ‘purchase intention’ is used extensively (Granzin & Painter, 2001; Klein et al., 1998; Verlegh, 2007) in consumer-centric COO studies and can be considered closer to the reality (Verlegh & Steenkamp, 1999, p. 530) of consumer purchase decisions. As ‘supplier performance’ logically precedes purchase intention, the use

of such realistic measure of 'supplier performance' as an outcome construct may therefore help to explicate the real-world significance of COO constructs.

In addition to using a more realistic output construct than the previous COO studies, the current study uses two traditional COO constructs instead of one, which has been previously reported as a limitation of COO research (Pappu et al., 2007, p. 728). Overall country image (CI) is operationalised through the 'macro country image', with the scale refined and validated as a second-order construct by (Pappu et al., 2007) and originally developed by Martin and Eroglu (1993). The components of macro country image cover the overall country image perception that is usually 'outside the firm's control' (Bradley, 2001, p. 512) and are based on the cognitive component of attitude theory. Beyond 'overall country image (CI)' is the 'product-country image (PCI)', which is defined as "product-country images (PCIs), or the place-related images with which buyers and/or sellers may associate a product"(Papadopoulos & Heslop, 2003, p. 404). Regarding the PCI constructs, one simple operationalisation was identified in two recent articles, by Maher and Carter (2011) and (Leong et al., 2008), and is also based on the cognitive aspect. The list of all the constructs is presented in Table 5.3.1.

**Table 5.3.1 List of constructs and their respective sources**

<b>Constructs in second-order model</b>	<b>Constructs in first-order model</b>	<b>Source</b>
Company effect (CompE)	i) Product aspects (PDA) ii) Pricing aspects (PRA) iii) Marketing communication aspects (MCA) iv) Distribution and service aspects (DSA)	Adapted from Bradley (2001) 'CompE' validated as second-order construct in Empirical Paper 1 of this thesis
Country macro image (CI)	i) Economy (ECO) ii) Technology (TCH) iii) Government (GOV)	Adapted from Pappu et al. (2007)
Product-country image (PCI)	Product-country image (PCI)	Adopted from Maher and Carter (2011)
Geographical proximity (GRP)	Geographical proximity (GRP)	Newly developed construct and validated in Empirical Paper 2 of this thesis
Trade-related country infrastructure (TCI)	Trade-related country infrastructure (TCI)	Newly developed construct and validated in Empirical Paper 2 of this thesis
Country's regulatory strength (CRS)	Country's regulatory strength (CRS)	Newly developed construct and validated in Empirical Paper 2 of this thesis
Supplier performance (SPLP)	Supplier performance (SPLP)	Considered the most reported variables from extant studies and validated in Empirical Paper 2 of this thesis

It has been noted earlier that company effect can be well captured by its controllable variables, the marketing mix elements. Two closely relevant studies (Baldauf et al., 2009; Bradley, 2001) have already used these marketing mix elements to portray the company effect. More recently, in explaining a country's performance image, Wang et al. (2014) identified the antecedent relationship of product quality, price advantage and firm competence. Naturally, all three antecedents are most closely tied to the company, rather than to country. Grounded on strong evidence from past studies, the present study conceptualises the company effect ('CompE' hereafter) as a measure composed of marketing mix elements and, consequently, as a second-order construct.

The outcome construct of 'international supplier performance' (SPLP) has been previously used in the wider perspective of purchasing, but not in COO studies. Two other empirical investigations (Empirical Papers 1 and 2) of this thesis have used SPLP and shown that it is a valid and reliable outcome construct. In accordance with the results of Empirical Paper 1, the

proposed model considers Han's (1989) 'halo model' in specifying the country image influence structure which is written as follows:  $CI \rightarrow PCI \rightarrow SPLP$ .

The significance of trade-related country issues is well evidenced in the global purchasing, supply chain management, international supplier selection and international trade literature, but not in COO studies. Therefore, the current study also captures the trade-related COO image by using newly developed constructs in Empirical Paper 2 of this thesis. As a consequence, in total, there are five COO constructs used in this study; namely, CI, PCI, GRP, TCI and CRS). No previous study has used such a large number of COO constructs and, consequently, this study can be considered potentially worthwhile in widening the dimensions and scope of the COO literature, especially in the B2B context. Among the COO constructs, CI captures the macro-level or overall country image and PCI captures the product-related country image. The trade-related country perception of B2B buyers is captured by three constructs, named as GRP (Geographical proximity), TCI (trade-related country image) and CRS (country's regulatory image). Despite using several COO constructs, the proposed conceptual model of the study should ensure that the chance of theoretical overlapping among the constructs is very slight. Thus the company effect captures the company-controllable factors and the country-related constructs measure the aspects that are only controllable or manageable by a country, and not by the individual company.

#### **5.4 Research hypotheses**

The following discussion seeks to propose and justify the research hypotheses.

*H<sub>1</sub>*: Company effect (CompE) positively influences supplier performance (SPLP).

It is almost axiomatic to argue that a company's marketing mix performance will substantially influence its overall performance. The CompE construct is composed of the

supplier company's marketing mix elements that are assessed by the B2B buyers. The integrated effect of marketing mix elements as CompE will consequently influence the supplier's overall performance measure, SPLP. In the previous literature, Bradley (2001) reported a significant relationship of the company effect variables on company preference. Among the marketing mix elements, all variables except price were statistically significant at  $p < .01$ – $0.10$  level. In a later study of a similar nature, Baldauf et al. (2009) supplier image had a statistically significant relationship with brand profitability performance (BPP). However, all the marketing mix variables significantly explained the relationship with retailer perceived brand equity (RPBE). In addition, the results of Empirical Paper 1 of this thesis show that CompE has a high positive correlation with SPLP. Therefore, the current study proposes that CompE positively influences SPLP.

*H<sub>2</sub>: Geographical proximity (GRP) positively influences supplier performance (SPLP).*

According to other recent studies (Cantwell, 2009; Dunning, 1998), global firms typically consider geography as an important decision attribute as part of the overall economic environment—especially the distance to, and proximity of, markets. In addition, Empirical Paper 2 of this thesis has already reported that GRP positively impacts on SPLP.

*H<sub>3</sub>: Product-country image (PCI) positively influences supplier performance (SPLP).*

There are mixed results regarding the relationship between PCI and common dependent constructs in COO, such as purchase evaluation or purchase intention. Parameswaran and Pisharodi (2002) found statistically significant and strong relationships ( $\beta > .55$ ) between specific PCI and purchase intentions for all the categories studied. However, Knight and Calantone (2000) demonstrated mixed results regarding the hypothesised positive relationship from PCI to purchase intention. This relationship was statistically insignificant in the case of high knowledge-level students from Japan and low knowledge-level households



from Japan. In other cases, the flexible (both CI and PCI simultaneously influence attitude along with the direction  $CI \rightarrow PCI \rightarrow SPLP$ ) model showed a significant relationship between the two constructs. A significant relationship was found between PCI and purchase intentions from both countries' samples in the study conducted by Laroche et al. (2005, p. 108). Conversely, Diamantopoulos et al. (2011, p. 518) and Baldauf et al. (2009, p. 447) found no significant relationship between PCI and the final outcome construct. Finally, the results of Empirical Paper 1 of this thesis provide evidence that PCI and SPLP have a significant positive relationship. Therefore, these mixed results suggest that this hypothesis is proposed with caution.

*H<sub>4</sub>: Product-country image (PCI) positively influences country effect (CompE).*

The impact of PCI on company image is not generally evidenced in typical consumer-based COO studies. In these studies, the effect of all marketing mix elements surrounding a brand is depicted to consumers but consumers are generally assumed to be unconcerned with the company working behind the brand and behind the scenes. In this sense, the brand is treated as a proxy of the company in the consumer domain due to consumers' very limited ability to interact with the company and their greater familiarity and interaction with the brand. It is commonly seen that PCI is correlated with brand image or brand equity, which can be considered as similar to the relationship between PCI and company. Pappu et al. (2007, p. 741) used brand associations as one measure of brand equity. In brand associations, Pappu et al. (2007) used the term organisational associations (Aaker, 1991) that clearly tells more about the company of the associated brand. In addition, the brand association construct is seen to be highly related to overall country image and PCI (Pappu et al., 2007, p. 735). In a later study, Diamantopoulos et al. (2011, p. 518) found a statistically significant relationship between PCI and brand image. In the B2B context, Baldauf et al. (2009, p. 447) reported, in similar findings, that PCI directly impacts ( $\beta = .32$ ) on retailer-perceived brand equity

(RPBE). Beyond all this evidence, the results of Empirical Paper 1 of this thesis show that PCI strongly affects ( $\beta = .63$ ) CompE. Therefore, it can be conceptualised that PCI directly impacts CompE.

*H<sub>5</sub>*: Geographical proximity (GRP) positively influences company effect (CompE).

Geographical proximity, as a country construct in a company–country conceptual model, was first tested in Empirical Paper 2 of this thesis. Although there is no previous direct evidence that GRP influences company, our conceptual understanding indicates that a company's performance in two marketing mix elements, namely, price and distribution, can be substantially dependent on geographic proximity. In addition, the results in Empirical Paper 2 suggest that there is a strong relationship between geographical proximity ( $\beta = .48$ ) and company effect.

*H<sub>6</sub>*: Trade-related country infrastructure (TCI) positively influences company effect (CompE).

Similar to *H<sub>5</sub>*, trade-related country infrastructure as a country construct in COO studies was introduced in Empirical Paper 2 of this thesis. According to this study's results, TCI is positively ( $\beta=.48$ ) related to CompE. Logically, country infrastructure will be positively correlated with company performance. Thus, this study proposes that TCI and CompE are positively related.

*H<sub>7</sub>*: Buyers' perception of overall country image (CI) positively influences perception of trade-related country infrastructure (TCI).

A large number of B2B-centric COO studies have identified the overwhelming reality of the perceptual divide between developed and developing countries, although B2B buyers may, in fact, prefer products from developing countries, due to the obvious cost advantages, in

contrast to the preferences of consumer buyers for products from developed countries. The CI construct in this study may even function as a proxy indicator of a country's development level in an overall sense. The trade infrastructure issues measured by TCI variables overlap sufficiently with the Logistics Performance Index (LPI) of the World Bank with its measures of: customs clearance; transport and IT infrastructure; ease and affordability of international shipments; competence of local logistics; tracking and tracing facility of shipments; and timeliness of shipments in reaching their destinations. According to the LPI, of the top 15 countries, Singapore and Hong Kong (China) are the only consistent representatives of developing countries from 2007 to 2014 (although the classification of Singapore and Hong Kong as developing countries is obviously debatable). Consequently, it can be hypothesised that perception of higher CI leads buyers to perceive higher TCI.

*H<sub>8</sub>*: Buyers' perception of overall country image (CI) positively influences perception of country's regulatory strength (CRS).

The regulatory strength of a country, often attributed to the country's 'institutions', is also associated with the country's development level. In the World Economic Forum's Global Competitiveness Report, 'institutions' is the first pillar among 12 pillars of competitiveness. Moreover, of the seven components of the institutions measure, five (property rights, ethics and corruption, undue influence, government efficiency and security) are related to public institutions, and these issues are also reflected in the CRS construct of this study. Moreover, safe working conditions are more associated with developed countries, while reports of unsafe working conditions in Bangladesh factories, child labour and forced labour in the Uzbek cotton industry (target.com.au, 2014a, 2014b), and unsafe and forced working conditions at Foxconn's Chinese factory (Blanchard, 2012) are more associated with developing countries. Based on these facts, this study proposes the relationship that buyers' perception of CI positively impacts on CRS perception.

*H<sub>9</sub>*: Overall country image (CI) positively influences product-country image (PCI).

Two previously discussed models, the ‘halo model’ (Han, 1989) and the ‘flexible model’ (Knight & Calantone, 2000), have considered the country image influence structure as being CI → PCI. Studies that tested the relationship of CI → PCI received a statistically significant relationship in every single case (Han, 1989, p. 227; Knight & Calantone, 2000, pp. 135-136; Laroche et al., 2005, p. 107). In addition, other research findings (Diamantopoulos et al., 2011, p. 518; Roth & Romeo, 1992) have substantiated this relationship. Finally, the results of Empirical Paper 1 of this research have also shown a statistically significant relationship ( $\beta = .82$ ) of the path CI → PCI.

### **5.5 Study focus, survey respondents, survey country and product category**

This study used an online survey questionnaire that was designed using Qualtrics survey software. The survey was administered online to professional purchasing managers in Australia by Research Now. The study concentrated on international purchasing (Motwani & Ahuja, 2000), a term that can be synonymous with import sourcing (Swamidass, 1993), global sourcing (Kotabe et al., 1998); worldwide sourcing (Monczka & Trent, 1992); and international procurement (Scully & Fawcett, 1994). This current study is based on buyers’ cognitive awareness of COO and not the affective (emotional) component. Note that the home country bias frequently observed in COO research is an affective component. International purchasing (as a preference over local purchasing), can be regarded as a rational decision as opposed to an emotional one. Therefore, cognitive component of attitude theory, international sourcing, and B2B buyers’ rational decision making (than emotional) are consistent with each other.

Australia, the country location of the current study, plays an important part in the global economy, and no less in relation to its imports. Regarding global imports, Australia ranked

18<sup>th</sup> (*Trade at a Glance*, 2013, p. 14), contributing 1.5% of global imports, putting behind countries such as Brazil, Taiwan, Thailand, Turkey, Switzerland, Malaysia, Indonesia, Austria and Sweden. According to the KOF Index of Globalisation 2014, Australia is ranked 19<sup>th</sup> among 191 countries. As this study is also focused on trade-related country constructs and takes the perspective of the buyer importer side, the significance of Australia is also evidenced as it holds 18<sup>th</sup> position (in 2010) globally (IHS Global Insight, 2013) in the import of containerised cargo.

In studying COO, it is important to create a diverse pool of countries to reduce bias towards a particular country or country group. One notable bias in COO, particularly in consumer-focussed studies, is toward developed country products over those from developing countries (Ahmed et al., 1994; Crawford & Lamb, 1981; Dzever & Quester, 1999; Knight et al., 2008; Lee et al., 2012; Phau & Leng, 2008; Saghafi & Puig, 1997). Similarly, buyers tend to select suppliers from geographically proximate countries over those from more distant countries (Oke et al., 2009). Another global pattern is the regional concentration of global trade (Rugman & Verbeke, 2004), which is also geographically concentrated, albeit in a wider distribution. (That is, certain industries and economic activities, such as electronics manufacturing, are concentrated in clear geographic regions, such as South-East Asia.) Regarding the study location in relation to international trade, developed countries, such as Australia, are suitable for global representation as developed countries' markets normally experience a greater assortment of products originating from developed and developing countries. Moreover, developed countries typically have fairly balanced markets of high, and average, quality goods that enable industrial buyers to create wide assortments of different quality products. Conversely, in developing countries, the market size for high-quality products (normally produced in a developed country) is usually very small (unless the total market size is very large, as it is in India and China). Therefore, in developed countries,

purchasing managers have increasing opportunities to deal with, and inspect, products from a wider number of countries, and to receive customer feedback about them. Considering all these kinds of trade biases, Australia's top ten import sources include representation of Asia (physically proximate supplier markets and mostly developing countries), Europe and North America (mostly developed countries), and also newly industrialised countries of Asia (see Chapter 1, Table 1.4.1).

The product category of the current study is 'raw materials and components'. By investigating trade of 'raw materials and components' or intermediate goods, this study also aligns with an obvious reality of global trade in recent times. Additionally, no previous B2B focused COO studies explicitly addressed intermediate goods as product category. The exponential growth of the global supply chain not only covers finished goods but also components and sub-assemblies (Gereffi & Lee, 2012, p. 25), which has given rise to the global trade in intermediate goods. In 2009, global exports of intermediate goods exceeded the export values of final goods plus capital goods, representing 51% of non-fuel merchandise exports (WTO & IDE-JETRO, 2011, p. 81). Therefore, a shift has occurred from 'trade in goods' to 'trade in value added' and 'trade in tasks' (OECD, 2011; WTO & IDE-JETRO, 2011). The increased use of the statement 'Made in country X from local and imported materials/ingredients' in 'Made in' labelling clearly evidences the increasing nature of intermediate goods trade. In representing intermediate goods import (excluding fuel), Australian import of processed industrial supplies and parts for industrial goods grew on average 6.8% per annum from the period 1990–91 to 2010–11 (Andrew, 2012). In comparison, the global average of annual growth rate in intermediate inputs trade between 1995 to 2006 was 6.2% (OECD, 2011, p. 30). This demonstrates that the growth of Australian intermediate inputs trade is representative of the global growth rate. In addition, the yearly intermediate goods trade, excluding fuel, is AUD 66.9 billion, equal to the two-

way trade of Australia with Japan, the second largest two way trading partner of Australia (Andrew, 2012).

## **5.6 The questionnaire, data collection procedure and sample characteristics**

Data were collected using a standard self-completion questionnaire. Purchasing managers (the respondents) were asked to rate their existing major foreign supplier based on their product, price, marketing communications, and delivery and service issues. Another set of questions was related to the supplier country. Specifically, respondents were required to rate their major existing foreign supplier's country on the country image and product-country image issues that were specified earlier in the conceptual framework. Before rating the country-related scale items, respondents were asked to write the country name of their major supplier in an open-ended space. Next, respondents were asked to rate the respective supplier's performance based on the scale items. In addition, some organisational and personal classification information was requested. Although all the items in the questionnaire were taken from previously used scales, five experts (three purchasing managers and two academics) checked the items for measurement appropriateness, language simplicity and their ability to be easily understood. In measuring the company effect construct (CompE), Bradley's (2001) scale for four marketing mix elements was used with several modifications recommended by the experts. Firstly, the influence of brand name association was included under the product dimension as brand name is extensively considered in both consumer-centric and B2B-centric COO studies (Ahmed et al., 1994; Baldauf et al., 2009; Batra et al., 2000; Ghymn & Jacobs, 1993; Ghymn et al., 1999; Gill & Ramaseshan, 2007; Khanna, 1986; Knight et al., 2008; Knight et al., 2007; Li et al., 1994). Secondly, statements of the scale items were modified to make them suitable for different industry users and not specific, for example, to electrical or electronic products. Thirdly, there were a few inclusions and

exclusions of items to make the questionnaire simpler and more realistic for purchasing managers of intermediate goods. After the experts' review, 19 items in four dimensions were considered for the pre-testing stage. After pre-testing, 17 items were found to have produced high loadings under their expected factors, and were thus included in the final questionnaire. All 17 items were measured using a 7-point Likert-type scale ranging from excellent (7) to poor (1).

Regarding the country macro image or CI construct, nine macro country image variables were used in the final analysis based on those variables used by Pappu et al. (2007). Here, political stability of the government (Maltz et al., 2011) was also included because it is considered important by purchasing managers. In the pre-testing stage, 'civilian government' was loaded very low with the factor 'government' and was thus excluded. Therefore, nine items remained for the final survey under the CI construct. All nine items were measured by a 7-point Likert-type scale ranging from highest (7) to lowest (1).

Regarding the product-country image (PCI) construct, no change was necessary from the original items used by Maher and Carter (2011) as they loaded well under the focal construct at the pre-testing stage. It is important to note that these five items (value for money, reliability and durability, aesthetics and design, quality of workmanship and level of technological advancement) were re-phrased to capture the product-specific country image. The 7-point Likert-type scale used for the five scale items ranged from highest (7) to lowest (1) under the statement 'rate the product category you have purchased from this country based on the following issues'.

The trade-related country constructs geographical proximity (GRP), trade-related country infrastructure (TCI) and country's regulatory strength (CRS) included a total of 13 items that were measured by a 7-point Likert-type scale ranging from highest (7) to lowest (1). Supplier



performance (SPLP) was measured through three items using a 7-point Likert-type scale ranging from excellent performance (7) to poor performance (1). All three items resulted in high loadings with the SPLP construct.

Data were collected from online panel members provided by a commercial panel provider company, Research Now, and were from all around Australia. Respondents were filtered using two screening questions: “are you significantly involved in making international purchase decisions?” and “are you involved in purchasing intermediate goods (e.g. non-fuel raw materials, parts and components for industrial use) from foreign suppliers?” Because organisational purchasing decisions are often a group decision (Andersen & Chao, 2003), the amount of involvement was considered and both questions were asked about international purchasing. In all, 1863 panel members were requested to participate in the final survey and, following the screening questions, 293 completed questionnaires were received, giving a 15.7% response rate. Among the 293 responses, 276 were found to be usable for analysis. Demographic characteristics of the sample respondents are presented in Table 5.6.1.

**Table 5.6.1 Demographic profile of respondents and organisations**

<b>Gender %</b>	<b>Highest level of completed education %</b>	<b>Experience in purchasing profession %</b>	<b>Type of materials purchased %</b>	<b>Size of business %</b>
Male: 62.7	Doctoral degree: 2.5	Less than 10 years: 38.8	Raw materials: 39.5	Small business: 43.1
Female: 37.3	Master’s degree: 29	10 to 20 years: 43.8	Components and parts: 60.5	Small to medium: 46.7
	Bachelor honours/Graduate certificate/Graduate diploma: 22.1	More than 20 years: 17.4		Large business: 10.1
	Bachelor degree: 20.7			
	Advanced diploma/Associate degree: 9.8			
	Diploma: 10.1			
	High school: 8.3			

Note: Business size defined using Australian Taxation Office (ATO) criteria; Small: annual turnover less than AUD 2 million; Small to medium enterprises: annual turnover AUD 2 million to AUD 250 million; and Large: annual turnover more than AUD 250 million.

As each respondent reported the country of their major foreign supplier, the composition of cases from supplier countries as reported by sourcing countries is shown in Table 5.6.2.

**Table 5.6.2 Percentage of cases reported by sourcing country**

Supplier country	Percentage of cases
China	24.6
USA	14.1
Singapore	9.4
Germany	6.8
South Korea	6.2
New Zealand	4.7
Japan	3.9
UK	3.2
Malaysia	3.2
Indonesia	2.9
India	2.9
Italy	2.2
Thailand	1.8
Others	10.8

## 5.7 Study results

### 5.7.1 First-order measurement model

The conceptual model of the study was tested with covariance-based structural equation modelling (SEM), using the two-step process suggested by Anderson and Gerbing (1988). Consequently, assessment of fit and the validity of two key tests (the measurement and structural models) needed to be established. The conceptual model consists of 12 first-order constructs. Initial estimation considered 47 measured variables under 12 constructs. The factor loadings(.5 or higher and ideally .7; Hair et al., 2010, p. 709), and standardised residuals, (close to 4; Hair et al., 2010, p. 725), of the variables were examined and three variables were excluded (see Tables 5.7.2.1 and 5.7.2.2). The model fit of the 44-item confirmatory factor analysis (CFA) was assessed using multiple indices.

As suggested by (Hair et al., 2010, p. 672), at least one absolute (RMSEA, SRMR, Normed  $\chi^2$ ) and one incremental index (CFI, TLI, NFI, RNI) needs to be used along with  $\chi^2$  value and associated degrees of freedom (*df*). In addition, fit indices are sensitive to model complexity

(number of constructs and indicators) and sample size (Anderson & Gerbing, 1984; Bearden et al., 1982; Bentler, 1990; Marsh et al., 1988; McDonald & Marsh, 1990; Sharma et al., 2005). Therefore, researchers suggest flexibility in evaluating fit indices when considering model complexity (Hair et al., 2010, p. 673; Sharma et al., 2005, p. 941). In this vein, (Hair et al., 2010, p. 672) indicated liberal cut-off values for a model consisting of 30 or more observed variables and a sample size of more than 250. In addition, (Sharma et al., 2005, p. 939) suggested that, in the case of a large number of indicators (more than 24) and a sample size of around 200, liberal cut-off values for normed indices (.80) should be used. (Sharma et al., 2005, p. 939) also found that the root mean square error of approximation (RMSEA) is the least affected index and is insensitive to sample sizes over 200 and to the number of indicator variables. Based on the specifications regarding fit indices, the very complex confirmatory factor analysis (CFA) model of this study (44 measured variables and sample size of 276) fits the data well.

**Table 5.7.1.1 First-order CFA model fit indices**

<b>GoF Measures</b>	<b>Calculated value</b>	<b>Threshold value</b>
$\chi^2$ (df)	1758.88 (836)	
Sig.	.000	Significant p-value expected (Hair et al., 2010, p. 672)
Normed $\chi^2$	2.10	3 or less associated with better fitting models (Hair et al., 2010, p. 668)
CFI	0.88	.90 or better for acceptable model fit (Hair et al., 2010, p. 669; McClelland & Judd, 1993); For normed indices, cut-off value of 0.90 recommended by (Bentler & Bonett, 1980); models with more than 24 indicators and sample size around 200, liberal cut-off value for normed indices is .80 (Sharma et al., 2005, p. 939)
TLI	0.87	.90 or better for acceptable model fit (Hair et al., 2010, p. 669; McClelland & Judd, 1993)
RMSEA	0.063	.05 suggests close fit: .051–.08 suggests acceptable model fit to data (Browne et al., 1993; Jöreskog, 1993)
SRMR	0.051	.08 or less (Hair et al., 2010, p. 672)

In comparison, the null model ( $\chi^2 = 8904.41$ ;  $df = 946$ ;  $\chi^2/df = 9.41$ ;  $RMSEA = .175$ ) in which the correlations among the latent constructs are constrained to zero shows a significantly worse fit ( $\Delta\chi^2 = 64.96$ ;  $\Delta df = 1$ ;  $p < .001$ ).

### *5.7.2 First-order measurement model validity*

One important assessment of construct validity includes the measurement relationships between observed variables and constructs (Hair et al., 2010, p. 707). The first-order measurement model consists of 12 constructs: marketing communications aspects (MCA); delivery and service aspects (DSA); product aspects (PDA); pricing aspects (PRA); economy (ECO); technology (TCH); government (GOV); product-country image (PCI); geographical proximity (GRP); trade-related country infrastructure (TCI); country's regulatory strength (CRS); and supplier performance (SPLP). The measurement model estimates of standardised item loadings exceeded the suggested threshold (at least .5 and ideally .7; Hair et al., 2010, p. 708). Among the 44 item loadings, only three are in the .5 range, only two in the .6 range and the remaining are .7 or above (see Tables 5.7.2.1 and 5.7.2.2). Moreover, all the item loadings are significant at .001 level (see Tables 5.7.2.1 and 5.7.2.2), which is also considered as a minimum requirement by Anderson and Gerbing (1988). In addition, high item loadings on intended constructs and average item loadings for CompE variables (.72); for country variables (.80); and for SPLP variables (.73) show convincing evidence of convergent validity (Fornell & Larcker, 1981).

The study computed average variance extracted (AVE) and composite reliability (CR) as an estimate of the reliability of all measurement scales (Chin, 1998a; Fornell & Larcker, 1981). All the AVE estimates are above the cut-off value of .5 (Fornell & Larcker, 1981) and all the CR estimates are well above .7, (indicate good reliability; Hair et al., 2010, p. 710). Therefore, both the measures (AVE and CR, see Table 5.7.2.3) demonstrate adequate reliability and convergent validity (Chin, 1998a; Fornell & Larcker, 1981) of the constructs.

**Table 5.7.2.1 Factor loadings of the company effect (CompE) and supplier performance (SPLP) variables (CFA model)**

<b>Marketing communication aspects (MCA)</b> <b>CR: 0.84; AVE: 0.57</b>	<b>Standardised loadings (t-value)</b>
Active dissemination of new information on products and services	0.75 (11.95)*
Knowledge level of sales executives about company products and applications	0.76 (12.07)*
Truthfulness in product claims	0.77 (12.27)*
Quality of information content in company communications	0.73 (NE)
<b>Distribution and service aspects (DSA)</b> <b>CR: 0.75; AVE: 0.51</b>	
Adherence to delivery promises	0.85 (8.31)*
Efficiency of order processing system	0.73 (7.86)*
Level of after-sales service	0.51 (NE)
Competency in providing emergency services	Variable excluded
<b>Product aspects (PDA)</b> <b>CR: 0.87; AVE: 0.53</b>	
Manufacturing quality	0.66 (10.80)*
Degree of product variety	0.78 (12.90)*
Design excellence	0.80 (13.17)*
Compliance with technical specifications	0.70 (11.37)*
Products associated with recognisable brand names	0.70 (11.32)*
Quick to adapt product to user needs	0.74 (NE)
<b>Pricing aspects (PRA)</b> <b>CR: 0.76; AVE: 0.52</b>	
Attractiveness of quoted pricing	0.78 (NE)
Value for money	0.79 (12.04)*
Usefulness of supplier-provided credit terms	0.56 (8.71)*
<b>Supplier performance (SPLP)</b> <b>CR: 0.78; AVE: 0.55</b>	
<b>Product quality performance</b>	0.80 (NE)
<b>Delivery performance</b>	0.86 (14.36)*
<b>Price performance</b>	0.53 (8.57)*

\* Significant at .001 level.

NE = Not estimated as loading set to fixed value of 1.

**Table 5.7.2.2 Factor loadings of the supplier country-related variables (CFA model)**

<b>Economy (ECO)</b> <b>CR: 0.86; AVE: 0.67</b>	<b>Standardised loadings (t-value)</b>
Standard of living	0.89 (NE)
Welfare concentration of government	0.77 (15.35)*
Cost of labour	0.79 (15.91)*
<b>Technology (TCH)</b> <b>CR: 0.88; AVE: 0.72</b>	
Level of economic development of the country	0.84 (NE)
Level of industrialisation	0.88 (17.14)*
Level of technological research	0.83 (15.94)*
<b>Government (GOV)</b> <b>CR: 0.80; AVE: 0.67</b>	
Freedom of market forces	0.75 (NE)
Political stability	0.88 (13.17)*
Democratic practices in forming government	Variable excluded
<b>Product-country image (PCI)</b> <b>CR: 0.87; AVE: 0.63</b>	
Technological advancement in country's product	0.81 (NE)
Aesthetics and design image of country's product	0.80 (14.65)*
Value for money perception of country's product	0.79 (14.43)*
Reliability and desired performance length perceived about country's product	0.76 (13.53)*
Country's workmanship image	Variable excluded
<b>Geographical proximity (GRP)</b> <b>CR: 0.84; AVE: 0.58</b>	
Geographical closeness to Australia	0.73 (NE)
Economy in transport cost	0.84 (13.15)*
Ease of face-to-face interaction with country's suppliers	0.61 (9.59)*
Travel time of shipments from supplier country (reverse-coded)	0.84 (13.27)*
<b>Trade-related country infrastructure (TCI)</b> <b>CR: 0.91; AVE: 0.62</b>	
Predictability of port clearance time	0.80 (NE)
Time consumed in port clearance (reverse-coded)	0.82 (15.37)*
State of IT and communication infrastructure	0.78 (14.32)*
Stability of currency value	0.84 (15.93)*
Ease of using payment interface with the country	0.74 (13.42)*
Level of preferential tariff treatment (as an outcome of trade agreements) with the country	0.73 (13.18)*
<b>Country's regulatory strength (CRS)</b> <b>CR: 0.89; AVE: 0.72</b>	
Security of intellectual property	0.83 (NE)
International acceptability of country's standards certification	0.90 (17.93)*
Extent of ethical treatment of workers	0.82 (15.81)*

\*\*\* Significant at .001 level.

NE = Not estimated as loading set to fixed value of 1.

To demonstrate adequate discriminant validity, the correlations between pairs of constructs should be less than 1 (Bagozzi, 1982) whereas Chin (1998b) argues that correlation between constructs should be less than .90. A more rigorous test of discriminant validity (Hair et al., 2010, p. 710) is that the square root of AVE should be higher than inter-construct correlations (Fornell & Larcker, 1981). Table 5.7.2.3 shows inter-construct correlations with the square

root of AVE in the diagonal. The constructs show adequate discriminant validity as suggested by Chin (1998b) and Bagozzi (1982) but, according to Fornell and Larcker (1981), the study indicated a discriminant validity problem.

**Table 5.7.2.3 Composite reliability, AVE estimates and inter-construct correlation matrix**

	<b>GRP</b>	<b>MCA</b>	<b>PDA</b>	<b>PRA</b>	<b>TCH</b>	<b>ECO</b>	<b>GOV</b>	<b>DSA</b>	<b>PCI</b>	<b>SPLP</b>	<b>TCI</b>	<b>CRS</b>
<b>GRP</b>	<i>0.76</i>											
<b>MCA</b>	<i>0.57</i>	<i>0.75</i>										
<b>PDA</b>	<i>0.62</i>	<i>0.83</i>	<i>0.73</i>									
<b>PRA</b>	<i>0.50</i>	<i>0.65</i>	<i>0.76</i>	<i>0.72</i>								
<b>TCH</b>	<i>0.43</i>	<i>0.46</i>	<i>0.46</i>	<i>0.22</i>	<i>0.85</i>							
<b>ECO</b>	<i>0.42</i>	<i>0.40</i>	<i>0.42</i>	<i>0.17</i>	<i>0.66</i>	<i>0.82</i>						
<b>GOV</b>	<i>0.55</i>	<i>0.52</i>	<i>0.52</i>	<i>0.32</i>	<i>0.73</i>	<i>0.73</i>	<i>0.82</i>					
<b>DSA</b>	<i>0.56</i>	<i>0.85</i>	<i>0.82</i>	<i>0.62</i>	<i>0.38</i>	<i>0.38</i>	<i>0.41</i>	<i>0.71</i>				
<b>PCI</b>	<i>0.62</i>	<i>0.57</i>	<i>0.66</i>	<i>0.48</i>	<i>0.70</i>	<i>0.62</i>	<i>0.72</i>	<i>0.58</i>	<i>0.79</i>			
<b>SPLP</b>	<i>0.70</i>	<i>0.67</i>	<i>0.76</i>	<i>0.58</i>	<i>0.42</i>	<i>0.36</i>	<i>0.47</i>	<i>0.74</i>	<i>0.61</i>	<i>0.74</i>		
<b>TCI</b>	<i>0.45</i>	<i>0.46</i>	<i>0.53</i>	<i>0.39</i>	<i>0.64</i>	<i>0.62</i>	<i>0.59</i>	<i>0.51</i>	<i>0.71</i>	<i>0.49</i>	<i>0.79</i>	
<b>CRS</b>	<i>0.55</i>	<i>0.44</i>	<i>0.51</i>	<i>0.32</i>	<i>0.54</i>	<i>0.74</i>	<i>0.67</i>	<i>0.42</i>	<i>0.68</i>	<i>0.47</i>	<i>0.68</i>	<i>0.85</i>
<b>CR</b>	<b>0.84</b>	<b>0.84</b>	<b>0.87</b>	<b>0.76</b>	<b>0.88</b>	<b>0.86</b>	<b>0.80</b>	<b>0.74</b>	<b>0.87</b>	<b>0.78</b>	<b>0.91</b>	<b>0.89</b>
<b>AVE</b>	<b>0.58</b>	<b>0.57</b>	<b>0.53</b>	<b>0.52</b>	<b>0.72</b>	<b>0.67</b>	<b>0.67</b>	<b>0.51</b>	<b>0.63</b>	<b>0.55</b>	<b>0.62</b>	<b>0.72</b>

Note: Square root of AVE on the diagonal

It is important to note, however, that the first-order constructs that subsequently form the second-order construct may not demonstrate discriminant validity (Gerbing & Anderson, 1984, p. 574; Ping Jr, 2004, p. 133). Accordingly, the discriminant validity problem observed in the four marketing mix constructs is not a major problem as these constructs form the second-order construct ‘company effect (CompE)’ in the subsequent analysis. Despite this, a further discriminant validity test was undertaken using the problematic pairs. The pairwise  $\lambda^2$  difference test (Anderson & Gerbing, 1988, p. 416; Bagozzi & Phillips, 1982, p. 476; A. M. Farrell, 2010, p. 325; Jöreskog, 1971) was performed for the pairs of constructs under question. The constraining covariance of each pair was undertaken for each pair at a time as suggested by Anderson and Gerbing (1988, p. 416).

**Table 5.7.2.4 Pairwise Chi-square difference tests for discriminant validity**

Pair of constructs	Constrained model		Unconstrained model	
	$\lambda^2$	<i>df</i>	$\lambda^2$	<i>df</i>
MCA $\leftrightarrow$ PDA	1769.49**			
MCA $\leftrightarrow$ DSA	1783.28***			
DSA $\leftrightarrow$ PDA	1784.58***			
DSA $\leftrightarrow$ SPLP	1794.98***	837	1758.88	836
PDA $\leftrightarrow$ PRA	1772.54***			
PDA $\leftrightarrow$ SPLP	1775.65***			

\*\*Significant at .002 level; \*\*\* Significant at .001 level

The pairwise  $\lambda^2$  difference tests (Table 5.7.2.4) subsequently showed that five pairs produced significant  $\lambda^2$  differences at .001 level, and one pair at .002 level. Consequently, all the pairs can be considered to exhibit discriminant validity. Therefore, based on satisfactory first-order CFA model validity, model estimation could now move to the higher-order measurement and structural models.

### 5.7.3 Common method bias and non-response bias

In attitudinal and behavioural research of this kind, ‘common method variance’ (variance attributed to the measurement method) is a potential problem (Podsakoff et al., 2003, p. 879). One important reason for encountering this problem is that data are collected at one point in time using the same method (Podsakoff et al., 2003). The study considered some steps, as suggested by Podsakoff et al. (2003), to reduce the risk of common method bias. Respondents were assured of anonymity and subsequently were requested to answer questions as honestly as possible. In addition, respondents were informed that there were no right or wrong answers, and the scale items were improved through pre-testing to reduce item ambiguity. Moreover, the study used Harman (1967) one-factor test to assess the model for common method bias. The one-factor CFA model resulted in  $\lambda^2$  value of 4260.603 with *df* at 902 which indicates the fit of the one-factor model is significantly worse ( $\Delta\lambda^2 = 37.904$ ,  $\Delta df = 1$ ,  $p < .001$ ). This result indicates that common method variance does not pose a threat in



explaining the measurement model results (Baldauf et al., 2009; Jayachandran & Varadarajan, 2006; Josiassen, 2011; Kandemir et al., 2006; Yenyurt et al., 2013).

Data were also tested for non-response bias by analysing early and late respondents (Armstrong & Overton, 1977) for significant differences. The sample of early respondents (25%) and late respondents (25%) was used to perform a *t*-test for the mean difference. Mean values for early respondents (ER) and late respondents (LR) and their respective *t*-values are reported in Table 5.7.3.1. As the *t*-values of ER and LR for all the constructs are well below 1.96, non-response bias can be considered as not being a major problem for the data analysis.

**Table 5.7.3.1 Results of *t*-test for significant differences between ER and LR**

Constructs	ER	LR	<i>t</i> -value
MCA	4.79	4.61	1.30
DSA	3.50	3.38	1.30
PDA	5.30	5.26	0.24
PRA	4.64	4.65	0.02
ECO	4.15	4.09	0.33
TCH	4.61	4.65	0.15
GOV	4.25	4.18	0.51
PCI	4.92	4.78	0.94
GRP	4.27	4.29	0.06
TCI	4.51	4.39	0.79
CRS	4.67	4.58	0.46
SPLP	4.70	4.63	0.53

In addition to testing the constructs for non-response bias, some respondent characteristics were compared between ER and LR. For example, among the ER, raw materials were sourced by 40% of respondents and component parts were sourced by 60% respondents, while among the LR, these percentages were 36% and 64%, respectively. In addition, the average years of experience among the ER is 14.07 while among the LR, it is 12.83, which is not considered statistically different (*t*-value = .979).

#### *5.7.4 Second-order measurement model*

The second-order CFA model includes two second-order constructs and five first-order constructs. The company effect (CompE) construct consists of four first-order constructs, named as marketing communications aspects (MCA), distribution and service aspects (DSA), product aspects (PDA) and price aspects (PRA). Bradley (2001) conceptualised ‘company effect’ but did not measure it as a second-order construct. Another second-order construct is overall country image (CI) including economy (ECO), technology (TCH) and government (GOV) as first-order constructs. The CI construct was operationalised in a similar fashion to the construct in the source study (Pappu et al., 2007). The product-country image (PCI), geographical proximity (GRP), trade-related country infrastructure (TCI), country’s regulatory strength (CRS) and supplier performance (SPLP) constructs remained as first-order constructs in the second-order CFA model. The second-order CFA model fits the data well according to the threshold values of fit indices specified earlier [ $\chi^2(df) = 1849.55 (874)$ , Normed  $\chi^2 = 2.12$ , CFI = .88, TLI = .87, RMSEA = .064, SRMR = .055].

#### *5.7.5 Second-order measurement model validity*

Item loadings (see Table 5.7.5.1) of the second-order constructs are substantially higher than the ideal threshold value of .7 (Hair et al., 2010, p. 708). In addition, the *t*-values of all the item loadings are significant at .001 level (see Table 5.7.5.1). The item loadings of the first-order constructs changed minimally at a fractional level and were not reported again. Average item loadings of the two second-order factors were .86 which signals strong convergent validity (Fornell & Larcker, 1981). The AVE and CR estimates for the second-order constructs convincingly exceeded the threshold value (AVE > .5, CR > .7). After considering AVE and CR values of all the constructs in the second-order CFA model, it shows substantial evidence of convergent validity.

With regard to discriminant validity, inter-construct correlations and the square root of AVE estimates for the four constructs were examined. The results (see Table 5.7.5.2) indicated little deviation from (Fornell & Larcker, 1981) specification. Therefore, the pairwise  $\lambda^2$  difference test (Anderson & Gerbing, 1988, p. 416; Bagozzi & Phillips, 1982, p. 476; A. M. Farrell, 2010, p. 325; Jöreskog, 1971) was employed. Both pairs of constructs passed the discriminant validity test with significant  $\lambda^2$  differences (see Table 5.7.5.3). Consequently, the discriminant validity of the second-order CFA model was established.

**Table 5.7.5.1 Standardised loadings of second-order construct variables**

<b>Company effect (CompE)</b> <b>CR: 0.93; AVE: 0.77</b>	<b>Variable code</b>	<b>Standardised loadings (t-value)</b>
Marketing communication aspects	MCA	0.89 (NE)
Distribution and service aspects	DSA	0.90 (7.44)*
Product aspects	PDA	0.95 (10.33)*
Price aspects	PRA	0.76 (8.98)*
<b>Overall country image (CI)</b> <b>CR: 0.88; AVE: 0.73</b>		
Economy	ECO	0.84 (NE)
Technology	TCH	0.81 (11.30)*
Government	GOV	0.87 (10.28)*

\* Significant at .001 level.

NE = Not estimated as loading set to fixed value of 1.

**Table 5.7.5.2 CR, AVE estimates and inter-construct correlation matrix of second-order CFA model**

	<b>CI</b>	<b>PCI</b>	<b>SPLP</b>	<b>TCI</b>	<b>GRP</b>	<b>CRS</b>	<b>CompE</b>
<b>CI</b>	<i>0.84</i>						
<b>PCI</b>	0.81	<i>0.79</i>					
<b>SPLP</b>	0.50	0.61	<i>0.74</i>				
<b>TCI</b>	0.73	0.71	0.49	<i>0.79</i>			
<b>GRP</b>	0.55	0.62	0.70	0.45	<i>0.76</i>		
<b>CRS</b>	0.78	0.68	0.47	0.67	0.54	<i>0.85</i>	
<b>CompE</b>	0.56	0.67	0.79	0.55	0.64	0.50	<i>0.88</i>
<b>CR</b>	<b>0.88</b>	<b>0.87</b>	<b>0.78</b>	<b>0.91</b>	<b>0.84</b>	<b>0.89</b>	<b>0.93</b>
<b>AVE</b>	<b>0.71</b>	<b>0.62</b>	<b>0.55</b>	<b>0.62</b>	<b>0.58</b>	<b>0.72</b>	<b>0.77</b>

**Table 5.7.5.3 Pairwise Chi-square difference test for discriminant validity**

Pair of constructs	Constrained model		Unconstrained model	
	$\lambda^2$	<i>df</i>	$\lambda^2$	<i>df</i>
PCI $\leftrightarrow$ CI	1853.41**	875	1849.55	874
SPLP $\leftrightarrow$ CompE	1871.76***			

\*\* Significant at .05 level, and \*\*\* Significant at .001 level

### 5.7.6 Second-order structural model

As the measurement models provided sufficient evidence of construct validity, the structural relationships can now be estimated. The insignificant paths of previous studies (Empirical Papers 1 and 2) have not been estimated in this structural model. Therefore, the numbers of structural relationships are not the same as the number of covariances in the second-order CFA model. Consequently, the structural model validity check is required. The second-order structural model fit indices are close to the CFA fit indices and the structural model fits the data well according to the threshold values of fit indices specified earlier [ $\lambda^2(df) = 1877.54$  (885), Normed  $\lambda^2 = 2.12$ , CFI = .88, TLI = .87, RMSEA = .064, SRMR = .058]. The different  $\lambda^2$  value for the CFA model and structural model requires an additional test for validity. According to Anderson and Gerbing (1992), if the structural model fit is substantially worse than the CFA model fit, then one can question the validity of structural theory. All the fit indices are identical for the second-order CFA model and the structural model except for the  $\lambda^2$  value and associated *df*. Therefore, the study employed a  $\lambda^2$  difference test to check the structural model validity. This test resulted in an insignificant  $\lambda^2$  difference ( $\Delta\lambda^2 = 2.54$ ,  $\Delta df = 1$ ,  $p > .1$ ). As a result, the insignificant  $\lambda^2$  value with the CFA model strongly demonstrates adequate structural fit (Hair et al., 2010, p. 708).

### 5.7.7 Hypotheses testing

In the hypothesised model, as predicted in  $H_1$ , there is a strong positive relationship between CompE and SPLP ( $\beta = .57$ ,  $t = 6.36$ ,  $p < .001$ ):  $H_1$  is thus *supported*. The relationship between

GRP and SPLP ( $H_2$ ) also resulted in a positive significant relationship ( $\beta = .32$ ,  $t = 4.40$ ,  $p < .001$ ). However, the relationship between PCI and SPLP ( $H_3$ ) is *not supported* as the relationship is not statistically significant ( $\beta = .03$ ,  $t = .44$ ,  $p = .661$ ). The  $\beta$  value and  $t$ -statistic for  $H_3$  is so negligible that it is impossible to draw any conclusion.  $H_4$  indicates a strongly positive relationship from PCI to CompE ( $\beta = .34$ ,  $t = 4.03$ ,  $p < .001$ ):  $H_4$  is therefore *supported*. The positive relationship between GRP and CompE ( $H_5$ ) is *supported* with a moderate coefficient and strong significance ( $\beta = .38$ ,  $t = 5.22$ ,  $p < .001$ ). The relationship between TCI and CompE ( $H_6$ ) is also *supported* ( $\beta = .15$ ,  $t = 1.94$ ,  $p < .05$ ) by path estimate and significance level, as the critical  $t$ -value of the unidirectional or one-tailed test at 5% is 1.645 (critical  $t$  value of one-tailed test at 5 percent 1.645, one tail test as the hypothesis is unidirectional; Lisboa et al., 2013, p. 223).  $H_7$  indicates the strongly positive and significant relationship between CI and TCI ( $\beta = .79$ ,  $t = 10.75$ ,  $p < .001$ ):  $H_7$  is therefore supported. The hypothesised relationship in  $H_8$ , between CI and CRS ( $\beta = .82$ ,  $t = 11.28$ ,  $p < .001$ ) also shows statistical significance with high magnitude. Finally,  $H_9$  (CI  $\rightarrow$  PCI) is also significant with a high beta coefficient ( $\beta = .86$ ,  $t = 11.36$ ,  $p < .001$ ).

**Table 5.7.7.1 Structural model results**

Constructs/Paths	Hypotheses	Standardised path coefficients ( $t$ -value)
CompE $\rightarrow$ SPLP	$H_1$	0.57 (6.36)**
GRP $\rightarrow$ SPLP	$H_2$	0.32 (4.40)**
PCI $\rightarrow$ SPLP	$H_3$	0.03 (.438)
PCI $\rightarrow$ CompE	$H_4$	0.34 (4.03)**
GRP $\rightarrow$ CompE	$H_5$	0.38 (5.22)**
TCI $\rightarrow$ CompE	$H_6$	0.15 (1.94)*
CI $\rightarrow$ TCI	$H_7$	0.79 (10.75)**
CI $\rightarrow$ CRS	$H_8$	0.82 (11.28)**
CI $\rightarrow$ PCI	$H_9$	0.86 (11.36)**
R <sup>2</sup> : SPLP		0.69
R <sup>2</sup> : CompE		0.53
R <sup>2</sup> : PCI		0.73
R <sup>2</sup> : TCI		0.62
R <sup>2</sup> : CRS		0.67

\* indicates  $p < .05$  (critical  $t$ -value at 5%, one-tailed 1.645); \*\* indicates  $p < .001$

As shown in Table 5.7.7.1, the results show that in the hypothesised model, eight of nine paths tested are significant. Among the significant paths, the strength of relationships between predictors and outcome variables is strong. The hypothesised model explains 69% of variance in the outcome variable, SPLP, which is well explained by two constructs, CompE and GRP. CI contributes 73% of variability in PCI; 62% in TCI; and 67% in CRS. In addition, PCI, GRP and TCI explain 53% of observed variance in CompE.

In summarising the structural model results, the company effect (CompE) and geographical proximity (GRP) are two major predictors of international supplier performance (SPLP). Along with the direct influence, GRP also impacts on SPLP through CompE. Due to the strong influence of geographical proximity (GRP), the previously significant (Empirical Paper 1) country variable, product-country image (PCI), became non-significant. However, the influence of PCI on CompE is now significant with a moderate magnitude. Trade-related country infrastructure (TCI) makes a statistically significant impact on CompE. The impact of overall country image (CI) has a strong influence on all the relevant country constructs, named as PCI, TCI and CRS. Therefore, the development level of a country is shown to predict a country's performance level in PCI, TCI and CRS. Overall, the significance of both company- and country-related variables on international supplier performance has been evidenced in this study.

In the previous discussion, the results of the structural equation modelling (SEM) have shown the effect of an integrated model. Beyond the SEM analysis, a further analysis was undertaken to understand the more specific impacts. Specifically, hierarchical regression analysis was undertaken by unbundling the integrated overall model and was conducted on each dimension of supplier performance. All the company- and country-related constructs are regressed (in a hierarchical settings) with three supplier performance indicator variables. The hierarchical regression analysis results are presented in Table 5.7.7.2. The reported regression

results present only the models that incorporate significant F-change and significant variables.

**Table 5.7.7.2 Specific impact on supplier performance criteria**

<b>Explanatory variables: PCI and PDA; Dependent variable: Product quality performance</b>						
R <sup>2</sup> Model 1 (PCI)	R <sup>2</sup> Model 2 (PCI, PDA)	R <sup>2</sup> change	F-change	F-change sig.	Standardised $\beta$	t-value
.239	.396	.154	69.55	.000	PCI = .12 PDA = .54	PCI = 1.79* PDA = 8.34**
<b>Explanatory variables: GRP and DSA; Dependent variable: Delivery performance</b>						
R <sup>2</sup> Model 1 (GRP)	R <sup>2</sup> Model 2 (GRP, DSA)	R <sup>2</sup> change	F-change	F-change sig.	Standardised $\beta$	t-value
.393	.514	.121	67.81	.000	GRP = .33 DSA = .45	GRP = 6.59** DSA = 8.24**
<b>Explanatory variables: GRP and PRA; Dependent variable: Price performance</b>						
R <sup>2</sup> Model 1 (GRP)	R <sup>2</sup> Model 2 (GRP, PRA)	R <sup>2</sup> change	F-change	F-change sig.	Standardised $\beta$	t-value
.196	.241	.05	18.24	.000	GRP = .29 PRA = .27	GRP = 4.54** PRA = 4.27**

\* indicates  $p < .05$  (critical  $t$ -value at 5%, one-tailed 1.645); \*\* indicates  $p < .001$

According to the hierarchical regression results, it is clearly demonstrated that the two most important variables contributing to the specific supplier performance criterion are country- and company-related.

## 5.8 Discussion and implications

The results of the study show that the company effect has a higher significance than the country effect on international supplier performance. Similar to the results of the few studies (Baldauf et al., 2009; Bradley, 2001; Hsieh et al., 2004) that have incorporated both company and country association, the results of this study substantiate the dominance of the company effect over the country effect. However, with regard to country effect, a notable result is that, after using several country constructs, the impact of geographical proximity is the only significant country construct that impacts on international supplier performance. In the case of Empirical Paper 1 of this thesis, the relatively small impact ( $\beta = .14$ ) of product-country image (PCI) was detected with a much larger coefficient value from company effect ( $\beta =$

.70). Regarding Empirical Paper 2 of this thesis, the company effect was reduced ( $\beta = .70$  to  $\beta = .57$ ) when a stronger country construct, geographical proximity, was taken into account. In this current study, in the presence of several country constructs, the company effect is static ( $\beta = .57$ ) but product-country image (PCI) became an insignificant contributor to international supplier performance in the presence of the stronger country construct, geographical proximity.

In addition, company effect and geographical proximity together explain around 69% of the variability in international supplier performance. Therefore, the constructs that directly impact on international supplier performance are the company effect and geographical proximity, indicating the insignificant impact of all other country constructs, namely, overall country image, trade-related country infrastructure, the country's regulatory strength and product-country image. However, the significance of more COO constructs is evidenced as three COO constructs (product-country image, geographical proximity and trade-related country infrastructure) explain around 53% of the variance in company effect with strong and moderate beta coefficients. Therefore, the significance of country is more demonstrable when country constructs make a direct positive influence on companies. These findings thus suggest that, although companies gain strength from their country image, companies make the major contribution in creating a strong impact on perceptions of international supplier performance. These results support the observation of national competitiveness guru, Michael Porter (1990, p. 89), who said: "[u]ltimately, only companies themselves can achieve and sustain competitive advantage".

This study contributes to the COO literature by adopting a multi-cue and multidimensional country image perspective, two aspects that have been suggested for better design in the COO literature (Chattalas et al., 2008; Dinnie, 2004; Hsieh et al., 2004; Peterson & Jolibert, 1995;



Verlegh & Steenkamp, 1999). This study has captured most COO dimensions to date by incorporating five COO constructs, two related to a country's overall and product images, and the other three related to the trade-related country image. This research design enabled the identification and estimation of specific country-related impacts. In addition, the inclusion of marketing mix elements as aspects of the company effect satisfies the call for multi-cue settings in COO research and also avoided the extreme abstraction of previous studies by using marketing mix elements to measure the country impact. As a consequence, this study limited the scope for the inflated COO impact associated with previous single-cue designs.

In addition, by asking respondents to assess their existing principal supplier company and its associated country, it was probable that the subject company would be well known to B2B buyers, and that their opinions regarding own industry and product categories did not require them to imagine hypothetical scenarios. Based on previous literature, this study relied on the cognitive component of attitude theory (i.e. experience and knowledge) and the widely accepted view that B2B buyers are more rational than consumers. In this context, a questionnaire-based survey was considered as an appropriate research instrument as it was more likely to capture rational and verbally-expressed country associations, rather than emotionally-held COO aspects (Boddy, 2005; Koll et al., 2010). Therefore, by using a research instrument that captures rational aspects and a respondent group who answers questions based on real-world experience, the study avoided some elements of previous COO research in which it has been criticised for the "lack of realistic managerial relevance"; "consumers' impoverished origin knowledge base"; "explaining more of the variance than reality" (Samiee, 2011); "lack of familiarity"; "uninformed responses" (Usunier & Cestre, 2008); etc.

In addressing the reality of the global supply chain that is increasingly turning to products 'Made in the world (MIW)', this study considered raw materials and component parts as the

product category of investigation. Industrial buyers are now increasingly purchasing raw materials and components from globally scattered sources with these raw materials and components later processed, assembled or resold to other industrial buyers. In doing so, industrial buyers need to examine country-related aspects and more closely consider attributes of the supplier company. The examples of global value chain practices followed by Apple, Boeing and IKEA (See Table 4.3.1, 4.3.2, 4.3.3 and associated discussions in the Empirical Paper 2) have provided evidence of the higher significance of the supplier company. The findings of this study substantiate the dominance of company image over country image, although the significance of country impact is noticeable in the case of geographical proximity ( $\beta = .32$  on supplier performance) of the source country. However, while this study has provided evidence of the dominance of company-related over country-related considerations, there is a plausible argument why the importance of country is significantly understated. This speculative claim is based on the proposition that most buyers will only consider suppliers from a limited range of countries and that, within those countries, they carefully choose their suppliers. For example, B2B purchasers of electronics components may only consider Japan, China, and Taiwan in their 'evoked set' of supplier countries. In this sense, the importance of country would be arguably understated. This could be a worthy question for further research.

The results of this study also substantiate the greater role of logistics in globally scattered sourcing and the associated cost due to the multiple transportation and delivery requirements in producing one final product. The country significance was also evidenced through the company effect (with three COO constructs explaining around 53% of the variance in company effect). Similar findings were also reported by Bradley (2001). Therefore, in general, this study's results demonstrated the greater influence of the supplier company

influence and the comparatively lesser influence of the supplier's country, in the case of intermediate goods imported by B2B buyers.

Another noticeable result of this study is the strong significance of geographical proximity as a direct explanatory variable of international supplier performance and as an indirect antecedent through company effect. One possible explanation for the high influence of this COO-related construct could be that the GRP construct is composed of issues that are more objective as they are related to monetary cost and cost of time (distance, transport cost and travel time of shipment). In comparison, other popularly known COO constructs, CI (country image) and PCI (product-country image), and trade-related COO constructs, TCI (trade-related country infrastructure) and CRS (country's regulatory strength), are expressed either at a higher level of abstraction or are more subjective in nature. Moreover, the study's respondents were B2B buyers of intermediate goods who, in many cases and unlike consumers, have to further process and later sell their purchases to other parties at a margin. The B2B buyers are more likely to be cost-driven (for a specified minimum level of product quality) than final consumers. Another reason for the considerable impact of geographical proximity, along with the company effect in the model, is the popular 'tyranny of distance' phenomenon (Blainey, 1966) attributed to Australia. In a recent working paper for the Australian Treasury Department, Battersby and Ewing (2005) discussed the negative impact on Australia's trade owing to its geographical remoteness. The report argued that Australia is the country in the world that is most remote from world economic activity, with the exception of New Zealand. Another estimate shows that if Australia was closer to the world economy, Australian trade would be 50% greater than that of the UK (Battersby & Ewing, 2005, p. 15). In addition, Dr Craig Emerson MP commented "[f]or Australia, the tyranny of distance from Europe will be replaced by the power of proximity to Asia" (Emerson, 2012).

Notwithstanding, in connection with this discussion, the impact of distance found in this study is in line with other study findings and media reports.

In addition to the direct effect on supplier performance, the indirect effect of geographical proximity through the company effect is also significant on international supplier performance. As stated earlier, two important marketing mix elements—price and delivery may have an obvious dependence on a country's geographical proximity. This finding is also consistent with the recent changing pattern of the global value chain known as 'back-shoring' or 'near-shoring', both of which are strongly driven by proximity concerns. In addition to the evidence from the SEM results, the findings from the hierarchical regression analysis also substantiate the significance of geographical proximity to Australian B2B buyers. In the case of two of the three criteria of supplier performance, the significant impact of geographical proximity was detected. With regard to delivery performance, geographical proximity explains around 40% of the variability in the absence of the company's delivery aspects (DSA) and 51% when both variables are included in the model. In the case of price performance, geographical proximity explains nearly 20% of the variance in the absence of the company's pricing aspects (PRA) and 24% in the presence of PRA. These results indicate the concern of B2B managers for transportation cost in importing to Australia that again can be associated with the 'tyranny of distance' phenomenon.

The study results also relate to the familiar and long-established COO differentiating factor of developed *versus* developing countries. The overall country image (CI) that consistently reflects a country's overall development level, also clearly explains the relationship with other trade-related constructs. The study results show that developed countries tend to have better trade-related country infrastructure (TCI) and stronger regulatory strength (CRS) which is a well-established perception. In addition, the study results indicate that more developed countries are also enjoying a higher product-country image (PCI). These findings need to be

analysed with caution, however, as, in the case of technological products, developed countries may have a high reputation but, at the same time, some developing countries are also well known for technological production. Similarly, in the case of processed food products, some developed country products, such as juice concentrate, cheese and butter, are regarded with a higher PCI while, with for other food products, such as rice, raw tea and raw spices, developing countries hold a higher PCI.

The significance of trade-related country infrastructure (TCI) directly influences the company effect but not international supplier performance. Unlike proximity measures, the TCI construct includes several issues that require more subjective assessments, which may vary more with individual countries' differences. However, in this study, the impact of TCI on the company effect shows that better country infrastructure related to trade enables that country's companies to perform better as suppliers.

One unexpected result of the model is the insignificance of a country's regulatory strength on company effect. This is surprising because the real-world experience differs from this finding. As the results explain, a country's regulatory strength does not make the supplier company perform better. Despite the negative image regarding the ethical treatment of workers in Bangladesh, Target Australia sources from Bangladeshi factories. In this regard, Target Australia publishes a full list of factories on their website. These factories are inspected from time to time and ethical treatment of workers is ensured. Similarly, Adidas sources most of its products from factories in China, Indonesia and India (Adidas, 2012, p. 81). At the same time, none of these countries is well regarded for the ethical treatment of workers, high product quality standards or the safety of intellectual property rights. In these countries, Adidas imposes the regulatory standards, and not the sourcing country government. Similarly, Apple sources from China despite the negative image of China in terms of safeguarding intellectual property rights. Therefore, in regard to the regulatory issue, results

indicate that the country image does not play any significant role on the supplier company effect; rather, the buyer and supplier company work together to enforce standards for their own sustainability. Again, an alternative explanation is that in their principal evaluating supplier companies and countries, respondents only considered those countries and companies whose regulatory regimes were minimally acceptable and allowed them to trade with confidence- a further issue for future research.

A very important finding of this study is the statistical significance of the influence of product-country image (PCI) on the supplier's product quality performance. According to the hierarchical regression results, PCI explains around 24% of the variance in the supplier's product quality performance, and which further increases to 40% when combined with company's product aspects. Although the beta coefficient of PCI is .12, its impact on product quality performance is significant. This result substantiates the significant impact of the product-country image construct on B2B buyers' assessment of supplier performance. Moreover, the significance of the PCI construct was detected despite taking several steps to lessen COO overestimation, and thus, this can be considered as evidence against recent criticism of the COO relevance, specifically in B2B purchasing.

### **5.9 Limitations and future research**

Like other studies, the present study has limitations. Firstly, the extant research suggested the use of cognitive, affective and conative components of attitude theory, while this study captured only the cognitive component because we were not undertaking a preference study where emotion plays an important role. There is scope in future research to accommodate several attitudinal components of country image. Secondly, the model testing took place only in Australia owing to resource limitations. Future studies can use this model and extend the findings of this study by including multinational samples. Thirdly, the results of this model

indicate the strong influence of geographical proximity; however, as discussed, this may be because Australia was the survey country. Therefore, future studies could use this model and extend the findings of this study to include multinational samples (geographically remote and connected country samples) and could test the cross-country validation of this model. In addition, the model can also be tested and extended to specific industry segments. For example, the focus of the current study on intermediate goods purchases, by definition, excluded purchasing for resale and, thus, excluded retail purchasing, clearly a very important category of B2B purchasing. By accommodating scale items used in previous studies and the use of new scale items related to trade, this model may be used in different industry classes with minor changes. Fourthly, although the survey respondents were representative of purchasing managers working in Australia, the inclusion of managers in the survey was not random but was, in effect, a random sample within panels. Therefore, more randomly selected members could have different views to those included through panels. Finally, the current study only considered international B2B purchasing and specifically excluded B2B purchasing from local, domestic suppliers. In this way, the potential influence of the COO effect and any preference for local suppliers was negated in the study design. Notwithstanding these limitations, the results of this study provide new insights into the decision-making processes of B2B purchasing managers and the relative importance of COO and country-related factors.

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## CHAPTER6

### Conclusion

This concluding chapter simply makes an effort to make the long story short. In doing so, the chapter presents the findings of the studies from the three empirical papers, discusses the inter-linkages of the findings, outlines the contributions and practical implications, points out the study's limitations and suggests avenues for future research.

The literature review chapter established the basic foundation of the conceptual model of this thesis. Addressing the relevance debate in relation to COO research, the review argued and concluded that B2B procurement/purchasing decision makers have hitherto been largely ignored, but would be the most relevant group of respondents for COO studies. The higher familiarity and involvement of B2B buyers with purchased products, countries and companies; the increasing importance of intermediate goods in global trade; the interconnectedness of the COO literature with global purchasing; international supplier selection; and international trade and economics all provide evidence that B2B purchasing is a largely overlooked, but vitally important area of focus in COO studies. In addition, COO meta-analyses confirm the significance of B2B buyers; whereas the literature review confirmed the dearth of COO studies in the B2B domain. Based on conceptual and methodological underpinnings, the hypothesised model (Figure 2.9.1) incorporated supplier company aspects, and a country's development-related, product-related and trade-related aspects to estimate their effects on B2B buyer-perceived international supplier performance. Based on this theoretical model, the three empirical investigations were hypothesised and tested.

The conceptual framework developed in the literature review chapter of this thesis, therefore, captures the rational aspects and a respondent group who would answer questions based on

real-world experience. In this way, it avoided some elements of previous COO research which has been criticised for its “lack of realistic managerial relevance”; “consumers’ impoverished origin knowledge base”; “explaining more of the variance than reality” (Samiee, 2011); “lack of familiarity”; and “uninformed responses” (Usunier & Cestre, 2008); etc. In addition, the conceptual model of this research study conforms to two uncontested and well-accepted research guidelines for COO investigations in the extant literature (Chattalas et al., 2008; Dinnie, 2004; Hsieh et al., 2004; Peterson & Jolibert, 1995; Verlegh & Steenkamp, 1999). These guidelines are, firstly, adopting a multi-cue setting (using COO with other cues) and, secondly, incorporating a multidimensional country image perspective (that is, using more than one COO construct to capture different COO aspects).

## **6.1 Findings from the empirical papers**

### ***6.1.1 Empirical Paper 1: “International Supplier Performance: Impact of Country and Company Antecedents”***

In studying the relative influence of company and country constructs, the results show the dominance of the company effect over the country effect (company effect [CompE]  $\beta = .70$ , product-country image [PCI]  $\beta = .14$ ) in explaining international supplier performance (SPLP). These results conform to the well-established previous COO findings that the country influence diminishes significantly in multi-cue settings. In addition, between the country constructs, the influence of product-country image (PCI) is statistically significant and the effect of overall country image (CI) on supplier performance is insignificant. This finding also answers an important question of the most recent COO meta-analysis (Magnusson & Westjohn, 2011, p. 307), “*is macro country image (overall country image) more or less influential than micro country image (product-country image)?*” The significance of product-country image (PCI) influence on B2B buyers’ assessment of supplier

performance as evidenced in this study may be due to the raw materials and component parts playing a crucial role in determining the quality of final products. In addition, the company effect and product-country image explain 64% of the variance in the outcome construct, supplier performance. Overall country image contributes 66% of the variability in product-country image while product-country image explains around 45% of the observed variance in the company effect.

With regard to the direction of the country image influence, among the three models tested (halo, summary construct and flexible), the halo model (Han, 1989) best fits the data. This study, as the first application of the sequential direction in the country image influence in the B2B setting, provides evidence that B2B buyers of intermediate goods conform to the following directional path: overall country image (CI) → product-country image (PCI) → supplier performance (SPLP). This direction indicates that a high overall country image leads to a higher product-country image which, in turn, leads to higher supplier performance. Statistically significant mediating relationship from overall country image (CI) → product-country image (PCI) → supplier performance (SPLP) also substantiates this directional relationship among these three constructs.

Mediation analysis results also demonstrated the significance of product-country image as an indirect positive contributor to supplier performance (through the company effect). In a practical sense, higher product-country image leads that country's companies to better marketing mix actions and that leads to companies being better international suppliers.

#### *6.1.2 Empirical Paper 2: "International Supplier Performance: The Role of the Infrastructure and Proximity of the Country of Origin"*

In the COO literature, there is a clear absence of consideration of any COO construct to capture international trade-related aspects that are a very important consideration of

B2Bbuyers in their international purchase decisions and their consequent assessment. To fill this gap in the COO literature, this study has developed and validated three new COO constructs that represent trade-related COO aspects. After validating these trade-related COO constructs, the study estimated the conceptual model to understand the relative influence of company- and country-related impacts on international supplier performance. The study results showed that the company effect is comparatively larger ( $\beta = .57$ ) than the significant country construct, geographical proximity ( $\beta = .34$ ), on international supplier performance. As the company is more directly related to performance than the country, this result is consistent with the findings of the few COO studies that investigated company and country constructs together (Baldauf et al., 2009; Bradley, 2001; Hsieh et al., 2004). In contrast, none of these few COO studies used any trade-related COO constructs and none of them provided evidence of such a high ( $\beta = .34$ ) coefficient for any country construct. This result evidences the significance of geographical proximity in intermediate goods purchasing. Two statistically significant constructs (country effect and geographical proximity) contributed to explaining 70% of the variance in the outcome construct, international supplier performance. In addition, three country-related constructs (geographical proximity, trade-related country infrastructure and the country's regulatory strength) explain 50% of the variability in company effect. Therefore, companies within a country gain a significant positive impact from their country's trade-related attributes. However, transforming that positive impact into higher supplier performance depends on the company's internal actions (as measured by the company effect).

In addition to directly influencing supplier performance, geographical proximity also influenced the company effect. This means that a company's actions also depend on its proximity aspects (as the company's actions are rated by international buyers) that finally impact on supplier performance. The results of mediation analysis (showing statistically

significant partial mediation) also substantiate this relationship indicating that geographical proximity significantly influences supplier performance through the company effect.

The results of this study thus demonstrate that trade-related country infrastructure plays a significant role as a country construct, in the absence of the company effect construct. However, along with the company construct, trade-related country infrastructure plays a significant role on the company effect, but not directly on international supplier performance. The statistically significant mediating relationship (full mediation) from trade-related country infrastructure to supplier performance through the company effect therefore indicates that country infrastructure substantially aids that country's companies in improving their marketing mix actions that consequently can be transformed into superior supplier performance.

Among the three new COO constructs, the country's regulatory strength did not have a significant impact on either supplier performance or the company effect. With the real-world concern with regulatory issues in international trade to ensure ethical sourcing, the lack of significance of the country's regulatory strength construct was somewhat unexpected.

### *6.1.3 Empirical Paper 3: "Impact of Country-of-Origin (COO) on Business-to-Business (B2B) Purchasing: Modelling an Integrated Relationship"*

This study estimated the impact of the company effect and five COO constructs on international supplier performance. Among the five COO constructs, two are considered as traditional COO constructs (overall country image and product-country image) and the remaining three are trade-related COO constructs (geographical proximity, trade-related country infrastructure and the country's regulatory strength). After estimating this complex model, the company effect ( $\beta = .57$ ) and geographical proximity ( $\beta = .32$ ) were shown to be the two statistically significant constructs impacting on international supplier performance.



The significant country construct in Empirical Paper 1, product-country image, became insignificant in the presence of the more influential trade-related country construct, geographical proximity.

The company effect and geographical proximity together explain 69% of the variance in supplier performance. Three country constructs (product-country image, geographical proximity and trade-related country infrastructure) explain 53% of the variability in company effect. Overall country image strongly influences buyers' perception of the other country constructs except for geographical proximity. Overall country image explains 73% of the variation in product-country image, 62% of the variation in trade-related country infrastructure, and 67% of the variation in the country's regulatory strength. Therefore, the country's development level is a very important criterion that enables international B2B buyers to form positive/negative perceptions about a country's product and trade image.

In addition to the direct effect on supplier performance, the indirect effect of geographical proximity, through the company effect, is also significant on international supplier performance. Two important marketing mix elements, that is, price and delivery may have an obvious dependence on a country's geographical proximity, more specifically in the case of international trade. However, the very strong predictive role of geographical proximity may be influenced by the geographical remoteness of the survey country, Australia. In this sense, these findings may not necessarily be replicated among European or North-American samples.

In addition to the evidence from the structural equation modelling (SEM) results, the findings from the hierarchical regression analysis substantiate the significance of both company- and country-related constructs in explaining the impact on international supplier performance. Three indicator variables of supplier performance (product quality performance, delivery

performance and price performance) were considered as dependent variables in the hierarchical regression setting that included each company- and country-related construct as the independent variable. The results of hierarchical regression show the significant importance of the conceptually relevant country construct in explaining each indicator of supplier performance. In explaining product quality performance, the two significant constructs were the company's product-related aspect ( $\beta = .54$ ) and product-country image ( $\beta = .12$ ). Both variables together explain 40% of the variance in product quality performance. With regard to the delivery performance of suppliers, the supplier company's delivery and service aspect ( $\beta = .45$ ) and the source country's geographical proximity ( $\beta = .33$ ) are statistically significant contributors, and these two constructs explain 51% of the variance in the dependent variable. In predicting the price performance of the supplier, the supplier company's pricing aspect ( $\beta = .27$ ) and source country's geographical proximity ( $\beta = .29$ ) are statistically significant contributors. Although the conceptually relevant constructs became the significant explanatory variables of price performance, the predictive ability of these variables is relatively poor ( $R^2 = .24$ ). Considering the three hierarchical regression equations, evidence was provided that each supplier performance indicator is significantly influenced by one company variable and another country variable (the remaining three company variables are insignificant in each case in presence of significant country variable). Therefore, this study corroborates the significance of the effect of country-related constructs on supplier performance from the B2B perspective.

## **6.2 Overall conclusion of the thesis**

The thesis clearly evidences the role of company- and country-related issues on B2B buyers' assessment of international suppliers. The study also justifies the relevance of COO investigation from the B2B perspective that encompasses international trade realities. The

study also observed that trade-related country constructs significantly influence supplier company actions and supplier performance. Therefore, the study results substantiate the view that the extant COO literature has failed to grasp the urgency of developing and validating trade-related country constructs, a significant research gap filled by this study. The study findings also reiterate the positive impression among the B2B buyers with regard to developed country products, a consistent theme in COO research. In addition, this study's results present new findings that B2B buyers also hold positive perceptions about developed countries' trade infrastructure and regulatory strength.

### **6.3 Academic contributions of the thesis**

The research design and investigations in this thesis have attempted to answer several questions surrounding COO research in recent times. The thesis makes a significant contribution to the COO literature by addressing the relevance debate; the inclusion of a well-informed respondent group with a high level of familiarity; introducing an outcome construct with greater real-world significance; testing direction of COO influences in the B2B domain; conceptualising the multidimensionality of the COO literature; the development of new constructs; and testing of a multi-cue (the COO cue along with other cues) COO research model with multidimensional COO constructs (multiple COO constructs in one model). The academic contributions of this thesis can be explained from the conceptual/theoretical and methodological perspectives as outlined in the introductory chapter.

#### ***6.3.1 Conceptual/theoretical contributions***

Firstly, by addressing recent criticisms of COO research, this study has shown that COO research is both relevant and consistent. In making such a claim, this study first considered recent trends in global trade. Among the recent trade trends, it has been noted that intermediate goods are consistently contributing more than 50% of global trade. Moreover,

due to increasingly fragmented global production processes, it is manifestly clear that B2B buyers are very influential purchase decision makers, and that their country choices can be a fundamentally important decision. Considering that major criticisms of COO research include consumers' unfamiliarity with the product category and their poor origin recognition ability, having B2B buyers as respondents is a valid and conceptually worthwhile response to such criticism. In this way, the focus on B2B buyers is a notable counterpoint to the prevailing preoccupation of COO researchers with consumers' responses to patently contrived choice scenarios. By the use of a survey-based questionnaire of buyers' personal experiences as the data collection tool, this study acknowledges recent developments in the literature that survey-based studies are more likely to capture rational and verbally-expressed country associations than emotionally-held COO aspects (Boddy, 2005; Koll et al., 2010). Once again, in being consistent, this study develops the conceptual framework on the basis of the cognitive component of attitude theory. Again, B2B buyers and their purchasing patterns are considered as rational rather than emotional (Samiee, 1994).

Secondly, COO research has also been criticised for considering an unrealistic outcome construct, with country preference more often a mental state that may not reflect any realistic purchase decisions. In capturing a realistic outcome construct, this study relates antecedents to current suppliers' performance assessment by B2B buyers, which does not require any hypothetical answers or responses on unfamiliar issues. Moreover, supplier preference is obviously directed at getting higher performance from a supplier. In consumer-centric COO studies, 'purchase intention' is considered as being closer to actual purchase situations (Granzin & Painter, 2001; Klein et al., 1998; Verleghe, 2007). In the B2B domain, perceptions of supplier performance will intrinsically relate to actual past performance, as distinct from an expectation of future performance. In this sense, it is arguably likely to be a more reliable predictor of actual supplier choice in the future.

Thirdly, COO research critics (Usunier, 2006) highlighted the interconnectedness of the COO literature with other literature. However, due to adhering to consumer-based studies, even the COO research critics have merely tried to bring conceptual interconnectedness to COO research investigations. As this study considers the B2B purchasing environment, there are several established research fields that have clear overlapping concerns with COO research. Therefore, this study has examined relevant literature from global purchasing, international supplier selection, international trade and B2B-centric COO studies. As a consequence, a noteworthy gap in the COO literature was identified that indicated a clear absence of any trade-related country constructs being considered as having relevance in international B2B purchase decisions.

Fourthly, this study conceptualised the development of new COO constructs. The international trade and international purchase literature provides clear evidence of the impact of trade related facets on trade performance. However, to date, there is no evidence of any effort in the COO research to conceptualise country trade related variables into operational constructs. By conceptualising three trade related COO constructs, geographical proximity, country's trade related infrastructure, and country's regulatory strength this thesis advances this aspect of the COO literature.

Fifthly, COO research has been highly criticised for overestimation of the COO effect (Usunier & Carstre, 2007). In addressing this criticism, this study follows one of the most uncontested issues in COO research which is that, in multi-cue settings, the COO impact usually diminishes (Agrawal & Kamakura, 1999; Bilkey & Nes, 1982; Chattalas et al., 2008; Dinnie, 2004; Johansson et al., 1985; Wall et al., 1991). Along with a multi-cue setting, this study also included a rarity in COO research by considering multiple COO cues in one investigation (Pappu et al., 2007). Therefore, this study adopted a multi-cue setting by

considering company and country cues (as introduced by Bradley, 2001) and used multiple COO constructs in a single model that enabled the capture of different aspects of COO.

### *6.3.2 Methodological contributions*

This study makes a number of methodological contributions. Firstly, the development and validation of new constructs is a methodological contribution. This study developed and validated three trade-related COO constructs of geographical proximity, country's trade related infrastructure, and country's regulatory strength by following prescribed methodological rigour that enables researchers to use the constructs in future studies with confidence. By verifying the convergent and discriminant validity of these constructs through principal component analysis (PCA) and confirmatory factor analysis (CFA), this study can confidently suggest future use and further modification of these COO constructs.

Secondly, empirical paper 3 of this study investigated five COO constructs (along with company constructs) and, with the greater number of constructs, is thus arguably a notable contribution to the COO field. In addition, it is a noteworthy contribution in the COO field that all the three models followed multi cue settings, and multiple COO cues in one model along with testing mediating relationships, which is a methodological rarity in COO research.

Thirdly, it is also a proof of methodological soundness that in presence of many variables and many constructs in the models all the fit indices, reliability and validity measures are within desirable standards.

Fourthly, it is also evidence of methodological soundness that, in the presence of many variables and many constructs in the models, all the fit indices, reliability and validity measures are within accepted standards.

Finally, three competing models (the halo, summary construct and flexible models) have previously been used in consumer-based COO research to gain an understanding of the sequential paths among overall country image, product-country image and attitude. However, to date, there has been no published effort to test the directional relationships among these constructs in B2B settings. This study fills this gap by investigating the directional influence among overall country image, product-country image and supplier performance. This study provides evidence that the ‘halo model’ is the model with the best fit, which contradicts the initial argument of Han (1989) that the halo model is not consistent with buyers (such as B2B buyers) with a high level of familiarity.

This research addresses several COO criticisms regarding relevance and consistency. Also, several additions are made by this research to the existing body of knowledge regarding COO. The following table, Table 6.3.2.1, pinpoints significant contributions made by this research:

**Table 6.3.2.1 Significant contributions to the literature by this thesis**

<b>Contribution criteria</b>	<b>Addressed in this research</b>
Investigating consequential variable previously ignored (Summers, 2001)	B2B-centric COO research has mostly considered supplier or country preference, or brand equity, or profitability but has never used supplier performance as an outcome construct. More clearly, high supplier performance should be the consequence of higher supplier preference.
Studying antecedent variables previously overlooked (Smith, 2003, p. 320)	This research has not only studied trade-related antecedent variables previously overlooked but has also developed and validated 3 new COO constructs.
Filling a knowledge gap (Summers, 2001)	This study has tested three competing models (halo model, summary construct model and flexible model) in the B2B setting for the first time. In addition, development of new constructs can be considered as filling a knowledge gap.
Examining overlooked mediating variable (Smith, 2003)	In B2B-centric COO studies, the mediating relationship among multiple COO constructs (CI and PCI) and supplier performance has not previously been investigated. The mediating role of PCI has not been investigated in B2B settings in COO studies.

## 6.4 Practical implications of the thesis findings

This research addressed several real-world phenomena that can have obvious practical implications.

Firstly, according to the study results, overall country image (CI) → product-country image (PCI) → supplier performance (SPLP). Therefore, B2B managers perceive that developed countries normally have a higher product-country image and that this leads to higher supplier performance. Again, the statistically insignificant relationship between overall country image and supplier performance indicates that the developed country image alone is not enough to generate superior supplier performance; rather, the findings indicate that only a developed country with a high product-country image can generate higher supplier performance. For example, in importing food ingredients developed countries are preferred by buyers: if Italy and Germany are the options, Italy has the higher PCI for food ingredients and an Italian supplier generates higher supplier performance. Therefore, this study revealed that a crucial role of PCI is in aiding B2B buyers in making purchase decisions regarding intermediate goods. This finding is consistent with previous COO studies, which demonstrated the significance of PCI among the B2B respondents (Baldauf et al., 2009; Knight et al., 2007; Knight et al., 2008).

Secondly, a country's PCI is clearly strongly associated with a particular industry's strength or competitiveness. Gaining substantial advantage from PCI requires coordinated efforts from industry participants and government. Domestic rivalry within industries plays a vital role in gaining national competitiveness according to determinants of national competitiveness (Porter, 1990). This phenomenon of within-industry rivalry is a prerequisite of the development of PCI. However, the COO facet 'PCI' is rarely applied in addressing national competitiveness in COO research. When companies that collectively belong to a particular industry originating from one country deliver consistently high performance, the product's origin country gains a high PCI. Moreover, the involvement of government with industry complements PCI and enhances global positioning. This has implications for government policy makers. For example, as previously mentioned (Empirical Paper 1), Indonesia is the



global leader in producing palm oil and two other major producers are Malaysia and Thailand. However, owing to combined government and industry efforts, the highest PCI for palm oil is attributed to Malaysia; not Indonesia or Thailand. In this regard, there is also the importance of country image advertising in developing a high PCI (as the Malaysian government does in the case of palm oil).

Thirdly, the effect of product-country image is positive on the company effect and a positive company effect leads to higher supplier performance. This relationship supports the significance of PCI in purchasing intermediate products from international sources. As the investigation has considered post-purchase assessment, it indicates that the country with a high PCI tends to have more highly rated companies in that field. As a consequence, this leads to higher supplier performance. Therefore, B2B buyers should consider a country's product image before selecting a product supplier from a foreign country.

Fourthly, the reality of the global supply chain is increasingly turning products into 'Made in the world (MIW)'. Industrial buyers are now increasingly purchasing raw materials and components from globally scattered sources with these raw materials and components later processed, assembled or resold to other industrial buyers. In doing so, industrial buyers need to examine country-related aspects and more closely consider attributes of the supplier company.

Fifthly, the strong significance of geographical proximity as a direct explanatory variable of international supplier performance indicates that Australia's remote location from global economic activity centres made the significance of geographical proximity very high in B2B buyers' perceptions. Geographical proximity measures are more objective and related to monetary cost and cost of time (distance, transport cost and travel time of shipment). As B2B buyers must sell their products at a profit, they are very concerned about measurable cost

components. Therefore, in real-world business practices, the significance of geographical proximity is a logical concern. Though the current study introduced geographical proximity as a construct in COO research, past B2B centric COO studies have considered the importance of variables such as delivery reliability, transportation cost, timely delivery, delivery performance, delivery of products on schedule etc. It is logical that delivery and transportation cost will be favourable for B2B buyers if the geographical proximity is high. All of these variables are clearly associated with geographical proximity and, thus, the statistical significance of geographical proximity construct is also consistent with the extant COO research.

Sixthly, the significance of trade-related country infrastructure (TCI) directly influences the company effect but not the international supplier performance. Unlike proximity measures, the TCI construct includes several issues that require more subjective assessments, which may vary more due to the differences between individual countries. However, in this study, the impact of TCI on the company effect shows that better country infrastructure in relation to trade enables that country's companies to perform better as suppliers. In addition, the significance of trade-related infrastructure in the current study is comparable to the findings of international trade literature that has substantiated the impact of trade facilitation.

Seventhly, trade-related country infrastructure (TCI) influences international supplier performance through the company effect. This finding provides strong evidence that might enable exporter country industries to pursue country governments to invest in trade related infrastructural development.

Eighthly, security of intellectual property has previously been reported as a significant variable in global sourcing (Maltz et al. 2011; Monczka et al., 2005; Trent, 2007) literature. This means that a country's regulatory strength should have a statistically significant relationship with international supplier performance or on the company effect. However, the

current study reports an insignificant relationship in this case. Interestingly, the “real world” sourcing practices are in accordance with the current study finding that a country’s regulatory strength does not significantly influence the company’s conformance to ethical standards. For instance, despite the negative image for absence of ethical treatment of workers in Bangladesh, Target Australia continues to source from Bangladeshi factories. In this regard Target Australia publishes a full list of factories on their website. These factories are inspected from time to time and thus the ethical treatment of workers is claimed to be ensured. Similarly, Adidas sources most of its products from factories in China, Indonesia and India (Adidas, 2012, p. 81). None of these countries is well regarded for their ethical treatment of workers, high product quality standards or safety of intellectual property rights. In these countries, Adidas imposes the regulatory standards; not the sourcing or hosting country government. Similarly, Apple sources from China despite the negative image of China in safeguarding intellectual property rights or the health and safety of factory workers. The implication from this finding is that international buyers can enforce and ensure suppliers’ ethical actions by maintaining an inspection frequency and enforcing minimum standards. Moreover, failure to maintaining buyer-imposed standards will lead to the suppliers’ loss of future orders that works as a safeguard to buyers.

## **6.5 Limitations of the thesis**

Like other studies, the present study has limitations. Firstly, the extant research suggested the use of cognitive, affective and conative components of attitude theory, while this study captured only the cognitive component, as it was not a preference study in which emotion plays an important role. Secondly, the model testing took place only in Australia owing to resource limitations. Thirdly, the results of this model indicate the strong influence of geographical proximity; however, as discussed, this may be because Australia was the survey

country. Fourthly, although the survey respondents were representative of purchasing managers working in Australia, the inclusion of managers in the survey was not random but was, in effect, a random sample within a panel. Therefore, respondents selected more randomly could have different views to those included through panels. Fifthly, Australia is a country of migrants and purchasing managers' previous associations with their countries of birth may be emotional, rather than rational. In this context, the survey instrument only focused on rational aspects and not emotional aspects. As the B2B buyers typically have to make purchase decisions under organisational guidelines, fulfil organisational profitability targets, and satisfy customers; the likelihood of rational decision-making could be expected to increase. Yet, there remains the possibility of emotional attachment to their countries-of-birth when evaluating respective supplier countries and companies. Sixthly, the current study only considered international B2B purchasing, and specifically excluded B2B purchasing from local, domestic suppliers. In this way, the potential influence of the COO effect and any preference for local suppliers was negated in the study design. Finally, the current study of B2B buyers was limited to purchasers of intermediate goods, and thus excluded purchasers of finished goods. Since, both groups of goods and B2B buyers are very large and economically influential, the issue of potential differences between these groups of buyers is, for now, unknown.

Notwithstanding these limitations, the results of this study provide new insights into the decision-making processes of B2B purchasing managers and the relative importance of COO and country-related factors.

## **6.6 Future research directions**

This research study only considered the cognitive component of attitude theory. Therefore, future research could extend this study by including the affective and conative components of

attitude theory. The present research model developed scale items in such a way that these items could be used in different industry settings; therefore, the models of this study could be tested and extended to specific industry segments. For example, the focus of the current study on intermediate goods purchases, by definition, excluded purchasing finished goods for resale and thus excluded retail purchasing, clearly a very important category of B2B purchasing. The current study is limited to Australian samples due to resource limitations. Therefore, future studies could use this model and extend the findings of this study to include multinational samples (geographically remote and connected country samples) and could test the cross-country validation of this model. Another attractive avenue for future research could be model extension. For example, the theoretical framework for this thesis included cultural proximity (or “cultural distance”) as an antecedent of supplier performance but this was not tested in the study due to the limited extent of this research. As cultural proximity is another field of research that has applications in diverse areas of the literature, investigating the impact of cultural proximity on supplier performance would be a worthy contribution to COO literature. As this study developed three trade-related country constructs, the use of these constructs in other product categories (i.e. finished goods, food products, industrial equipment, etc.) could also widen the scope for further refinement of these constructs. Finally, the role of a country’s regulatory strength on the company image and supplier performance produced an inconclusive finding. Therefore, further interview-based investigations can be undertaken to understand the role of country and the role of buyer standards in improving the ethical standards of suppliers, especially those in developing countries.

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## Appendix 1: Extant studies in B2B-centric country-of-origin (COO) literature

Study	Purpose	Variables reported	Survey methodology/types of questions/ method of analysis/sample size/type of firm/product category/country of survey
Nagashima (1970)	Investigating US and Japanese businessmen's perceptions about products 'Made in' the USA, Japan, Germany, England and France.	Price and value (inexpensive, reasonable pricing, reliability, luxury, exclusivity, heavy industry product), service and engineering (workmanship, technical advancement, mass production, spread of distribution, inventive) advertising and reputation (pride of ownership, level of advertising, brand recognition, design and style (variety of size & model, external appearance, use of colour), consumers' profile (for young people, male or female, social class)	Mail survey/ bipolar 7-point semantic differential scale/ mean, percentile, descriptive information/ 230 (USA) and 100 (Japan)/ manufacturers (USA) and companies (Japan)/ automobile, electrical appliances, textiles, cosmetics, foods, pharmaceuticals/ USA and Japan.
Nagashima (1977)	Investigating Japanese businessmen's perceptual change about products' 'Made in' image over an eight-year (1967–1975) period.	Price and value (inexpensive, reasonable pricing, reliability, luxury, exclusivity, heavy industry product), service and engineering (workmanship, technical advancement, mass production, spread of distribution, inventive) advertising and reputation (pride of ownership, level of advertising, brand recognition, design and style (variety of size & model, external appearance, use of colour), consumers' profile (for young people, gender orientation, social class)	Mail survey/ bipolar 7-point semantic differential scale/ mean, percentile, descriptive information/ N = 100/ companies/ automobile, electrical appliances, textiles, cosmetics, foods, pharmaceuticals/ Japan.
White and Cundiff (1978)	Understanding the psychological influence of price and country of manufacture on purchasing managers.	Independent variables: price and country of manufacture. Control variables: delivery and service. Dependent variable: perception of product quality. Countries included as country of manufacture are the United States, West Germany, Japan, or Brazil.	Mail survey/ hypothetical buying situation, 7-point semantic differential scale/ ANOVA using experimental data/ random sampling/ N = 236/ Not reported/ industrial lift truck, metal working machine tool, dictation system/ USA
Chasin and Jaffe (1979)	Understanding generalised perceptions of products that originated from several Eastern European countries.	Product Attributes: Quality, workmanship, style, dependability, and advanced technology. Marketing values: Credit /terms, value for money, on time delivery, reputation, maintenance/ service.	Personal interviews/ nine point scale in performance attributes and overall rating, later transformed to a 0-100 range/ rank order, percentile, correlations/ N = 82/ firms with sales volume of \$1,000,000/ building materials, chemical products, electrical equipment, farm equipment, machine tools, paper products, passenger aircraft, scientific precision equipment, textiles, turbines and generators/ USA (New

Study	Purpose	Variables reported	Survey methodology/types of questions/ method of analysis/sample size/type of firm/product category/country of survey
			York metropolitan area).
White (1979)	Examining organisational buyers' perceptions (stereotypes) of products from Western industrialised countries including the USA, West Germany, France, Italy and England.	Product quality dimension: quality, reliability, durability, workmanship, level of technical advancement, and inventiveness. Marketing characteristics dimension: highly advertised and promoted, recognised brand names, easy to service, large choice of size and model. Price dimension: expensive, and reasonably priced.	Mail survey with structured questionnaire/ 7-point semantic differential scale/ principal component analysis, mean, standard deviation, ANOVA, pairwise comparisons/ random selection, managers with over ten years of experience participated/ N = 213/ Not reported/ industrial products in general/ USA
Niffenegger, White and Marmett (1980)	Studying the product stereotype image of British retail managers regarding products that originated from France, the USA and Britain.	Price and value: inexpensive/expensive, reliable/unreliable, luxury items/necessary items, exclusive/common. Advertising and reputation: great prestige in ownership, much advertising, recognisable brand names. Service and engineering: technically advanced, mass-produced, easily obtainable, inventive, careful workmanship. Design and style: large choice of size and model, more concerned with outward appearance, clever use of colour. Consumer profile: more for young people, more for men, upper class.	Self-administered questionnaire with personal drop off and pick up/7-point semantic differential scales/ mean score, graphical plots/ Quota sampling aimed to represent food stores, automotive showrooms, variety stores, speciality stores/ N = 92/ retail stores/ automobiles, electrical appliances, textiles, cosmetics, foods, pharmaceutical products/ UK (Bristol).
Niffenegger, White and Marmett (1982)	Measuring British and French retail managers' country stereotype attitudes towards US products.	Price and value: inexpensive/expensive, reliable/unreliable, luxury items/necessary items, exclusive/common. Advertising and reputation: great prestige in ownership, recognisable brand names. Service and engineering: technically advanced, mass-produced, easily obtainable. Design and style: large choice of size and model, good use of colour. Consumer profile: more for young people, more for men.	Self-administered questionnaire with personal drop off and pick up/ semantic differential scales/ mean rating, graphical plots, t- test of mean difference, $\lambda^2$ test/ Quota sampling aimed at representing major types of consumer stores like food, appliances, transportation products, and speciality stores/ British N = 92, French N = 71/ retail stores/ automobiles, electrical appliances, textiles, cosmetics, foods, pharmaceutical products/ UK (Bristol) and France (Lyons).
Ghymn (1983)	Investigating the purchasing behaviour of US import managers to reveal major determinants of their import	Two broad categories of import decision variables reported. Product-oriented variables: brand recognition, product quality, price, product safety, marketability (domestic	Structured questionnaire survey with judgemental sampling/ items rated using 5-point Likert scale/ descriptive statistics, multivariate discriminant analysis/ descriptive statistics part N



Study	Purpose	Variables reported	Survey methodology/types of questions/ method of analysis/sample size/type of firm/product category/country of survey
	decisions. Identifying differences in important sourcing criteria between western European countries and least developed countries (LDCs).	demand), product style/feature, packaging, product uniqueness. Service-oriented variables: timely delivery, dependable long-term supply, ordering/shipping procedures, transport cost, payment method, length of association, product promotion.	= 198, discriminant analysis N = 155/ multinational corporations/ consumer products: footwear, toys, clothing, Chinaware/ USA
Keown (1985)	Studying Asian importers' assessment (based on realistic information and experience) of US exporters with some comparative evaluation to Japanese and European exporters.	Variables reported in a marketing framework that includes product, price, distribution, promotion, regulations and interactions.	Interviews with semi structured survey instrument/ verbal open-ended questions/ qualitative data analysis/ N = 28/ importing firms/ household appliances, food and scientific equipment/ Japan, South Korea, Taiwan, Singapore, and Hong Kong.
Turnbull (1985)	Studying attitudes of purchasing executive buyers from western Europe towards British suppliers.	Customer orientation, technical competence, commercial competence, delivery performance, after-sales service, new product technology, product quality, like dealing with.	Interviews/ rating scale/ weighted average scoring, graphical plots/ N = 416/ Business buyers/ industrial products in general/ France, Germany, Italy, Sweden, UK.
Khanna (1986)	Analysing empirical evidence on COO perceptions about Asian developing countries (South Korea, Taiwan and India).	Price: price competitiveness, price reasonable for value, price range offered, and discounts offered. Product: product quality, creativity and invention, fashion ability, technology. Promotion: emphasis on advertising and Publicity, market exposure of products, sales promotion, brand name recognition. Service: delivery schedules, supplier reliability, business communication speed, terms of payment.	Mail structured questionnaire later personal interviews because of very low response rate/ 11 point bipolar scale/mean ratings, composite index/N = 93 (foreign sample), N = 140 (Indian sample)/ Importers (foreign sample), exporters (Indian sample)/ engineering products, leather manufactures, and apparel/ Japan, Thailand, Singapore, Philippines (foreign sample), and India.
Chasin and Jaffe (1987)	Measuring industrial buyers' perceptions about performance attributes of industrial products from east European countries. Comparing performance attribute ratings between two survey years, 1979 and 1985.	Product Attributes: product reliability/dependability, product uniformity/consistency, materials quality/workmanship, fullness of product lines, product reputation/guarantees. Marketing Attributes: innovative/advanced technology, field service/technical Support, credit extensions/terms, on time deliveries, price/value for money, supplier contact/ample	Mail survey with structured questionnaire/ nine point visual scale in performance attributes/ rank order, percentile, correlations/ N = 281/ organisations purchased at least one of six industrial goods listed below and total purchase value exceeded \$250,000/ chemical products, electrical equipment, farm machinery and equipment, machine tools, scientific precision

Study	Purpose	Variables reported	Survey methodology/types of questions/ method of analysis/sample size/type of firm/product category/country of survey
		Information. Country groups: Western oriented block (USA, Japan, and Austria), Eastern European block (USSR, Poland, Hungary)	equipment, textiles/ USA.
Yavas, Cavusgil and Tuncalp (1987)	Empirical study to understand how Saudi importers evaluate suppliers from the USA, Japan, England and Taiwan.	Price, suitability to local market, quality, style/appearance, repair/maintenance service, order placement, middlemen's willingness to carry, promotion, suitability to expatriate segment, warranty/guarantee, preference by local consumers, timely delivery, terms of payment and credit, dependability for long term supply, past experience, preference by expatriate consumers, transportation cost, financial risk.	Personal interviews following convenience sampling/ statements in 5-point Likert scale/ mean, two-way analysis of variance, multiple comparison test / N = 54/ importers/ food stuffs, textiles and clothing, home furnishing and furniture, and electronics/ Saudi Arabia.
Kaynak (1989)	Understanding the behaviour of Chinese industrial buyers in purchasing industrial products from major sourcing countries. Answering buyers' perceptions of product quality, and country-wise, product-wise, and buyer characteristic-wise variations in perception.	Quality perception matrix by country and product class. Sourcing countries (11): West Germany, USA, Japan, Italy, France, Romania, Soviet Union, Switzerland, UK, Australia, and Hong Kong. Product classes (5): general products, electronic and telecommunication equipment, vehicles and motorcycles, steel products, industrial equipment and technology.	Self-administered questionnaire/demographic and socioeconomic characteristics of respondents, attitudinal responses on product quality according to product class and country/ rank order by mean value, t-test of mean difference, Chi-square test/N=84/ Government organisations/general products, electronic and telecommunications equipment, vehicles and motor cycles, steel products, industrial equipment and technology/China.
Kaynak and Kucukemiroglu (1991)	Studying Chinese industrial buyers' perceptual differences about product quality arising from different regions, product classes and demographic characteristics.	Regional classification: Asian region (Australia, Hong Kong, Singapore, Japan. European countries: France, Germany, Italy, Switzerland, and the UK), Socialist countries (former Soviet Union), North America (Canada and USA). Product categories: General products, electrical and telecommunications equipment, vehicles and motor cycles, iron and steel products, industrial equipment machinery and technology. Demographic characteristics: age, sex, income, education, experience.	Personal interviews with self-administered questionnaire/ demographic profile of the respondents, five point rating scale/ mean, ranking, pairwise comparisons/ N = 96/ public sector enterprise and joint venture multinationals/ General products, electrical and telecommunications equipment, vehicles and motor cycles, iron and steel products, industrial equipment machinery and technology/ China.
Saghafi, Varvoglis and Vega (1991)	Examining the export problem of Latin American countries with specific concentration on marketing mix incompetence	Marketing mix attributes: Basic product quality (workmanship, product imitation, labour sophistication, and material quality), product quality benefits (reliability, durability, quality, and packaging),	Mail survey with structured questionnaire (random sampling)/ respondent involvement level, profile, company profile, perception measured by 5-point Likert scale/ mean, ranking,

Study	Purpose	Variables reported	Survey methodology/types of questions/ method of analysis/sample size/type of firm/product category/country of survey
	and/or misperception.	promotion (well promoted, well-known attributes), and price (reasonably priced, expensive). Exporter attributes: Supplier reliability (compliance with instructions and specifications, fulfilment of promise, honesty, delivery of products in good condition, quality professional management, delivery of products on schedule), supplier capacity (production capacity, large variety of products, good promotional material, and storage facilities).	percentile, factor analysis, t-test of group difference/ N = 304/ medium to large companies representing industrial operation, wholesale & retail, utilities, government and others/ machinery and equipment, chemicals, wood and paper products, textile fibres, non-metallic minerals, animal and vegetable products/ USA.
Ghymn and Jacobs (1993)	Revealing COO-related purchase decision variables considered by Japanese import managers and how those variables differ from those of US purchasing managers.	Three broad categories of import decision variables reported. Product-oriented variables: product quality, price, product safety, marketability (domestic demand), brand name reputation, product style/feature, packaging, product uniqueness. Service-oriented variables: timely delivery, dependable long-term supply, ordering/shipping procedures, transport cost, payment method, length of association, promotion help from suppliers. Laws/regulation variables: home government laws/ host government laws	Mail survey/ profile of the respondents and firms, items rated using 5-point Likert scale/ descriptive statistics, analysis of variance (ANOVA)/ N = 48, for group differences N=52/ private firms/ import products in general/ Japan and USA.
Kraft and Chung (1993)	Examining Korean purchasing agents' perceptions about US and Japanese industrial product suppliers.	Factors related to exporter attributes (14 items finally considered) are reputation, negotiation style, customer orientation, cultural awareness, and personal communication. Product offer factors (17 items included in final analysis) are good product information, quality products, improved products, well designed products, good technical training with the product, and competitive prices.	Personally delivered written questionnaire/ current and projected import of firms, firm's sales and import volume, imported product category, respondent profile, statements in 7-point Likert scale/ common factor analysis, t-test, regression analysis/N = 190/ mostly large firms/ raw materials, finished materials, equipment and machinery/ Korea.
Ahmed, d'Astous and Adraoui (1994)	Relating industrial buyers' perceptions of product quality and purchase value to country images in single cue and multi-cue settings.	Perceived quality and purchase value are influenced by country of design, country of assembly, brand name, price, warranty or delivery	Mail survey/conjoint profile for different product categories evaluated on bipolar scale/ conjoint analysis/ N=173/ manufacturing, government agencies and others/computer systems, fax machine, and ballpoint pen/Québec, Canada.

<b>Study</b>	<b>Purpose</b>	<b>Variables reported</b>	<b>Survey methodology/types of questions/ method of analysis/sample size/type of firm/product category/country of survey</b>
Chang and Kim (1995)	Understanding import source ratings of industrial products from the newly industrialised country (NIC) perspective.	A total of 16 attributes include technological advancement, brand reputation, economic price, options, overall quality, technical assistance, long-term viability, durability, communication, local knowledge, delivery, instructions, reliability, after-sale service, finishing, and non-substitutability.	Mail survey with follow-up telephone call/ profile of the respondents and firms, items rated using 7-point Likert scale statements/ mean, paired significance test, ANOVA, principal component analysis, regression analysis/ N= 100/ importers of industrial goods/ finished goods, materials and components, capital goods, and other/ South Korea.
Güdüm and Kavas (1996)	Understanding Turkish industrial buyers' attitudes towards local (Turkish) and foreign (Japanese, German and US) suppliers and investigating Turkish industrial buyers' willingness to buy from these four countries' suppliers (Japan, Germany, USA and Turkey).	Marketing quality: customer satisfaction, delivery speed, sensitivity to post sales complaints, product quality, technological soundness, quality consistency over time, availability of technical information, reliability, inform about order updates, after sales follow up, information adequacy, speed of complaint handling, informing product updates, conformance to international quality standards, order-related problem handling. Sensitivity to environment: concerned about business customs, product adaptation, language of product instructions, commercially competent marketing staff, and courteous marketing staff. Business relationship: problems for cultural barriers, cooperation difficulty, difficulty in establishing personal relationship, nice to work with. Price: lower price.	Mail survey with self-administered questionnaire/ respondent profile, preference rankings, 5-point Likert scale/ mean, ranking, factor analysis/ N = 105/ large manufacturing firms/ industrial products (raw materials and investment goods)/ Turkey.
Alpert, Kamins, Sakano, Onzo and Graham (1997)	Understanding how the Japanese distribution system works as a barrier to entry. Studying supermarket buyers' assessment of individual and relative importance of COO perception	Factors affecting US sellers in selling to Japanese retail buyers are entry order of suppliers brand, loyalty or commitment to established suppliers, interaction style between supplier and buyer, size of the supplier, and suppliers' country-of-origin.	Personally delivered questionnaire with postage paid return envelope/ conjoint profile, ranking, 10point rating scale/ mean, ANOVA, conjoint analysis/ N = 103/ buyers of large supermarkets/ General retail goods/ Japan.
Saghafi and Puig (1997)	Revealing the perceived attributes of products made in developed and developing countries, and the influencing attributes for choosing between	Price, workmanship, reliability, technical advancement, performance, and timely delivery.	Mail survey with structured questionnaire (random sampling)/ respondent involvement level, profile, company profile, perception measured by 5-point Likert scale/ mean, ranking, t-test of group difference/ N = 100/ medium to

Study	Purpose	Variables reported	Survey methodology/types of questions/ method of analysis/sample size/type of firm/product category/country of survey
	products from developed and developing nations.		large companies/ machinery and transportation equipment, chemicals, wood and paper products, textile fibres, non-metallic minerals, animal and vegetable products/ USA.
Chetty, Dzever and Quester (1999)	Revealing New Zealand purchasing agents' quality perceptions of industrial products (component parts and equipment) with regard to COD and COA.	Quality perceptions of COO measured by COD and COA. Considered countries: Developed: Japan, France, USA, Sweden, Germany, United Kingdom, Norway. Newly industrialised: South Korea, Singapore, Taiwan, Hong Kong. Newly industrialising: Brazil, Mexico, India, Russia, Thailand, Philippines.	Mail survey with structured questionnaire/profile of the respondents, measuring quality perceptions by 5-point Likert scale/ ranking by average, <i>t</i> -test, ANOVA/ N=230/ not reported/ machine tools and component parts/ New Zealand.
Dzever and Quester (1999)	Revealing Australian purchasing agents' quality perceptions of products (component parts and equipment) from 17 different countries with regard to COD and COA.	Quality perceptions measured by: nature of technology used in the product, the nature of training provided by the supplier, the product's ease of operation/ maintenance, and the degree of space utilised by the product. Quality assessment based on COD and COA.	Mail survey with prior phone call confirmation/profile of the respondents, measuring quality perceptions by 5-point Likert scale/ ranking by descriptive statistics, correlation coefficient, paired sample <i>t</i> -test/ N=277/ not reported/ component parts and equipment/Australia.
Ghymn, Liesch and Mattsson (1999)	Rating the import decision variables according to their importance to Australian importers.	Important decision variables: Product oriented variables (Brand name, product style/feature, packaging for safety, packaging for merchandise, product quality, price, product demand, uniqueness in cultural appeal, technical uniqueness); Service-oriented variables (Timeliness and ease of ordering, timely delivery, long-term supply, payment method, history of business association, transportation cost and time, promotion by suppliers); and government-related variables (import duties and regulations, exporting country's laws/regulations, compliance with Australian safety standards).	Self-administered mail survey /product types, firm demographics, attitudinal responses on import purchase decision variables/ rank order by mean value, analysis of variance/ N=104/SME/ products in general/Australia.
Quester, Dzever and Chetty (2000)	Comparing quality perceptions of purchasing agents of Australia and New Zealand towards products that originated from 17 different countries with regard to COD and COA.	Quality perceptions measured by: nature of technology used, nature of training provided by the supplier, the product's ease of operation/ maintenance, and the degree of space utilised by the product. Quality assessment based on COD and COA.	Mail survey with structured questionnaire/ profile of the respondents, measuring quality perceptions by 5-point Likert scale/ ranking by mean and standard deviation, correlation coefficient/ N = 277 (Australia) and N = 250 (New Zealand)/ not reported/ machine tools and

Study	Purpose	Variables reported	Survey methodology/types of questions/ method of analysis/sample size/type of firm/product category/country of survey
			component parts/Australia and New Zealand.
Bradley (2001)	Measuring the effect of COO influence along with company influence on the preferences of industrial buyers for different suppliers in international markets.	<p>Company effect: Product (wide range of products, high manufacturing standard, design excellence, compliance with technical specifications, quick to incorporate new technical developments, quick adaptation for buyers), price (good value for money, good discounts, good credit terms, competitively priced, use of non-price factors), advertising and communications (dissemination of new information, high quality information content, helpful and knowledgeable salespeople, truthful product claims, frequency of imaginative/creative advertisements), distribution and service (receive personal attention, good after-sales service, products' and spares' availability from stock, efficient order-processing system, good emergency service, adheres to delivery promises), innovation (strong international reputation, knowledge of market and competitors, progressive technology, company's internal cooperation and coordination, professionally managed).</p> <p>Country effect: Excellent international reputation, innovative manufacturing, produced from reliable materials and components, acceptable international technical standards, good value for money, competitively priced, free from adverse exchange rate effects, knowledgeable and helpful salespeople, receive excellent after-sales service, manufactured in professionally managed companies.</p>	Personal interviews with structured questionnaire and using prompts whenever needed/ country and company identification, ranking, evaluate on 10 point scale/ frequency tests, rank order, discriminant analysis/ 60 respondents, cases 240, N=240/ industrial buyers/ electrical and electronic products/ Ireland.
Insch (2003)	Measuring COO effect by using partitioned COO constructs on the decomposed measures of product quality (design, conformance to specifications and manufacturing).	Quality measures include product design quality, parts quality, assembly quality, manufacturing quality, conformance to product design specifications quality, other quality biases, and overall product quality. COO constructs include country of design (COD), country of product assembly (COA), and country of parts manufacture (COP).	Mail survey for USA, and convenience sample for Mexico, structured questionnaire with experimental design/ 5-point, bipolar adjective pair scale/Q sort, factor analysis, mean ratings, MANOVA, ANOVA/ USA N = 330, Mexico N = 187/ not reported/ electric motor and small power relay unit/ USA and Mexico.
Kaynak and Eronen	Examining Finnish industrial	Motivating factors for outsourcing from central and	Mail survey with self-administered

Study	Purpose	Variables reported	Survey methodology/types of questions/ method of analysis/sample size/type of firm/product category/country of survey
(2004)	buyers' evaluation of and attitudes toward products and suppliers from eastern and central Europe.	eastern Europe include high product quality, less expensive price, high product durability, high product reliability, high technical content, wide assortment of features, and good value for the money	questionnaire/ ranking, percentage, 5 point rating scale/ rank order, percentile, correspondence analysis/ N = 74/ Finnish industrial companies/ Construction equipment, chemicals and allied products, petroleum, refining, and related products, rubber and plastics products, stone, glass, clay, or concrete products, primary or fabricated metals, non-electrical machinery, electronic and electrical machinery, transportation equipment, measuring instruments, photographic, medical or optical goods etc./ Finland.
Overby and Servais (2005)	Understanding international purchase behaviour with regard to the motivations for choosing suppliers and the perceived supplier relationships of small and medium-sized industrial firms.	Import intensity, product importance, and relationship orientation. Motives for choosing foreign suppliers: lower price, better quality, better reliability of delivery, better lead time, more amenable to negotiation, better for the environment, better geographical location. Product importance characteristics: percentage of total purchases from local source, percentage of total purchases internationally, relationship orientation, reliability of delivery, and cooperation with foreign supplier.	Mail survey with self-administered questionnaire/ firm characteristics, five point rating scale/ mean, percentile, ANOVA, $\lambda^2$ test/ N = 105/ small and medium sized manufacturing firms/ machinery, products for resale, raw materials, components/ Denmark.
Gill and Ramaseshan (2007)	Understanding the influence of supplier-performance criteria on importers' repurchase intentions.	Relationship commitment: Dependability for long term supply, suppliers ordering procedures, suppliers delivery reliability, fairness and trustworthiness, ability to keep promises, positive attitudes towards complaints, regular communication. Brand recognition: Recognised brand name, supplier reputation, sales history, promotion materials, grants for promotional materials. Service – payment facilities: Payment method, credit terms, discounts and allowances. Product quality: Quality of the wine, variety of the wine, vintage of the wine, labelling and packaging. Price: Competitive price. Repurchase intention: Likelihood of repurchase.	Mail survey with self-administered questionnaire/ 7 point rating scale/ regression analysis/ N = 152/ Small to large importers/ Wine/ UK.
Knight, Holdsworth	Revealing COO preferences in	Major components of price-perceived value model that	Face-to-face in depth interviews/semi structured

Study	Purpose	Variables reported	Survey methodology/types of questions/ method of analysis/sample size/type of firm/product category/country of survey
and Mather (2007)	food sourcing by European distribution gatekeepers. Interviewing food distributors to uncover the following key issues: factors considered in choosing source countries, most important aspects considered about sourcing country, product-country image (PCI) in food purchase decisions and the elements of food category-specific PCI.	leads to purchase decision of imported foods: perceived price, perceived quality, perceived monetary sacrifice, perceived value. Issues influencing trust are quality attributes, personality of sellers, brand, traceability, regulations and certifications, country economic status, country attributes, social and political culture, integrity and credibility, PCI, corporate reputation, product attributes.	questionnaire using pre-selected topics in guiding interviews/ qualitative data analysis (identifying relevant issues, collecting examples of those issues, analysing issues in orderly fashion)/ convenience sample N=17/manufacturer or importer or distributor or food industry experts/food products/Germany, Greece, Italy, Netherlands, UK.
Knight, Gao, Garrett and Deans (2008)	Understanding key factors influencing import sourcing in China. Revealing major risk factors regarding food imports, importance of COO in food purchase decisions, relative importance of COO compared to other extrinsic cues, COO as an indicator of quality and trustworthiness and association of symbolic value with a particular COO or country of brand.	Major components of price-perceived value model that leads to purchase decision of imported foods: perceived price, perceived quality, perceived monetary sacrifice, perceived value. Perceived quality influenced by perceived price, product attributes, symbolic value, and quality attributes. Issues influencing social safety are quality attributes, product attributes, symbolic value, reputation of sellers, brand, regulations and certifications, country economic status, country reputation, imported versus domestic, Confucian values, face and favour, status and prestige.	Face-to-face in-depth interview/ semi structured questionnaire using pre-selected topics in guiding interviews/ qualitative data analysis (identifying relevant issues, collecting examples of those issues, analysing issues in orderly fashion)/ companies that represent six major commercial centres of China, contacts from trade commissioners, authors, and referrals from respondents; location-specific convenience sample/ N=20/ Hotels, supermarkets, importers, distributors, multinational retailer, manufacturer, café, and supermarket suppliers/ food products/ China.
Baldauf, Cravens, Diamantopoulos and Zeugner-Roth (2009)	Investigating the impact of PCI and marketing activities on retailer-perceived brand equity (RPBE) and its consequent influence on brand profitability performance (BPP)	Marketing mix elements comprised of supplier image, price level, price deals, and promotion. PCI measured by innovation, exclusivity, workmanship, and external appearance. RPBE represented by quality, loyalty, and awareness. BPP estimated by relative profitability, realised margin and overall financial attractiveness.	Mail survey with prior phone call confirmation/ profile of the respondents, statements rated using 5-point Likert scale and 7-point semantic-differential scale/confirmatory factor analysis (CFA), path analysis, stepwise regression analysis/ N= 142/ retailers/ tiles/ Austria.
Oke, Maltz and Christiansen (2009)	Investigating the criteria for choosing suppliers from developing economies as part of global production networks and	Included criteria from past literature are cost, quality, delivery performance and process technology. Criteria indicated by the investigated firms are cost (logistics cost, labour cost, material cost), physical proximity	Personal interview/ criteria for choosing and locating developing country suppliers/ multiple case study method/ 6 firms, 54 hours interview data/ three lead manufacturers, one intermediary,



Study	Purpose	Variables reported	Survey methodology/types of questions/ method of analysis/sample size/type of firm/product category/country of survey
	the complexities involved in such decisions.	(supplier nearness, ensure supply for own facility offshore, availability of materials, logistics cost related to distance, closeness to market), quality (quality of raw materials), reliability (referrals from customers, work experience with other manufacturers, relevant external certifications, competence and work ethics, historical delivery performance, supply risk, risk assessment, response time, specialisation, service and delivery reliability), cultural proximity (similarity in humour), and political factor (political situation).	two suppliers/ industrial machinery, electronic equipment and component, metal and FMCG industries/ USA, UK, Scandinavia, Estonia, Mexico.
Insch, Prentice and Knight (2011)	Studying the importance of COO and the relevance of a 'buy national' campaign in purchase decisions made by retail buyers.	Hypothesised that retail buyers purchase decisions are intuitive judgements based on the experiential system, use categorisation approach, consider COO as an unimportant factor, and may employ COO as a 'specific' summary construct.	Face-to-face in-depth interview/ semi structured questionnaire using pre-selected topics in guiding interviews/ qualitative data analysis (thematic content analysis)/ purposive sampling with an intention to include two major cities, supermarkets located in different socio-economic areas, and retailers in diverse sectors/ N = 16/ large full-service and discount supermarket chains, sporting goods and homeware chains/ Wide variety of goods sold by retailers/ New Zealand (Auckland and Dunedin).
Maltz, Carter and Maltz (2011)	Understanding the criteria that buying firms from developed countries consider in choosing and locating suppliers from low-cost countries.	Attributes to look into while purchasing from low cost regions: Work ethic, security of intellectual property, attraction of local market, reliably meet customer requirements (deliver complete orders on time), transportation reliability (consistency of lead times), transportation cost (cost from source to buyer's location), government support for business, political stability, flexibility (ability to react to changes in requirements), predictable border clearance times, government corruption, overall attractiveness for sourcing, labour cost. Considered low cost regions: Coastal China, inland China, less developed Asia, eastern Europe, Russia/Central Asia, South America, urban India, rural India, and Mexico.	Personal interviews, online survey/ criteria for choosing and locating developing country suppliers, 7-point rating scale/ mean, two sample <i>t</i> -test, perceptual mapping/ 15 managers from nine firms, N = 101 for survey/ large, medium, and small (five lead manufacturers, two intermediaries, two suppliers)/ industrial manufacturing, aerospace or defence, chemical, consumer products, food and beverage, and financial services/ interview locations are USA, UK, Scandinavia, and Mexico; survey locations North America, Western Europe, Asia, Middle East, Australia, and South America.

## Appendix 2: Information and consent form



Department of Marketing and Management  
Faculty of Business and Economics  
MACQUARIE UNIVERSITY NSW 2109

Phone: +61 (0)2 9850 8990  
Fax: +61 (0)2 9850-6065  
Email: [greg.elliott@mq.edu.au](mailto:greg.elliott@mq.edu.au)

Chief Investigator's / Supervisor's Name:  
Gregory Elliott

Chief Investigator's / Supervisor's Title  
Professor

### Information and Consent Form

June, 2013

Name of Project: **The Impact of Country-of-Origin (COO) on Australian Procurement Managers**

Dear Sir or Madam,

I am writing to invite to participate in a study of international procurement/purchasing. The aim of the study is to investigate the impact of company and country-of-origin characteristics in the choice of international suppliers. The result of this study will be to develop a better understanding of how Australian procurement or purchasing managers evaluate both the country and company of their overseas suppliers.

The study is being conducted by Jashim Uddin to meet the requirements of Doctor of Philosophy in Marketing and Management at Macquarie University under the supervision of Professor Gregory Elliott (Phone: +61-2- 9850 8990, E-mail: [greg.elliott@mq.edu.au](mailto:greg.elliott@mq.edu.au)) of the Department of Marketing and Management.

Any information or personal details gathered in the course of the study are confidential (*except as required by law*). No individual will be identified in any publication of the results. A summary of the results of the data can be made available from June 2014 to you on request, upon sending an email to Jashim Uddin at [jashim.uddin@mq.edu.au](mailto:jashim.uddin@mq.edu.au).

Participation in this study is entirely voluntary. You are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence. The questionnaire should take around 18 to 22 minutes to complete. Responding to and completion of the online questionnaire will be regarded as consent to use the information for research purposes.

Thank you for your participation in this study. Your opinions are very important to us and invaluable to the success of this study. If you have any questions or concerns, please feel free to contact Jashim Uddin at [jashim.uddin@mq.edu.au](mailto:jashim.uddin@mq.edu.au) (Mobile: 0415 543 223) or Professor Gregory Elliott at [greg.elliott@mq.edu.au](mailto:greg.elliott@mq.edu.au) (phone +61 2 9850 8990).

Yours sincerely,

Jashim Uddin

*The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics (telephone [02] 9850 7854, email: [ethics@mq.edu.au](mailto:ethics@mq.edu.au)). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.*

## Appendix 3: Questionnaire

### Introduction

Department of Marketing and Management  
Faculty of Business and Economics  
MACQUARIE UNIVERSITY NSW 2109  
Phone: +61 (0)2 9850 8990  
Fax: +61 (0)2 9850-6065  
Email: greg.elliott@mq.edu.au

Chief Investigator's / Supervisor's Name:  
Gregory Elliott  
Chief Investigator's / Supervisor's Title  
Professor

### Information and Consent Form

June, 2013

Name of Project: **The Impact of Country-of-Origin (COO) on Australian Procurement Managers**

Dear Sir or Madam,

I am writing to invite to participate in a study of international procurement/purchasing. The aim of the study is to investigate the impact of company and country-of-origin characteristics in the choice of international suppliers. The results of this study will be to develop a better understanding of how Australian procurement or purchasing managers evaluate both the country and company of their overseas suppliers.

The study is being conducted by Jashim Uddin to meet the requirements of Doctor of Philosophy in Marketing and Management at Macquarie University under the supervision of Professor Gregory Elliott (Phone: +61-2- 9850 8990, E-mail: greg.elliott@mq.edu.au) of the Department of Marketing and Management.

Any information or personal details gathered in the course of the study are confidential (*except as required by law*). No individual will be identified in any publication of the results. A summary of the results of the data can be made available from June 2014 to you on request, upon sending an email to Jashim Uddin at jashim.uddin@mq.edu.au.

Participation in this study is entirely voluntary. You are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence. In addition, there are no right or wrong answers to the questions. The questionnaire should take around 18 to 22 minutes to complete. Responding to and completion of, the online questionnaire will be regarded as consent to use the information for research purposes.

Thank you for your participation in this study. Your opinions are very important to us and invaluable to the success of this study. If you have any questions or concerns, please feel free to contact Jashim Uddin at jashim.uddin@mq.edu.au (Mobile: 0415 543 223) or Professor Gregory Elliott at greg.elliott@mq.edu.au (phone +61 2 9850 8990).

Yours sincerely,

Jashim Uddin

*The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics (telephone [02] 9850 7854, email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.*

Are you significantly involved in making international purchase decisions?

☐ Yes

☐ No

Are you involved in purchasing intermediate goods (e.g. non-fuel raw materials, parts and components for industrial use) from foreign suppliers?

☐ No

☐ Yes

### Section 1

At first, please indicate the type of intermediate goods purchased

☐

1. "Fuel" (e.g. oil, gas, coal, etc.)

- ☐ Raw materials
- ☐ Components and parts

Please estimate your company's total annual sales revenue

AUD

## Section 2

Please rate your major overseas supplier company/firm on the issues listed in the following table. The scale ranges from 'Poor (1)' to 'Excellent (7)'. Please click on the appropriate circle.

(In answering the following questions, please consider your largest supplier by value)

	Poor (1)	Very Bad (2)	Moderately Bad (3)	Neutral (4)	Moderately Good (5)	Very Good (6)	Excellent (7)
Adherence to delivery promises	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Knowledge level of sales executives about company products and applications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Truthfulness in product claims	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competency in providing emergency services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Active dissemination of new information on products and services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Level of after-sales service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Efficiency of order processing system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality of information content in company communications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attractiveness of quoted pricing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Degree of product variety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Usefulness of supplier-provided credit terms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Value for money	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manufacturing quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Products associated with recognisable brand names	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design excellence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compliance with technical specifications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quick to adapt product to user needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please write the name of this major overseas supplier's country

Next, please rate this **major overseas supplier's country** on the following issues. The scale ranges from 'Lowest (1)' to 'Highest (7)'. Please click on the appropriate circle.

	Lowest (1)	Very Low (2)	Moderately Low (3)	Neutral (4)	Moderately High (5)	Very High (6)	Highest (7)
Standard of living	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Level of industrialisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Political stability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Level of technological reaserch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost of labour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Freedom of market forces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Welfare concentration of government	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Level of economic development of the country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Democratic practices in forming government	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Geographical closeness to Australia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Predictability of port clearance time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Travel time of shipments from supplier country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ease of using payment interface with the country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time consumed in port clearance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Economy in transport cost	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
State of IT and communication infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ease of face-to-face interaction with country's suppliers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Security of intellectual property	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stability of currency value	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International acceptability of country's standards certification	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Level of preferential tariff treatment (as an outcome of trade agreements) with the country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Extent of ethical treatment of workers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate the product category you have purchased from this country (major overseas supplier's country) on the following issues. The scale ranges from 'Lowest (1)' to 'Highest (7)'.

	Lowest (1)	Very Low (2)	Moderately Low (3)	Neutral (4)	Moderately High (5)	Very High (6)	Highest (7)
Country's workmanship image	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aesthetics and design image of country's product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reliability and desired performance length perceived about country's product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Value for money perception of country's product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technological advancement in country's product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Next, please rate the **performance level** of this supplier (major overseas supplier). **Poor performance indicated by (1) and Excellent performance indicated by (7).** Please click on the appropriate circle

	Poor Performance (1)	Very Low Performance (2)	Moderately Low Performance (3)	Neutral (4)	Moderately High Performance (5)	Very High Performance (6)	Excellent Performance (7)
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Product quality performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Delivery performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Final Section**

**Finally, About Yourself**

**Your Gender (please click)**

- ☐ Male
- ☐ Female

**Highest level of completed education**

**Years of experience as purchasing/procurement professional**

**Thank you very much for your kind participation**

## Appendix 4: Ethics approval



JASHIM UDDIN <jashim.uddin@students.mq.edu.au>

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### Approved - 5201300312

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Mrs Yanru Ouyang <yanru.ouyang@mq.edu.au>  
To: Prof Greg Elliott <greg.elliott@mq.edu.au>  
Cc: Mr Jashim Uddin <jashim.uddin@students.mq.edu.au>

Wed, May 29, 2013 at 10:03 AM

Dear Prof Elliott,

Re: 'The impact of Country-of-Origin (COO) on Australian procurement managers.'

Reference No.: 5201300312

Thank you for your recent correspondence. Your response has addressed the issues raised by the Faculty of Business & Economics Human Research Ethics Sub Committee. Approval of the above application is granted, effective "29/05/2013". This email constitutes ethical approval only.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

[http://www.nhmrc.gov.au/\\_files\\_nhmrc/publications/attachments/e72.pdf](http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf).

The following personnel are authorised to conduct this research:

Mr Jashim Uddin  
Prof Greg Elliott

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).
2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 29th May 2014  
Progress Report 2 Due: 29th May 2015  
Progress Report 3 Due: 29th May 2016  
Progress Report 4 Due: 29th May 2017  
Final Report Due: 29th May 2018

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

[http://www.research.mq.edu.au/for/researchers/how\\_to\\_obtain\\_ethics\\_approval/human\\_research\\_ethics/forms](http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms)

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final



Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

[http://www.research.mq.edu.au/for/researchers/how\\_to\\_obtain\\_ethics\\_approval/human\\_research\\_ethics/forms](http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms)

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

<http://www.mq.edu.au/policy/>  
[http://www.research.mq.edu.au/for/researchers/how\\_to\\_obtain\\_ethics\\_approval/human\\_research\\_ethics/policy](http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy)

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of approval to an external organisation as evidence that you have approval, please do not hesitate to contact the FBE Ethics Committee Secretariat, via [fbe-ethics@mq.edu.au](mailto:fbe-ethics@mq.edu.au) or 9850 4826.

Please retain a copy of this email as this is your official notification of ethics approval.

Yours sincerely  
Parmod Chand  
Chair, Faculty of Business and Economics Ethics Sub-Committee



## Appendix 5: Results of principal component analysis of the newly developed constructs (pre-testing data)

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.516
Bartlett's Test of Sphericity	Approx. Chi-Square	365.265
	df	136
	Sig.	.000

### Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.322	43.069	43.069	4.863	28.603	28.603
2	3.464	20.377	63.446	3.154	18.553	47.156
3	1.481	8.714	72.160	2.946	17.327	64.484
4	1.374	8.081	80.241	2.679	15.757	80.241
5	.817	4.808	85.049			
6	.663	3.902	88.951			
7	.497	2.926	91.878			
8	.397	2.335	94.213			
9	.298	1.750	95.964			
10	.224	1.315	97.279			
11	.162	.955	98.234			
12	.119	.698	98.932			
13	.089	.521	99.453			
14	.044	.260	99.713			
15	.031	.182	99.895			
16	.012	.073	99.968			
17	.005	.032	100.000			

Extraction Method: Principal Component Analysis.

**Rotated Component Matrix<sup>a</sup>**

	Component			
	1	2	3	4
Geographical closeness to Australia	-.024	.020	.819	.430
Economy in transport cost	.155	.142	.563	.589
Ease of face to face interaction with country's suppliers	-.044	-.011	.858	.054
Travel time of shipments from supplier country (reverse coded)	-.065	.340	.674	.207
Predictability of port clearance time	.959	.050	-.022	.093
Time consumed in port clearance (reverse coded)	.956	.054	.048	.007
State of IT and communication infrastructure	.860	.178	.149	.137
Stability of currency value	.757	.427	.270	.004
Ease of using payment interface with the country	.713	.286	-.238	.176
Level of preferential tariff treatment (as an outcome of trade agreements) with the country	.666	.420	-.300	.268
Efficiency of domestic transport infrastructure	.413	.455	.583	.039
Security of intellectual property	.127	.862	.271	.200
International acceptability of country's standards certification	.588	.683	.081	.189
Extent of ethical treatment of workers	.367	.784	.067	.017
Product quality performance	.229	-.005	.198	.903
Delivery performance	.049	.289	.237	.845
Price performance	.105	.651	.060	.603

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

## Appendix 6: Results of principal component analysis of the newly developed constructs (final survey data)

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.888
Bartlett's Test of Sphericity	Approx. Chi-Square	2736.574
	df	120
	Sig.	.000

### Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.110	44.438	44.438	4.204	26.272	26.272
2	2.130	13.315	57.754	2.783	17.396	43.668
3	1.257	7.857	65.611	2.501	15.632	59.301
4	1.024	6.398	72.009	2.033	12.708	72.009
5	.712	4.448	76.456			
6	.658	4.112	80.568			
7	.520	3.249	83.818			
8	.487	3.044	86.862			
9	.371	2.316	89.178			
10	.340	2.124	91.302			
11	.307	1.918	93.221			
12	.281	1.754	94.974			
13	.257	1.604	96.579			
14	.210	1.313	97.891			
15	.188	1.177	99.068			
16	.149	.932	100.000			

Extraction Method: Principal Component Analysis.

**Rotated Component Matrix<sup>a</sup>**

	Component			
	1	2	3	4
Geographical closeness to Australia		.871		
Economy in transport cost		.727		
Ease of face to face interaction with country's suppliers		.678		
Travel time of shipments from supplier country (reverse coded)		.750		
Predictability of port clearance time	.770			
Time consumed in port clearance (reverse coded)	.824			
State of IT and communication infrastructure	.748			
Stability of currency value	.819			
Ease of using payment interface with the country	.768			
Level of preferential tariff treatment (as an outcome of trade agreements) with the country	.757			
Security of intellectual property			.783	
International acceptability of country's standards certification			.768	
Extent of ethical treatment of workers			.805	
Product quality performance				.799
Delivery performance				.807
Price performance				.577

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.