

**Going Global: A Comparison of the Relative Attractiveness of
Global Sourcing Locations**

PhD Thesis, University of Hull

Robert Keith Carruthers

BBA (Management), Acadia University

BA (Psychology), University of Waterloo

MBA, University of Moncton

April 2020

Table of Contents

<u>Topic</u>	<u>Page</u>
Table of Contents	2
Abstract	9
Chapter 1: Introduction	11
Background Information	11
Rationale for this Research	12
Project Scope	14
Questions and Aims	15
Chapter Outline	16
Chapter 2: Research Methodology	17
Introduction	17
Philosophical Considerations	17
Research Methodology	19
Sample Selection	21
Data Collection	21
Validity and Reliability	25
Researcher Reflexivity	26
Chapter 3: Literature Review	28
Literature Review Methodology	28
International Trade Theory	30
Firm-Level Research	40
Country-Level Research	52
Existing Measurement Tools	62
Concluding Comments	74

Chapter 4: Evolution of Outsourcing	76
Introduction	76
International Cooperation	76
Policy Development	81
Regional Trade Agreement	95
Facilitating Factors	111
Barriers to International Trade	117
The Nearshoring Movement	123
Chapter Summary	124
Chapter 5: Global Sourcing Perceptions	126
Introduction	126
China as a Benchmark	127
The Evolution of China as the World's Manufacturer	128
The Role of Perception in Global Sourcing Decision-Making	137
Relevance and Future Implications	160
Chapter 6: Empirical Data	162
Introduction	162
Data Collection	163
Quantitative Surveys	165
Quantitative Data Analysis	169
Semi-structured Interviews	171
Interview Data Analysis	174
Further Analysis Through Grouping of Data	183
Major Themes Identified	193
Empirical Data Conclusion: What Does it All Mean?	196

Chapter 7: Introduction to the Model	201
Introduction	201
Tool Selection	202
Model Design	204
Model Inputs	210
The Position Map	222
Model Results	225
Practical Application	227
Chapter Summary	229
Chapter 8: Model Validation	231
Introduction	231
Validation Process	232
Main Findings to be Validated	233
Survey Findings	233
Interview Findings	234
Validation Through Triangulation	236
Validation Through Member Checks	249
Validation Through Data Saturation	258
Concluding Comments	259
Chapter 9: Research Limitations and Future Considerations	262
Methodological Limitations	262
Limitations of the Researcher	264
Future Considerations	265
Chapter 10: Conclusions and Recommendations	268
Research Purpose and Objectives	268

Research Findings	269
Reflection on the Research Findings	272
Implications of the Research Findings	273
Concluding Comments	276
Appendices	279
Appendix 2-1: Quantitative Survey	280
Appendix 2-2: Semi-structured Interview Questions	288
Appendix 2-3: Sample Interview Transcript	290
Appendix 2-4: Interview Participant Demographics	299
Appendix 3-1: Research Timeline	301
Appendix 4-1: GATT Negotiation Rounds	302
Appendix 5-1: China Export Performance	303
Appendix 5-2: China GDP Performance	304
Appendix 6-1: Rank Ordered Survey Responses	304
Appendix 6-2: Rank Ordered Survey Responses Final Factors	306
Appendix 6-3: Survey Data Decision Making Factors Grouped by Risk Reward	307
Appendix 6-4: Interview Data Goals and Objectives All Participants	308
Appendix 6-5: Interview Data Volume of Global Sourcing	309
Appendix 6-6: Interview Data Type of Global Sourcing	310
Appendix 6-7: Interview Data Decision Making Factors	311
Appendix 6-8: Interview Data Most Important Factor	312
Appendix 6-9: Interview Data Second Most Important Factor	313
Appendix 6-10: Interview Data Third Most Important Factor	314
Appendix 6-11: Interview Data Barriers to Global Sourcing	315
Appendix 6-12: Interview Data Supply Chain Issues	316

Appendix 6-13: Interview Data Global Supply Chain Performance	317
Appendix 6-14: Interview Data Risk Mitigation Strategies	318
Appendix 6-15: Interview Data Global Sourcing Trends	319
Appendix 6-16: Interview Data Future Predicted Trends	320
Appendix 6-17: Interview Data Global Sourcing Goals and Objectives In Group	321
Appendix 6-18: Interview Data Global Sourcing Goals and Objectives Out Group	322
Appendix 6-19: Interview Data Volume of Global Sourcing by In Group	323
Appendix 6-20: Interview Data Volume of Global Sourcing by Out Group	324
Appendix 6-21: Interview Data Type of Global Sourcing by In Group	325
Appendix 6-22: Interview Data Type of Global Sourcing by Out Group	326
Appendix 6-23: Interview Data Decision Making Factors by In Group	327
Appendix 6-24: Interview Data Decision Making Factors by Out Group	328
Appendix 6-25: Interview Data Most Important Factor by Out Group	329
Appendix 6-26: Interview Data Most Important Factor by In Group	330
Appendix 6-27: Interview Data Second Most Important Factor by In Group	331
Appendix 6-28: Interview Data Second Most Important Factor by Out Group	332
Appendix 6-29: Interview Data Third Most Important Factor by In Group	333
Appendix 6-30: Interview Data Third Most Important Factor by Out Group	334
Appendix 6-31: Interview Data Weighted Factor Importance	335
Appendix 6-32: Interview Data Weighted Factor Importance by In Group	336
Appendix 6-33: Interview Data Weighted Factor Importance by Out Group	337
Appendix 6-34: Interview Data Barriers to Global Sourcing by In Group	338
Appendix 6-35: Interview Data Barriers to Global Sourcing by Out Group	339
Appendix 6-36: Interview Data Supply Chain Issues by In Group	340
Appendix 6-37: Interview Data Supply Chain Issues by Out Group	341

Appendix 6-38: Interview Data Global Supply Chain Performance by In Group	342
Appendix 6-39: Interview Data Global Supply Chain Performance by Out Group	343
Appendix 6-40: Interview Data Risk Mitigation Strategies by In Group	344
Appendix 6-41: Interview Data Risk Mitigation Strategies by Out Group	345
Appendix 6-42: Interview Data Global Sourcing Trends by In Group	346
Appendix 6-43: Interview Data Global Sourcing Trends by Out Group	347
Appendix 6-44: Interview Data Future Predicted Trends by In Group	348
Appendix 6-45: Interview Data Future Predicted Trends by Out Group	349
Appendix 7-1: Economic Factor Weightings	350
Appendix 7-2: Model Input Freight Cost Analysis	353
Appendix 7-3: Model Input Duties and Tariffs	354
Appendix 7-4: Model Input Labour Cost	355
Appendix 7-5: Model Input Environmental Factors	356
Appendix 7-6: Model Input Governmental Factors	357
Appendix 7-7: Model Input Political Stability	358
Appendix 7-8: Model Input Quality Perception	359
Appendix 7-9: Model Input Infrastructure	360
Appendix 7-10: Model Input Delivery	361
Appendix 7-11: Model Input Currency Volatility	362
Appendix 7-12: Model Input Corporate Social Responsibility	363
Appendix 7-13: Risk Factor Analysis	364
Appendix 7-14: Position Map	365
Appendix 7-15: Comparison of Infrastructure Model Inputs	366
Appendix 8-1: Member Checks Analysis	367
Appendix 8-2: Saturation Matrix	368

Appendix 8-3: Saturation Matrix: Goals and Objectives	369
References	370

Abstract

Domestic organizations in competitive markets are often reliant on the sourcing of low-cost goods and services from suppliers located offshore, often located in China. History has shown that location advantages are not fixed, and evolve over time, creating a shift in when and when global sourcing opportunities present themselves. With the future success of so many organizations tied to low-cost China sourcing, China's future competitiveness as a sourcing location is of critical importance. If China does indeed lose their competitive advantage, how will the potential reduction in China's cost competitiveness impact those organizations reliant on China sourcing to compete in their marketplace?

The purpose of this research is to determine what location factors drive the global sourcing decision-making process, the relative weights of these factors in making global sourcing decisions, and how different sourcing locations (including China) currently score in relative comparison to each other with regards to these factors. An understanding of these factors and how they effect the global sourcing decision-makers will allow organizations to understand which global locations might present opportunities for both their current and future global sourcing activities.

The methodology used in this research is based on a mixed methods approach, grounded in an explanatory sequential design, with a focus in the basic qualitative research methodology. A quantitative survey was utilized to identify potential decision-making factors and weights, supplemented by semi-structured interviews to understand why the relevant factors are indeed relevant, and to provide trustworthiness, credibility, and dependability in the findings.

Semi-structured interviews of two distinct populations (global sourcing practitioners and business advisors) were conducted, as was a survey of supply chain practitioners from the Supply Chain Management Association. This approach provided an opportunity to understand what factors are deemed important for practitioners making global sourcing decisions, and the relative factor weights these factors hold in the decision-making process. The methodology also

provides insight into the potential differences between those who do (the practitioners), and those who advise (the business advisors).

The research findings indicate that China is not necessarily the most attractive global sourcing location for all global sourcing, and that results are dependent on where the organization is sourcing from, the competitive make-up of their industry, and the organization's tolerance for risk.

The practical implication and originality of this work is to provide a foundation for the subsequent building of a model analyzing the current state of comparative attractiveness with regards to which global sourcing locations are likely to provide the largest opportunities for organizations, given the organization's location, global sourcing strategy, and organizational risk profile.

Chapter 1: Introduction

Background Information

In 1776, the economist Adam Smith (1776) proposed the idea that the true role of government was to maximize the wealth of its citizens. In order to accomplish this, a borderless marketplace was required, in which the countries of the world most efficient at producing goods and services would be producing those goods and services for all countries. In other words, a borderless global marketplace was required to maximize the standard of living for the world's citizens.

At the time of Smith's comments, this view of global trade was in stark contrast with the mercantilist approach, often relying on trade protectionism to enhance the viability of domestic industries. Smith recognized that while trade protectionism did indeed have specific localized advantages, these practices were often in support of inefficiency, and resulted in inflated costs of goods and services at the expense of the citizens.

Smith's view of international trade has spread over the years, resulting in growth of free trade agreements between nations, and the establishment of a global marketplace built on efficiency of production (Urata, 2002). Despite the spread of Smith's beliefs however, political pressures in times of lackluster economic performance, often result in the return to trade protectionist practices, which cater to specific localized industries that are critical to the political agenda. As a result, the world is still struggling to create a full borderless international marketplace, despite the overall trend towards globalization.

The past few decades have continued to see the world shift to a more global business marketplace, as countries reduce or remove trade barriers, allowing foreign countries access to their domestic marketplace. Although for many this trend is thought of as a relatively new phenomenon, we need to recognize that global trade patterns have occurred for centuries, with countries trading their abundant resources for those in short supply. The difference in today's business world is the ease in which we are able to find new sources of supply, locate new global markets for our products, and in our ability to execute on these opportunities.

Despite this long history, global sourcing remains the topic of significant media attention and debate, particularly since China's rebirth in the post-Mao era. This rebirth has resulted in China demonstrating a pattern of continual, aggressive, annual economic growth (see Appendix 5-2), and in their ability to establish themselves as the world's leading manufacturer, with many organizations throughout the world relying on low-cost China sourcing to remain competitive in the marketplace. These, and other global sourcing opportunities, have resulted in an enhanced focus on global sourcing in many world markets.

The growth in the focus on global sourcing opportunities have yielded great benefit to many companies. It has allowed for significant improvement in cost structures, and improved market competitiveness (Alguire et al. 1994). There are also downsides to these strategies however, such as longer lead times, reduced flexibility, heavier investment in inventory, and in some cases, dependence on low cost sourcing for continued market competitiveness. It is this dependence on global sourcing that is the primary concern driving this research.

Rationale for this Research

There are few who would argue with the fact that China has grown into an international powerhouse with regards to global trade. Their continued levels of unprecedented annual economic growth has been deemed by many as unsustainable, but nonetheless continues (albeit at a declining rate), and has resulted in not only a significant increase in the standard of living for many Chinese, but also other economic inflation pressures that are starting to show in the form of escalating price levels. As well, the overall workforce continues to become more sophisticated, leading to growth in the presence of trade unions, which have also contributed to inflating costs to manufacture (Chan et al. 2017).

This is not the first time in history that a country with significant cost advantage has evolved to the point that the advantage is diminished and in fact eventually lost due to increased inflationary pressures in the cost to manufacture. Many countries throughout history have experienced this economic life cycle from a developing to a developed nation, eventually resulting in a loss of competitive edge. Japan and Taiwan are two examples of countries that relatively recently were major forces with regards to low cost manufacturing in the electronics

sector, and who eventually lost their global leadership position, forcing divestment to other low-cost locations (Belderbos & Zou, 2006). This is but one example of this natural phenomenon in which localized economies evolve, similar to the evolution of North American or European economies over the past number of decades. This evolution is of critical importance to organizations whose sourcing activities are focused on specific global locations.

Costs in China are continuing to rise, and although the country is still dominant in the global marketplace, their leadership position is likely to subside, which could have potentially devastating impact to organizations throughout the world who have become dependant on China for low-cost goods and services. Despite this fact, many organizations seem to be impervious to this risk, remaining dependent on supply chain structures as they exist today, and taking a reactive approach to their global sourcing practices. Many are not recognizing the continual evolution of global competitiveness, and the need for a robust and proactive global sourcing strategy that takes into account potential future changes.

This proposed research is of particular significance to the large number of organizations that are currently dependent on low-cost country sourcing for their future economic viability. The question now on the minds of many business professionals is “when China will price itself out of the marketplace, and what this will mean to the organization’s who have become reliant on low-costs goods and services from China to be competitive in their industry”?

Many companies, who currently are depending on sourcing from China, will find themselves in a difficult position in the future when China no longer serves as a viable option for their sourcing needs. Those who are able to quickly and accurately alter their global trading patterns to the developing nations who are well positioned to serve their future needs will be the organizations that will gain competitive advantage and increase their chances of long-term success in the marketplace.

The research conducted here is intended to build a current state model to aid organizations in determining where current opportunities lie from a global sourcing location perspective. This model could be an important tool in mitigating organizational competitive risk and provide

businesses with insight and evaluation of their current global sourcing strategy, and to improve the long-term viability of their business.

Project Scope

Like with most studies, there are limitations which can impact the depth and breadth of the research project, requiring a definition and narrowing of the scope. This piece of research is no different, and the project scope had to take into consideration these various limitations.

In the case of this specific research, a mixed methods methodology was chosen, but one which was primarily influenced by qualitative research. Due to the nature and degree of influence of the qualitative component of this mixed methods study, research findings will have limitations with regards to their generalizability, which could impact its usefulness (Merriam & Tisdell, 2016).

Further to this, since this research is intended as part of doctoral studies, resources in the form of time and money were limited. As a result, this study's focus is to acquire a deeper understanding of the current state of relative competitiveness of the countries included in the study.

In addition, the secondary research data intended for use as model inputs had some limitations, resulting in a focus on the current state of the relative attractiveness of countries included in the model. The country-level data available also led to a significant limitation in the number of countries that could be included in the model, leaving some areas of the developing world being excluded from this research. The intention is to broaden the scope in future research efforts, and to build on the findings and conclusions from the current research.

Given the limitations listed above, the project scope for this research was narrowed to focus on Canadian purchasing practices, and specifically, how sourcing decision-makers decide on whether or not to source products and services globally, and if so, to identify the factors considered when making global sourcing decisions. Because the end goal of this research involves a deeper understanding of the global sourcing decision-making process in order to build a current state model, the decision-making factors of most concern are those factors related specifically to location, as opposed to industry, vendor, or product factors.

The populations used for sampling purposes consisted of two, distinct populations. For our quantitative survey, members of the Supply Chain Management Association were chosen as our population. This association is made up of members who, for the most part, make sourcing decisions as part of their normal day-to-day job. This group therefore represented an opportunity to reach out to a reasonably large population in a very cost-effective manner and utilized the association's member access to get the survey distributed, and to encourage member participation.

The semi-structured interview portion of our data collection focused on a population of individuals who either make or influence their organization's sourcing decisions or are in an advisory role for those who do make such decisions. These data collection efforts allow us to dig deeper into the decision-making factors, to determine why the factors listed are important in making global sourcing decisions, and to also identify if any gaps existed between the views and perceptions of those who do, and those who advise. Both populations were sampled based on a purposeful sampling approach.

Questions and Aims

Without truly understanding the critical global sourcing decision-making factors, and what is happening to these drivers in China (and other countries), we would not be in a position to understand the current state of relative attractiveness, and whether China sourcing remains to be attractive. This lack of understanding could put many organizations at risk.

History has demonstrated how countries can go from developing markets with significant cost advantages, to more developed ones with eroding competitive advantage. The question that remains of vital interest to many organizations is "when will China no longer be a viable sourcing destination, and who will be next to assume that leadership position?" In other words, what should current global supply chains look like for those organizations dependent on global sourcing to compete?

In order to answer these questions, we need to gain an understanding of how those who choose to source products globally make those decisions. In other words, what are the key

decision-making factors when making global sourcing decisions, which of these factors are attributed to sourcing location, and how do these factors interact with each other with regards to their level of importance in making the final decision as to whether or not to source globally, and if so, from where.

This research will therefore focus on the following research questions:

1. What location specific factors are considered important by supply chain practitioners when considering whether or not to source products and services globally, and what weight does each carry in the global sourcing decision-making process?
2. How do countries measure up in relation to each other today, with regards to their relative attractiveness as a global sourcing destination?

Chapter Outline

The research thesis that follows will discuss in more detail the methodology and theoretical framework used to conduct this research project, and then will summarize the existing relevant literature reviewed, identifying gaps in previous research with regards to the research questions we seek answers to. The thesis will also review and outlines the evolution of global sourcing, consider some of the current perceptions that exist with regards to doing business offshore, and the potential impact on the global sourcing decision-making process. The existing perceptions are extremely relevant and important to our research, as some global sourcing decision-making factors are based in fact, while others are grounded in perception.

Following the chapters outlined above, we review and discuss our empirical data collection and conduct data analysis to draw thematic conclusions. This information is analyzed and explained with regards to what it means for current and future global sourcing practices amongst Canadian purchasers. The data findings will then be developed into a global sourcing model, which is the true objective and output of our research efforts.

Finally, we will summarize the implications and relevance of our findings, as well as discuss some of the limitations of this research, ending with a summary of what it all means

Chapter 2: Research Methodology

Introduction

As mentioned in the introduction of this research thesis, the goal of this study is to understand the factors and their relative weights in practitioners' decision-making on whether or not to source products and services globally, and from which countries. The decision-making factors of particular interest to our study are those related to location; those that influence what countries decision-makers choose to source from.

Given the objective outlined above, the following represent our research questions:

1. What location specific factors are considered important by supply chain practitioners when considering whether or not to source products and services globally, and what weight does each carry in the global sourcing decision-making process?
2. How do countries measure up in relation to each other today, with regards to their relative attractiveness as a global sourcing destination?

It is intended that the findings from this study be used as foundational research to be built upon in future research endeavours. Future anticipated research will involve building the extent of our knowledge of the global sourcing decision-making process and building a predictive model which will guide organizations as a leading indicator in determining future sourcing locations, giving those organizations a first-mover advantage in setting up global supply chains in new emerging locations.

Philosophical Considerations

A researcher's approach to conducting research is influenced by many factors, beginning with their ontological and epistemological perspectives on what represents reality, and how we go about gaining knowledge to understand that reality (Saunders, et al. 2019). Therefore, a brief discussion on this researcher's ontological and epistemological perspective is relevant to our discussion on the specific research methodology used to conduct this specific research endeavour.

Ontology refers to how we view the world with regards to what represents reality (Saunders, et al. 2019). Does an objective reality, independent of influence from people, exist or not? The ontological position suggesting an objective reality supports an objective approach to finding and measuring this reality, in an effort to understand and predict what will happen, given various considerations.

The alternative ontological view is that no objective reality exists, and that reality is dependent on interaction between people and their environment, and therefore cannot be understood without understanding on how people view and interact with the world.

The ontological perspective held by the researcher in turn influences the researcher's epistemology, namely how we come to understand and gain knowledge about the world around us. Those with an ontological perspective supportive of an objective reality, are likely to hold an epistemological position such as positivism, realism, or objectivism. Alternatively, those researchers with an ontological perspective focused on lack of an objective reality are likely to carry an epistemological position such as interpretivism, subjectivism, or pragmatism.

The philosophical underpinning of our research methodology is not considered to be coming solely from the Interpretivist philosophy or the Positivist philosophy, but rather a pragmatist approach considering a blend of the two philosophical extremes (Subedi, 2016). This philosophical perspective recognizes that there are indeed facts in existence that make a given country competitive or not (positivism), yet our experiences in perceiving these facts also plays a large role in making global sourcing decisions (interpretivism). Although there is merit in this pragmatist philosophy, this study is heavily weighted towards the interpretivist epistemological position and is therefore heavily influence by perception, leaning heavily towards a philosophy that is grounded in interpretivism.

In addition to the ontological and epistemological considerations outlined above, the values and ethics held by the researcher also has the potential to impact any research project. The role played by these values and ethics is referred to in research philosophy as axiology (Saunders, et. al,2019).

Axiologically speaking, my personal values and ethics are grounded in “always do the right thing, not the easy thing”, and this personal philosophy also has the potential to be projected onto others. As a result, the optic sometimes held by global sourcing practitioners (and often perpetuated by the media) that focuses on lack of trust from vendors, is not shared by this researcher. This gap in values and ethics therefore may have a potential impact on the analysis of perception vs. reality, which is an important part of the findings from this research.

In order to mitigate any potential impact or bias this could have, an awareness combined with a diligence to keep this top of mind while conducting the research interviews, analyzing the data, and presenting the findings was an important consideration to mitigate any potential bias that could creep into the research findings.

Research Methodology

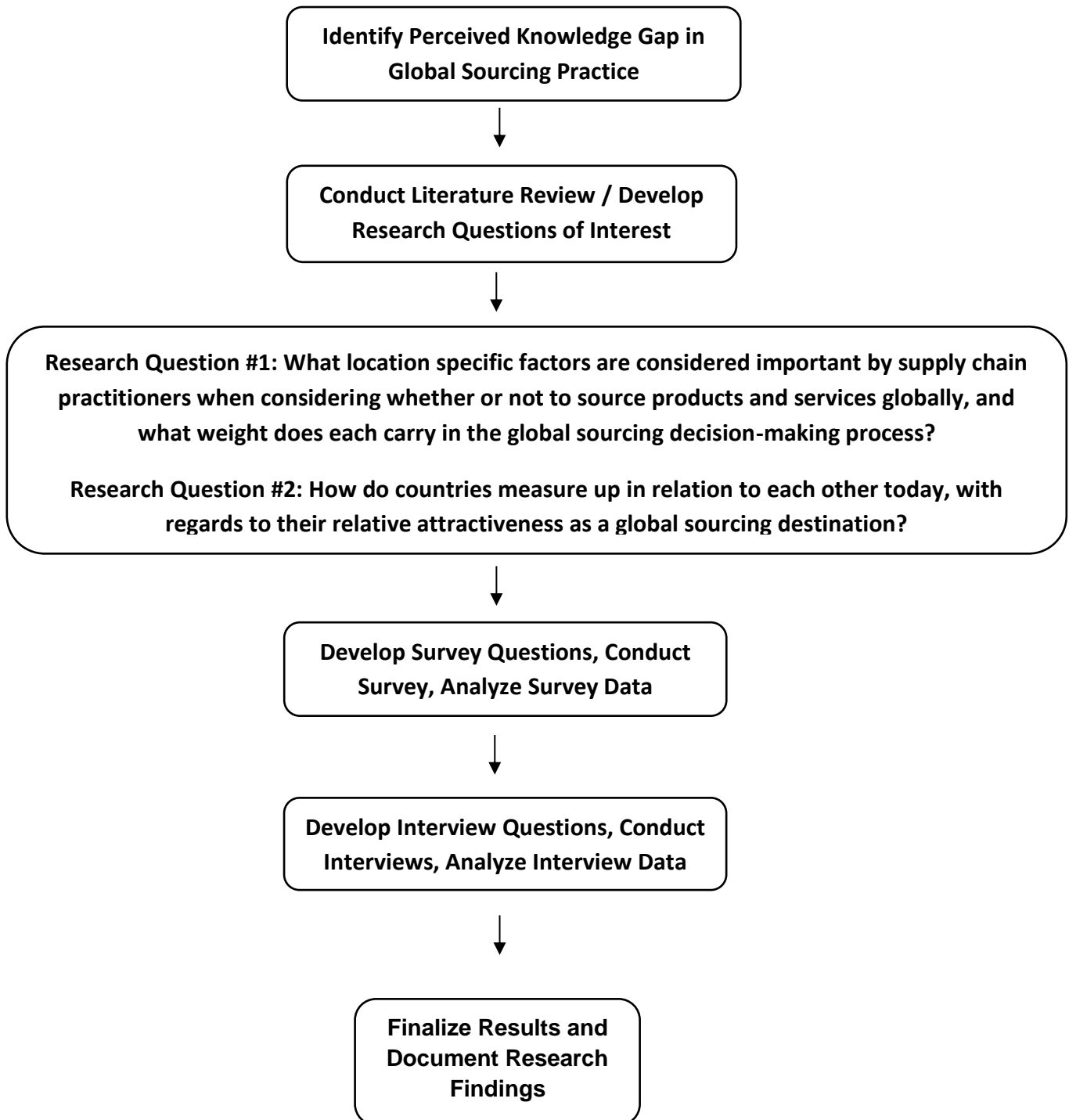
This study utilizes a mixed methods research methodology, although since our epistemological approach is skewed towards interpretivism, the major influence on the research is grounded in the basic qualitative research approach, with a goal of understanding what global sourcing decision-makers think, and why they think as they do.

The study utilizes an explanatory sequential design in which quantitative surveys were conducted first to determine the global sourcing decision-making factors that are important to supply chain practitioners, followed by semi-structured interviews to gain a deeper understand why supply chain practitioners think the way they do with regards to making global sourcing decisions (Merriam & Tisdell, 2016). A mixed methods approach was deemed a good fit since our goal was not only to understand what the factors are, but also to dig deeper to add some breadth and depth to our understanding of how and why practitioners make the decisions they make with regards to global sourcing.

An additional interest from this research was in understanding the role that perception vs. reality plays in the decision-making process, including perceptual differences between those who make these decisions (practitioners) and those who are advise those who make these

decisions (business advisors). For this reason, a sample from a population of business advisors was also included in the semi-structured interview portion of the data collection.

The process diagram below summarizes the methodological approach to this research endeavour:



Sample Selection

In order to gather data related to our topic, we utilized purposeful sampling in which we intentionally selected candidates thought to be a good fit for providing the type of information we were looking for, as related to answering our research questions. With regards to the quantitative survey, the demographics of the individual participants were not available, and were not gathered through the survey questions, as they were not deemed to be of interest given the associated research questions. The participants consisted of supply chain practitioners from the Supply Chain Management Association, representing a wide variety of companies and industries throughout Canada. These individuals were considered to be participants with direct experience in making sourcing decisions and were therefore ideal to provide insight into what factors were considered relevant when making decisions on whether or not to pursue global sourcing strategies.

Participants in the interview portion of our data collection alternatively came from two distinct populations, which provided us the added opportunity to compare the practitioner group to those who are primarily in business advisory roles. The individual participants in this group therefore had a wide variety of experience, and worked in distinctly different roles, with varying degrees of subject matter expertise with regards to global sourcing. The business advisors were deemed important, as they potentially have significant influence in whether or not global sourcing strategies are implemented, and if so, in how they are implemented. This information could also potentially impact government economic development strategy, as government investment is significant in providing advisory services to small business in the pursuit of domestic economic growth.

For information on the interview participant demographics, see Appendix 2-4.

Data Collection

For the survey portion of the data collection, the sample was taken from a population of supply chain management practitioners in Canada to identify the important global sourcing decision-making factors and their relative weights in the decision-making process. It was decided to use

members of the Supply Chain Management Association in Canada as the population, as this group consists of practitioners who source product and services as part of their regular responsibilities, representing both people who participate in global sourcing activities as well as people who do not. A total of 217 responses were received from a total population of 4796 potential participants.

The semi-structured interview portion of the data collection also utilized purposeful sampling. In choosing a sample size, the desire was to interview approximately twenty to thirty individuals in an effort to gather enough data that would result in saturation, indicating no new relevant information was being contributed. In the end, the decision was made to stop the data collection process after 15 interviews from the practitioner group, and 10 interviews from the business advisory group. Participants from the practitioner group consisted of both full-time supply chain practitioners, as well as others who are responsible for daily sourcing decisions, such as operations managers or small business owners.

The criteria for inclusion in the practitioner population for the semi-structured interviews were that the individual had to be a sourcing decision-maker, or at least be highly influential in their organization's sourcing decisions, including from where and from which vendors they would source from. For the business advisory group, the individual was required to be in a role providing advice to organizational personnel who have decision-making influence over sourcing strategies. This group consisted of individuals from a variety of roles, such as economic development officers, external accountants, finance and banking.

The Survey:

Since the purpose of the quantitative surveys was to gain an understanding of what factors participants considered to be important in the global sourcing decision-making process, and what the relative weight in importance of each of those factors was, a questionnaire with Likert-type scales was considered a cost-effective way to gather data from a reasonable sample size, in a relatively short period of time.

In total, 217 participant responses were received from a population of 4796. The survey was administered on our behalf by the Supply Chain Management Association and was distributed electronically to those members in their database who had previously “opted in” for electronic communication from the association. The original survey was sent out on October 15, 2015. Two follow up communications were sent on October 29th and November 5th of that same year, encouraging association members to complete the survey in support of industry research.

The survey questions were developed from the structured literature review process, in which a variety of potential factors were uncovered that might possibly have an impact on the global sourcing decision-making process. A list of the survey questions can be found in Appendix 2-1.

Survey data was gathered utilizing the Survey Monkey software application, and the results were analyzed in spreadsheet format using Microsoft Excel. The spreadsheet analysis focused on identifying the percentage of responses for each category for each survey participant. The data was cleansed through the elimination of samples in which incomplete answers were received for a majority of the survey questions, bringing the total participant sample size to 212. The analysis of the data then calculated the percentage of responses by category, and ranked according to the importance of the factor, utilizing weighted average calculations.

The criteria for inclusion in the survey population was that the participant must be a member of the Supply Chain Management Association and must have “opted in” as per CASL requirements to receiving electronic communication from the association. The reason for the “opt in” requirement was recent changes to Canadian law preventing organizations from soliciting or communicating via electronic means to people who had not previously given their “opt in” consent.

The Interviews:

Semi-structured interviews were also utilized in an effort to dig deeper into the meaning behind the factors uncovered during the survey data collection. This process was intended to add richness to the data, and to provide increased depth and breadth to the meaning behind why

the factors considered important are important and carry the level of importance attributed by supply chain practitioners.

The interviews were conducted from the two distinct populations described above, primarily in a face to face manner. On some occasions, the interviews were conducted by phone or skype to facilitate and accommodate participant location and work schedules.

The semi-structured nature of the interviews provided the opportunity to take advantage of a predetermined set of questions to guide the interview, but also to allow for probing and gathering of information that may not have been anticipated prior to the start of the interview process. Utilizing the basic qualitative approach to the research, the study was intended to be an inductive process, with the questions and focus of the researcher evolving over time, influenced by comments made by participants earlier on in the interview process.

All interviews were recorded, and subsequently transcribed in detail during the several weeks following the interviews. Some field notes were taken during the interview process, to record details that resulted in an expansion of questions or themes to be explored in subsequent interviews. A list of interview questions can be found in Appendix 2-2.

The interview data was entered into the Nvivo 10 software application, utilized for data storage, sorting, and coding. Nvivo provided an efficient way to analyze the data, to identify and define topics and themes of interest, and to analyze the frequency of comments related to the specifically identified themes, utilizing the constant comparative method of analysis, which involves the coding and recoding of text data into themes relevant to the research questions (Hewitt-Taylor, 2001). With this method, the researcher identified categories deemed relevant to the research questions, and then coded and sorted participant responses made by the interview participants.

As the analysis of the interview transcripts evolved, a total of thirteen distinct categories were identified, namely:

- Barriers to global sourcing
- Decision-making factors

- Future predicted trends
- Global sourcing goals and objectives
- Global sourcing trends
- Global supply chain performance
- Most important factor
- Risk mitigation strategies
- Second most important factor
- Supply chain issues
- Third most important factors
- Types of global sourcing
- Volume of global sourcing

Within these categories, a number of separate “nodes” were identified using the constant comparative method, allowing us to group “like comments” together to identify volume of references, and thematic trends. In total, one hundred sixty-five separate notes grouping like comments together were utilized during the analysis of the semi-structured interview data.

Validity and Reliability

In order to ensure validity (trustworthiness, credibility, and dependability) of this study, attempts were made to ensure best practices were utilized resulting in rigor in the research effort. It was therefore decided to utilize the standard research practices outlined below.

Firstly, triangulation was used as an approach to demonstrate credibility in the work, through comparison with other data collection methods. Comparison between the results of the quantitative survey and the semi-structured interviews were a means of determining the consistency of responses with regards to what the key decision-making factors were, and their relative importance in the global sourcing decision-making process. In addition, secondary research in the form of published peer reviewed research articles were used to compare the research findings to what was found in relevant literature, thereby identifying similarities and differences in the relevant research selected.

To supplement the above, member checks were used as a means of following up with a sample of research respondents to determine if the study findings made sense and resonated with participants. By comparing the interview data with the survey, conducting the member checks, and comparing findings with secondary research literature, a triangulation approach to ensuring the credibility of this research was realized.

As with most research utilizing the basic qualitative approach, research reliability (transferability) and the ability to generalize findings are somewhat of an issue. Basic qualitative research, by design, involves the gathering of data from study respondents to understand their views, at this point in time, as related to the relevant research questions. The goal is a deeper, broader understanding, and is an inductive process of understanding how these specific participants think, and why, given the topic being studied. This approach is not intended to generalize across all situations, so the expectation of generalizability is something that is not guaranteed nor expected.

Researcher Reflexivity

The potential for bias from the researcher is something that was paid close attention to in this study, since the main data collection instrument in the interview process was the researcher. Given the researcher's deep experience in the subject matter area, having a high level of expertise in global sourcing, and in particular doing business in China, awareness over potential reflexivity issues had to be kept top of mind. This was an important consideration to ensure an objective assessment of study participants views were gathered, and that the researcher, both in the design of the survey questions and the conducting of the semi-structured interviews, was not leading the participants to responses that simply validated the point of view or biases of the researcher.

From the semi-structured interview portion of the data, we achieved an adequate level of objectivity in conducting the interviews through interviewer awareness and a strong desire to remain objective and not lead interview participants. When reviewing the survey questionnaire, the addition of some open-ended questions at the front end of the survey to identify potential factors potentially not considered in the current survey, could have enhanced the data

collection efforts. Future research, building on the results found here, should consider implementation of data collection utilizing an open-ended approach to acquiring respondent data on potentially relevant topics.

Chapter 3: Literature Review

Much has been researched and written on subject matter related to global sourcing, including the historical development of several international trade theories. In addition to these trade theories, research has been conducted related to country-level factors, firm-level factors, as well as research aimed at developing some type of metric or measurement system related to a variety of global sourcing areas.

The following chapter embarks on a literature review that will discuss several theories on international trade, starting with Adam Smith's work in the late 1700's. We will then discuss significant research initiatives, some of which are focused at the country-level and others at the firm-level. While the country-level research often focuses on comparative analysis to various trade theories, the firm-level research attempts to determine the factors considered by organizations when making sourcing selection decisions in an effort to understand the customer's perspective that governments need to consider when attempting to make policy decisions that will attract foreign direct investment. Finally, we will look at some of the existing measurement tools that have been developed and are currently in use today and discuss why this research effort is significantly different in scope, and why it is so vital to business and government moving forward.

Literature Review Methodology

When approaching this literature review, the process began with the identification of a research topic of interest, namely how Canadian supply chain practitioners who make decisions on whether or not to source globally (and from where), make those decisions. This overarching research question was firmly entrenched in the overall objective of the research related to the growing dependence on China sourcing by many businesses to allow them to compete in the marketplace. The end goal of the research being to develop a current state tool to allow organizations to assess their global sourcing strategies around high value locations, and to gain advantage into the identification of emerging markets.

The next step was to dig deeper, and to outline specific research questions to be answered, and to identify and focus the research on the constraints and limitations of this project, most of which were related to time and financial considerations. The most significant impact of these limitations was to focus this immediate research endeavour around a current state analysis, which would then be built upon in post-doctoral research to add the predictive dimension to the study.

A broad search of articles was then conducted to source materials deemed relevant to our research questions. This broad search began without setting filters for the year of publication, allowing us to source foundational theories in international trade that while authored as early as the late 1700's, were still deemed relevant to this research. As the search narrowed, we gradually began to focus on the most recent peer reviewed research conducted over the past couple of decades, through use of date of publication search filters.

Our literature review strategy made use of a variety of search engines, including Google Scholar, the library at the University of Hull, the library at Dalhousie University, and the library at Dalton State College, including reference materials stored within the University System of Georgia network of libraries. These search engines connected to a variety of academic databases, which contain academic peer reviewed journal articles, including those relevant to our research aims.

In addition to the use of the above academic search engines, some databases were searched directly, despite the fact that many of these databases were accessed utilizing the search engines listed above. The main databases that proved fruitful in locating relevant research were ABI/Inform, Emerald Journals, JSTOR, PROQUEST, Science Direct, Taylor and Francis, Springer Link, and Wiley.

The initial searches were conducted utilizing key words such as supply chain management, global sourcing, outsourcing, nearshoring, and others. This broad search allowed for the gathering of a significant amount of literature, some more relevant than others. In total, in excess of one hundred articles were scanned at the abstract level, allowing for a reduction to fifty-six journal articles requiring a more in-depth, full article review. From these fifty-six articles

narrowed down from our broad search, the number of journals analyzed and referenced as part of the literature review for this research engagement was a total of twenty-six, with an additional five textbooks deemed relevant as well.

As this literature was reviewed, themes began to emerge, and the search narrowed, sometimes specifically related to the identified themes, and also based on the identification of major theories, identified related works, or measurement systems that are currently in place. The narrowing of the search also resulted in the utilizing of published books and internet websites providing secondary research data that was relevant to the research goals and objectives. In addition, other suggested works that were recommended as highly relevant were explored, in an attempt to improve the robustness of the literature review.

The review of pertinent articles and books as a result of the literature review methods outlined above, sometimes led to additional source materials, from the reference sections of the research under review, particularly when the research was deemed highly relevant or foundational to our research aims.

Finally, the chapter below was written, and organized based on the major thematic components synthesized from the review and analysis of the most relevant data. This organization categorized the relevant literature under the headings of international trade theory, country-level research, firm-level research, and existing measurement tools. A timeline of the relevant research and their related themes can be seen in Appendix 3-1.

International Trade Theory

Adam Smith

Prior to the publication of Adam Smith's (1776) "An Inquiry into the Nature and Causes of the Wealth of Nations" in 1776, the predominant belief was that a nation's wealth was determined by the existence of precious metals, such as gold and bullion, and as a result, governments primarily practiced protectionism, levying large duties on imports to protect domestic industries. This practice later became referred to as mercantilism by Smith. Smith argued that this type of protectionist behaviour, although often beneficial to home industries, was harmful

for the country as a whole as it inflated the cost of goods which had an overall detrimental effect on the domestic economy and standard of living of its citizens.

Smith spent time at University in Scotland, as well as some time studying at Oxford, which led to his eventually teaching at the University of Glasgow. For a time, he also toured mainland Europe while employed as a tutor. This time on the mainland exposed Smith to other academics that had emerging views on international trade, adding to his personal development as an economic theorist.

During Smith's time on the European mainland, new views were being put forth by a group of people known as the Physiocrats, who were proponents of the view that governments should not be interfering in business, and should be eliminating barriers to free economic trade amongst nations. These Physiocrats were firm believers that the only way that true value was created by a country was through agriculture, where products were actually created and grown.

Smith thought this interesting, and was a supporter of a free trade view, although he did not believe that agriculture alone was the determinant of value creation.

Smith's theories were grounded in the belief that firms should be left alone to compete, and that although they would make decisions based on their own good, the resulting effect would be for the greater good of the nation. He referred to the fact that the individual would be led by an "invisible hand" which would guide their intent based on their own personal gain, but which would still contribute to the greater good of the national economy (Smith, 1776). Smith argued that this competitive situation would lead to a division of labour and specialization, with countries producing the goods and services that they could produce more efficiently than others, giving them in essence a competitive advantage.

In Smith's view, three factors exist that make up the cost of a commodity: wages, profit, and rent. Wages were the money paid to workers as a result of their labour, which was an investment in the production of products. Smith thought wages were representative of the real value of the product.

In addition to wages, the cost of commodities contained a certain amount of profit, which in effect was the compensation awarded to the owner for making the required capital available, and for taking risk in the production and sale of goods. The third component of commodity cost Smith termed as rent, or compensation given to the landlord who does no work nor accept any risk in commodity production, which in reality represents payment in which the landlord gets something for nothing.

Smith further goes on to distinguish between the natural price of a good, and the market price of a good. His view was that the natural price represents the true value of the good, while the market price fluctuates around this natural value due to market forces such as supply and demand. These market forces have an equilibrium tendency that always eventually bring the price of the good back to equilibrium at the natural price level.

Smith's theories became widely known, and today he is often referred to as the "Father of Modern Economics". His work in "An Inquiry into the Nature and Causes of the Wealth of Nations" not only became a best seller overnight but is still thought of today as ahead of his time in promoting a free trade economy which still impacts international trade today.

David Ricardo

David Ricardo also did foundational work in international trade, some forty years after Adam Smith's work, publishing his "Theory of Comparative Advantage" in 1817 (Costinot & Donaldson, 2012). Ricardo, a British Political Economist, further advanced Smith's views of a free trade economy and the effect of division of labour.

Ricardo (1911) suggested, in line with Smith's views, that countries should focus on producing goods and services in which they are most internationally competitive and import the remainder of their needs from countries with more efficient production. This approach would result in extreme industry specialization, thereby maximizing value in the overall global economy.

Although Ricardo's work appears to be primarily supportive of Adam Smith's theories, Ricardo went further to coin the term "Comparative Advantage", which describes the resulting effect of

what Smith referred to as the “invisible hand” of greater good achieved through specialization and the division of labour. Ricardo further advanced Smith’s belief that through a focus on specialization in what a country does best, and importing the balance of what the nation needs, the result is an overall benefit or abundance of goods that cannot be otherwise achieved. He suggested that comparative advantage was primarily due to differences in a nation’s factor endowments.

Although Ricardo’s theory has garnered its share of criticism, it is still thought of today (along with the works of Adam Smith) as foundational work on the promoting of international free trade.

Some relatively recent research undertaken made an attempt to validate Ricardo’s “Theory of Comparative Advantage”. Prior to the undertaking of this research, Ricardo’s model was thought to be mathematically correct, although empirical research demonstrating the theory’s validity was not supported, primarily due to the fact that many of the production factors deemed important by Ricardo were not readily observable.

Costinot and Donaldson (2012) attempted to work around this problem by focusing specifically on the agriculture industry; an industry in which significant scientific knowledge and a deep understanding of production inputs existed. There was also an abundance of secondary data available that could be utilized with a great degree of confidence in attempting to demonstrate the validity of Ricardo’s work.

Costinot and Donaldson applied Ricardo’s model to the data and production input information available in order to predict the level of production output in a large number of fields, in accordance with Ricardo’s theory. The predicted values from their work were then compared to actual production data, for comparison and evaluation.

Costinot and Donaldson concluded that Ricardo’s model was not only mathematically correct, but that it also had a significant degree of explanatory power, an indication of the validity of Ricardo’s work.

Eli Heckscher and Bertil Ohlin

In the early 1930's, Eli Heckscher and Bertil Ohlin conducted research that again built on the theories put forth by David Ricardo. Heckscher and Ohlin's research regarding international trade resulted in the Heckscher-Ohlin theorem that attributes trading patterns to relative factor abundance (Jones, 1956-1957).

H-O theory states that countries who have abundance in a factor will realize a lower price in their home market for products and services that are heavily reliant on that factor. As a result, these countries will export these products and services to countries having higher market prices, in order to increase profits. Alternatively, products and services with lower factor abundances will have higher prices in the home market, which will result in imports of those products and services.

In 1954, Wassily Leontief conducted research building on Heckscher and Ohlin's work, research that resulted in the most controversial application of the H-O theorem. His input-output studies of the American economy hypothesized that the U.S. would be exporting goods and services that were capital intensive, since the U.S. was thought to be a very capital-rich nation, while primarily importing goods and services with high labour content. Leontief's study found the exact opposite, which resulted in what is now called Leontief's Paradox.

Many people point to Leontief's study as evidence that does not support the work conducted by Heckscher-Ohlin. Leontief, on the other hand, still believed the H-O model to be valid, but simply concluded that the U.S. was not as capital-rich a nation as other nations.

Michael Porter

Michael Porter's (1990) work, documented in his book "The Competitive Advantage of Nations", took an alternate view of global economic development, focusing on competitive advantage rather than the previously popular concept of comparative advantage. Previous work, as reviewed earlier in this paper, defined comparative advantage as being due to factor endowments or factor abundance, while Porter's work focused more on the classic definition of competitiveness referred to in business.

Porter's view put forth that globalization shifts a nation's ability to be advantaged by factor conditions that historically were thought to create a comparative advantage. He stresses that it is the ability of firms to be competitive in a particular location that is the key to long-term sustained economic advantage for the country they operate in. So, countries in which local industries are able to operate efficiently and competitively were the key to economic development, as opposed to simply factor considerations.

Porter's work developed what he called a diamond framework, which outlined four contributing factors to a country's success from an international competitive point of view.

The first consideration in Porter's diamond framework were factor conditions, such as human resources, physical resources, knowledge resources, capital resources, and infrastructure considerations. Those countries with a higher level of these factor resources were considered to be in a better competitive position internationally. Secondly, Porter considered demand conditions, asserting that countries having higher levels of home demand in a certain industry, develop a network of buyers that are more sophisticated, and have higher expectations of companies in that industry. This higher level of expectation forces companies to be more innovative, and to drive to make improvements, which in the end, leads to a competitive advantage for the entire industry internationally.

The third component of Porter's diamond framework deals with firm strategy, structure, and rivalry. In Porter's opinion, a firm's strategy and structure are dependent on conditions within the country in which they operate. As a result, countries who create an environment in which firms need to compete for business, force the businesses to strive for high levels of cost, quality, and innovation performance, makes the entire industry internationally competitive.

And finally, Porter's framework considers the presence of a country's related and support industries. As an industry grows and enjoys success in the home country, a number of related and support industries are developed, which creates a significant location advantage for that industry in that country. Porter purports that this support structure makes it extremely difficult for the industry to be "outsourced" to other countries, and therefore creates a competitive

advantage for that industry in that country. As a result, governments need to focus on making policy that removes roadblocks and supports the cluster of businesses to flourish.

In addition to these four factors, Porter identifies two other factors (government policy and chance) that can influence a country's competitiveness, although he believes that these factors alone cannot sustain a country's competitiveness, but rather support or enhance what is achieved from the four factors listed in the diamond framework. Porter further clarifies that for a country to be truly competitive, all four of the factors outlined in the diamond framework need to be strong.

In 2010, A.J. Smit (2010) wrote an article which examined Porter's work. The purpose of Smit's analysis was to determine whether or not Porter's model was indeed a new model to support the competitiveness of nations, or whether it is more related to the international competitiveness of firms, as opposed to countries.

As Smit stated in this research, when it comes to the competitiveness of countries, not everyone agrees as to whether or not there is indeed such a thing as country competitiveness, let alone theories that would explain how countries compete. There are really two separate schools of thought on this topic, the management school and the economic school.

The management school suggests that countries do compete internationally for business, as if it were a zero-sum game. In other words, one country may advance in a certain industry, doing so at the expense of other countries. The economic school of thought, on the other hand, takes an opposing view, that international trade is a positive-sum game, and that countries can indeed improve and benefit, and that this improvement is not necessarily at the expense of others. In other words, it is a positive-sum game, and that as countries improve, the size of the economic pie can be increased, as opposed to simply divided.

Porter's work on the competitiveness of nations has attracted some criticism. From the management school of thought, Porter's diamond framework does not take into account the attributes of a country's largest trading partner, does not appear to be applicable to smaller nations, and ignores the role of multinational companies in the competitiveness of a given

country on the international stage. Despite these criticisms however, the management school of thought is supportive of Porter's notion that countries do indeed compete internationally.

Porter's model has received much harsher criticism from the economic school, as Porter rejects the traditional international trade theories of people such as Adam Smith and David Ricardo in which the economic school of thought in international trade are founded. The economists are quick to point out that Porter does not distinguish between hypotheses, theorems, conjectures, and facts, and that his model has not been supported by empirical evidence, but rather is more based on a logical reasoning approach as opposed to mathematical models.

Smit summarizes his point of view by advocating that Porter's model is not about international trade at the country-level at all, but instead suggests location factors that support international competitiveness that are really at the firm-level. He also points out that much empirical evidence exists that supports Ricardo's comparative advantage theories of trade, which flies in the face of what Porter suggests in his diamond framework.

One such example cited by Smit is the Indian software industry. The software industry is flourishing in India, despite the absence of many of Porter's diamond model factors. In fact, Porter's model would suggest that software development should be much better supported and internationally competitive in the U.S. as opposed to India, but that clearly is not the case.

In 2011, a new study, conducted by Nebojsa Savic (2011), focused on examining Serbia's competitive position. This study looked at the timeframe from 2005 to 2011 and used Porter's New Global Competitiveness Index and his Diamond Framework as a tool for comparing the country's competitive position.

Savic found that when looking at Serbia's factor conditions, their context for strategy and rivalry, the country's performance with regards to related and supporting industries, and their demand conditions, that the many competitive disadvantages far outweighed the competitiveness advantages in all categories. Savic also found issues at the microeconomic level, with company sophistication and strategy.

Savic discovered that although Serbia had indeed improved its New Global Competitive Index score over the period studied, that their rate of improvement was less than other countries in their geographical area, resulting in a reduced level of relative competitiveness. As a result, Savic recommended that Serbia focus on improvement in factor conditions such as logistics infrastructure and educational institutions, and at reducing the level of government involvement in the economy that was resulting in a detrimental impact on the domestic competitive environment needed to enhance firm competitive behaviours.

Conclusions on International Trade Theory

This thesis is focused on global sourcing, and the way in which Canadian supply chain practitioners make global sourcing decisions. As part of this research, an understanding of the way in which global trade has evolved over the past few centuries is important as it provides background to how our globalized world has evolved in relation to international trade practices.

The process of globalization really started with the works of Adam Smith (1776), and his recognition to think beyond mercantilism, and his development of the “Theory of Absolute Advantage”, and in his promotion of the concept of international trade in a borderless society.

Smith’s work is very relevant to our current research, as his work was the starting point on global trade discussions, and therefore was very much focused on why reduced protectionism was good for society as a whole. His arguments, however, were solely focused on economic considerations (cost), which is only one component of consideration in our current research, so his impact, albeit foundational, is quite limited to our current model. The reason for this is his sole focus on cost/efficiency, while our expectation that cost is not only part of the decision-making process, and is becoming less important in the overall decision-making process, being overtaken somewhat by the decision-makers concern over alternate considerations such as risk.

Smith’s work was later advanced by Ricardo’s (1817) development of his “Theory of Comparative Advantage”, who moved beyond Smith’s focus considering factor endowments as a key comparative advantage for nations. Although Ricardo was able to expand upon the factors considered as advantageous in Smith’s work, his discussion on factor endowments was still

examined through a cost lens, so once again, does not cover the breadth of factors which our study considers. Although Ricardo's work is once again foundational, its impact on our specific study is again somewhat limited.

Heckscher-Ohlin's (1911) work, building upon Ricardo's theories, expanded the notion of factor endowments into factor abundance, making an argument for why certain nations hold comparative advantage as a result of factor endowment considerations. Similar limitations to our discussion above hold true for their work as well, primarily that it is focused on the cost argument for trade advantages at the national level.

The three significant pieces of research outlined above, each building upon what came before it, demonstrate an evolution in thought over time that form the basis of understanding international trade from a country perspective.

Porter's (1990) work on Competitive Advantage was the final significant piece of international trade theory we have discussed in detail. Porter purports that his theory explains how nations compete, and challenges claims made by the work of Smith and Ricardo. Although his theories claim to be focused on national competitiveness, this researcher's perspective is in line with Smit's comments that Porter's work is really about firm-level competitive factors, and although influenced at the country level, is truly not a country-level analysis (Smit, 2010). Given that our research efforts are focused on country-level global sourcing decision-making factors leading to location advantage, Porter's work, although expanding on the number of factors considered by the works of Smith, Ricardo, and Heckscher-Ohlin, once again is only partially relevant to this current piece of research.

In addition to the work done on various international trade theories listed above, there has been a significant amount of additional research related to global sourcing. Some of this research deals with factors at the country-level, looking at factors that make a particular nation a potential sourcing destination, while others have been at the firm-level, looking at reasons why a firm may potentially source globally. Whether at the country or firm-level of analysis, this research is beneficial in understanding what factors may be significant in predicting why or where firms may source from in the future.

Firm-level Research

Several pieces of research have been conducted that are related to global sourcing factors at the firm-level. Below is a review of six research initiatives that are relevant to the current research we are conducting, four of which focus on reasons for global sourcing. A fifth piece of research deals with a contingency model for determining sourcing strategy, while the final research reviewed below is focused on global sourcing risk.

Alguire, Frear, and Metcalf (1994) conducted research in an effort to gain insight into both barriers and motivating factors to global sourcing. They solicited feedback through a questionnaire consisting of twenty questions from a group of companies who were members of the National Association of Purchasing Managers in the United States. This research was undertaken to understand global sourcing decision-making factors, as most prior research simply focused on competitive factors such as lower cost and did not take into account any other advantages or potential barriers to global sourcing.

The barriers were categorized into either internal or external in nature. Internal barriers, those imposed by the companies themselves, considered of items such as constant design or model changes, high transportation costs, local availability of critical components, or risk of losing control of proprietary products and processes. These internal barriers also included the presence of low volume/high design changes, national pride or negative stereotypes of destination countries, and agreements with unions.

External barriers, or barriers that were a function of the external environment, were things like government protectionist measures, government control on the transfer of sensitive technologies, or differences in language or business customs.

As for motivating factors, four distinct categories were developed, namely factors of comparative advantage, factors of competitive advantage, factors related to circumvention of barriers, and factors considered to be internal motivators.

The researchers used cluster analysis, in which three primary clusters were determined, with the addition of two smaller insignificant clusters. The focus of the results was found to be related to the three primary clusters:

Cluster 1: The first cluster of companies found that improvement in competitive position and the availability of lower prices to be the prime motivating factor for global sourcing. In addition, companies in this cluster were more likely to utilize offshore suppliers to gain access to superior quality inputs and were also more likely to agree that global sourcing enabled them to gain advantages in improved delivery. As for barriers to global sourcing, these companies disagreed that the list of internal barriers were a deterrent and that despite some barriers in the form of import quotas, in reality, very few barriers existed.

Cluster 2: Companies in cluster 2 also agreed with the companies in cluster 1 with regards to the ability for global sourcing to provide opportunities for improvement in competitive position and the ability to secure lower prices, and that these indeed were an incentive to global sourcing. These firms also found that global sourcing allowed them to circumvent barriers that were imposed by foreign governments. The cluster 2 companies, however, did not find competitive advantage as an incentive to source globally. They also found internal barriers such as low production volumes, frequent design changes, high quality standards, and intellectual property concerns as significant issues to sourcing offshore. In addition, external barriers were also an issue. Despite the fact that barriers did exist however, these companies did not find these barriers as a significant deterrent to global sourcing.

Cluster 3: In contrast with the other two clusters, Cluster 3 companies did not consider improvement in competitive position or the availability of lower costs to be factors in global sourcing or find that local content and offset requirements considerations to be motivating factors either. Furthermore, they did not consider that many motivators or barriers actually existed.

The result of this research demonstrates that both comparative and competitive motivating factors for global sourcing exist, as well as the existence of both internal and external barriers. Furthermore, the research would indicate that most companies still engage in global sourcing

strategies primarily due to cost concerns, and that few companies found that they were able to improve quality or gain access to higher quality technology inputs as a result of global sourcing. This means that in most cases, buyers still take a more traditional purchasing approach to global sourcing activities.

These findings also indicate that companies may need to change their thoughts and approach around global sourcing strategies. In the future, it is highly likely that the pure cost advantages achieved in the past may in fact erode, due to factors such as increasing freight costs as well as increased labour costs as labour becomes more highly trained and competent. As this happens, companies will need to rely on other global sourcing advantages if they are to sustain a competitive advantage from these activities. This may result in a shift in focus away from pure cost drivers, to comparative advantage considerations such as quality and technology.

Furthermore, the danger in continued reliance on domestic sources for these comparative advantages lies in the fact that superior capabilities and expertise in these areas may be found in alternate locations, and that failing to consider these criteria as part of a global sourcing strategy could be detrimental to the future of the organization.

Historically, many business leaders have maintained a position that global sourcing is simply done as a search for low cost labour and cost competitiveness. Some research, however, has attempted to dispel this myth by suggesting that there are many other reasons why organizations undergo global sourcing strategies.

Handfield (1994) conducted a study of managers who were members of the National Association of Purchasing Managers, including both firms that sourced internationally, as well as those whose primary sources of supply were domestic in nature. This study attempted to find the reasons why firms sourced materials internationally.

Handfield's study determined that the number one supplier selection criteria for companies who source products domestically or internationally was the same; quality. Furthermore, it was determined that there was no significant difference in the quality of materials delivered by domestic or foreign suppliers.

Additional factors for supplier selection differed somewhat between those sourcing domestically in comparison with those sourcing internationally.

Organizations that source domestically ranked trust, schedule reaction, on time delivery, and the fact that the supplier was established in the United States as other critical selection criteria behind quality. International sourcing firms on the other hand, ranked cost, trust, and product and process technology as additional supplier selection criteria.

The Handfield study also found a difference in sourcing destinations between specific industries. It was noted that the Japanese led in high tech industries, while Asian suppliers tended to lead in electronics, automotive, and industrial equipment industries. The European countries gained superiority in pharmaceutical, chemical, and industrial equipment industries, with trustworthiness being a significant vendor selection criterion. The United States, on the other hand, were utilized in the electronics, industrial equipment, steel, and consumer products industries. A significant supplier selection criterion for the U.S. companies was delivery reliability and flexibility, which supports the trend towards Just in Time manufacturing systems.

In addition to lower costs, Handfield found that companies also sourced globally in order to obtain the required level of quality, to meet schedule requirements, to import new technologies, or to broaden the organization's supply base.

Handfield also points out that there can be some additional problems inherent in global sourcing, such as cultural and communication barriers, increased lead times and cost of transportation, employee travel costs, and the perceived risk of sharing new technologies. Handfield further points out that in today's world of Lean Manufacturing and reduced inventories, that global sourcing does not support the Just in Time initiatives that are a pillar of these strategies.

Handfield's study makes several conclusions. The results show that firms source products globally for other factors in addition to cost. These factors are quality and product and process technology. Handfield also found that domestic sources of supply have an advantage in their ability to support Just in Time strategies due to their ability in the area of delivery performance.

Handfield also found that trust plays an important role in international supplier selection, and even in companies that source internationally, they tend to have an increased level of trust with domestic suppliers. Manager's using international sources of supply need to take a total cost of ownership approach to assessing costs, and when evaluating potential international sources, companies need to determine what the key competitive factors are for their industry and use these factors in evaluating potential suppliers.

Kenneth Deavers (1997) conducted research in the mid-1990's that also looked at the factors that were involved in why companies chose to outsource. Similar to Handfield's findings, Deavers found that many other benefits have been uncovered suggesting that not all outsourcing activity is merely cost driven.

Deavers' decided to undertake his research as much of the previous research assumed too much, and in particular, that a search for low-cost labour was the primary factor in the outsourcing decision-making process. He believed that the concepts of downsizing and outsourcing were viewed too simplistically, and that in fact, firms who are downsizing in one area of their business are often increasing the labour force in other areas, leading to a positive net effect on overall employment levels for the firm.

Deavers attempted to show that there were other factors that were primary drivers in the decision to outsource, namely rapid technological change, increased risk and the search for flexibility, a greater emphasis on focusing on core competencies, and the globalization of the world's business community.

Deavers believed that the rapid change in technology, for the first time in history, was having a significant impact across industries. The last historical change of this magnitude existed during the time of agricultural mechanization, and although significant, its effects were confined to those specifically involved in the agricultural sector.

The technological changes being experienced in the mid-1990's was different, in that its impacts were being felt in multiple sectors. Deavers believed that this change in technological

advancement made it easier and more beneficial for some firms to outsource tasks, regardless of the actual labour rates outside the firm.

Deavers also believed that a corporate search for flexibility was a significant reason to outsource, as firms were facing ever-increasing rates of uncertainty in the marketplace. One method of dealing with this level of uncertainty was to share the risk with firms outside the organization through outsourcing activities. Other reasons why firms had a desire to become more flexible were to improve company focus, to gain access to world-class capabilities, to accelerate benefits for re-engineering, to share risk, and to free resources for other purposes. None of the above reasons are grounded in a desire to reduce labour costs. Furthermore, history has shown that firms who strategically decide to outsource for reasons similar to those shown above, often made significant business improvements. By contrast, those who tended to chase short term advantages in lower labour costs were often disappointed with the result.

Another reason why firms possibly pursue outsourcing is to allow them to increase their focus on core competencies. This allows the firm to do what they do best, and to free up resources from activities that provide lower value from a strategic point of view.

Some of the research that discussed the impact and desire for low-cost labour savings had some flawed assumptions driving their focus and results. For example, although job numbers in the United States manufacturing sector did show a decline, there was also a shift in the ratio between white collar and blue-collar worker percentages. The suggested related increases in jobs in foreign countries of United States multinational corporations, showed a similar shift in ratio, meaning that the jobs that were increased in foreign countries tended to not be labour jobs.

In addition, the quoted labour rates for low-cost labour countries that indicate lower nominal labour rates can be misleading, as productivity rates in those countries are also significantly less than the productivity rates in the United States. This, combined with the fact that a higher degree of non-wage resources is required in these areas to transfer the necessary knowledge for success, may result in more equitable adjusted labour rates.

Deavers' concluded that to state that a popular reason for outsourcing is primarily an effort to find low-cost labour would be "overly simplistic and wrong". The information technology revolution, risk sharing, increased focus on core competencies, and global opportunities and challenges are all related factors.

Deavers also comments on the difficulty in distinguishing between wage and other factors when analyzing outsourcing decisions. Also, that lower nominal wage rates may not always in fact be lower, as productivity and other concerns were rarely the same in offshore markets. He further believed that as productivity begins to rise in the markets (which would result in lower real wages due to the lower nominal wage rates), that these nominal wage rates would likely increase as well.

In keeping with the theory of a quest for lower costs, Fraering and Prasad (1999) conducted research that looked into what the best strategy would be for organizations to get the lowest possible total cost of ownership. This research assumed that lowest overall cost was the goal, and analyzed different possible strategies, as well as what the end result would be for the organizations that pursue these strategies, purely from a cost perspective.

Fraering and Prasad suggested that there is no one best way to source products, and that these activities are dependent on the organization and the products involved, in addition to other factors. The goal of their research was to develop a contingency model that organizations could use to determine whether or not they should be sourcing globally, and if so, at what locations. This model could also be used by government officials to assess whether or not certain activities and investments might enhance the country's ability to grow as a global sourcing destination.

Fraering and Prasad's study had a focus on total cost of ownership as the key performance indicator that determines whether or not global sourcing activities are successful. For them, these activities are related to driving down organizational costs, and thereby improving financial performance.

Their findings suggest that total cost of ownership, as related to global sourcing activities, are significantly impacted by both sourcing and logistics strategies. These two strategies, in turn, are impacted by product factors, organizational factors, and country factors.

The product factors deemed relevant when considering whether or not to source globally are asset specificity and materials cost. With regards to asset specificity, the determination is the degree of “uniqueness” of the product, in other words, how unique the product is to the specific organization. From an organizational perspective, consideration needs to be given to the cost of running the organization in question, the degree to which the organization is innovative, as well as the amount and importance of research and development activities. As for country factors, key considerations were found to be exchange rate volatility, tariffs, and the amount of infrastructure to support export activities.

This research suggested that products with low asset specificity and high materials costs are ideal candidates for global sourcing strategies. With regards to organizational factors, organizations who have high costs of running the organization, are highly innovative in product and process, and focus little on research and development activities should consider global sourcing as a viable option. As for countries, those with low exchange rate volatility, low levels of tariffs, and good infrastructure support are ideal sourcing destinations.

Fraering and Prasad’s conclusions stated that sourcing and logistics strategies needed to be coordinated and matched to the product, organization, and country factors to have the greatest impact on total cost of ownership. Also, inexperienced firms with regards to global sourcing should focus on items with high asset specificity and low material costs. Further, managers looking for global sourcing destinations should look for countries with stable exchange rates, low tariffs, and good infrastructure support for exporting.

A further and related take-away is that government officials who are eager to impact the attractiveness of their country as a global sourcing location should consider investment and activities that will aid in stabilizing foreign exchange rates, reduce trade barriers (tariffs), and provide good infrastructure to support export activities.

In the late 1990's, Ettlief (2002) conducted research with 600 manufacturing firms in 20 countries that examined two different theoretical perspectives on global sourcing, the resource-based view and the transactional cost economics view. This research hypothesized that there are two basic "locus of sourcing" that firms consider: sourcing locally, or sourcing globally. The research investigated the circumstances and drivers that result in choosing one locus of sourcing over another. In addition, they were interested in whether the resource-based view or the transaction cost view could be useful in determining the locus of sourcing used by a firm.

Traditionally, the most recognized benefit of global sourcing was thought to be the ability to lower costs, but Ettlief points out that things have changed, and that lower costs are no longer the only benefit of global sourcing strategies. Firms are also sourcing globally to raise levels of product quality, to increase manufacturing flexibility, and/or to improve product design.

Ettlief's research indicates that neither the transaction cost approach nor the resource-based approach explains by themselves how firms construct their supply chains, so both theories need to be considered.

Ettlief's research indicated that a firm's research and development intensity was significantly related to the amount of global sourcing being done as well as the higher the level of new product revenue, the higher the proportion of global sourcing. Firm's who were more committed to total quality management also were found to do more global sourcing. The more vertically integrated a firm was however, the less global sourcing they were undertaking.

The size of the firm seemed to be unrelated to global sourcing activities, meaning that small, medium, and large sized firms all had similar driving factors for global sourcing.

Another area of global sourcing that has been researched deals with the increased risks involved in global sourcing strategies, and what organizations actually do to mitigate these risks. When organizations embark on a global sourcing strategy, they increase the length of supply lines, the complexity of the supply chain network, and as a result, they expose the organization to heightened levels of risk.

Christopher, Mena, Khan, and Yurt (2011) conducted research through a multiple case study method, in which they conducted semi-structured interviews with 30 supply chain managers from 15 U.K. organizations who were involved in global sourcing activities. These organizations came from multiple industries in order to capture a cross industry perspective and increase the general applicability of the research findings.

Five categories of supply chain risk were outlined in this study, namely process risk, control risk, demand risk, supply risk and environmental risk. This particular research focused on one specific type of risk, supply risk.

It is important to note that all organizations are exposed to supply risk, but those who source globally operate in a more complex and uncertain environment, which increases their exposure to this risk. The researchers noted that there are many benefits to global sourcing, such as lower costs, access to new markets, improved quality, and increased flexibility. These numerous benefits however are not guaranteed due to the organization's increased exposure to risk inherent in global sourcing activities (Christopher & Lee, 2004).

When implementing global sourcing strategy, organizations need to be aware of several types of associated risk, such as the size and development of the market, the existence of the required infrastructure to support global trade, political characteristics, and factors related to local demand. In addition, currency exchange risk, climate and weather patterns, language skills, management training, and cultural characteristics were other risk factors deemed to be important.

It is important for organizations to not only be aware of these potential risks, but to also give them due consideration when developing risk mitigation strategies. Some of the tactics that companies may use to mitigate global sourcing risks are to utilize dual rather than single sourcing, to build trust in relationships, to be proactive at managing risk, to balance and align benefits and costs, to have flexible sourcing relationships, or to utilize technology to redesign supply chains.

From this research, some of the suggested activities that help mitigate global sourcing risk are a redesign of supply networks, a closer relationship between supply chain partners, increased agility, and the creation of a risk management culture.

The following specific research findings were a result of this study:

- There is still a gap between the theory of how companies manage global sourcing risk, and what they actually do in practice
- There is now a growing realization that organizations and individuals will need to pay for their carbon impact in the future
- The majority of companies interviewed indicated that cost was one of the most important factors in global sourcing activities, although in some cases, other factors were also present
- The demand for on-time product delivery, and acceptable quality levels were key priorities, although it was often difficult to achieve both simultaneously
- Most companies made an effort to maintain competitive advantage through global sourcing, despite being from different industries
- Poor synchronization in the supply chain was a common problem
- Lack of communication with the global supply chain partners was seen as a key risk
- Most risks identified were supply risks, as opposed to demand risks
- Managers from almost 50% of the participants had no specific risk management process
- Risk was managed through isolated decisions or subjective judgement by sourcing managers
- The two most common risk mitigation strategies were global sourcing and network re-engineering, and creating a global sourcing risk management culture

In summary, this research found that most organizations had more informal risk mitigation practices as opposed to structured approaches to risk mitigation, and also that there was a gap between what had theoretically been suggested as risk mitigation practices, and what companies were actually doing. In the end, most risk mitigation practices were found to be deficient.

Conclusions on Firm-level Research

The firm-level research reviewed above has some degree of relevance to our current research initiative. While these pieces of research were primarily focused on firm-level factors, which is in contrast to our focus on country-level factors, the research still highlighted some factors and findings deemed relevant to our country-level end goals and objectives.

Four of these research studies deal with the factors or reasons why firms choose to undertake global sourcing activities. Although most of these recognize cost reduction as a major goal, and in some cases the only factor considered, there is recognition from much of this work that other factors do indeed play a role in determining global sourcing strategy, and that there is a shift with regards to global sourcing methodology and decision-making considerations. This shift is cited as being due to the erosion of cost reduction potential as logistics and other global sourcing costs continue to rise, but also in recognition of other factors that are important to the global sourcing practitioner (Alguire, 1994).

Handfield (1994), in his work, also recognizes that although global sourcing is driven by a desire to reduce cost, that the criteria for supplier selection is somewhat different, and that quality considerations appear to be a more important factor than cost.

The other two pieces of research reviewed do not focus on reasons for global sourcing but make the assumption that global sourcing is solely a quest for reduced cost. The research conducted by Fraering and Prasad focused on the development of a contingency model to aid in the determination of supply chain strategy (i.e. relocate manufacturing vs. source globally), solely based on reducing cost and improving financial performance, is of minimal relevance to our

current research, due to lack of recognition of factors other than cost. The researchers do mention other relevant factors; however, all are in the end tied to cost considerations.

The research by Christopher, Mean, Khan, and Yurt is focused on the topic of risk, in recognition of the significant increase in risk associated with global sourcing activities. This topic of risk has high relevance to our work, as it is hypothesized to be a key component in decision-making factors for making global sourcing decisions. The focus of this research, however, is more related to how organizations manage this risk, and what methods and strategies are in place to do so. The value of this research to our current initiative is the identification of potential risk factors that may impact current global sourcing decision makers, although the focus of our study is significantly different.

In the end, the above research is relevant to our current research in varying degrees, although none of this work is primarily focused on decision-making factors related to location considerations when making global sourcing decisions. In addition, the research that is most closely related to our objective is more than two decades old, and therefore should be re-evaluated as to its relevance to how global sourcing decisions are made today. Globalization has changed procurement practices significantly over the past few decades, likely resulting in a shift in global sourcing strategy and decision-making criteria used by today's global sourcing practitioners.

Country-level Research

DiRienzo, Das, and Burbridge (2007) conducted research that focused on the effect that ethnic, linguistic, and religious diversity had on a country's competitiveness. Their rationale for undertaking this research was that although much work had been done on global competitiveness, all of this research focused strictly on what they termed to be the hard factors related to global competitiveness, such as levels or technological advancement, or economic, political, and social factors. Past research had therefore not associated any soft factors such as diversity with the competitiveness of a nation.

This research, examining the potential impact of ethnic, linguistic, and religious diversity on competitiveness, also included some control variables. These control variables were level of economic freedom in the country, the level of human development in the country, and whether or not a country had a democratic political system. The inclusion of these three control variables led to the formulation of the following hypotheses:

- H1: Countries that are more ethnically fractionalized experience lower levels of competitiveness
- H2: Countries that are more linguistically fractionalized experience lower levels of competitiveness
- H3: The degree of religious fractionalization has no effect on competitiveness
- H4: Countries with higher levels of economic development and institutional freedom experience higher levels of competitiveness
- H5: Higher level of human development results in higher levels of competitiveness
- H6: Democratic countries should experience higher levels of competitiveness

H1 deals with the topic of a country's ethnic diversity. One side of this argument states that the more ethnically diverse a country, the more overall creativity that should exist amongst its population. Creativity, in turn, should have a positive impact on productivity and competitiveness. The contrary argument would hold that ethnic diversity leads to a level of polarization amongst a country's population, which in turn has a negative impact on the political system (lack of political cohesiveness) to pull together towards common objectives like productivity and economic competitiveness.

H2 examines the linguistic diversity of a country. Countries with a higher level of linguistic diversity could be more productive, as linguistic diversity adds to economic potential through the increased human capital of individuals. On the other hand, linguistic diversity can lead to a fractionalized society, with the polarization and lack of political cohesiveness concerns cited

above as related to ethnic diversity. Under this argument, linguistic diversity would negatively impact competitiveness.

H3 is related to the level of religious diversity in a country. Some past research conducted indicated a relationship between certain cultural factors of a society and a country's economic growth. Some of the cultural factors discussed historically came from organized religion, leading to the possibility that religious diversity may have an impact on a country's level of competitiveness. Similar arguments from ethnic and linguistic diversity can be made for religious diversity, such as whether a religiously diverse population will increase competitiveness through an increased level of creativity, or whether this diversity would again lead to a political structure that is polarized, and unable to focus on the common needs of the country.

H4 hypothesizes whether or not a country's level of economic and institutional freedom (trade policy, monetary policy, level of government intervention, etc.) would have a positive impact on a country's level of competitiveness. The thought being that a country with "an established and stable legal and monetary system, efficient labor and product markets, with open trade and investment opportunities, provides a more competitive and dynamic environment for rapid growth" (DiRienzo et al. 2007).

H5 discusses the level of human development within a country. Does an increased level of human development, which should lead to an improved level of human capacity, positively affect the level of global competitiveness for a country? The level of human development was considered to be impacted by the country's literacy rate, school enrolment ratios, as well as the population's average life expectancy.

And finally, H6 considered whether or not a democratic political system would have an impact on a country's level of competitiveness as opposed to other political structures.

In their research the findings DiRienzo, Das, and Burbridge found that some factors were positively correlated with competitiveness, while other factors were negatively correlated with

competitiveness. Some factors also seem to be unrelated to whether or not a country is competitive.

The factors with positive correlation to competitiveness were linguistic diversity, increased economic freedom, reduced institutional rigidity and higher levels of human development. Alternatively, ethnic diversity was found to be negatively correlated with a country's competitiveness. Religious diversity and a democratic political system were found to have no effect on whether or not a country was competitive.

The impact of this research suggests the so called "soft factors" of ethnic and linguistic diversity do in fact have an impact on a country's level of global competitiveness. More specifically, that countries with a low level of ethnic diversity and countries with a high level of linguistic diversity are at a competitive advantage in the global marketplace. Furthermore, factors such as a country's level of economic freedom, as well as the level of human development within a country, also have an impact on global competitiveness, meaning that a higher level of economic freedom as well as a higher level of human development also contributes to a country's level of global competitive advantage.

For a brief time, Mexico had a growing export market due to a combination of its low-cost labour and its close proximity to the major markets in the United States. This advantage appears to have somewhat eroded during the last couple of decades.

Nowak, Lehmann, and Vollmer (2007) conducted a study that looked at the loss of competitiveness of Latin American countries, and in particular Mexico, to China with regards to world exports. The main purpose of this study was to determine if there was cause for concern in Mexico with regards to them losing relative productivity to China. The study therefore focused on whether or not China's success was in fact due to productivity gains, or whether foreign exchange rate manipulation was the underlying cause of China's growing share of the world export market.

These researchers looked at several factors thought to potentially contribute to an increase in competitiveness of a country, namely productivity, unit values, trade costs, price levels, and real exchange rates.

The findings from this study indicate that many of the above factors do have an impact on export success, and that the important factors varied by industry. It was also noted that real exchange rate advantages had a positive effect in all industries, indicating that prudent exchange rate management was an important factor to be considered by governments.

One other factor discussed by these researchers was that China's focus with regards to growing exports was to attempt to attract increasing levels of foreign direct investment, while Mexico's strategy was more around the establishing of free trade agreements with other trading nations. Evidence suggests that Mexico has not benefited from these agreements to the degree originally anticipated, and that despite some growth in their agricultural sector, Mexico's industrial sector has not grown their exports at the same rate. China, on the other hand, experienced the exact opposite; while their agricultural sector has not had significant success, their industrial production has blossomed.

George Anastassopoulos (2007) also conducted research examining the relationship between a country's international competitiveness and the levels of foreign direct investment it could attract. This study focused on the European Union, and on whether or not any differences could be identified between Northernmost Countries, as opposed to Southernmost Countries in the European Union with regards to levels of foreign direct investment.

At the beginning of the millennium, the European Union had identified a strategy known as the Lisbon Strategy in an attempt to increase the Union's competitiveness over the next decade. This strategy was focused on halting the trend of companies relocating from European Union member countries to other parts of the world. Anastassopoulos' research was an attempt to analyze what had happened with regards to levels of foreign direct investment into these countries during the period from 2002 to 2006.

This research hypothesized that the factors that affect foreign direct investment can be divided into location factors (specific to a particular country), and ownership advantages (specific to a particular firm). Anastassopoulos (2007) also hypothesized that the location factors affecting differing levels of foreign direct investment would be different between the northernmost countries and the southernmost countries in the European Union, indicating at least two heterogeneous groups within the European Union.

Anastassopoulos (2007) reasoned that the presence of a foreign firm in another country would be an indicator that they already possessed international competitiveness, and therefore possessed the ownership advantages necessary for foreign direct investment. As a result, his research focused on the differing presence (or absence) of location factors that would affect the ability of a country to attract foreign direct investment.

The location factors considered by Anastassopoulos (2007) came from definitions and measurements currently taken by the International Management Development, and consisted of factors such as the existence of raw materials, the existence of other assets such as cheap labour, intermediate markets, technological expertise, international transportation costs, communication costs, less rigorous legislation and a more favourable domestic business environment.

Due to the fact that location factors are not evenly distributed across countries, each individual country would have varying degrees of competitive advantage, or competitive disadvantage, to attract foreign direct investment.

Anastassopoulos also examined the national factors used as an annual measure of global competitiveness by the World Competitiveness Yearbook. These factors were divided into four main areas.

The first area was economic performance which was a macroeconomic evaluation of the domestic economy. Factors such as the domestic economy, international trade, international investment, employment and prices were part of this group.

The second group of national factors were related to government efficiency, and included government policy to aid in competitiveness, public finance, fiscal policy, institutional framework, business legislation and societal frameworks.

Another area of consideration was overall business efficiency. Some considerations related to the efficiency of business were the extent to which business is performed in an innovative, profitable, and responsive manner, productivity and efficiency, the labour market, finance, management practices, attitudes and values.

And finally, Infrastructure considerations, which were the extent to which basic technological, scientific, and human resources meet the needs of business. Factors in this category were basic infrastructure, technological infrastructure, scientific infrastructure, health and environment and educational factors.

The research undertaken with Anastassopoulos' dataset indicated that in the period from 2002 to 2006, most European Union countries lost competitiveness, with the exception of Denmark and Austria. When the competitiveness measurement of these countries was compared to indicators of levels of foreign direct investment, a clear relationship between the two was not readily apparent. Anastassopoulos hypothesized that this could be due to the fact that different factors may be more or less important in motivating a firm to engage in foreign direct investment. For example, market seeking foreign direct investment would be motivated by the size and growth of the market, levels of competition, and cost factors, while resource-seeking foreign direct investment would be focused on factors such as the availability and cost of resources. Similarly, efficiency seeking foreign direct investment would be motivated by differential costs, and economies of scale and scope, while Strategic Asset foreign direct investment would be more focused on competitively high skills, technology, and the availability of other assets.

Anastassopoulos' research had several interesting findings:

Firstly, the factors that affect the northernmost countries were indeed different than those affecting the southernmost countries, indicating at least two heterogeneous groups within the

European Union. He also found that direct investment in the southernmost countries fell when current account deficits grew, and competitiveness fell. These account balances did not have a significant effect in northernmost countries. In addition, the effect of public sector performance on foreign direct investment was more apparent in southernmost countries.

Increased business efficiency was found to have a positive effect on foreign direct investment in both groups, while foreign direct investment in southernmost countries decreased as the country's level of political risk grew. In northernmost countries, it was not political risk but investment risk that was a factor, although this factor was found to be insignificant. The availability and competitiveness of skilled labour was found to be lacking in both groups, indicating a required investment in education and training, and the attitude towards globalization was found to be more positive in northernmost countries as opposed to southernmost countries, and therefore had a more positive effect on foreign direct investment for northernmost countries.

Conclusions from this research indicates that increases in foreign direct investment in northernmost European Union countries depends on their market size, government efficiency in reducing bureaucracy, and the openness and efficiency of the business sector. For southernmost European Union countries, it was found to be less about the importance of their market, and more about the efficiency of the government and the reduction of investment risk. It was also noted that the role of the government in influencing foreign direct investment and competitiveness was found to be more critical in the southernmost countries than the northernmost countries.

Other research topics related to global sourcing have focused on the effect that such a strategy could have on the ability for a company to market one's products. This research proposes that a negative country of origin effect can exist, whereby the marketplace has a perception about the quality of products based on where these products come from.

Chu, Chang, Chan, and Wang's (2008) research explored whether or not a strong brand image could mitigate negative country of origin quality perceptions, as well as whether or not

presenting products to consumers in a joint or separate evaluation mode would make a difference on the consumer's perception of the product.

Some past research had indicated that consumers typically view products made in developing countries less favourably than they do products made in developed countries. This negative product evaluation has been referred to as a negative Country of Origin effect. The negative Country of Origin effect is grounded in two other concepts (the Halo effect and the Summary effect) that were determined to exist in past research endeavours. The Halo effect refers to a situation where consumers infer their beliefs about other attributes of a product into their evaluation of that product. Similarly, research by Johanssen (1989) discussed the Summary Effect, in which consumers take their knowledge of a country's products and transfer that to an image of the country itself. Both of these findings contribute to the negative Country of Origin effect.

Chu, Chang, Chan, and Wang conducted their research using a 2x2x2 matrix, examining the relationships between country of origin, product brand, and product evaluation mode. They developed the following hypotheses:

H1: The effect of country of origin on product evaluation will be weaker for products of a strong brand than those of a weak brand

H2: Evaluation mode (joint versus separate) will moderate consumers' product evaluation

H3: The effect of Country of Origin on product evaluation will be stronger in joint evaluation mode than in separate evaluation mode

H4: The effect of brand on product evaluation will be weaker in joint evaluation mode than in separate evaluation mode

The results of the study indicated that consumer product evaluations for the two comparison products were significantly different in perceived quality and perceived favourability, and the mode of evaluation did indeed have a significant impact on the product ratings (H2 was

supported). Average scores for perceived quality and perceived favourability were higher for products in joint evaluation mode than in separate evaluation mode.

The study results also supported H3, finding that the Country of Origin effect was found to be stronger in joint evaluation mode than in separate evaluation mode.

H1 and H4 were not supported in these research results. The study found an insignificant interaction between brand and country of origin, and also that the difference in product evaluations was not found to be larger in separate evaluation than in joint evaluation.

In conclusion, Chu, Chang, Chan, and Wang found in their research that brand image was not sufficient to mitigate negative country of origin effect. In other words, even with a strong brand, sourcing from a country with perceived negative quality would still have a detrimental effect on the perceived quality of product. This would indicate that companies are better off to source or produce their products in countries that do not have a negative perception attached to them.

This research further demonstrated that the way a product is presented, either jointly with competitive product or separately, could also have an impact on perceived quality. So, in the instance where product must be sourced or produced in countries with a negative perception in the marketplace, that it is best to market these products utilizing a separate evaluation mode. In contrast, the findings suggest that if you were sourcing product from a country with a positive perceived quality image, you are better to market your products jointly with others.

Research has also been conducted in an effort to understand the linkage between a country's level of skills related to the workforce, and their overall level of competitiveness.

Human Capital theory suggests that the availability and effective use of workforce skills has a positive impact on productivity and competitiveness. These skills are developed through the use of education and training services.

The research by Onsomu, Ngware, and Manda (2010) indicates that increases in human capital in the form of work skills is an important factor in competitiveness. They also noted that basic

levels of formal education are not sufficient to develop the level of skills necessary, and that secondary and tertiary levels of education and training are required, with involvement from both public and private sectors.

Conclusions on Country-level Research

The five pieces of country-level research discussed above are not focused on our objective of identifying how global sourcing practitioners make decisions on whether or not to source globally, and from where. They do, however, identify several potential decision-making factors that may be considered by practitioners when making these global sourcing decisions. The potential location factors from these research efforts were utilized in developing our quantitative questions for our survey, as well as in the development of questions for our semi-structured interviews.

In addition to identifying potential decision-making factors related to sourcing locations, the work by Chu, Chang, Chan and Wang supports the role that perception can have in making decisions, particularly when related to perceptions of product quality. Considering the role perception plays, in addition to facts, is a distinction that is expected to have high relevance in the findings from our current research.

Existing Measurement Tools

Much debate exists as to whether or not the ability to measure a factor such as country competitiveness can even be accomplished (Smit, 2010). Despite the variety of indices in use, many people remain skeptical that any resemblance of validity or reliability can be demonstrated, or that the concept of country competitiveness even exists.

Research conducted in 2010 by Rosenbaum (2011) tackles this subject, looking at six different competitive indices that attempt to measure the overall competitiveness of the European Union member states. In this research, Rosenbaum looked at measurements provided by Doing Business, The World Competitiveness Scorecard, The Global Competitiveness Report, the Lisbon Scorecard, the European Growth and Jobs Monitor, and the Lisbon Review. The results of their

correlation analysis show that the actual order of countries measured differs significantly from index to index, supporting the overall skepticism in such measurements.

In the mid to late 1950's, several countries in Europe were considering entering into a trade agreement that would eliminate tariffs between the participating countries. As with the modern examples of the concept of free trade, much debate was occurring as to whether this type of agreement would be beneficial to Britain, or whether it would result in detrimental effects on industry, such as a net loss of jobs. Those in favour of free trade felt that Britain no doubt could hold their own with other countries from a production efficiency point of view, while those opposed felt that Britain would not be able to produce more efficiently than other nations. H.H. Liesner (1958) therefore conducted research to study the potential effects a free trade agreement would have on British Industry.

Liesner's research attempted to determine what the result of such an agreement would be on British Industry, including an industry-level analysis of the potential effects. Liesner's theory was that through the removal of trade barriers restricting trade, countries would specialize in commodities that they could produce efficiently and held a comparative advantage over other countries. This in turn would allow industries in which comparative advantage existed to prosper, resulting in a decrease in imports for that commodity, and a simultaneous expansion in exports. In other words, Liesner's research would be beneficial in demonstrating the value of the theories of Adam Smith and David Ricardo.

Liesner's work attempted to divide commodities in to one of two groups; commodities that could be more cheaply produced in Britain than on the European continent (i.e., commodities in which Britain had a comparative advantage) and commodities that could be more cheaply produced on the continent than in Britain (i.e., commodities in which Britain had a comparative disadvantage).

The main purpose of Liesner's work was to evaluate the comparative costs to produce different commodities in Britain and Europe, in an effort to identify the trends that would occur if the proposed free trade agreements were indeed put in place.

In conducting his research, Liesner considered three options for the gathering of data needed for analysis. First, he thought of utilizing secondary data from the European Census of Production. This data was readily available and could be used to extrapolate the future effects of the proposed free trade agreement. This approach would, however, be a significant undertaking, and would require a great deal of time and resources.

Secondly, Liesner could talk to companies, and ask them what they believed would be the resulting effect on their business if the free trade agreements were put in place. This was the approach taken by others in conducting prior research in this area.

The third option Liesner considered was to utilize historical trade patterns and to make the assumption that industries that had succeeded in the past, would continue to do so in the future, and those that had struggled historically, would also continue to do so in the future.

Liesner settled on the third approach, recognizing that there were some limitations such as the fact that the historical patterns may indeed be altered by changes to trade barriers. Liesner felt, however, that this discrepancy would be limited in the effect it would have on the overall data.

After completion of his research, Liesner was not satisfied that it was successful in answering his research question, and as a result, indicated that more detailed research would be needed in the future to be able to get the answers he was looking for. He did, however, succeed in ranking a list of commodities on a scale from those most likely to succeed, to those most likely to struggle, under the proposed free trade agreement.

Although Liesner recognized that the actual order and degree of the predictive accuracy in his findings was less than desirable, he was confident that focusing on those at the top of section of the list as those who would benefit, and those at the bottom of the list as those who would struggle, was probably a reasonably accurate assessment of free trade impact. As for those in the middle, there remained some question as to what the actual effect of the agreements would be.

In the mid-1960s, Bela Balassa (1965) conducted research that resulted in the development of the Revealed Comparative Advantage (RCA) index, indicating a country's revealed comparative advantage.

There are many factors which can be considered when determining whether or not a country has an advantage globally with regards to producing goods to be consumed internationally. Some of these factors are easily quantifiable, while others are not. At the same time, some of these factors are relatively easy to identify, while others are not.

In order to ensure that all related factors were considered in this study, Balassa proposed that looking at actual export performance from a historical data perspective would be the preferred method, as this historical performance should be affected by all of the causal factors, whether they were expressly identified or not. In other words, Balassa was not so much concerned with identifying all of the underlying causal factors for a country's advantages, but rather simply measuring whether a comparative advantage existed or not.

Balassa's research examined the export and import data of seventy-four commodity groups in ten industrialized nations. He noted that this data should be looked at not only for a given year, but over time in order to consider trends that were apparent in a country's historical export performance. Balassa also believed that the information would have to be analyzed by industry or commodity group, as it was reasonable to expect that a given country might have an advantage in one industry, but not in another. The results of his study verified this assumption.

Balassa's index was developed to indicate which country has comparative advantage at a given point in time, in which commodities or industries. He noted that because imports can be influenced by a country's preferences and levels of duties, that a heavier weight would need to be placed on export data, as in theory, all countries should be somewhat equally impacted by global trade barriers.

The calculation Balassa used involved comparing a country's commodity exports as a ratio to total exports (over two separate time periods) to determine the change over time, and whether or not that country was seen to have comparative advantage over other nations. His thoughts were based on the shifting mix of exports in a given country, with some commodities growing with regards to that commodities share of total exports, there must be a reason for that.

Balassa believed the reason to be that the country possessed a growing comparative advantage for the commodity in question.

This research does not however, attempt to analyze or measure factors related to attractiveness of that country from a global sourcing perspective, nor does it attempt to calculate an overall universal comparative index for the country which could be used as a measure of overall attractiveness.

The results of Balassa's study indicate that countries do indeed have advantages in some commodities and industries, while simultaneously having disadvantages in others (Balassa, 1965). In addition, the outcome of the country's export performance is a result of several factors, some of which are not readily identifiable. It was further noted that cost considerations alone may not be sufficient to explain global trade patterns. In most cases, however, costs were found to be the primary driver of comparative advantage, although some exceptions were found in certain industries.

Follow up research utilizing Balassa's Revealed Comparative index was conducted by Chien (2010), who focused on the shifting comparative advantage between South Korea, Taiwan, Japan, and China, and the resulting change in trade patterns as a result of this shift.

This research utilized Balassa's Revealed Comparative Advantage index as it not only takes into account a country's export trade to a certain region but compares that level of trade to the overall level of trade of all of a country's products to that region. In other words, it takes into account the size of the economic scale of that country's market share, allowing for comparisons to be made between industries in a country, or between countries within an industry.

Chien's study analyzed changes to the Revealed Comparative Advantage index in order to understand the correlation between export structure of a country vs. other countries for a given period, and for different periods. According to Chien, a Revealed Comparative Advantage index greater than 1 indicates strong export competitiveness, while an index less than 1 indicates weak export competitiveness.

The results of the study were:

- The number of industries in Taiwan and Japan that have strong export competitiveness to the US has grown from 1996 – 1998 to 2005 – 2007

- The number of industries in Mainland China that have strong export competitiveness to the US has remained stable from 1996-1998 to 2005- 2007
- The number of industries in South Korea that have strong export competitiveness to the US has declined from 1996- 1998 to 2005- 2007
- There was some evidence to support that there is a shifting in Regional Comparative Advantage:
 - Some sectors in Japan were replaced by some sectors from Taiwan
 - Some sectors in Taiwan were replaced by some sectors in Mainland China
 - Some sectors in South Korea were replaced by some sectors in Mainland China
 - Some sectors in Japan were competing with some sectors in Taiwan
 - Some sectors in Japan were competing with some sectors in South Korea
 - Some sectors in Taiwan were competing with some sectors in Mainland China
 - Some sectors in South Korea were competing with some sectors in Mainland China
- The positive correlation between the products of Taiwan and South Korea indicates that they are competing with each other for US market share
- Taiwan follows the patterns of export to the US of Japan, but not at the same rate
- Mainland China follows Taiwan's pattern of export to the US
- Since 1996, the product structure of South Korea's exports to the US has been changing
- The growth rate in Mainland China's export to the US has outpaced the gain in overall US imports, indicating a strengthening of Mainland China's market share of US imports.

Somewhat related, research by Quoc-Phuong Le (2010) in an attempt to analyze and understand changes in the comparative advantage of Vietnam since the economic reforms introduced by the country in 1986. The goal of this research was to examine what had happened to Vietnam over the previous twenty years since the reform programme, and based on this analysis, to make recommendations on potential government policy changes to help enhance the comparative advantage of Vietnam moving forward.

Phuong Le selected three time periods in which the country's Revealed Comparative Advantage index, as developed by Balassa, would be measured for a variety of commodity groups. These time periods were selected to correspond with the initial stages of economic reform (1991), a stage of rapid economic growth (1996), and a recent period (2005). The researcher also decided to look both at a high level with few categories based on the 1-digit SITC codes, and then at a more detailed level based on the 3-digit SITC codes.

Phuong Le was aware that Vietnam's comparative advantage historically came from the exploitation of the country's factor endowments, mainly resource abundance and low-cost labour. The comparison of these time periods would reveal where the comparative advantages for the country lie, and if the structure of these advantages were changing over time.

What was uncovered in the research based on the 1-digit SITC code categories was that from 1991 to 1996, the number of categories in which Vietnam had comparative advantage grew from three of nine categories, to five of nine categories, and that there was also a shift from the primary resource and agricultural based commodities, to the manufacturing sector. When expanding this analysis to 2005, it was noted that the results in 2005 were very close to that of 1996, indicated that the recent progress was being made at an extremely low rate of change.

The 3-digit SITC code analysis provided a little more insight. From 1991 to 1996 and then in 2005, the number of categories in which the country had a comparative advantage grew from thirty-three to forty-one, and then in 2005 to forty-seven. Once again, it was noted that the comparative advantage structure was also changing from the primary resource and agriculturally based products, to the manufacturing sector. It was also noted, however, that the manufacturing sector was still heavily dependent on outward processing agreements,

involving the import of materials to be manufactured within Vietnam, taking advantage of the country's low cost labour, a strong factor endowment. This was a concern, since growth in this area, albeit positive, does not allow for much value-add activities on the products being exported.

Phuong Le also compared the results found in Vietnam to two countries in similar situations, namely the Philippines and Malaysia. A similar shift in comparative advantage structure was seen in both of these countries from 1991 to 1996, in that they moved away from the primary products to more technologically advanced manufacturing sectors. The Philippines, however, were not able to maintain this shift in comparative advantage, primarily due to their inability to raise the country's domestic technological capacity. Malaysia, on the other hand, did maintain this shift through investment in improved research and development capacity and improvements to their education system. This would suggest that Vietnam should follow policy similar to that of Malaysia, while avoiding the issues experienced by the Philippines.

The following policy recommendations were made by Phuong Le as a result of the research findings:

- Vietnam should strengthen the food processing and mining processing industries to allow for added value to their exports, as opposed to exporting raw materials
- The country should build strong supporting industries for products currently manufactured in Vietnam, again increasing value add
- Vietnam should encourage investment in technology intensive industries to again increase value add in their exports
- Vietnam needs to enhance their human capital through investment in education and training systems and raise the technological capacity of firms through the provision of incentives. This would enhance the country's ability to continue to increase their comparative advantage

As demonstrated above, Balassa's Revealed Comparative Advantage index has been utilized in many differing research applications since his original work in 1965. Balassa's index, however, has received its share of criticism over time, mainly focused on potential bias that is built into the measure, as well as problems with making comparisons due to the asymmetric property of the index itself (a lower limit of zero, a neutral position of one, and an upper limit that is limitless). These issues can lead to misleading results, particularly when a country had a small overall export level in a commodity, or when the countries overall level of world exports is less than substantial. In these cases, a small shift in actual export levels indicates significant comparative advantage using Balassa's index that did not make sense from an overall comparative advantage point of view. As a result, several researchers have proposed modifications to the index to attempt to resolve these issues.

Yu, Cai, and Leung (2009) published research that resulted in a modified version of Balassa's RCA index that was called the Normalized Revealed Comparative Advantage (NRCA) index. In this research, Yu, Cai, and Leung took Balassa's index, and modified it by comparing the calculation for each commodity in a country to a position of neutrality, which eliminated the asymmetric property of Balassa's original work, and allowed for more accurate comparisons between nations.

The NRCA index has a possible range of scores from $-1/4$ to $+1/4$, with a neutral point of zero indicating neither a level of advantage nor disadvantage for a commodity in a country. The result is a symmetrical calculation that appears to resolve the asymmetric issues inherent in Balassa's original RCA index.

Empirical analysis conducted by Yu, Cai, and Leung during their research focused on agricultural exports for the state of Hawaii. This analysis demonstrated two key outcomes; firstly, when the results of the NRCA index was compared to the results of the RCA index, it was clear that there were many significant differences in the results between the two indices, indicating that the two indices did lead to different conclusions. Secondly, when looking at the data, the NRCA index, at least in these examples, appeared to be a better evaluation of what was actually happening from a comparative advantage point of view.

In addition to Balassa's RCA index, and the revised NRCA index developed by Yu, Cai, and Leung, there are other measurement tools that claim to assess the competitiveness of nations globally. One such measurement tool is the Global Competitiveness Index, published annually by the World Economic Forum.

The Global Competitiveness Index is a measure of a country's competitiveness, and considers institutions, policies, and factors that contribute to the state of competitiveness of a given country (World Economic Forum, 2012). The index measures performance on twelve different "pillars", which are grouped into three categories: factors, efficiency, and innovation. The actual pillars (or areas) that are considered in calculating the annual competitiveness rankings are:

- Institutions
- Infrastructure
- Macroeconomics
- Health and primary education
- Higher education and training
- Goods market efficiency
- Labour market efficiency
- Financial market development
- Technological readiness
- Market size
- Business sophistication
- R&D innovation

On an annual basis, countries are measured in these twelve categories, and ranked as to their position on global competitiveness, as an overall score.

The IMD World Competitiveness Yearbook also publishes an annual review of the competitiveness of nations. Their calculations of competitiveness not only include Gross Domestic Product as a measure of productivity, but also considers political, social, and cultural dimensions (Rosselet & McCauley, 2006).

The Competitiveness Yearbook looks at four main competitive factors in their analysis, namely economic performance, government efficiency, business efficiency, and infrastructure.

This measurement device considers both quantitative and qualitative dimensions, and is the result of 126 hard criteria, as well as an additional 113 criteria that is taken from their annual Executive Opinion survey, as a means to capture qualitative data, and also to capture some of the opinions of what the future may hold.

Another measurement tool that has been developed recently, launched for the first time in 2014, is the Logistics Performance Index, developed and published by the World Bank (World Bank, 2018).

The Logistics Performance Index is comprised of survey data conducted from two primary sources; logistics practitioners practicing outside of the country being rated, and logistics practitioners practicing inside the country being measured. The resulting data is utilized in the development of two separate indices, namely the International LPI, and the Domestic LPI.

While the International LPI is calculated from qualitative data, the Domestic LPI utilizes a combination of qualitative and quantitative data. Each of these indices measures a country's logistics performance in six separate categories; "the efficiency of customs and border clearance, the quality of trade and transport infrastructure, the ease of arranging competitively priced shipments, the competence and quality of logistics, the ability to track and trace consignments, and the frequency with which shipments reach consignees within scheduled or expected delivery times" (World Bank, 2018).

The resulting ratings for the published indices, and combined into an aggregate LPI metric, is an attempt to rate overall logistical performance for a given country (167 countries are listed in

the index), which is relevant data for organizations who participate, or who are interested in participating, in global sourcing activities.

Conclusions on Measurement Tools

The seven pieces of literature reviewed above consists of some work that has been done to take a current state “snapshot” of economic performance (such as Liesner’s work in Britain in the 1950’s, or the studies building on Balassa’s RCA index applied to Asian economies), as well as work conducted to attempt to measure a country’s level of competitive or comparative advantage.

With regards to country-level measurement tools, we have two measurement devices that claim to measure country competitiveness on an annual basis, and one that measures a country’s level of comparative advantage, depending on the industry being considered. While these tools have some value depending on the end goal of the individual using the tool, they significantly differ in design and objective from what we are trying to accomplish in our research.

With regards to Balassa’s Revealed Comparative Advantage index, the overarching purpose, identifying location advantages, is in line with our objective. Balassa’s index, however, is specific to industry considerations, and is basically measuring historical performance to determine whether or not a given industry, in a given country, is trending towards increased comparative advantage or not. Although Balassa’s index is the closest of the three measurement tools discussed here to being in line with our end goal, it falls short in taking into account specific risks and rewards that allow supply chain practitioners to make global sourcing decisions based on their specific situation and organizational risk profiles.

The other two measurement devices have analyzed and combined their vast amounts of economic information into one number; a number that claims to indicate a country’s global competitiveness. While this is a lofty goal, it’s usefulness for making global sourcing decisions is highly questionable, not to mention the validity and reliability of the measurement. By

comparing these two measurement indices, one quickly notices that the results of their analysis differ significantly, leading to different conclusions regarding global country competitiveness.

As for the usefulness of these indices, the definition of competitiveness inherent in these tools seems far removed from what our supply chain practitioners consider relevant when making global sourcing decisions. In looking at the highest ranked countries for either of these measurement indices, we find countries that are rarely discussed as global sourcing location opportunities, and in many cases, are countries with little economic opportunity from a global sourcing perspective.

As a final comment, our decision to focus on a tool that indicates the relative proximity of countries from an opportunity point of view, as opposed to a statistical calculation leading to one number, seems to have much greater practical application in aiding supply chain practitioners in finding new opportunities from a global sourcing location perspective.

Concluding Comments

The literature review conducted, and the summary provided above, looks at a significant amount of work, conducted by many different individuals, over the past couple of centuries. As a result, it is reasonably comprehensive, and covers much of the historical work that is relevant to this specific research on global sourcing location factors.

In reviewing the above-mentioned research, some patterns were evident, allowing us to group the literature into four main areas:

- Research resulting in the establishment of international trade theory
- Research with a focus on firm-level factors, that influence the decision to participate in global sourcing activities
- Research with a focus on country-level factors, that indicate factors that can contribute to countries growing their economies by becoming an attractive destination for global sourcing activities

- Research resulting in some form of metric or measurement tool related to global sourcing activities, or country competitive or comparative advantage

Despite that fact that a reasonably large volume of research has been undertaken related to the subject matter being examined in this research endeavour, this research project has a uniqueness that will result in bringing valuable new knowledge that will provide value to both the corporate business community, as well as governments throughout the world.

In conclusion, the research that I am undertaking, and the intended end goal of the development of a current state model, is different than research that has been undertaken in the past, and is critical to both the business community as well as national governments, allowing them to fully understand the factors related to patterns of global trade, resulting in their ability to make sound strategic decisions to benefit their organizations. These sound decisions will provide an opportunity to work towards comparative advantage, and to provide an advantage to both the business and government sectors.

Chapter 4: The Evolution of Outsourcing

Introduction

The concept of free trade was first suggested in Adam Smith's (1776) "The Wealth of Nations", and then further built upon by David Ricardo (1817) in "The Principles of Political Economy and Taxation". At the time of these publications, the concept of free trade was novel and a dramatic departure from previous theories on international trade, all having a role for government to play in the form of protectionist practices in aid of domestic economies.

Today, it appears to be generally understood that the concept of reduced trade barriers and a more competitive international marketplace is the approach that maximizes the good for all citizens, resulting in a higher standard of living and increased overall consumption globally. To put it simply, by allowing all nations to compete openly in the global marketplace, those who are most efficient at producing products and services do so for the global economy, and as a result, consumers benefit from the most efficient form of production, and are rewarded with the lowest possible cost. Why is it then that we are still struggling to implement a true barrier-free international marketplace some two and a half centuries after Adam Smith first published his work in this area?

In this chapter, we will discuss the evolution of global sourcing from its initial conceptualization to the development of international trade organizations including policy development. We will then review some recent theories and trends that are popular today and conclude our discussion with a critical view of how we arrived at where we are.

International Cooperation

At the end of the Second World War, the world's focus was on rebuilding, and finding a way to get back to the business of economic reform and development. Various countries, led by some of the main Allied powers, started to discuss the best approach forward. These discussions resulted in laying the groundwork for the formation of the General Agreement on Tariff and

Trade (GATT), which was intended to promote increased trade between nations, and overall economic prosperity at a global level (Matsushita et al. 2006).

The General Agreement on Tariff and Trade (GATT)

In 1948, a group of countries met in Havana, Cuba at the United Nations conference on trade and employment in an effort to promote international trade, primarily through a reduction in trade barriers (tariffs). As a result of these meetings, the General Agreement on Tariff and Trade (GATT) was born, with twenty-three countries signing the agreement as “contracting parties”. This original GATT agreement resulted in approximately forty-five thousand trade concessions in the form of reduced import tariffs.

The next step for the contracting countries was to attempt to build on the progress made in the establishment of the GATT, and to form a new trade organization, which was proposed to be called the International Trade Organization (ITO). This organization would be a formal entity for the promotion of international trade and would have legal status and authority to settle trade disputes between nations. Work continued over the next couple of years towards the formal establishment of the ITO, but in 1950, the United States failed to have the Havana charter passed through Congress, which resulted in the death of the establishment of the ITO as a formal trade initiative (WTO, 2015).

Despite this pivotal failure, the General Agreement on Tariff and Trade continued to move forward as an informal, de facto, organization, and made continual and significant progress over the next several decades, despite the fact that it had no formal authority.

By the late 1960's however, it was evident that to truly have a lasting effect on increasing international trade, the efforts of GATT would need to go beyond a reduction in tariffs, as nations continued protectionist practices, despite agreements on tariff reductions, in the form of non-tariff barriers. As a result, the GATT expanding its view, the parties began to introduce additional topics to the negotiating table, beginning with the Kennedy round in the late 1960's. Negotiations at the GATT sessions continued to evolve, with anti-dumping duties on the agenda during the Kennedy Round, non-tariff barriers during the Tokyo Round, and services and

intellectual property introduced during the Uruguay Round. A list of GATT negotiation rounds can be found in Appendix 4-1.

Although the GATT continued to make progress, it was becoming evident that as the negotiations moved away from the traditional reduction in tariffs, continued progress was becoming more and more difficult, compounded by the fact that the organization was informal with no legal binding authority. The final GATT negotiating round, the Uruguay Round, culminated with the establishment of a formal organization to deal with international trade, the World Trade Organization (WTO). After fifty years of progress under GATT, a formal legal entity to promote international trade finally came into existence.

The World Trade Organization (WTO)

The World Trade Organization, formed in 1995, is a formal, recognized international organization whose mandate is to promote international trade through the free movement of goods and services across international borders. This organization is a place where member governments meet to sort out their trade problems with each other.

The World Trade Organization primarily exists as a place for member countries to negotiate and establish formal legal agreements with each other with regards to trade between nations. In addition, there is a formal dispute resolution system, and all decisions are binding. The WTO has the power to enforce rulings, and to take necessary action against member countries who do not abide by the established agreements.

The overall goal of the World Trade Organization is to allow international trade to move as freely as possible through the establishment of negotiated rules that are transparent and predictable. The WTO was founded based on the following underlying principles:

- To promote trade without discrimination
- To promote freer trade, gradually through negotiation
- To enhance predictability, through binding and transparency

- To promote fair competition, and
- To encourage development and economic reform

The WTO has several means of achieving the above-mentioned principles, such as most favoured nations (MFN) and national treatment requirements. Under the most favoured nation policy, what one-member country offers another member country to promote trade must also be offered to all other member countries. To a similar end, national treatment policy ensures that once a product or service is imported into a member country, that it is treated equally with domestically produced product, to promote fair competition in the marketplace.

In addition to reducing trade tariffs, the WTO also works on creating bindings, which are agreements from a country to fix tariffs at their current level, and to guarantee they will not be increased. This is one means of providing predictability through transparency which promotes trade growth.

The WTO, however, does not always support efforts towards free trade. In some cases, it is an advocate for protectionist practices. This approach is taken to allow least developed countries the opportunity to gain access to market(s) and to enhance their individual economic development.

One of the significant challenges faced by the WTO in the work that they do, is that despite the theories of Adam Smith and David Ricardo, and the general understanding that reducing tariff barriers and the free flow of goods and services is better for countries overall, there is always a temptation for countries to invoke protectionist practices to serve the specific interests of the individual county. These practices, however, support inefficiencies in the global marketplace, inflate costs, and stifle overall economic growth.

From 1973 – 1979, the GATT was conducting the Tokyo round of negotiations. Although this round was successful in realizing a further reduction in tariffs, it did struggle to move forward with the newer non-tariff agenda items. Although the countries were able to reach some agreement on a portion of these issues, the Tokyo round overall was unsuccessful at gaining

support from the full GATT membership, and as a result, these agreements were labelled as “codes” as opposed to holding multilateral agreement status.

As time moved on, new non-tariff issues were arising on a continual basis, as member countries continued to exploit non-tariff “loopholes” in the agreements, which further resulted in a restriction of trade through non-tariff barriers. By the 1980’s it became clear that the unofficial status of the GATT was not enough to continue to make the progress required with regards to promoting the free trade of goods globally. As a result, the Uruguay round continued, ending in the establishment of a new, formal, and official international trade organization, the World Trade Organization.

Upon completion of the Tokyo round, the Uruguay round was established commencing in 1986, and became the largest trade negotiation ever attempted. In fact, it was so large that at several times during the round, this trade negotiation seemed doomed to fail. In the end, it lasted seven and a half years, ending in unprecedented success, including the formal establishment of the WTO. In addition to this major accomplishment, the establishment of the WTO accomplished the following:

- All of the original GATT articles were up for review
- New areas, such as services and intellectual property, were entered into the negotiation process
- Sensitive areas such as agriculture and textiles, areas that progress was never able to be reached, moved forward with some success. This, in itself, was a major accomplishment
- Agreement was finally reached to establish a formal and legal international trade organization

The establishment of the WTO actually came about as a result of a failed attempt to create the International Trade Organization (ITO). Although this attempt failed in the late 1940’s, the work carried on under GATT, although it did not result in a formal, legal entity that had the necessary

teeth to enforce the underlying purpose barrier free global trade. The GATT did, however, have twenty-three contracting parties and did reduce approximately 45,000 tariffs, so is considered to have been successful.

The initial trade round under the newly formed WTO, which started in 2001, was named the Doha Development Agenda.

Policy Development

When looking at global policy development with regards to international trade, there are two primary types of agreements that have had a profound effect on the reduction of trade barriers, and consequently the promotion of trade across borders. These agreements can be grouped under the broad categories of global agreements (WTO agreements which consist of both multilateral and plurilateral agreements), and regionalized agreements intended to stimulate trade in specific global trading regions.

Global (WTO) Agreements

Upon establishment of the WTO, agreements for the first time would go far beyond international trade in goods. Both services and intellectual property considerations became a major part of the negotiation process.

WTO rules are a result of negotiated agreements among member countries, and start with the following broad principles:

- GATT (General Agreement on Tariff and Trade) for goods
- GATS (General Agreement on Trade in Services) for Services
- TRIPS (Trade Related aspects of Intellectual Property Rights) for the protection of intellectual property rights

After the broad principle agreements, come extra agreements and annexes for special issues or sectors, and then a list of schedules of commitments. The following in the overall structure of WTO agreements:

- The umbrella agreement (WTO)
- Basic principles (GATT, GATS, TRIPS)
- Additional details
- Market access commitments
- Dispute resolution
- Transparency (trade policy reviews)

The discussion below outlines some of the specific agreements that have evolved in the World Trade Organization. Many of these agreements were started under GATT in the Tokyo or Uruguay Rounds, but have been expanded and further refined since the establishment of the World Trade Organization.

Agriculture:

Agriculture, along with textiles, are two specific industries that have been sensitive areas for countries and have therefore be fraught with protectionism in an effort to protect domestic production around the world. Efforts were first made during the Tokyo Round to attempt to remove protective barriers in the agricultural industry, but little or no success was achieved in this area.

As a result of the failure to move forward on new agricultural agreements during the Tokyo Round, the agriculture industry became a significant agenda item during the Uruguay Round. This negotiation round had some success in moving forward, and successfully bound all agricultural tariffs in member countries. Furthermore, new rules and commitments were made related to market access, domestic support and export subsidies.

Although these items were not tariff related, they were a critical accomplishment as many countries began to exploit and use these “tools” as non-tariff barriers to protect domestic agriculture.

One of the major accomplishments on agriculture during the Uruguay Round was to replace the quota systems (non-tariff barriers) with tariffs, resulting in a tariffication of all forms of agricultural protectionism, and in taking a tariffs-only approach to restricting agriculture sector trade. This, as it turned out, was a critical start towards promoting the free flow of agricultural goods, and finally broke the stalemate that had been barring progress in this industry for years.

After tariffication was put in place, the plan was to gradually reduce the tariffs, and to bring agriculture more in line with normal GATT trade agreement rules. Governments continued to be allowed to put restrictions on agricultural trade, but only if these restrictions were to protect citizens from unsafe agricultural products.

Standards and Safety:

As mentioned above, trade restriction on agricultural goods was deemed acceptable if the restrictions were put in place to protect citizens from unsafe products. Article 20 of GATT dealt with Standards and Safety and allowed countries to implement protectionism in the name of safety, provided that the decision to do so was based on scientific evidence and was not simply a discriminatory practice to implement a barrier to trade.

One critical issue related to this area was to determine what standard would be used to make decisions as to whether or not products were safe for importing. The resulting agreements allowed for countries to use differing standards, although the use of international standards, when available, was encouraged.

The Technical Barriers to Trade Agreement (TBT) was eventually put in place to attempt to ensure that safety standards did not result in unjustified barriers to trade.

Textiles:

As previously mentioned, textiles were another sensitive industry where little progress was made during the Tokyo Round, and an area fraught with protectionist practices resulting in limitations to international trade.

In the textile sector, quotas were established starting in 1974 under the Multifibre Agreement (MFA), primarily as a means of restricting trade. When the World Trade Organization was formed in 1995, the Multifibre Agreement was replaced by the Agreement on Textiles and Clothing (ATC), which eliminated all textile quotas. This new agreement worked to gradually reduce tariffs bringing the textile industry in line with the mainstream GATT rules. The Agreement on Textiles and Clothing also had a self-destruction mechanism in order to make the agreement obsolete once this goal was finally achieved. As a result, the ATC ceased to exist on January 1, 2005.

Services:

One of the new areas of focus to create barrier free global trade efforts was the introduction of trade in services as part of the General Agreement on Trade in Services (GATS), first introduced during the Uruguay Round of negotiations. The introduction of services was an important turning point in international trade, as the services sector was the fastest growing sector in the global economy at that time.

The General Agreement on Trade in Services covered four main modes of trade:

- Mode 1: Cross Border Supply, in which services are supplied from one country to another
- Mode 2: Consumption Abroad, when consumers make use of services in another country
- Mode 3: Commercial Presence, which occurs when a services company actually sets up locations in a foreign country, and
- Mode 4: Presence of Natural Persons, which includes rules regarding travelling to and temporarily staying in foreign countries in order to deliver services.

GATS was an attempt to fulfill many of the same fundamental objectives that were accomplished with regards to trade in goods as established under the GATT. It dealt with ensuring that governments published laws and regulations related to services in order to

enhance transparency, and in ensuring that all regulations related to services were objective and reasonable, and as a result, impartial. Other fundamental objectives were to ensure that if governments had agreements in place with specific countries with regards to recognizing qualifications, and that these same opportunities were afforded to other member countries, as well as to ensure that the flow of monies to pay for services was not restricted in any way.

In addition to the main GATS agreement, several annexes were also introduced to deal with specific concerns, such as travel and temporary stay for service providers, the rights of individual governments to take steps to protect customers in the financial services industry, and to provide access by foreign companies to domestic telecommunications infrastructure. It also established specific agreements related to aircraft, aircraft service, and air reservation systems.

Work in the area of free trade in services continues today as part of the Doha Development Agenda.

Intellectual Property:

Another ground-breaking area introduced during the Uruguay round was in relation to intellectual property protection. People who create things have intellectual property rights related to their creations; however, the rules and degree of protection afforded people varied widely from country to country. As a result, this area was often one of contention in international trade relations.

The Agreement on Trade Related Aspects to Intellectual Property Rights (TRIPS) was introduced to ensure adequate and fair protection of intellectual property rights for creators internationally and was an attempt to narrow the gap and to bring common international rules into play regarding intellectual property rights.

The TRIPS agreement covers the following subject matter areas:

- The basic principles of the agreement, specifically non-discrimination, national treatment, and most-favoured nations treatment. TRIPS also introduced a new

principle which deals with the contribution of technical innovation and the transfer of technology internationally

- Copyright protection for computer programs, including rental rights
- Protection for performers with regards to unauthorized recording, reproduction, and broadcast of their works
- The types of signs that can be trademarked, and how they will be protected
- Geographical indicators that define a product or product group (such as champagne, or scotch). The agreement requires countries to protect against misuse of this terminology
- Protection for industrial designs of at least 10 years
- Protection of patents for inventions of at least 20 years
- The rights for countries to implement compulsory licensing in cases where inventory is not supplying to the market
- Free access to pharmaceuticals required to protect public health
- Protection for integrated circuit designs for at least 10 years
- Protection for undisclosed information and trade secrets to protect against breach of confidence, and
- The right for governments to take action to protect against anti-competition

The TRIPS agreement also requires governments to ensure the enforcement of the agreement, and to put penalties in place that are significant enough to be a deterrent to those who may be tempted to break the rules.

TRIPS also offers incentives to developed countries to transfer technology to least developed countries and provided reasonable transition periods for countries to comply with the new rules.

Anti-Dumping, Subsidies, and Safeguards:

As a general overarching principle, the World Trade Organization and its agreements attempt to promote the free flow of goods without restrictions. In some cases, however exceptions exist in which the WTO is supportive of some form of restrictive measures related to trade.

Anti-dumping is the practice of selling goods at an unfair price in foreign markets, at a price lower than what they are normally sold at domestically. WTO agreements are in place to prevent companies from implementing these practices and include disciplinary measures to be levied when parties are found to be engaged in anti-dumping practices.

The agreements of the WTO also restrict the use of trade subsidies, and provide a mechanism allowing countries to impose countervailing duties as a punitive measure to offset unfair subsidies resulting in unfair competition. Trade subsidies are prohibited when they are specifically intended to distort international trade, such as subsidies paid when companies meet certain export quotas.

WTO agreements also deal with the right of countries to take safeguard measures in the short-term to protect industries in distress. These safeguard measures, however, come with specific rules, and should not target specific trading partners, should last no more than four years, and should include some form of compensation to the countries affected by these measures.

Non-tariff Barriers:

WTO has also been making progress related to the reduction in non-tariff barriers used by countries to restrict trade. Many of these barriers were introduced as a means to protect domestic industry when the use of tariffs was no longer possible.

Import licensing is one such barrier which can restrict trade into a country. Recent WTO agreements require governments to ensure that licensing requirements are simple,

transparent, and predictable. Similarly, rules for the valuation of goods at customs must be fair, uniform, and neutral, and pre-shipment inspection, rules of origin, and investment measures should be fair, reasonable, and not discriminate between trading partners.

WTO Agreements not supported by all:

As previously mentioned, the Tokyo round in the early 1970's was met with little success in some areas. One example of this lack of success was a group of agreements that were made but were not supported by all member countries. These plurilateral agreements originally were focused on trade in civil aircraft, government procurement, dairy products, and bovine meat, the latter two which were terminated in 1997.

Trade Policy Reviews:

The areas covered under the multilateral WTO agreements ensures trade transparency among member countries. This agreement also requires member countries to notify the WTO of any policies or actions taken that may affect international trade, and also allows for the WTO to conduct regular reviews of member country policies related to global trade.

Dispute Resolution:

The World Trade Organization is a rules-based system, and as such, has a dispute resolution system built into the process. Without an effective means of resolving disputes, the rules would have no teeth and the system would be ineffective. This was an issue under GATT.

Disputes within the World Trade Organization are often as a result of broken promises, or a failure to meet commitments. Dispute resolution processes have been in place for many years, originally introduced under GATT. Like the rest of the GATT system, however, the dispute process was unclear and lacked definitive rules and timetables. As a result of this lack of definition and clarity, dispute resolution took far too long, was easily blocked, and was therefore pretty much ineffective.

The Uruguay Round introduced the dispute resolution system that is in place today, and resulted in a more robust, defined, and timely process. The dispute resolution process is the

responsibility of the dispute resolution body and has resulted in a dramatic improvement in the effectiveness of dispute resolution at the WTO.

The current system involves two phases, with the option of appeal if the resulting decision is not acceptable to one or both parties. Since the focus of the dispute resolution system is on settling disputes and not passing judgement on the parties, phase one involves the parties attempting to settle the dispute themselves through consultation. This phase lasts 45 days and is an initial attempt to settle the dispute out of court. If this phase does not lead to a settlement, the Dispute Settlement Body has 60 days to form a panel that will take up to six months analyzing evidence and reaching a final decision. Decisions are very difficult to overturn under the present system, as they can only be done with consensus by all members to reject the decision.

If either or both parties are not happy with the final decision, they still have the option to appeal. Appeals are heard by an appeals committee of three members, selected from the seven members sitting on the appellate body who are representatives from the general membership.

Once decisions are final, the losing party is expected to bring their policy immediately in line with the ruling. In cases where this is not practical, reasonable time frames are set up for compliance. Failure to comply in a reasonable amount of time requires the parties to come to an agreement on acceptable compensation. If an agreement on compensation proves to be difficult, the party who is due compensation can apply for trade sanctions to be placed against the violating party.

New Arising Issues:

The World Trade Organization, as it continues the work originally started under GATT, continues to evolve and to branch into new areas that were never previously considered when discussing international trade. This comes as no surprise, as the evolution from GATT to WTO was basically a recognition that progress needed to be made on many issues that go beyond the original focus on tariffs as trade restrictions.

In recent years, work has commenced on many new arising issues, all of which are related to improving free trade. One such issue is the establishment of regional trade agreements, which appear to fly in the face of what the WTO is all about as they are not multilateral in nature and therefore do not apply to all member countries.

Regional trade agreements in some cases, however, actually support and complement the work being done by the WTO. This occurs when these agreements reduce trade barriers and result in growth in trade amongst some of the member countries. The main concern from a WTO perspective is to ensure that these agreements do not impose further trade restrictions on other member countries, which are not part of the regional agreement. Examples of some of the major regional agreements now in place are the European Union (EU), the North American Free Trade Agreement (NAFTA), the Association of South East Asian Nations (ASEAN), the South Asian Association for Regional Cooperation, the Common Market of the South (MERCOSUR), and the Australian-New Zealand Closer Economic Relations Agreement (ANZCERTA). The agreements mentioned above are but a few of the main agreements in place. There are close to three hundred agreements in existence today categorized as regional trade agreements.

In recent years, the WTO has established a Regional Trade Agreements Committee to examine both current and proposed agreements, and to make sure they comply and are consistent with the rules and overarching purpose of the WTO.

A second area of new and arising issues is related to environmental issues. With the environment receiving a great deal of focus in recent years, the question has arisen as to whether or not environmental issues should be part of WTO agreements. Although the WTO currently does not have agreements specifically focused to environmental issues, many countries have signed such agreements outside of the WTO. In addition, the WTO has established a Trade and Environment Committee (at the end of the Uruguay Round) to study the relationship between trade and the environment. This committee operates under the principles that the WTO is only competent to deal with trade issues, and that if the committee does identify issues, any solutions must uphold the principles of the WTO trading system.

The big question that has arisen out of this work is whether or not environmental disputes should indeed be handled by the WTO. The current thought on this issue is that where environmental agreements do exist, issues should be resolved under these agreements. Where they do not exist, the only place for resolution may be within the WTO.

A third new area of recent discussion at the WTO has been with respect to investment, competition and procurement. These areas, along with trade facilitation, were tabled at the 1996 Ministerial Conference in Singapore, and are thus referred to as the “Singapore Issues”. Unfortunately, consensus on how to proceed on these issues was not reached, and the first three have been dropped from the Doha Agenda, with only work on trade facilitation continuing.

The World Trade Organization has also had some success on establishing an agreement on government procurement that focuses primarily on transparency and non-discrimination, but this agreement is a plurilateral agreement, and therefore is not enforceable on all member countries.

Finally, two other new and arising areas under discussion at the WTO are with respect to electronic commerce and labour standards. The first of these is in its infancy from a WTO discussion point of view, and is focused primarily on video, music, and books in electronic form. Discussion continues, but the only progress to date is the commitment from member countries to continue to allow for free trade of these items until agreements can be developed. With regards to labour standards, the WTO has recognized the International Labour Organization (ILO) as the expert body in this field, and as such, the WTO has agreed to support their efforts in this area.

The Doha Development Agenda

In late 2001, the negotiating round known as the Doha Development Agenda was launched in Doha, Qatar, with a plan to finalize negotiations by the start of 2005. The negotiations proved to be difficult in many areas, which impeded progress and eventually resulted in delays that

extended the negotiations well beyond the 2005 anticipated deadline. In fact, this round is still ongoing over a decade later.

The areas of most difficulty were areas that had previously been contentious, such as protectionist practices within the agricultural industry, first identified as one of the Singapore issues.

The following subject matter areas were slated to be addressed as part of the Doha round:

- Implementation-related Issues: to help developing countries meet the requirements of the WTO, usually through extended implementation timelines, and other special provisions only applicable to developing nations
- Agriculture: one of the long-term, ongoing hot topics, the intention being to prevent restrictive practices that result in distorting the world's agricultural markets
- Services: to further promote the work done on the General Agreement on Trade in Services (GATS), and to set timelines for further negotiations
- Market Access for non-Agricultural Products: to continue past efforts to reduce and eliminate tariffs, and to also reduce and eliminate non-tariff barriers to trade
- Intellectual Property Rights: to further work on TRIPS, and to provide a higher level of geographical protection for wine and spirits
- Relationship between Trade and Investment: A Singapore issue that was originally scheduled but eventually dropped from the Doha Agenda
- Interaction between trade and competition policy: A second Singapore issue that was also eventually dropped from the Doha Agenda
- Transparency in Government Procurement: a third Singapore issue dropped from the Doha Agenda

- Trade Facilitation: to begin negotiations which would improve the speed at which goods travel across borders
- WTO rules on anti-dumping and subsidies: to negotiate anti-dumping and subsidy agreements
- WTO rules on regional trade agreements: to clarify the World Trade Organization's position on regional trade agreements, which would allow them to exist but to ensure that they comply with the intentions and rules of the WTO
- Dispute Settlement: to further improve the WTO's dispute resolution process
- Trade and Environment: to clarify the relationship between the WTO and the many multilateral environmental agreements, which would grant the WTO observer status; also, to reduce trade barriers related to environmental goods
- Electronic Commerce: to endorse prior work done in the area of electronic commerce, and to continue the past practice of not imposing duties on electronic commerce transactions
- Small Economies: to examine issues related to specific small economies, and to make recommendations to address challenges in these economies
- Trade, debt, and finance: to establish a working group on trade, debt, and finance
- Trade and Technology transfer: to establish a working group to help facilitate the transfer of trade and technology to developing nations
- Technical cooperation and capacity building: to make new commitments on technical cooperation and capacity building
- Least Developed Countries: to continue the commitment to decrease or eliminate tariffs related to the least developed nations

- Special and Differential treatment: to review special provisions related to the least developed countries, with the intent to strengthen them and make them more precise
- Timelines: to finalize negotiations by specified timelines

Work continues on the Doha Development Agenda, but with the frequently missed deadlines, it is difficult to anticipate for sure when this round may reach its conclusion.

Developing Countries:

Developing countries receive special treatment and are of interest to the WTO. Of all of the member countries, the vast majority (approximately two-thirds) are categorized as developing countries.

With special provisions that apply only to these developing nations, the WTO takes on the role of “economic development” for these countries, to help them grow their economies and increase their participation in the international trade arena. Although this work is considered by many as a vital role in the world’s economy, it is hard to argue that it doesn’t fly in the face of the overarching theories of Adam Smith and David Ricardo, who were staunch proponents of a world without trade restrictions or governmental interference with regards to cross-border trade.

Some of the many World Trade Organization advantages provided exclusively to developing nations are:

- The WTO committee on trade and development, which focuses their work on least developed nations
- Technical assistance provided to developing nations by the WTO secretariat
- Subsidized office space in Geneva provided by the Swiss government to least developed nations

- Financial assistance provided by the WTO so the developing countries can send representation to meetings and ministerial conferences
- Extra time to comply with World Trade Organization rulings
- The ability to trade in a non-reciprocity manner with developed countries
- Extra leniency with regards to trade negotiations
- Increased trading opportunities for least developed countries
- Special provisions in agreements to safeguard the interests of developing countries
- Legal advice provided by the WTO
- Opportunities for improved market access, exclusively for least developed countries
- Special treatment from other international organizations
- A speedier membership process into the WTO
- Training to support developing nations participation in the WTO
- Elimination of import duties and quotas, that only apply to developing nations

Regional Trade Agreements:

The World Trade Organization, building on progress made in the GATT before it, is the first and largest organization that was truly focused on improving international trade on a global scale, focusing on multilateral trade agreements that were binding on such a large group of members. This resulted in a significant impact on trade, supporting the growth in the volume of international trade that we see today.

In addition to the multilateral agreements negotiated under the guidance of the WTO, many regional trade agreements have sprung up over the years. These agreements, like the

agreements negotiated as part of the World Trade Organization's mandate, have focused on improving the economic and social outlook for regional markets by taking a collaborative approach to economic and social development, as opposed to a competitive one.

Although there are a huge number of agreements that we can categorize as regional agreements, below we discuss some of the more substantial regional agreements that have been put in place over the last half century or so.

The Association of Southeast Asian Nations (ASEAN):

During the late 1960's, turmoil existed in the countries geographically located in what we now know as Southeast Asia. With the Vietnam War raging on, the countries in this part of the globe were not only concerned with economic struggles, but also with a concern for establishing peace and stability in their region (Asean, 2015).

The Southeast Asian nations consists of countries with reasonably small economies, making it difficult to establish a strong economic outlook independently. As well, many conflicts occurred between the nations, and there was an overall concern shared by the majority of these countries regarding potential interference from countries outside of the region.

In 1967, five of the Southeast Asian countries got together in Bangkok to establish the details of a new regional trade agreement that became the foundation for the Association of Southeast Asian Nations (ASEAN). The association was established by the founding members of Indonesia, Malaysia, Philippines, Singapore, and Thailand.

The document signed during the meetings in August of 1967 became known as the ASEAN Declaration, which focused on:

- To accelerate economic growth, social progress, and cultural development in the region
- To promote regional peace and stability, including adherence to the United Nations charter

- To promote collaboration and assistance between the member nations
- To promote advancements in agriculture and other industries through collaboration
- To promote Southeast Asian studies, and
- To promote and maintain close relations and cooperation between the nations

The overall goal was to grow the region economically, socially, and for the good of all nations in the region. A fundamental part of this growth was to establish peace in the region, free from outside political interference.

These nations recognized that they would be unable to significantly grow and prosper on their own, but with the resources and strengths of the various nations in the region, could become an economic power through close alliance with one another. To succeed would require them to put their competing interests aside and instead focused on the greater good for the region. Aside from the obvious economic benefits, it was also quite likely that the region would remain in constant conflict and danger unless the nations were able to pull together towards a common, mutually beneficial, set of goals.

ASEAN has survived to this day and has had success in establishing both economic and political stability in the Southeast Asian region. Although conflict still exists from time to time between member nations, all members continue to be committed to resolving these conflicts peacefully, with a focus on the greater good of the Southeast Asian region. ASEAN has grown over the years to include a total of ten nations, with Brunei Darussalam joining in 1984, Vietnam in 1995, Lao PDR and Myanmar in 1997, and Cambodia in 1999.

As part of the economic focus of ASEAN, the group has succeeded in establishing many signed regional agreements that promote free trade, reduced tariffs, and a reduction in non-tariff barriers. This work has not only focused on trade between member nations, but also on how the Southeast Asian nations trade with other countries in the region, such as Japan, China, Korea, and Australia.

Australian-New Zealand Closer Economic Relations Trade Agreement (ANZCERTA):

Australia and New Zealand have been working to improve trade between their nations for over a hundred years. Regional trade for these countries is of critical importance due to their close proximity to each other, and their distance from the rest of the world.

In 1922, the first trade agreement was signed between Australia and New Zealand, but was little more than a document to officially signify the countries desire to trade with each other (Dfat, 2015). This agreement was further strengthened ten years later, as the establishment of preferential treatment and special rates of duty came into existence.

In 1966, the first free trade agreement between these two nations was signed, called the New Zealand Australia Free Trade Agreement (NAFTA). This agreement was an attempt at reducing tariffs and trade restrictions, calling for reductions covering 80% of trade to fall under the new agreement's rules by the late 1970's.

Further progress was made in 1983 with the signing of the current trade agreement, the Australia – New Zealand Closer Economic Relations Trade Agreement (ANZCERTA). This agreement went deeper to establish a free trade zone between the two countries, and was a bilateral agreement designed to be consistent with the spirit and intent of the goals and objectives of the World Trade Organization.

At its core, ANZCERTA's objectives were to strengthen the broader relationship between Australia and New Zealand through development of closer economic relations and expansion of free trade. This was to be accomplished by eliminating barriers to trade, and the further development of trade in the spirit of free competition.

The intent of ANZCERTA was to:

- Eliminate tariffs and quantitative trade restrictions
- Minimize market distortions due to government assistance and subsidies
- Harmonize the food standards between the countries

- Establish a mutual recognition of goods and occupations, and
- Establish a protocol to support investment

As a result of this agreement, all goods meeting the rules of origin (i.e., produced in these countries) were traded free of duty and trade restriction since 1990. Services were added to this agreement in 1989, with most services now trading free of duty.

The Common Market of the South (MERCOSUR):

Mercosur was established in 1991, when the founding members of Argentina, Brazil, Uruguay, and Paraguay signed the Treaty of Asunción (Gardini, 2007). The objective of Mercosur was to eliminate obstacles to regional trade (such as high tariffs and income inequalities), and to eventually lead to a common market, initially aimed at the southern cone countries, and then to be extended to the rest of South America.

In the mid-1980's, Argentina and Brazil had both recently returned to democratic governments and began discussions around the idea of creating a common market in the southern cone region of South America. Their respective Presidents (President Alfonsín in Argentina and President Sarney in Brazil) had a close personal relationship, which fostered cooperation between the two countries. An increase in political stability in the region existed, yet many economic challenges remained. The goal of both countries was to protect democracy, and to deal with the economic challenges that lay ahead.

Initial discussions between the two countries were focused on establishing a bilateral trade agreement, which would bolster economic stability for both Argentina and Brazil. Although the primary focus was on these two countries, Uruguay was often invited to attend discussions, and would later sign on to several of the bilateral agreements that were eventually established between Brazil and Argentina.

As time went on, the governments in both of these countries would change, so future work on these agreements were left to the ruling successors. Although these successors (Carlos Menem in Argentina and Fernando Collor de Mello in Brazil) did not share the same close personal

relationship, their economic policies were similar, and both remained in support of establishing a common market to bolster the South American economy.

As the 1980's came to a close, Brazil and Argentina were finalizing their bilateral agreement, and Uruguay's interest in participating was growing. Paraguay had also returned to democracy and became interested in participating as well.

Two other countries who were also strong candidates for the common market were Chile and Bolivia. Although preliminary discussions did occur with Chile, it quickly became clear that an agreement was not to be had, as a reduction in tariffs was a significant issue. An agreement with Bolivia also proved to be a challenge, as they were already party to other trade agreements in Latin America, a practice not permitted under the rules established for moving forward with a Common Market.

Negotiations to finalize a four-country agreement moved forward reasonably quickly, as much of the content had already been established in the bilateral agreement between Brazil and Argentina and was adopted as core content for the multilateral Common Market. By the time the ink was dry on the 1991 Treaty of Asunción, Brazil, Argentina, Uruguay and Paraguay would become founding members, with Venezuela joining several years later.

Mercosur is different in many aspects from other regional trade agreements. It is not necessarily a proponent of free trade but has a strong protectionist component. In fact, Mercosur members are not permitted to enter into any bilateral trade agreements with countries outside of the Mercosur membership, and are required to maintain a maximum tariff on all imports.

Mercosur has been increasingly unstable in recent years. Venezuela, a country known for its opposition to free trade, tried to join Mercosur in 2004, but its membership was blocked by Paraguay, who cited lack of democracy in Venezuela. In 2012, Paraguay was suspended from Mercosur, over opposition to their self-imposed impeachment of their President, a move which was opposed by some Mercosur nations. They remained suspended until a new President was elected and put in power. This situation also paved the way for the quick inclusion of Venezuela

into the Mercosur membership, which created further tension and increased instability. Further complications exist resulting from an increasing politicization of Mercosur's agenda, causing some to believe the intent of the agreement is no longer focused on trade.

In addition to the full members listed above, Mercosur also has five Associate Members, namely Chile, Bolivia, Columbia, Ecuador, and Peru. The Associate Members do not have full voting rights or complete access to Mercosur member's markets, and not required to impose the common external tariff that applies to full Mercosur members.

Issues within Mercosur remain, such as the recent rise in trade disputes between member countries, and the increasing desire of some of these countries to want to reach outside bilateral agreements with other nations. Uruguay has recently signed a Trade and Investment Framework Agreement with the United States. If this framework agreement leads to a free trade agreement with the US, it would violate Uruguay's charter with Mercosur, and would require them to be suspended, or lead to a change in Mercosur's current charter to allow for such bilateral trade agreements.

Unfortunately, Mercosur has not resulted in the common market originally envisioned when the treaty came into existence in the early 1990's.

The European Union (EU):

Economic challenge and regional conflict have been ongoing on the European continent for centuries. After experiencing two world wars, and the associated economic challenge that comes with such devastation, the idea of economic, social, and political integration gained momentum, primarily as a mechanism to bolster regional economies, as well as a means to promote harmony and the elimination of conflict between neighboring countries.

After World War I, European integration was seen as the best way to economic prosperity and a brighter future for the European community. The concept of a "Pan-Europa", an integrated Europe, was being discussed, and the idea was gaining momentum (Dinan, 2014). In fact, in a 1929 speech to the League of Nations, Gustav Stresemann not only spoke of European

cooperation and integration, but also of the possibility of establishing a common currency for use throughout Europe.

France and Germany led the discussions around integration, focusing on rebuilding their post-war economic relationship. Both Aristide Briand of France, and Stresemann of Germany, were strong proponents of Pan-Europa.

In the early 1930's, the concept of "customs unions" was also being discussed as a means to reducing trade barriers and promoting cross-border trade. The idea of a customs union seemed to fit well with the Pan-Europa concept, and the European continent seemed to be moving strongly in favour of a more integrated European community.

The 1930's were not a decade of economic prosperity in Europe and continued economic decline as a result of political conflict deflated the momentum towards an integrated Europe. To further complicate the economic picture, the decade culminated with the start of the Second World War, ending all discussions of a Pan-Europa, and silencing all progress of European cooperation and integration.

After World War II, the focus of the democratic European countries once again turned towards Federalism and a more integrated democratic group of countries bound together against Fascism. In September 1944, The Federal Union adopted the promotion of a democratic federation of Europe as part of the post-war settlement process. Steps towards European integration began once again but were restricted to the Western European countries due to the existence of the cold war between the west, and the eastern European bloc.

In the early 1950's, six European countries (Belgium, France, Italy, Luxembourg, Germany, and the Netherlands) put aside their historical Nationalist views, and created the European Economic Community (EEC), which was to be managed by a European Commission. Britain, a significant player in the European Economic Community, chose to stay outside of the group, in favour of their national interests.

As economic rebuilding continued throughout the 1950's, it was becoming clear that cooperation and integration had its advantages and were proving to be beneficial to the

participating countries. In the early 1960's, Britain made an effort to join the European Economic Community, but were blocked by France's Charles de Gaulle, who saw them as a threat to France. By the end of the 1960's however, de Gaulle would resign, paving the way for Britain's ascension into the EEC.

The 1970's were once again a decade of economic challenge, this time on a global scale. Global financial instability, the global oil crisis, sluggish economic growth, soaring levels of inflation and rising unemployment were major concerns worldwide. This once again fueled opposing views toward federalist thinking, causing many countries to retreat to a more nationalistic economic approach in search of improved domestic economies.

By the mid-1980's however, the economy was once again on the rebound, as was a renewed determination in Europe to support European integration. As the European Economic Community focused on economic growth, Jacques Delors, President of the European Commission, focused on the promotion of economic and social cohesion through what he referred to as a single market program.

By 1986, the Single European Act was signed by the six original member countries in the EEC, as well as two newcomers, Portugal and Spain. This Act was the first major reform treaty for the EEC and had as its goal a single European market to be in place by 1992. The signing of this Act was a major turning point in the history of European integration.

As the Cold War era ended, the European Economic Community continued its efforts to both expand its membership, as well as reform its policy to enhance economic and social prosperity, and a peaceful European Economic Community.

The end of the Cold War led to the development of the Maastricht Treaty in December of 1991, coming into effect in November of 1993. This was the treaty that moved the EEC into the formal establishment of the European Union (EU).

The EU continued to struggle throughout the 1990's as the economic outlook once again deteriorated, which made widespread acceptance of the European Union a challenge. Despite

this, progress continued to be made, and more and more countries ascended to EU membership.

In 1995, the group grew with the inclusion of Austria, Finland, and Sweden. In 2004, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia, Cyprus and Malta joined. 2007 saw the inclusion of Bulgaria and Romania, with Croatia joining in 2013, bringing the total membership in the EU to 28 member countries.

From a policy reform point of view, the Nice Treaty was signed in 2001 to build on further reform from where the Maastricht Treaty left off but was thought to be largely inadequate. In 2005, the Constitutional Treaty was developed, but failed to pass with the required number of votes. This was seen as a major blow to the EU. In 2007, most of the content of the failed Constitutional Treaty was salvaged, and repacked as the Lisbon Treaty, eventually being signed after two voting attempts.

The end of the first millennial decade saw economic instability once again rear its ugly head, as financial crisis of some EU member countries (such as Greece) surfaced due to over-use of debt. This situation was partially as a result of the introduction of the EURO as a common currency in 2001. Economic challenges, as seen in the previous decades, once again put European integration under the microscope, with Britain starting to question the value of continued membership in the EU, and France and Germany experiencing dissension over how to move forward.

With the rise in economic challenges, free trade approaches to economic development comes under scrutiny, often as a result of short-term political interest. The debate over a common EU market erupted in Britain, leading to a vote in 2018 to exit the EU. Despite this decision, the exit strategy has proven to be difficult, and much uncertainty remains on how and when Britain will be able to move forward, and what impact will result from these decisions.

Brexit:

Discussions have been ongoing for decades as to whether or not the United Kingdom should have economic independence or should be part of a common market. The first referendum in

U.K. history occurred in June 1975, with overwhelming support for a common market strategy with the rest of Europe (Goodwin & Heath, 2016). In that referendum, 67% of the voters were in favour of a common market with Europe.

Despite the interest of the majority in a common market strategy, the issue continued to be debated, with strong support from the United Kingdom Independence party (UKIP). UKIP remained focused on an eventual United Kingdom independence.

This issue once again became a hot political topic, leading to a second referendum in June 2016. The voters were asked in this referendum whether or not they were in favour of the U.K. remaining in the European Union (Remain), or whether they should exit the common market (Leave). This time around the vote was much close, with 51.9% voting to exit the European Union.

This vote was somewhat of a surprise, with Remain thought to be leading in the polls up to the day the vote occurred. This has led to some researchers trying to understand what happened, and why the majority of voters were in favour of a European Union exit.

As mentioned earlier in this study, it appears that trade protectionism has historically gained momentum when domestic economies falter, and the economic outlook looks grim, as in times of lackluster growth or recession. Trade protectionist practices are often posed by political parties in an attempt to gain favour of the voters in support of change in an effort to bolster the domestic economy. The 2016 example of the Brexit vote appears to be further evidence of this claim.

Research conducted by Goodwin and Heath analyzed in detail the Brexit vote. What these researchers found was that although the majority of the vote was in favour of a common market exit, the vote was not evenly dispersed throughout the United Kingdom. Scotland, Northern Ireland, and southern England, particularly around the economic center of London, voted to remain, while the rural, more economically challenged areas of the Midlands voted overwhelmingly to leave. This would indicate that political momentum by the Leave supporters was grounded in the rural, less educated, more economically challenged areas of the country.

There was also a strong correlation between age and the Leave campaign, with older citizens in favour of exiting the European Union.

Additional research conducted by Colantone and Stanig (2018) had similar findings, with regards to the demographics of voters in favour of the Remain and Leave sides.

This research introduced a different hypothesis, being that the extreme growth in Chinese manufacturing over the past few decades, and the shift to a globalized marketplace, has hit different geographic areas to varying degrees, mostly dependent on each individual area's industry focus. Their research supports their view that the areas of the United Kingdom where the Leave campaign thrived, are areas most impacted by "Chinese Import Shock".

The impact of Brexit remains to be seen, as the United Kingdom continues to negotiate the terms of their exit from the European Union. The decision to leave as a result of this referendum has also spurred debate in other EU member countries, with some citizens also in favour of dismantling the European Union. The current state of the EU remains fragile, despite the successes experienced in the prior few decades.

NAFTA:

The North American Free Trade Agreement was a product of the changing economic reality within North America during the 1980's and came into effect on January 1, 1994. NAFTA was a highly debated agreement and marked the first time that a regional trade agreement included both developed and developing Nations (Castañeda, 2004) It was also significant as it marked a departure in attitude and political will in Mexico with regards to their relationship with the United States.

The attraction for both Canada and Mexico for increased trade with the United States is similar to the rest of the world, with the U.S. being the largest global domestic economy. The sheer size of the market could result in significant economic benefit for either of these countries. In fact, when NAFTA first became a topic of discussion, Canada had a free trade agreement with the U.S. in place (CAFTA), having come into effect in early 1989.

The concept of NAFTA started in June 1990 when the President of Mexico, Carlos Salinas, formally requested from President Bush a free trade agreement with the United States. This came as a surprise to Canada, who stood little to gain from the inclusion of Mexico into the free trade agreement.

Free trade between the U.S. and Canada was a hot topic in the 1988 Canadian Federal election, and the politicians in power in Canada had no desire to re-open the topic for discussion based on the concept of NAFTA, especially since they believed Canada had little to gain from such an agreement (Baer, 1991). Mexico's presence at the NAFTA table was more to protect Canada's current trade interests, and to keep them from losing any advantage, than it was to improve their current trade situation south of the border.

Some logic can be seen for Mexico and Canada supporting increased trade with the U.S., but what possible rationale could there be for the U.S. to open increased trade relations with Mexico?

During the 1980's, the Mexican economy was in peril, and the situation exposed a significant amount of risk for the U.S. economy, providing evidence that a stable and growing economy in Mexico was important to the United States. The idea of free trade with Mexico, and the positive benefits it could have on the Mexican economy, would alleviate this situation, and was therefore enough to spur the U.S. to consider a free trade agreement.

In Mexico, however, such a move would not be without political risk. Mexico had traditionally viewed the Americans as a threat, not an opportunity, to bolster the Mexican economy. Mexico's history of statist economic policy, fraught with protectionism, demonstrates their lack of desire to get closer to the U.S. The Mexican government also had a history of political behaviour that aggravated the U.S., such as their open support for the Soviets and Cubans, who were opponents of the U.S. To make a political decision to get closer to the U.S. from an economic and political standpoint, would be quite a turn-about for the Mexican government, and would likely not be readily accepted by many citizens in Mexico.

The Mexican economy during the 1980's however, was struggling, similar to other closed protectionist economies such as Eastern Europe and Cuba. Recognition of these challenges caused Mexico to rethink past economic policy and make significant change in order to protect their sovereignty. Mexican President Miguel De La Madrid started the shift by privatizing enterprises and creating a focus on export and international trade in order to grow the Mexican economy. His successors would eventually begin a focus on NAFTA as part of a natural progression to the shift in political thinking and economic policy in Mexico.

Many Mexicans preferred a focus on Latin American trading partners, but this was little more than a pipe dream as Latin American consumption was simply too trivial to have any meaningful impact on the Mexican economy, at least in comparison with that of the U.S.

The first substantive meetings regarding NAFTA were held in June of 1991 in Toronto and resulted in the establishment of several working groups focused on a variety of topics related to North American free trade. As negotiations continued towards an agreement, other issues began to arise that needed to be included in free trade discussions. Two of the largest issues were with regards to the environment and labour standards. This required the U.S. to make substantive changes to the proposed negotiations, and to take a multi-track approach to negotiations.

The strongest opposition to free trade came from the industries that had a history of enjoying significant levels of subsidy and protectionism from government, such as the apparel and horticulture industries. Trade negotiations were also occurring at a delicate time, as GATT was thought to have outlived its usefulness, with many believed that regional bilateral trade agreements being the future.

The negotiations associated with NAFTA did not go unnoticed in South America. The South American countries were interested in what Mexico was doing, and were gaining an interest in opening up their borders as well through joining GATT, and the possibility of increased trade with the U.S.

When NAFTA finally came into existence in 1994 as a trilateral agreement between the United States, Mexico, and Canada, it resulted in the elimination or reduction in a large number of tariffs. It would take until 2008 however, to become fully implemented.

The results of NAFTA get mixed reviews, and the effectiveness of the treaty often depends on who you ask. Most people support the view that NAFTA did indeed result in an increase in trade between the North American partners, with Canada being the country that benefited the least, primarily due to Canada having a free trade agreement in place with the U.S. prior to the start of NAFTA. The evidence would indicate that NAFTA did have a significant effect on Mexico-U.S. trade, but had little impact on trade between Mexico and Canada, or between Canada and the United States.

Although trade flows have indeed increased throughout North America due to this agreement, the dramatic increase in jobs, and the anticipated increase in productivity in the Mexican workforce thought to occur due to the kick start of the Mexican economy, did not come into fruition.

Part of the reason for NAFTA not meeting expectations is that multilateral trade agreements were also on the rise, as well as many other bilateral agreements throughout the world. Many countries were therefore afforded the opportunity for preferential access to the U.S. market, not just Canada and Mexico.

In the end, NAFTA has not proven to be the huge benefit originally predicted by proponents, nor has it proven to be the devastating economic force that had been predicted by its detractors. It seems to have done more good than harm, although its impact remains a debatable topic for many people within the North American political scene.

After the last United States Presidential election, President Trump made good on his promises to either re-negotiate NAFTA in favour of the United States, or to withdraw from the trade agreement. In a much-publicized move, the United States, Canada, and Mexico opened NAFTA for renegotiation, with culminated with the signing of a new agreement, the USMCA, in October of 2018 (Chepeliev, Wallace, & van der Mensbrugghe, 2018). Although this new agreement has

been signed by the three countries, it has yet to be ratified by US Congress, so is not yet in effect.

The question remains as to what will happen if this new agreement is not ratified. President Trump has stated that he will still end the US participation in NAFTA if the new agreement is not ratified, while others question whether or not Congress approval would be required to do so.

The impact of no NAFTA agreement if the USMCA is not ratified could be devastating, particularly for the US Agricultural industry. While losing both preferential market access and significantly reduced duties under NAFTA, other countries would remain as preferred trade partners with Canada and Mexico under the various other trade agreements currently in place (McDaniel, 2019).

This situation once again supports the notion that trade protectionism is closely tied with political agendas, often associated with the party attempting to come to power by displacing the political incumbents. The short-term political opportunity, usually grounded in a specific geographical area, or to support specific key industries, is seen as a method of garnering political support. The long-term economic impact, however, is often not in the best interests of the country as a whole.

Although it is too early to speculate as to what and when the future of NAFTA will be, it is clear that these moves are politically motivated, and that much of the original stand on these protectionist practices have softened since originally proposed.

A similar course of action has been introduced by President Trump with regards to trade with China. His introduction of a stiff increase in tariff treatment for Chinese goods being imported into the US has been met with similar tariffs increases by the Chinese in retaliation, and again, it is difficult to predict where it will end.

Facilitating Factors

When discussing the growth in international trade over the past several decades, there are factors that facilitate the level of trade that occurs between nations. Below we examine three facilitating factors, namely containerization, the growing size of ocean-going vessels, and the impact of technology on international trade.

Containerization:

The invention of containerization for cargo has revolutionized international trade over the past few decades. Prior to containerization, ocean going goods were shipped either in bulk, or in break bulk, which resulted in separately packaged items being individually loaded onto vessels. Although bulk shipping was reasonable efficient, calling on specialty facilities to load and unload, break bulk was particularly troublesome, and expensive due to the portside labour cost to load and unload goods. In fact, ships often spent as much time in port as at sea, with 60% - 75% of total transportation costs attributed to portside activities (Tomlinson, 2009).

The concept of containerization really started in the U.S. military during World War II. In an effort to make shipping easier, goods were packaged in small “containers” to ease handling during loading and unloading. These containers, however, were still quite small, requiring significant labour to load and unload. Ocean shipping costs were so high that international trade in the U.S. economy was smaller in 1960 than it was in 1930.

In the 1950’s, an inland carrier businessman, Malcolm McLean, built on the U.S. military concept by making containers significantly larger to achieve economies of scale. Since McLean was previously involved in inland cartage, he also strengthened the container so that they could be shipped intermodal and could be handled by truck and rail as well by ship. The first container shipments of this type were completed in 1956, and it wasn’t long before McLean got involved on the ocean side of transport, founding SeaLand, a new intermodal freight company.

Containerization became increasingly popular in the 1960’s, due to the resulting enormous efficiency gains for the ocean freight companies. The reduction in required labour was so

significant that strong opposition came from the Labour movement who felt threatened with significant job loss due to this new technology.

As larger efficiencies became a reality, containerized freight volumes boomed, which led to significant changes in the way vessels were constructed, the size of the vessels, and the configuration and location of ports. Containerization even had an impact on where factories were located, as the loading and unloading duties for ocean shipping could now be relocated away from the congested portside.

The significant increase in containerized freight eventually led to the development of ISO standards on the design and size of containers. The resulting standardization led to major changes in ship and port designs and resulted in increased investment in infrastructure to handle containerized freight.

Ocean Going Vessels:

In an effort to reduce costs through economies of scale, shipping companies have been increasing container ship sizes steadily over the past 40 years. Although the theory behind carrying more containers per shipment to reduce cost appears logical, the issue facing these organizations is the trend in lower freight prices on the market, which in many cases has outpaced the gains made in cost reduction, leaving freight companies no better off from a profitability standpoint (Baird, 2001). To complicate things further, operating larger vessels has not been without its challenges, which has further impacted the ability of these shipping companies to improve performance and better serve their customers.

In 1972, the largest vessels in operation had a capacity of 3000 twenty-foot equivalent units (TEU's). Throughout the 1980's, vessel size had increased, first to 3500 TEU's, then to 4300 TEU's. Passing the 4000 TEU mark became referred to in the industry as the "post-Panamax" era, in which vessels became too large to be able to pass through the Panama Canal, resulting in longer routes at sea, lengthening transit times, and increased fuel costs (Baird, 2001).

During the 1990's, vessel size grew once again to 6000 TEU's, then to 6690 TEU's, with some vessels reported to actually be able to carry as much as 8736 TEU's, although this quantity was

undeclared by the shipping company, as it was not considered to be a practical capacity but a theoretical one.

This dramatic increase in tonnage capability for ocean going vessels had a positive impact on the shipping cost per TEU, as each voyage was able to transport an increased quantity of containers. This came at a cost, as shipping companies had less flexibility to make decisions that would benefit both themselves and their customers. Larger vessels meant shipping more infrequently, and often at increased transit times, which lengthened the lead time to receive goods for the shipping company's customers.

As vessel sizes continued to increase, the industry experienced many challenges trying to deal with these larger vessels (Baird, 2001). Some of these challenges were:

- Post-Panamax size vessels could no longer use the Panama Canal, increasing the distance required to travel, lengthening transit times, and increasing fuel costs
- Shipments were made less frequently, which resulted in less flexibility and longer lead times for customers
- Container handling at the port side became an issue, as large volume "peak" shipments stressed capacity to its limits with regards to container handling and landside operations (rail and truck movements)
- Portside equipment, such as berthing space and cranes, became a constraint in vessel turnaround time at the port
- Fewer ports were able to deal with the larger vessels, who needed deeper water and wider turnaround space
- The space required at portside to store the level of containers being received also became a limiting factor, which caused a further deterioration in portside productivity levels

Early in the new millennium, many industry experts thought that the size of vessels being constructed had reached its peak and would not go much beyond the 8,000 TEU level. Although there were no barriers to building larger vessels, the issue became an economic one, and the lack of capability of the ports to be able to handle these large vessels. The idea of the industry changing to a “hub and spoke” approach, with super large vessels calling on few ports, being then supported from smaller feeder lines was thought to have merit. Other industry experts thought the trend in increasing vessel size would continue and would reach the 15,000 TEU level by the year 2020. As it turns out, these latter experts were correct.

To deal with the trend towards larger vessels, shipping companies and their ports of call needed to make several improvements to prevent them from losing the gains achieved by moving larger shipments globally (Baird, 2001; Leach, 2014). Some of these improvements were:

- To increase the speed of ships, to compensate for longer routes and increased time in port unloading
- To install more and larger cranes, to speed the time required to load and unload containers
- To increase both crane trolley speeds and hoist speeds, in order to speed up the loading and unloading process
- To increase the capital expenditure for dredging, not only to maintain but to increase port water depth to handle the larger vessels
- To increase the amount of space available for berthing, where possible, to handle vessels that were 10% longer than in the past
- To increase the available land space to store additional containers
- To improve the transport of containers out of the yard, by truck and rail

- To move services to alternate locations, when the traditional locations were simply unable to handle larger vessels
- To form alliances with competitors, allowing shipping companies to fill the additional volume required by the larger vessels

Although the ports had been readying themselves for quite some time for the anticipated increase in vessel size, the reality was that the size of vessels and the number of these new mega ships being built came far earlier and in far greater numbers than ever anticipated (Leach, 2014). Vessels of 15,000 TEU capacities have been in service for almost ten years now, with 18,000 TEU capacities on the horizon. It is now thought that vessels of 22,000-24,000 TEU's will become a reality within the next ten years.

The result of this shift in vessel size has been steadily deteriorating performance levels with regards to serving the industry's customers. Ports are now extremely congested, resulting in lost efficiency in container handling, and increasing time spent in port. These delays also result in vessels arriving at subsequent ports "out of window" and having to wait as the ports have no berthing areas or equipment available to service the ship.

Given the situation that has evolved in this industry, it makes one question the value of larger vessels if the support network is unable to keep pace and becomes a bottleneck in serving customers. Although the "hub and spoke" concept has become a reality in some locations, it has not been implemented at a significant level, and the traditional network of ports of call has been stretched to its limits. Some technological improvements such as crane handling equipment, is also thought to be stretched to its limits, which will make further increases in ship size a concern for ports attempting to handle the increased volume efficiently (Baird, 2001; Leach, 2014). Only time will tell if this trend will continue, and if the industry will find solutions to ease the pain caused by ever-increasing vessel size.

Internet Technology Considerations:

Technology has been talked about for many years as a consideration for factors that promote international trade growth. Prior to the internet era however, technology as a facilitating factor

was primarily focused on the culture of innovation that may exist within a certain nation and was found to be a factor that did facilitate export growth (Freund & Weinhold, 2004).

Since the mid 1990's however, research on technological factors effecting trade growth has shifted to the role the internet potentially plays as a facilitator of growth in trade. Significant work has been done in this area since that time.

Much anecdotal evidence exists that demonstrates the impact that internet technology can have on international trade. There are many examples of businesses in remote parts of the world growing revenues via internet sales, and the explosive growth in business to business websites certainly supports the notion that internet technology has had a major impact on global trade growth.

When looking at the potential role of the internet as a facilitator of international trade, we consider trade in goods separately from trade in services. The reason for this is that the internet and electronic sharing of information, plays a different role in each of these areas of trade. When looking at trade in goods, the internet's primary role is in sharing of information and gathering of facts, allowing suppliers to locate customers, and vice versa. From a services point of view, the internet potentially plays a much greater role, allowing for not only the locating of customers and suppliers, but also the ability to deliver services from a distance, and at very little (if any) added cost.

Caroline Freund and Diana Weinhold (2002, 2004) conducted two pieces of research early in the new millennium, from data gathered in the late 1990's after the internet era began. One piece of research looked at the effect of the internet on international trade as a whole, while the other specifically looked at the impact on trade in services.

These researchers found that growth in internet availability had a positive and significant correlation with growth in international trade. When considering trade as a whole, Freund and Weinhold's (2002, 2004) findings were that a 10% increase in web hosts in a country correlated to a .2% increase in trade exports. They further found that there was evidence of a proximity-bias, in which growth in trade between nations was more significant the closer the nations

were located to each other, and much less as the distance between the trading nations grew. The researchers attributed this proximity-bias to the fact that costs increased as the geographical distance between nations grew, making the business case (i.e., resulting profitability) of long-distance trade less attractive.

For many years prior to this research, it was long thought that market-fixed entry costs to new markets were significant, and that these costs were indeed a barrier to entry into international markets. Freund and Weinhold (2002, 2004) hypothesized that it was likely that the internet reduced these costs significantly, and that the presence and growth in internet usage would indeed lead to an overall growth in exports. The evidence found in their research supports this hypothesis.

Freund and Weinhold (2002, 2004) also hypothesized that with the increase in internet availability and usage, businesses in a domestic market would be subject to increased competition. This increased competition would reduce profits and encourage businesses to take a strategic approach to increasing exports in order to offset losses encountered in their local domestic market. Since the business case for these exports was often greater the closer the export market was to the domestic market, a proximity bias was thought to be likely.

Freund and Weinhold's (2002, 2004) research related to trade in services also found that a 10% increase in internet penetration correlated with a 1.7% increase in exports, and a 1.1% increase in imports of trade in services. Previous research had shown that the two most important factors in service trade flows were overall economic activity and real exchange rates, but Freund and Weinhold's (2002, 2004) research provided evidence that internet penetration is indeed another significant factor.

Barriers to International Trade

There are many factors that can be considered facilitators of international trade. On the other hand, factors also exist that are barriers to international trade. Below, we discuss five such barriers; increasing transportation costs, the growth of the environmental movement,

corporate social responsibility initiatives, governmental protectionist practices, and increased customer responsiveness.

The Cost of Transportation:

Transportation costs are a critical factor in establishing a business case for global sourcing activities. As transportation costs rise, sourcing closer to home can become more economical, and cost advantages associated with outsourcing activities deteriorate.

Transportation is a significant cost in global sourcing activities and can often be 20% or more of the total cost of ownership (Appendix 7.1). As a significant cost driver, it requires close attention, and can often lead to a re-evaluation of outsourcing decisions, particularly for products that had initial outsourcing advantages that were marginal.

The bulk of international freight still moves by means of ocean vessel, being the most economical form of distance transportation for most goods. Those that do not move through this channel, utilize air, rail, and truck transportation, all having a cost structure dependant on the world price of oil.

The price of oil has experienced volatile pricing over the last few decades, and the world remains concerned over how much of this resource will remain available for consumption in the future. Prices of oil have more than doubled between 2000 and 2014, and freight costs have increased dramatically as a result (macrotrends.net). In early 2015, the price of oil dropped significantly, yet many ocean freight companies decided to maintain increased pricing levels, and to utilize this situation to bolster company profits. This proved to be a good decision, as deflated pricing levels for this commodity proved once again to be temporary, and commodity prices quickly rebounded.

The Environmental Movement:

Over the past couple of decades, the world has become increasingly aware of global warming, spawning a global environmental movement towards a greener world, and a focus on

renewable energy sources. This in turn has led to many organization's reassessing their business practices to determine what changes could be made that would reduce their organization's carbon footprint.

Although many people state that the global business community will simply embrace improved environmental performance to be good global citizens, in many cases this has not proven to be the case. Organizations are still faced with an economic reality, and simply cannot stop current practices such as global sourcing simply to reduce their carbon footprint. Organizations that rely on global sourcing for marketplace competitiveness would be unable to sustain operations if they eliminated these practices that result in competitive advantage in their marketplace.

Shaw et al. (2020) conducted research focused on measurement of environmental improvement in organizations, with a focus on the identification of enablers, inhibitors, and benefits of improved environmental performance. The findings from this research identify that the most significant enablers are grounded in economic factors leading to improved financial performance, while the major inhibitors are associated with increased organizational cost. In addition, one enabler that ranked reasonably high was government regulation.

This research supports the other research indicating that organizations today do not simply enact environmental or corporate social responsibility performance improvement solely to be good corporate citizens, but that rather, there needs to be some form of financial return on investment associated with these improvement initiatives. In fact, in the research mentioned above, genuine concern for the environment, as an enabler, actually ranked 5th in the list, behind both cost and government regulatory factors (Shaw et al. 2020)

The good news for environmentalists is that there is often a business case for improved environmental performance. Improved energy consumption at the plant level not only reduces an organization's carbon footprint, but also their overall cost structure, leading to increased profitability. A reduction in packaging not only reduces the consumption of resources which benefits the environment, but also reduces packaging costs.

The environmental movement has promoted increased concern related to corporate social responsibility, and in some cases has changed organizational metrics to what is termed the "triple bottom line" (social, environmental, and financial) performance measures (Andersen & Skjoett-Larsen, 2009). These changes in some cases cause organizations to rethink global sourcing activities and introduce additional factors that could result in a change in global sourcing practices. As a result, the environmental movement has created additional barriers to growth in global sourcing and international trade.

Corporate Social Responsibility

Over the past decade or so, there has been talk regarding global warming, which has spawned a growing focus on environmental concerns. This attention has led to organization's becoming more concerned with corporate social responsibility.

There has been significant media attention on the topic of corporate social responsibility, and many stakeholders external to organizations are holding them accountable for social and environmental concerns. This level of accountability has hit the supply chain profession, as stakeholders hold organizations not only accountable for their actions, but accountable for the actions of their supply chain partners as well.

There are many examples of high-profile brands that have experienced significant negative publicity for the actions of their supplier factories in developing nations. As a result, the move towards a corporate socially responsible economy can be viewed as yet another barrier to global sourcing.

The enhanced accountabilities described above has increased focus in the business community on supply chain sustainability, triple bottom line, environmental management, corporate greening, green supply, and corporate social responsibility. This focus has not only affected the actions taken within organizations, but in relation to their suppliers as well. Unfortunately, a significant gap still exists between the desired behaviour that organizations strive for, and what is actually being implemented throughout the supply chain.

Research conducted by Andersen and Skjoett-Larsen (2009) focused on IKEA, and their activities related to corporate social responsibility. IKEA is an organization that has had a history of focusing on social and environmental concerns, which has been significantly elevated with the introduction of the IKEA way on Purchasing Home Furnishing Products (IWAY). This program formalized the organization's focus on societal and environmental concerns, as well as the focus of their suppliers.

The IWAY program has a four-stage model that drives the organization and its suppliers through progressive stages resulting in world-class performance from a corporate social responsibility point of view. To reach level four, the organization's suppliers need to be certified by IKEA to their official standard in each of three key areas: outside environment, social and working conditions, and wooden merchandise. The system requires IKEA relaying expectations to their supplier community, and to provide training for suppliers in meeting these expectations. It also provides auditing to ensure compliance is maintained.

The information outlined above with regards to IKEA's IWAY initiative is one example of an organization that is focusing on supply chain factors that are grounded in corporate social responsibility and environmental sustainability.

Governmental Protectionist Practices:

Adam Smith (1776) first wrote of a world free of trade barriers in "The Wealth of Nations". Despite the significant time that has passed since then, the international business community still struggles with the creation of a barrier-free global business marketplace.

There has been progress in having countries move towards a global business community based on free trade, but much work remains. In addition to the work done by the World Trade Organization with regards to multilateral trade agreements, over 250 regional trade agreements (that have been registered with the WTO) and are now in existence, with the bulk of that growth coming over the last three decades (WTO, 2015).

Despite this, government protectionist practices still remain as a significant barrier to international trade. Many of these agreements, whether they be multilateral agreements

through the WTO or regional agreements outside of the WTO, still contain exceptions, which are primarily aimed at protection of specific domestic industries. The end result being inflated pricing to end consumers in order to protect industries in countries that are not efficient at providing these goods or services.

Public opinion with regards to governmental protectionism is also cyclical in nature, following a close pattern with the overall economic outlook for a nation. When times are good and national economic performance is strong, much work towards trade barrier reduction and an increase in export opportunity is prevalent, and overall public opinion is either supportive, or at least neutral. When economic performance begins to wain however, governments resort to short-term thinking, and begin to focus on trade protectionism as a means to enhance stabilization for their home industries. Public opinion, likewise, becomes much more critical of imports to the domestic market, which in turn promotes this type of short-term government thinking.

Customer Responsiveness:

With the introduction of the internet and the rapidly increasing rate of new technology, we have now created a society that is extremely impatient and a growing reluctance to wait for anything. This growing concern over speed has spilled over into the business community, and what was once a world of he who has information has power, has become one of he who can sort through the overabundance of information to determine what is relevant to quick decision making has power.

Analyzing and managing business processes to focus on quick customer responsiveness was first promoted in Lean thinking management philosophies in the late 1980's and early 1990's (Womack et al. 1990). The business community has simultaneously become a marketplace in which there is minimal difference between organizations with regards to cost and quality, making delivery the differentiator in many sales situations. In fact, in many cases competition between companies has become competition between supply chains, and the speed at which they can respond to market demands (Christopher et al. 2011).

This operating philosophy has ramifications to an organization's desire to source globally. Although there may be significant cost advantages, global sourcing decisions can have a detrimental impact on a company's ability to respond to customer needs in a timely manner, potentially putting the organization at risk of losing business, or requiring excessive levels of inventory to protect customer delivery requirements. As a result, Lean thinking and flexible business strategies have become a barrier to global sourcing practices, that in some cases cause organizations to rethink their global sourcing practices.

The Nearshoring Movement

There has been much talk about nearshoring. Nearshoring supports the notion that organizations are now re-thinking their supply chain strategies beyond the concept of an optimal cost framework and are beginning to pull back outsourced production in favour of sources closer to home (Lakovou et al. 2010). Many proponents of nearshoring suggest that this is a result of companies becoming more responsible environmental citizens, and that these organizations are engaged in nearshoring strategies to support global environmental concerns. There are, however, other potential reasons why nearshoring may make business sense.

Supply chain practitioners who have been focused on low-cost models of global sourcing have been primarily concerned with total cost of ownership. In some instances, decisions to source products globally have been clear cut, with significant cost advantages. In others, global sourcing decisions have only been marginally advantageous from a cost point of view. In the marginal cases, changing factors such as transportation costs, varying lead times, and increasing labour cost, can in fact make the marginal business case no longer advantageous. As a result, we see organizations changing sourcing strategies to locations closer to home as a means of mitigating these increasing costs. It is a common practice to continue to re-evaluate our network of vendors for optimal corporate results.

Beyond these traditional cost evaluation techniques, supply chain practitioners have also developed a heightened awareness of risk and risk mitigation and have become more strategic in how they make global sourcing decisions. Factors such as stability of international currencies, increased rules and regulations for customs clearance, port congestion, and variability in lead

times have all contributed to ensuring the advantages of sourcing globally are significant enough to warrant the increased associated risk. This sometimes results in a re-evaluation of advantages that were once thought to be significant, and in some cases has led to sourcing products from suppliers closer to home purely as a risk mitigation strategy.

Today's business world also has an enhanced focus on the environmental or corporate social responsibility argument that would suggest a move towards a smaller, closer, supply chain in order to reduce an organization's carbon footprint and increased organizational performance from a triple bottom line perspective. Although there is some truth to this, we must not lose focus of the economic reality of the business community, and that organizations are unlikely to move in this direction purely to be better corporate citizens. It does hold true, however, that as previously mentioned, there are often economic advantages as well, and with the increased awareness of corporate responsibility issues and enhanced metrics to include other factors in the decision making process, that we will see some impact of these factors on the design of corporate supply chain networks.

Chapter Summary

Adam Smith first proposed the concept of a world where international trade flowed freely across borders, unencumbered by governmental protectionist practices in his book "The Wealth of Nations". This work was significant and demonstrated critical insight, being a dramatic departure from the views of the time with regards to governmental involvement in international trade.

Since Smith's time, the world has been shifting towards Smith's ideal state of free trade and free global competition. By trading goods and services freely across national borders, all citizens of the world would receive maximum value and would experience increasing levels of economic prosperity.

This global shift towards free, unrestricted trade was further bolstered with the establishment of the General Agreement on Tariff and Trade, and the World Trade Organization. These efforts

have contributed greatly to the current level of reduced tariffs that allow many goods to trade internationally with little or no duty.

Although at a global level we see this as a significant accomplishment, we have not done enough, and progress has taken far too long. Government interference in International trade still exists, and progress towards a globalized marketplace remains a challenge.

The sheer number of exceptions that exist in many of the WTO agreements is evidence enough that we are far from our goal. There are many instances of protectionism still promoted by various national governments, and some key industries (such as agriculture) still experience protectionism to artificially support domestic production. Much of the protectionist practices that go on in WTO member countries are still supported by the WTO, albeit under the goal of promoting economic development in least favoured nations.

Governments need to stay focused on the long-term, and not to revert to protectionist practices each time economic performance subsides. There is a clear pattern of support for free trade in good times, only to see a quick reversal when the road gets bumpy. The tendency for short-term thinking when times get tough only perpetuates reciprocal behaviour from other nations and becomes a cycle that is difficult and time-consuming to reverse.

We are making progress, albeit at a much slower pace than we should expect. The rate that new regional trade agreements are being put in place, as well as the geographic coverage of these types of agreements, is very encouraging. If we are able to stay the course with a continued focus and desire to reduce tariff and non-tariff barriers, international trade will continue to grow.

Chapter 5: Global Sourcing Perceptions

Introduction

This research attempts to understand the specific decision-making factors and their relative impact for supply chain practitioners when making decisions related to global sourcing activities. In doing so, it is hypothesized that some of these factors may be grounded in fact, while others are more related to perception (Carter et al. 2010). The role of perception in making product decisions is well documented in research related to negative country of origin effect (Chu, Chang, Chen & Wang, 2010), and therefore justifies some attention in our research.

An abundance of media messaging regarding global sourcing practices reports a variety of opinion that is not always grounded in fact. The resulting perceptions created by these reports sometimes contributes to a different outlook on global sourcing, including the future of current sourcing practices for domestic business. Some propose that global sourcing is on its way out, and that alternate strategies such as nearshoring are poised to replace the current focus on offshore alternatives for the sourcing of products and services, while others focus solely on risk, and the potential issues that can arise from sourcing globally (Hartman et al. 2017).

Media reports may create a perception in the minds of many, that is potentially different from what supply chain practitioners believe, and actually do, on a daily basis. This potential gap in perception is important to understand, as supply chain practitioners with little global sourcing experience could be highly influenced by these media reports, creating perceptions that can impact their global sourcing practices, leading to less than desirable results and missed business opportunities.

The perceptions created by the media may not be grounded in fact, yet these perceptions may form reality for many people. They are therefore likely to influence some decision makers, despite the fact that this point of view is not representative of true global sourcing opportunity. Evidence of misguided media messaging has been demonstrated in prior research, such as the research conducted in 2007 regarding product recalls in the toy industry, which found that “the single largest cause of recalls, deaths and injuries involving toys was small parts, which is, of

course, a design flaw as opposed to a manufacturing error. Despite this knowledge, the media, some toy company executives and the public blamed China for virtually all the flaws in toy recalls” (Beamish et al. 2008). This research provides support for our hypothesis that global sourcing decisions are potentially influenced not only by fact, but also by the perceptions held by global sourcing decision makers, underlining the importance of perception in the global sourcing decision-making process.

In this current research endeavour, we are therefore interested in what perceptions exist, the underlying facts related to these perceptions, and the ways in which perception potentially impacts the design and implementation of overall global sourcing strategy.

China as a Benchmark

Although the intent of this chapter is to discuss global sourcing perceptions which are generalizable and independent of discussion related to individual countries, we must recognize that the focus of global sourcing throughout much of the world in recent decades has predominantly been on China as a sourcing location. China’s dominance as a global sourcing location over the past few decades is unprecedented, and therefore much of the media attention and reporting related to the topic of global sourcing or outsourcing has been focused specifically on China, as the Chinese continue to have an increasing and long-lasting impact on the overall global economy (Vairon, 2013).

China’s growing dominance in the world’s economy is well documented in a variety of reported statistics. Information on China’s export performance and GDP growth can be found in (Appendix 5-1 and 5-2). As indicated in this appendix, China has gained significant ground in their percentage of the total world merchandise exports from 7.25% in 2005 to 12.78% in 2018, representing a growth in exports of over 75% (WTO, 2019). With regards to GDP as a percentage of total world GDP, we see a similar story with China growing from 8.48% in 2009 to 15.12% in 2017, representing a growth in GDP of over 78% (World Bank, 2019). During these same time periods, the United States performance in these categories remains pretty much flat.

Many of the perceptions held by global sourcing practitioners are grounded in their perceptions related to Chinese manufacturing, often as a result of media attention given to domestic manufacturing relocation to China, or in global sourcing activities from that country (Beamish & Bapuji, 2008). These perceptions are often generalized to other developing nations with similar characteristics, such as low-cost labour, excessive poverty, lagging health and safety standards, and questionable environmental practices, creating a country of origin effect in how products from these developing nations are perceived (Chu et al. 2010). It is this generalization, China's dominance as a global sourcing destination, and the associated media attention that makes China a good benchmark for our analysis of global sourcing perceptions.

The Evolution of China as the World's Manufacturer

The significant evidence available today makes the success and global dominance of Chinese economic policy clearly evident. The Chinese economy has grown at an annual rate of nearly 10 percent per year for the past 30 years (Rudolph & Szonyi, 2018). Given this evidence, we turn our attention to how and why the perception of global sourcing destinations such as China differ so significantly from what the factual evidence suggests.

It is no surprise that political affiliations and ideological positions that exist in the West are significantly different from those in the East, such as in China. These differences contribute to the promotion of perception through the media about the Chinese. Western political agendas are opposed to ideologies that exist in China, and therefore are a primary target in attempting to promote support for Western ideology. This in turn promotes media communication intended to support Western political agendas through the creation of perception regarding the Chinese economy, and the political system that has contributed to this significant economic growth, growth that has not been experienced anywhere in the Western world (Zhao & Tang, 2018).

The Chinese have purposely and strategically been implementing significant change to economic policy since the death of Mao Zedong in 1976. The resulting policy has proven successful at producing unprecedented levels of economic growth, yet the government that has outlined and executed these policies is based on communism, the primary enemy of Western

democracy. As a result, much of the continual criticism that has been mounted against China has been to divert attention away from the lackluster performance of governmental economic policies of the Western nations, and in particular, the U.S.A. and Europe. Through continued opposition and the highlighting of social issues present in China, the US and others have been successful at shifting the narrative onto social issues, and away from a focus on the significantly superior performance of the Chinese economy. This results in discussion that shifts away from economic performance, and on to topics on social issues that are a cause for concern amongst the international community. When the discussion on economic factors does surface, items such as the pegged valuation of the RMB and other differences in economic policy dominate the discussion, although evidence of these factors as a root cause of Chinese dominance is often thin at best, yet continues to be debated.

China has dominated the global economy, and this domination is not solely attributable to artificial factors, as many suggest. Real factors, such as superior economic policy, focused improvement initiatives, demographic considerations, and a positive shift in national productivity have also played a major role in China's rebirth and growth over the past several decades (Erzhen & Xiang, 2012; Kynge, 2007).

The Rise of the Republic

Although the Republic of China technically began in 1912 at the end of the Qing Dynasty, the establishment of the People's Republic of China as we know it today occurred in 1949. Thus, the evolution of China as the world's manufacturer began decades ago, when the country evolved into the People's Republic. Under the leadership of Mao Zedong, the founding father of the People's Republic of China, a focus on collectivism and industrialization was launched, with the goal of rapidly promoting economic growth, and improved overall competitiveness with the economies of the West. This economic rebirth was driven through the repeated design, documentation, and implementation of strategic planning, known as the Five-Year Plan, a concept Mao borrowed from the Soviets (Cairns & Llewellyn, 2016).

Mao's economic policies, however, were not without its challenges, and two decades under these policies had a devastating impact on the country. China's adoption of a blend of Marxist-

Leninist and Maoist ideology secluded China from the rest of the world and resulted in virtual isolation of the country for 35 years (Vairon, 2013). The result of this experimental ideological approach created ongoing turmoil and excesses that left China significantly behind the Western world socially, economically, culturally, and technologically.

The Philosophy of Mao Zedong

Mao Zedong rose to power in 1949 as a member of the Communist Party of China, later becoming Chairman of the People's Republic. Mao developed an ideological position referred to as Maoism, which is a variation on Marxist-Leninist ideology, focusing on rapid economic reform through socialist revolution. Maoism was adopted as the official ideology of the Communist Party of China until the mid-1970's when Deng Xiaoping took over as leader upon Mao's death (Cairns & Llewellyn, 2016).

The focus of Mao's ideology was to promote a socialist society focused on the poor. These peasant workers, in Mao's estimation, could be easily influenced, and since they had no political influence, could be easily molded to adapt to his ideological position. Mao's initial plan was to promote an equal division of land, which favoured the poor who previously were unable to acquire the land they required for farming, creating a grass roots movement in support of Maoist philosophy.

Introduction of the Five-Year Plan

To execute on his plans for rapid social and economic reform, Mao established what he called a Five-Year plan, focusing efforts on meeting the social and economic priorities he deemed vital to China's rebuilding. The initial Five-Year plan was developed in 1953, covering the period of 1953-1957 (Cairns & Llewellyn, 2016). The China Five-Year planning process has endured the test of time, and still exists today.

The initial Five-year Plan focused on industrial growth and socialization, based on the Soviet economic model of state ownership, collective agriculture and centralized economic planning. The plan was based on the establishment of large-scale industrial projects, and the transition of the Chinese economy from a private to a state-owned system. Mao's plan also intended to

move the agricultural sector from the small family farms to larger cooperatives, in an attempt to rapidly increase agricultural output to meet the needs of the growing Chinese population, particularly in the urban areas.

The initial plan met with some success, and firmly established heavy industry in China. Concerns remained however, as the growth in agricultural output remained insufficient to meet the country's needs for food, given the continued rapid growth of the Chinese population (Cairns & Llewellyn, 2016)..

The Great Leap Forward

The second Five-Year Plan, covering the period from 1958 – 1962, focused on a shift in government policy, and was labelled “The Great Leap Forward”. The focus of this plan was to continue with the expansion of heavy industry, the shift of property towards collectivism, and rapid economic growth. The Chinese government also wanted to increase cultural and scientific development, national defence spending, as well as enhance the standard of living of the country's citizens (Cairns & Llewellyn, 2016).

The resulting plan focused on continued investment in the country's industrialization through the shift of funds from the agricultural sector into heavy industry. Despite this increased investment however, the anticipated gains in production were not realized, and the agricultural sector was starved of the inputs required to maintain acceptable levels of food production, resulting in widespread famine amongst the Chinese citizens.

The Great Leap Forward resulted in a social and economic disaster, and the Chinese economy was thrown into economic depression, leading to Mao losing traction and support in the Communist Party. In an effort to restore support for his leadership, Mao embarked on a third Five-Year Plan focused on what he referred to as a Cultural Revolution.

The Cultural Revolution

The third Five-Year Plan was launched in 1966, with a focus on solving the urgent food and standard of living issues facing Chinese citizens, as well as a strengthening of National defense

and an enhancement of the country's infrastructure. Although these economic goals were a priority for the Chinese Communist party, Mao Zedong became increasingly concerned about his political future, which in turn impacted his development of economic policy (Cairns & Llewellyn, 2016).

The existing state of the economy facing China at the end of the Great Leap Forward was a major concern for Mao, as his model of Communism clearly wasn't working, and was under attack by his opponents. The lack of economic performance and urgent need for food for China's people left Mao open to opposition from other ideologies, the most concerning to him being the potential for a return to Capitalism. The difficulties being experienced by the Soviet's in Russia, a model which Mao used as a foundation for his Communist ideology, was a further cause of concern, and potentially provided ammunition for his opponents to attack Maoism. To combat these factors, Mao developed a plan to disrupt the current state and rebuild the Chinese Communist Party from the ground up.

Mao's solution to the political crisis he was facing was to launch what he called a Cultural Revolution, in which he utilized the Chinese youth, organized into what was known as the Red Guard, to disrupt Chinese society, creating a violent struggle between the classes. These attacks were launched against those Mao thought of as political rivals, as well as on society as a whole, with many older people being physically attacked, sometimes resulting in death (Cairns & Llewellyn, 2016)..

The chaos and violence that ensued was intended to purge the final remnants of capitalism from Chinese society. The main focus was on the major political rivals Mao faced within the party. Although these actions caused political and social chaos throughout China, the economic benefits associated with the third Five-Year plan made positive contribution to economic growth. The Cultural Revolution officially came to a halt at the end of 1969, although in reality the aftermath of the struggles carried on until Mao's death in 1976.

The Fourth Five-Year Plan

Following China's Cultural Revolution, work began on the development of the fourth Five-Year Plan, which would again focus on aggressive economic growth in both the industrial and agricultural sectors, as well as significant improvements in the country's infrastructure (United States Trade Commission, 1985). This period in time was the beginnings of China's strategy to open up to the rest of the world. In 1972, Mao welcomed U.S. President Richard Nixon to China, a major international event that signaled future change to a global economy, although it would take several decades for large scale globalization to come to fruition.

Although the initial draft of the fourth Five-Year plan required amendments to lower aggressive targets to more realistic levels, the plan delivered on its promise to improve the Chinese economy, and resulted in a period of the most rapid levels of economic growth that China had experienced in its history.

The Death of Mao Zedong

In 1976, Mao Zedong died at the age of 82, clearing the path for his hand-picked successor, Hua Guofeng to take control. Guofeng was a long-time supporter of Mao, and upon ascension to power, carried on with Maoist ideology until he was forced from power in 1978 (Cairns & Llewellyn, 2016).

Guofeng's resistance to large scale reform, combined with his allegiance to Mao, created division amongst the party, and he rapidly lost political support within the Communist party. This resulted in a quick change in leadership, and although Guofeng remained in politics and a member of the Communist party for years to come, he was no longer a driving force for change in China.

The Era of Deng Xiaoping

The rise of Deng Xiaoping to Chairman in 1978 marks the beginning of significant economic reform in China, and was a vast departure from Maoist philosophy, signalling a significant shift

in Chinese economic policy moving forward. Xiaoping's focus on opening up China to the world would bolster rapid economic and social growth for the country for years to come (Yu, 2018).

The past practice of repeated Five-Year plans continued, mostly focused on rapid economic growth based on export, laying the groundwork for China's evolution into becoming the world's manufacturer that we see today.

Xiaoping was a long-time Communist party member, holding a variety of significant positions during Mao's reign. Over this time, however, his political beliefs were in opposition to Mao, and their economic policies misaligned. It was only after Mao's death, combined with Xiaoping's strong ability to influence others, that he was able to rise to power and execute on his political beliefs in post-Maoist China.

Deng Xiaoping believed in communism and a socialist approach, but he also saw opportunities in free enterprise, developing and implementing a blended approach that he referred to as a China brand of socialism, or a "socialist economy with Chinese characteristics" (Vairon, 2013). By dismantling communes and allowing local government (as well as individuals) to pursue opportunities while simultaneously retaining state ownership, he developed a market economy that led to unprecedented economic growth, making China one of the fastest growing economies in the world over the next several decades (see Appendix 5-2).

Xiaoping's focus on opening up China to the West began early in his reign, as he visited the US and other countries to establish relationships and to learn from their successes. He was also successful in negotiating the return of several Chinese territories, such as Hong Kong and Macau, from foreign control. Xiaoping's economic policy was focused on what he called the four modernizations; emphasizing agriculture, industry, science and technology, and the military (Vairon, 2013).

The rapid economic growth that resulted however, was not without its challenges. The growing Chinese population continued to outpace the growth of the economy. Deng Xiaoping's solution was to continue the one child policy, initially introduced by Hua Guofeng, in an effort to curb and control the growth of the Chinese population.

In later years, after the shift to a market economy, Xiaoping continued to promote an export-focus, through the development of special economic zones, and the influx of foreign direct investment to promote manufacturing and export of Chinese products throughout the world.

Xiaoping's economic policy, focused on opening up China to the West, made profound change to the future of China and resulted in record levels of economic growth. But his impact on China was far from just economic, as real social change occurred as well. He allowed open criticism of government, primarily intended to show the flaws in Maoist ideology, but also seen as establishing increased freedom of Chinese citizens. This, however, did not always serve as support for Xiaoping, as he was subject to frequent criticism as well.

In 1989, social tensions ran high, and a demonstration of students was held at Tiananmen Square. Xiaoping responded with military force, resulting in the deaths of several protestors. This was the most volatile event in Xiaoping's reign, and he was highly criticized for the government's handling of the protest, resulting in some loss of support for his leadership. Shortly after this event, Deng Xiaoping announced he would retire, which he did in 1992.

The Early 90's

In 1991, the Eighth Five-Year Plan was introduced, with a continued focus on accelerating economic openness and the rapid modernization of China's economy. The government began to focus primarily on some of the larger state enterprises (with a goal of making them amongst the largest companies in the world) while simultaneously shifting some of the smaller ones to the private sector. Other main initiatives were the introduction of a new financial system for the country.

Rapid progress towards the opening up of the Chinese economy continued, resulting in over one thousand cities making significant progress in opening up their economies to the Western world. Much of the government investment during this period was to improve transportation systems, as major investments were made in highway infrastructure, the ports, the building of new airports, and improvements to the country's rail systems, all critical components to driving

growth in trade. The country's annual economic growth rate continued at unprecedented levels, with average annual economic growth rates in excess of 11%.

The rapid growth of the economy continued to have a major impact on the social wellbeing of the Chinese citizens, as new home construction boomed, and the average standard of living for the Chinese increased significantly. China began to experience record levels of savings, which would bolster future capital investment in the new Chinese economy. Population growth remained in check due to the one child policy, and poverty continued to steadily decline throughout the rest of the 90's, as the eighth and ninth Five-Year plans were implemented, with a continued focus on rapid economic growth and social change throughout the country.

The New Millennium

At the beginning of the new millennium, China took a final step towards true integration into the global economy, with their ascension to the World Trade Organization in 2001 (Erzhen & Xiang, 2012). Joining the World Trade Organization was a significant event, resulting in China making international commitments to abide by the rules of trade committed to by all WTO member countries, which included commitments to social and environmental progress.

China's Five-Year plans continued, resulting in progress made towards industrial modernization and economic growth. During this period, a significant migration of workers from rural to urban areas fuelled the ability to grow the industrial export sector, signalling a new trend in Chinese population demographics (Fang, 2018).

The country also began to set environmental goals for the first time, as well as to establish a focus on social mandates, often to appease the country's critics in the West. Economic progress continued at a rapid pace throughout the first decade of the new millennium, and by 2011, the United States trade deficit with China was three times what it was only a decade before (Vairon, 2013). With this came increasing criticism from the West, focusing mainly on China's violations in social policy.

China was no longer satisfied with being the largest beneficiary of foreign direct investment, or in being the largest exporter in the world. The country's economic strategy continued to evolve,

as Chinese businesses began to acquire large companies abroad, particularly after the 2008 economic crisis in the United States.

The growing trade deficit and acquisition of U.S. companies continued to raise concerns in the United States, resulting in increased criticism of China and its economy. Many Western critics focused and publicized criticism over Chinese monetary policy and the pegging of the RMB, as well as on social and environmental concerns, taking the focus away from economic troubles at home and promoting a resistance amongst U.S. citizens towards China. This strategy became a major contributor to the development of the negative perception that is currently held by many in the Western world towards China and the Chinese.

The Role of Perception in Global Sourcing Decision-making

Perceptions related to sourcing in China are widespread and are often a frequent source of media publication on the topic of global sourcing, outsourcing, nearshoring, and other related topics. As a result of such widespread publication, these perceptions often lead to inaccurate beliefs being held by the people exposed to the media, including both consumers and global sourcing practitioners (Vairon, 2013). Perception therefore potentially shapes the global sourcing strategies of some practitioners, potentially leading to sub-optimal results through missed opportunities.

The section below reviews some of the most common misconceptions related to the sourcing of products from offshore suppliers, whether the sourcing location is China, or other developing countries.

Perception #1: Global sourcing is easy

One perception held by many people today, primarily based on the availability of internet technology and the ease in which we communicate with people around the world, is that global sourcing is easy, and can be done by anyone (Bryant, 2019). While the availability of internet technology has definitely expanded the average person's ability to do business around the world, therefore reducing the barrier to entry into the global sourcing arena, it allows those with little global sourcing knowledge and experience to enter the game. Those who do often

discover the significant complexity and increased risk associated with sourcing globally, often as a result of failed attempts to effectively source products.

Although we can find evidence of people with little or no experience at global sourcing and lacking sound global sourcing strategy succeeding at sourcing products offshore, such is not the norm. Many organizations attribute their lack of focus and implementation of global sourcing strategy to not having the necessary internal skillset to do so. In fact, internal global sourcing competency is one of the key characteristics for organizations who excel at global sourcing.

Global sourcing practices have historically presented huge strategic opportunities for businesses. They also, however, can be fraught with increasing levels of risk; risk that must be mitigated through sound strategy. Without robust global sourcing processes that are entrenched in sound strategy, success at global sourcing can be hit and miss, and in some cases disastrous, if the associated risks are not mitigated through robust global sourcing processes. In the research by Trent and Monczka (2005) cited above, one key finding was “the presence of a well-defined sourcing approach or process was found to be the strongest differentiator between successful and less successful global efforts”. This requirement is due to the complexity involved in global sourcing activities, and the inherent risk of dealing with the unknown from a global supply chain perspective.

Trent and Monczka (2005) further outlined a list of key characteristics for organizations who perform global sourcing activities at high levels, including “executive commitment to global sourcing, rigorous and well-defined processes, availability of needed resources, integration through information technology, supportive organizational design, structured approaches to communication, and methodologies for measuring savings.”

These characteristics, combined with a deep understanding of complexity and risk, are key requirements to success in sourcing products in the global arena. The value of vendor visits is also something mentioned by participants in the Trent and Monczka (2005) study, a further indication that simply going online to find vendors is likely a high risk, low success approach.

The above evidence supports the notion that the belief that global sourcing is easy and can be executed upon by anyone due to the presence of potential vendors on the internet, is a perception that is not grounded in reality. Alternatively, global sourcing is a complex process; an exercise in trade-off between risk and reward, leading us to suggest that structuring a decision-making model built on this trade-off would have high value to sourcing practitioners, and once developed, could shed some light on potential opportunities and their associated risks with regards to the identification of future global sourcing locations.

Perception #2: Product quality is poor from offshore suppliers

Another perception held by many is that North American suppliers make great quality products, while the Chinese and other offshore sources of supply make poor quality products (Beamish & Bapuji, 2008). It is the “you get what you pay for” argument. This argument is further supported by what is often reported in the mainstream media, perpetuating this general misconception.

Those who hold this belief seem to ignore the evidence that the bulk of products we consume in our local domestic market are manufactured in offshore locations yet are deemed to be of acceptable quality. If we consider the significant export volumes from China over the past several decades (see Appendix 5-1), it makes little sense that this level of growth, and the fact that China has become the world’s manufacturer, could possibly occur if Chinese producers did not possess the ability to produce product of acceptable quality for our domestic market. In fact, some research indicates that companies who source products globally actually experience improved levels of quality as a result (Smith, 2006).

Those who fail to recognize the reality of the situation justify their beliefs by holding the optic that associates low cost with low quality, as opposed to the fact that the driving factor often influencing price is efficiency-related, and not quality-related (Kynge, 2006).

Once again, these perceptions are perpetuated from the myriad of media reports regarding product failures. Media reports several years ago regarding the Chinese use of lead paint in the manufacturing of children’s toys is a prime example (Beamish & Bapuji, 2008).

In the specific case cited above, many people assume that society no longer uses paint containing lead, because that is the expectation of North American society. We fail to recognize that in many ways, emerging markets are like stepping back in time, performing to standards that are in fact similar to what was in place in North America decades ago. When viewing environmental practices, health and safety standards, and the use of certain materials for example, emerging markets have yet to evolve to what we believe to be acceptable practice in today's Western society.

Many times the product failures we hear about, like the one mentioned above, are primarily due to the actions of the sourcing company; actions not grounded in robust strategic sourcing process, but rather on assumptions based on what is considered to be the norm in our domestic marketplace. Additionally, these product failures can be grounded in factors closely associated with the sourcing companies themselves, such as faulty design issues related directly to shortcomings within the sourcing organization. In fact, one study conducted on quality issues with imported toys from China, found that 76.4% of the toy recalls from 1988 to 2007 were due to design issues, as opposed to issues with the manufacturing process in China. Despite these facts, consumer opinion at the time of the study indicated that 80% of people were concerned over product produced in China, seemingly blaming the Chinese for these product shortcomings. The data from this study further indicates that although during the period of time analyzed product recalls due to manufacturing defects was also on the rise, Chinese manufacturing defects were growing at a slower pace than manufacturing defects from other countries of manufacture, as well as defects due to design issues.

What this means is that it is important to have robust processes in place so that we do not assume but instead specify exactly what it is we expect, and what is acceptable in our marketplace. The lead paint example above is a great case in point; a case in which the sourcing company eventually reported that the fault lies in their design process, and not with the Chinese supplier, as evidenced by the apology issued by Mattel to the Chinese government on September 1, 2007 for reputational damage to them caused by this issue; an issue that was solely due to issues within the Mattel organization.

North American businesspeople often suggest that the Chinese are lagging behind when it comes to the latest and most effective management practices. This view is based on our Western bias of how management should be conducted, and that advances in management systems and practices continue to evolve, yielding increasingly optimal overall business results. While at one time this may have been the case, it is an optic that is relevant to the China of the past, not the China of the present (Handfield & McCormack, 2005). One example of this type of evolving management practice would be the tendency to rely on increasing levels of employee involvement/engagement, or the total quality management approach to focusing on the end customer and continuously improving the value that we provide them. The reality is that both of these shifts in management philosophy have been evident in the China for decades (Pun, 2001).

In today's business marketplace, many Chinese manufacturers have begun implementing more sophisticated management approaches when it comes to quality improvements, such as Total Quality Management, should be an indicator that suggests that not all Chinese product is of substandard quality. Like most things, if we look hard enough, we can find examples of substandard Chinese vendors, and comparable vendors in North America that produce higher levels of product quality. We can also, however, find examples of the exact opposite, where the Chinese are producing far superior products to comparable vendors in North America. These examples unfortunately receive little coverage in the mainstream media.

When looking at potential suppliers, there are both good and bad suppliers from countries such as China, just as there are good and bad supplies in countries such as Canada or the United States. Many suppliers from least-developed countries can produce exceptional quality products, as long as we are clear on what the critical to quality factors are, and clearly communicate these factors to the supplier. If not, our flawed perceptions can often lead to a self-fulfilling prophecy and result in unintentionally influencing the quality of the product we receive, thus perpetuating the perception that offshore sources of supply are simply unable to produce product of acceptable quality based on North American standards.

Perception #3: Offshore Suppliers are unsophisticated and Low-tech

The perception that offshore suppliers are purely low-tech manufacturers with unsophisticated processes and are therefore only good for the production of the most basic commodity-type goods, is sometimes a belief held by global sourcing practitioners (Xu and Lu, 2009). This belief is grounded in the opinion that as the technological requirements needed to produce a given product increases due to product sophistication and complexity, offshore sources are much less likely to be able to produce the product to acceptable quality standards, due to the inherent unsophistication of offshore manufacturing processes.

As mentioned previously, many people fail to recognize that the China of today is not the China of the past. Much focus has been placed over the past few decades on improving both product quality and the ability to manufacture increasingly more sophisticated goods to meet global demand and take advantage of opportunities in the global marketplace. Research indicates that the existence of organizations that do lack sophistication in production capability is confined to a smaller and smaller geographical footprint. Overall, China continues to evolve the overall level of sophistication of their exported goods.

Reliable suppliers that exist offshore view quality and technology as a fluid consideration, one that can be increased or decreased based on the needs of their customers. These fluid considerations can be adjusted and are related to price. As long as customers are willing to pay the additional cost of higher technology, higher quality, or additional features and benefits, the desired product can be made readily available. This requires clear communication to the suppliers as to what our expectations and critical to quality parameters are.

There are many goods of high technological complexity, requiring tightly controlled quality tolerances, being produced in emerging markets. Dell and Apple are highly visible examples of companies that have high-tech products dependent on the sourcing of high-quality components from offshore suppliers. Technologically complex products used in the medical industry are also often sourced offshore in locations such as China, India, or other developing nations. Increasing technological complexity does not restrict us from sourcing offshore; it just means that the diligence and robustness of our global sourcing processes need to be highly evolved, and

extreme care and attention placed on vendor selection, identification of critical to quality factors, and quality inspection processes. Many of the latest technological advancements in mobile phones such as reduced size, colour screens and touch screen technology existed in the Chinese domestic market long before their existence in the North American marketplace.

Research has been conducted that demonstrates increasing levels of sophistication in China exports. Although many agree that the level of production sophistication seen in China exports has risen steadily over time, there is much ongoing debate over whether or not this is a valid conclusion for Chinese domestic manufacturing organizations, or whether the aggregated results on production sophistication are misleading due to high levels of influence from wholly owned foreign enterprises, or the importing of highly technological components that are then assembled by production facilities in China. According to Xu and Lu (2009), more research is required to draw valid conclusions on these potential impacts, although the fact remains that increasingly sophisticated products are being exported from China in much larger volumes than previously observed.

Perception #4: Offshore suppliers cannot be trusted

One common perception still held by many in North America is that suppliers in offshore locations enter into negotiations solely focused on their own interests and will take advantage of potential customers to meet their own short-term needs (Midler, 2018). Advocates of this point of view sometimes suggest that offshore suppliers build prototypes that meet acceptable quality standards but will ship unacceptable product once regular high-volume production orders are put in place.

Those with limited global sourcing experience fail to recognize that offshore suppliers are in business just as domestic suppliers are in business. Assuming that the goal of business is to grow and experience long-term success, it is not in a supplier's best interest to take advantage of potential customers. Shipping non-conforming product intentionally, presumably in an effort to gain increased margin through reduced production input costs, simply makes no sense from a long-term business perspective. Any short-term margin gain realized would be more than offset by limited repeat orders.

We would not have to look far to find examples of initial high-volume production orders falling short of the quality standard demonstrated during the prototype process, but this is by far the exception as opposed to the rule. Unfortunately, we tend to discuss and highlight these individual failures, while rarely discussing positive examples of the high value yielded from many global sourcing engagements.

Earlier in this chapter, we discussed the role that perception has in the global sourcing decision-making process, and that much of this perception is false due to the perceptual set or “lens” that we look through, often significantly impacted by the media. Repeated exposure to media reports, often citing isolated events that are then inappropriately generalized to the bigger picture can have a significant impact on our actions. The fact that perception differs from reality seems irrelevant, sometimes having a significant impact on trust in the buyer-supplier relationship.

Research conducted on trust in the global buyer-supplier relationship investigated the impact that trust had on supplier selection in a global business environment (Koh et al. 2012). The results of this research found that supplier trust did indeed have an impact on whether or not a buyer decided to do business with global suppliers, but that some factors related to buyer-supplier trust were more relevant early in the sourcing relationship, while less influential later on after repeated transactional exposure.

These researchers concluded that factors at the country-level (ex., perceived national integrity) tended to have longer term influence and were not significantly impacted by repeated transactions. Alternatively, factors more closely related to the firm-level (ex., legal structure) did indeed become less influential as the relationship grew between the buyer and the supplier. Other firm-level factors such as third-party supplier verification, also had a positive impact on the level of trust in the supplier by the buyer.

While trust is an important factor in the buyer-supplier global sourcing relationship, the generalized perception that global suppliers cannot be trusted, and are looking to simply take advantage of their global trading partners, is not grounded in fact.

Some companies who plan their global sourcing engagements, do so with no strategy at all. They plan sourcing initiatives based solely on optimal performance, as if every step in the supply chain delivery process will perform exactly as planned, with no variation in process time and with zero complication.

Unfortunately planning material sourcing and replenishment activities solely on each step in the supply chain process meeting “best case” expectations is doomed to failure, whether you are sourcing domestically or globally. In the case of domestic sourcing however, buyers can often get away with this lack of diligence, as there are far fewer steps in the supply process, and much smaller time allocations, leading to smaller potential variances in time to deliver. The domestic supply chain also has more contingency options available to the buyer, should things not go exactly as planned. The net result is that the impact of any potential delivery disruption is minimal at best.

The global sourcing process on the other hand is much more complex than purchasing domestically, with additional steps and additional time requirements, including much higher potential variation in actual to expected ship times, due to the nature and complexity of shipping over long distances (Creazza et al. 2010). Global sourcing requires suppliers to hit specific shipping cut-off points by ocean carriers, and missing the date often results in a delay of several days to a week or more, until the next vessel space becomes available.

Since there are more process steps, with higher potential variations, it is more probable that potential delays can occur when sourcing globally, which would in turn have a greater impact, requiring more planning and contingency to ensure any potential delays do not result in problems with meeting delivery commitments to the customer. Failure to include additional time for contingency can result in delivery failure before the process is even started.

Much research has been done in the area of global supplier performance, often identifying issues of lackluster performance by suppliers in countries such as China. Much of this research, however, has been limited to “case study” approaches, often with limited sample sizes. There is therefore some question as to the generalizability of these research findings.

Millington, Eberhardt and Wilkinson (2006) research looked at supplier performance in China to determine the level of customer satisfaction found by companies sourcing from that country. This research also dug deeper to look at differences in supplier performance and customer satisfaction based on the type of organization being sourced from, such as wholly owned foreign entities, state owned enterprises, or private-sector Chinese firms.

The findings suggest that for most purchasing organizations, the purchasers were mostly satisfied with the supplier performance in China, but that the purchasing organization needed to have a robust purchasing strategy, and when dealing with private Chinese firms, often needed to provide support and guidance with regards to things like production processes and quality systems. This would seem to indicate that for buyers looking for a short-term solution, often with little global supply chain strategy in place, going global to private Chinese firms can prove to be a challenge, and likely fraught with risk. This research further found that dealing with State Owned Enterprises can be an issue, as they tend not to be overly concerned with satisfying the customer, and are often focused on extremely high product volume, leaving many buying organizations with little power in the buyer-supplier relationship. One can draw parallels to these findings in dealing with government organizations in domestic supply chains as well.

Perception #5: Negotiation is negotiation; what works well in North America, also works well globally

Global sourcing practitioners sometimes misinterpret the negotiation situation and believe that the methods required to successfully negotiate in a global setting are the same as what is required in the domestic marketplace (Brett, 2000). Some deal with offshore suppliers with an arrogant point of view that we in North America do everything better than everybody else in the world. That is, if offshore suppliers such as the Chinese think they'll get the best of us in the negotiation process, they had better think again.

We sometimes fail to recognize the potential influence that cultural differences can impact the negotiation process. Key cultural components such as the presence of power, communication process steps, relationship factors, goals and objectives, and cultural optics on conflict can all

have a significant influence on the outcome derived from the negotiating process (Lewicki et al. 2015).

In the North American marketplace, we have a tendency to treat many suppliers at arms length, and to approach negotiations with a distributive bargaining mentality. We often believe that increased competition and a competitive marketplace, where you need to compete for business and negotiate good deals, are the best approach to a successful negotiation. Although buyer-supplier relationships have been seen as increasingly important in recent years, the “three bids and a buy” approach to dealing with suppliers remains all too common, even in situations where a more relationship-based approach seem more appropriate.

Negotiating in this manner fails to recognize the uniqueness that often exists when doing business in foreign markets, and in implementing global supply chain strategies. These differences sometimes mean that what is typically negotiable, is in fact not, or that the process/relationship side of the negotiation process may in fact be more important than the content side of the deal currently being negotiated.

When it comes to negotiating power, North American negotiators tend to view themselves as having the significant power-position in the negotiation, primarily fed by the optic that the customer is always right. They fail, in many cases, to recognize the economic power of the transaction, and that their Chinese counterparts are often dealing with quantities that are many multiples of what is required in the current deal being negotiated. This leads to the Western supplier negotiating from a perceived position of power, when in fact that is not the case at all.

Furthermore, power in Eastern society is often based on social structure and has little to do with the current transaction being negotiated. Because little information is often available in global sourcing situations with regards to the other side, buyer power is often less than what the buyer believes it to be (Brett, 2000).

Communication is another key factor in negotiations. Negotiators attempting to negotiate long-term deals based on integrative negotiation strategies focus on a deep understanding of the

other parties underlying interests, as opposed to their positions. This understanding comes from detailed communications, and the willingness to share information between the parties.

In Eastern culture however, communication is much less direct, and is often implicit in nature. This can be a significant roadblock during negotiations, making it difficult for North American buyers to understand what is truly important to the offshore supplier.

We often hear that relationship is an important consideration in Eastern culture, and that it has a significant impact on business relationships. The relationship component puts more emphasis on the negotiating process, and less on the actual content of the specific negotiation in question. Issues can easily arise if the Buyer puts business before first establishing relationships. This can result in sub-optimal results when getting the deal is done.

Similarly, Eastern and Western negotiators can often have differing goals and objectives when negotiating. If this is not well understood, coming to an acceptable agreement to the benefit of both parties can become increasingly more difficult.

Other factors, such as product pricing methods, can be significantly different as well. When negotiating deals with domestic suppliers, the price suppliers offer for their manufactured goods is typically comprised of the cost of materials, the cost of labour to convert those materials into the goods we want to purchase, the costs of other variable costs associated with production, the cost of fixed priced overheads to run their businesses, and finally the targeted margin they are trying to achieve through the sales of their products. If these North American suppliers are forced to reduce price in order to get new business, and if they are willing to do so, what often suffers is their margin, as all other costs remain the same.

When doing business in China, the Chinese have a quite different optic. As mentioned previously, the Chinese see quality and technological advancements as a fluid aspect of the products they sell. In other words, not all of their product is of consistent quality, but in fact the quality level is tailored to the unique requirements of their customers, which includes the price the customer is willing to pay (Quality Inspection.org, 2011).

The result is that traditional “tough negotiation” practices that are often used in the domestic market are ineffective, and in fact, can contribute to massive failure of new global sourcing opportunities.

All in all, we need to recognize the significant role that culture can play in the negotiating process and adjust our approach accordingly when negotiating global supply agreements. Taking the traditional “tough negotiation” approach that is often common in the domestic marketplace, can lead to suboptimal results or the supply of goods that are less than desirable.

Perception #6: You need to have huge volume to do business offshore

One belief that many organizations operate under and was mentioned in our qualitative interviews by some participants, is the perception that their material requirements are too small to take advantage of opportunities offshore. They believe that they simply don’t have the volume to justify global sourcing. While there are indeed products where this is the reality, in other cases, this is simply not true.

For some products, volume does matter. You need to be able to ship the product in full containers to gain economy of scale or purchasing power, and subsequently to realize economic advantage from the transaction. To attempt to purchase the product in smaller lots means the total value of the transaction will not interest the offshore supplier, or the extended lead time shipping the product as less than containerload outweighs any economic advantage gained. In others, the cost of freight makes the transaction unfeasible, unless the product is shipped in 40’ high cube containers, while still in others, this is not enough to make global sourcing work.

This reality is not the case for all products however, as some products are of extremely high value, and organizations who would consider full container purchases of those types of products are less common. One skid can represent many thousands of dollars, making less than containerload shipping not only feasible, but the norm for many organizations. This results in the global sourcing of such products a realistic consideration for even the smallest of sourcing

organizations, as they are able to ship smaller order volumes, closing the gap between the transactional value of the global purchase and what they would often typically purchase from domestic vendors.

There are also products that are ideal candidates for air shipments. Although the cost of shipping by air is much more expensive than ocean, the product margins for these types of products are significant enough that the air freight has minimal impact on the overall cost structure. Shipping by air also has the additional advantage of shipping more frequent, smaller shipments, keeping inventory levels in check, thereby becoming an additional cost benefit.

Yet in other situations, organizations can have significant volume of goods for global sourcing, but this volume is an aggregate volume, meaning that it is made up of many different components of lower individual volumes. Some of these are candidates for the above treatment of shipping by less than containerload, or by air, while others are not. For those that are not, options often still exist through the design of a logistics strategy that leverages load consolidation in the sourcing country, and de-consolidation at destination (Creazza et al. 2010).

The above-mentioned research by Creazza, Dallari and Melancini (2010) outlines five examples of global sourcing logistics network configurations that are applicable given a variety of vendor/customer needs. These options provide some insight to global sourcing organizations on the potential complexity of global sourcing logistics networks, and also that the design of such networks is far from a “one size fits all” approach.

This research also demonstrates the potential complexity and variety of options available with regards to logistical considerations for organizations embarking on global sourcing strategy. This includes, but is not limited to, those who find themselves in need to taking advantage of a global supply base for goods that represent volumes far less than what would be required by traditional full container load ocean shipments.

Perception #7: Not understanding the cultural norms and traditions of the sourcing destination will lead to failure

Another perception that has received much attention in the media is the cultural differences with regards to customs and traditions displayed in the workplace that potentially impact doing business internationally (Handfield, 1994). The fact that some cultures are more long-term relationship focused, as opposed to short-term transactional focused, has been discussed at length, and can be a significant factor in dealing with Chinese suppliers (Handfield & McCormack, 2005).

As far as other cultural factors are concerned, many examples of what could be considered “culturally insensitive behaviours” that have occurred, negatively impacting high potential business transactions, have also been detailed and shown as examples of what can happen when one does not respect the cultural norms of potential offshore business partners.

While the cases cited are true of the potential impact of cultural factors when doing business internationally, and are evidence of the varied expectations of how we do business within a given culture, the volume of global business dealings have grown over past decades, and there is a better understanding of cultural norms by both buyers and sellers in the global marketplace. This has resulted in an increased understanding and tolerance for business behaviours that sometimes differ greatly from what we expect in our culture, and an acceptance of that behaviour from cultures different from our own. This occurs as we gain an understanding that these differences are not demonstrated to offend others but are in fact just part of who it is that we do business with. An increasing tolerance to cultural differences in the business marketplace exists, reducing the importance of adherence to traditional cultural norms, although research indicates that these factors only become less important after repeated exposure and increased dealings with offshore vendors (Carter et al. 2010).

Perception #8: Offshore suppliers have better pricing solely due to government interference in the marketplace; global supplier advantages are artificial in nature

The media frequently reports on the Chinese “dumping product” into our marketplace, that the Chinese government’s manipulation of the RMB is the reason domestic businesses can’t compete, and that unfair trade practices in China (based on government incentive and support) are why Chinese products are more competitive. This belief that a stand-alone business

operation, without government support, would be unable to compete in a free marketplace (Kynge, 2006). Again, while we can no doubt find evidence in specific stand-alone cases to support these claims, this optic fails to recognize that in many cases, the Chinese (and other offshore suppliers) are simply more competitive.

This perception is perpetuated by media reports, and often lacking fact-based evidence to support these claims. Research has alternatively shown that the most internationally competitive Chinese industries are industries that have received less protection from the Chinese government (Erzhen & Xiang, 2012). This evidence supports that notion that the above perception is not supported by fact.

China has enjoyed the benefits of low-cost labour over the past several decades, as compared to labour rates in most developed nations. What is less recognized, however, is that not only is the hourly cost of labour cheaper, but the Chinese tend to have a stronger individual work ethics, work longer hours, and work harder to understand and to learn the intricacies of business inputs, and how these inputs impact success at meeting customer expectations. With regards to management specifically, Chinese managers work hard, long hours, and are highly motivated for individual success, a possibility that many Chinese thought would never exist in their society only a few short decades ago. Although the mantra guiding their society is one of collectivism, the reality in this day and age is that many Chinese workers, particularly in the management ranks, are very focused on individual success, and are willing to work exceptionally hard to ensure they reach the success they crave, out of an “intense self interest” (Meyer & Shen, 2010).

In North American business, we often see examples of “paralysis by analysis”. North American business is so focused on planning, that in many cases we lack action and timely execution of well thought out plans and lose the opportunities that we are presented with. This over-emphasis on analysis and planning is supported by our preference to mitigate risk, and to make careful, well thought out decisions.

The Chinese alternatively are extremely comfortable with risk and are anxious to take urgent action once decisions are made; “the speed of both decision making and execution in China is extraordinary compared to the West”.

Chinese are risk takers, and once decisions are made, act immediately and with great expediency. One example of how quickly Chinese companies act can be seen in the purchase and dismantling of steel mills in Germany, an extremely large-scale project, and the expediency in which the materials and equipment were relocated, set up, and put into production in mainland China (Kynge, 2007).

The Chinese also have a high degree of specialization in their jobs, and in many cases a deeper understanding of how to operate most efficiently to minimize cost and maximize value. They frown upon waste and spend as little as possible to get what they need to deliver acceptable product to their customers. This is a significant contributing factor when North American purchasers experience product that does not meet their expectation, often due to lack of conciseness and clarity in specifying critical to quality parameters. The conciseness required is not just limited to the product purchases, but also in how product should be packaged, in identifying the quality of packaging materials, and how product should be loaded and configured for containerization during transit.

Perception #9: Nearshoring is the new reality, and is done primarily because we want to protect the environment, and our heightened sensitivity to corporate social responsibility issues

Nearshoring seems to be the latest argument that is used to suggest the potential end of global sourcing. This perception is often supported by evidence highly touted in the media, regarding companies that once produced or purchased offshore, but no longer do so. The issue, however, is that many of these media reports do not delve into the root cause behind why these particular companies suddenly make a decision to source nearshore, and simply speculate that it is due to a lack of faith in offshore suppliers to “do the right thing”, or more commonly, the growing environmental movement and desire to be “greener” corporate citizens.

It is sometimes stated that the reason for nearshoring trend is that purchasing offshore is bad for the environment and increases corporate carbon footprints (Iakovou, et al. 2010). Another argument often cited is that unacceptable business practices such as child labour, forced labour, unacceptable safety standards, and brand reputational risk are the reasons for a shift towards nearshoring. Although we can find specific examples to support these claims, it is unlikely to be the underlying reasons for most organizations, as although this argument may make good philosophical sense, it is often contrary to the economical reality of running a business in a competitive market environment. Research indicates that our intentions to operate with strong corporate social responsibility practices is in contrast with what we actually do on a daily basis (Lund-Thomsen, 2007).

Purchasing professionals who evaluate global sourcing opportunities often do so through a lens of total cost of ownership, which is comprised of several cost components such as unit cost of goods, transportation, duties, etc. (Hartman et al. 2017). These cost inputs are not stable over the long-term, but change over time, whether we are sourcing domestically or internationally, resulting in the need for global sourcing practitioners to rebalance their sourcing strategies from time to time when the previous rationale for sourcing from current vendors is no longer valid (Merk et al. 2014). The Supply Chain practitioner is constantly evaluating and re-evaluating changes to these inputs and adjusting supply chain strategies accordingly to maximize value of their actions for the organizations they work for. The key point here is that global sourcing is a strategic decision and requires opportunities to be constantly evaluated and re-evaluated as time goes on, to ensure maximum value continues to be gained from the organization's supply base (Caniato et al. 2011).

In some cases, supply chain analyses identify that going global is worth the increase in risk, primarily due to the financial benefits achieved from such a strategy, but also for a myriad of other reasons as well. In some cases, the financial benefit is far in excess of what is needed to justify such a move, while in others the scale tips in favour of global sourcing only marginally.

For these marginal cases, changes in total cost inputs only need to shift slightly to warrant a re-visit of the global sourcing decision and can in fact result in a change in sourcing strategy in

favour of domestic supply chains, or other nearshoring opportunities. This may appear to some to be evidence of a changing trend towards nearshoring, which it is, albeit for different reasons than are often cited as the root causes of the shift in global sourcing strategy. Global Sourcing factors are constantly changing, requiring a constant re-evaluation of the costs and benefits associated with various global sourcing locations (Carter et al. 2010).

The reality is that although we all want to be good “green” environmental citizens, there is an economic reality in business that prevents us from simply reverting to nearshoring, so we feel better about ourselves. In time, the green movement will no doubt shift some of our sourcing practices, such as increasing global sourcing lead times by a few days in order to utilize transportation vendors who practice slow steaming as our environmental contribution. The evidence lacks to support a belief that we will abandon global sourcing opportunities and put our businesses at risk simply to improve our organizational carbon footprint. The competitive risk associated with such a move is simply too great.

Research has indicated that much of the media discussion about focus on Corporate Social Responsibility amongst multinational corporations with regards to extending these processes to their vendors throughout their global supply chains is more a perception than a reality.

Lund-Thomsen’s (2007) research outlines four myths related to the existence and effectiveness of CSR strategies on multinationals who source product globally. Amongst those myths is the myth that corporate social responsibility initiatives are widespread in the developing world, and that these CSR strategies are effective at achieving what they are set out to achieve. This suggests that evidence supporting these beliefs is lacking.

What is the Real Reason for China’s Success?

Having reviewed perceptions and their implications for global sourcing, we are left with the question of what represents reality when it comes to the success of China and other offshore destinations?

While many perceptions exist, there remains a list of valid factors as to how and why China has been able to experience rapid economic growth and achieve the levels of global success

demonstrated over the past few decades (Kynge, 2007; Erzhen & Xiang, 2012). These critical factors can be divided into four primary categories, namely economic factors, cultural factors, government policy and regulatory considerations.

Economic Factors:

Several economic factors were present over the past few decades that significantly contributed to the success of China as they restructured their economy with a focus on enhanced international competitiveness.

Being a less than developed nation has played a significant role, both from a comparative factor point of view, and from preferential international trade treatment that is afforded least developed nations (Erzhen & Xiang, 2012). Countries that are less developed have struggling economies, significant poverty levels, as low-cost labour availability. This low-cost labour offers an opportunity to focus on labour intensive industries, where competitive advantage exists. This is exactly what China did in the early stages of its economic restructuring.

A second key economic factor was the availability of labour due to the size of the Chinese population. Significant labour availability, combined with the low cost of labour, has made a strong combination of valuable resource that China was able to utilize to fill demand for low cost product around the globe.

This huge population size also provided Chinese companies with a large domestic market, which could often be used as a baseline for these companies to develop and sell products to, allowing them time to ramp up and refine production to eventually focus on export opportunities.

And finally, the valuation of the currency (RMB) being valued at attractive exchange rates to Western currency provided a significant advantage to Chinese exports, making their products highly competitive on the international stage. While many argue that the RMB was indeed artificially undervalued due to the pegging of this currency by the Chinese government, proof and support of this opinion is lacking, and the debate continues as to whether or not the RMB is in fact devalued (Vairon, 2013).

Cultural Factors:

In addition to the economic factors listed above, some aspects of the Chinese culture were strong contributors to the Chinese economic turnaround.

The Chinese have demonstrated a strong work ethic, willing to work long hours sacrificing home and family for the opportunity to better their domestic economic situation (Kynge, 2007). For many Chinese, the opportunities provided through the government's public sector reform, is something they never thought possible. Many Chinese were therefore ready to seize the opportunity, and to work long and hard to ensure they did not waste this opportunity.

Closely tied to this is the prevalence of saving amongst the Chinese. The fact that saving money for future investment as opposed to increasing consumption occurred, provided the necessary infusion of capital to spur economic growth when the time was right (Fang, 2018).

A further cultural factor is the long-term view of the world held by the Chinese culture. In the Western world, people are often impatient for opportunity, and lack "staying power" to work on building for the future. The Chinese, on the other hand, are willing to work hard, stay and course, and build for the long-term future. This results in focused efforts being sustained over time, leading to individual and corporate success over the long-term (Kynge, 2007).

Government Policy:

Not to under emphasize the economic and cultural factors listed above, a significant impact on the success of China over the past half century has been grounded in government policy.

The Communist Party of China followed an ideology that was modelled after the Soviets, but unlike the Soviets, they modified the platform into a blend of socialist and capitalist philosophy (Vairon, 2013). The party closely watched the implementation of Marxist-Leninist ideology in the Soviet Union, including the struggles the Soviets were having at achieving long-term economic success, and therefore modified their own philosophy to achieve the best of both worlds. This resulted in a transition towards a market-economy approach to the domestic economy.

The development and prioritization of economic and social strategy through the Five-Year planning process allowed for the Chinese government to rethink and refocus their activities to maximize the value and execute on the highest priorities to promote rapid economic growth. Although the results were not always as anticipated or as desired, this constant revamping of the plan was a major contributor to the economic turnaround and rapid growth of the Chinese economy over the long haul.

The Chinese government's decision to reallocate resources from the agricultural sector to industrial sectors had some less than desirable results from a social development point of view. Economically however, this resulted in major gains in national productivity, as the mass resources that were once focused on low productivity in the agricultural sector, were re-focused to the highly productive industrial sector (Fang, 2018).

The introduction of the one-child policy in the 1970's was not done as part of an economic strategy, but a social one. The country was having difficult feeding the population, primarily due to the reallocation of resources from the agricultural sector discussed above.

The implementation of the one-child policy, however, did have significant economic impact. By reducing the birth rate significantly, the overall country demographics consisted of a significantly larger percentage of the population being work aged citizens, again contributing positively to the overall productivity of the nation. This is what has been referred to as demographic, or population dividend that contributed to rapid economic growth.

Government policy also played a significant role in the growth of exports, as well as the influx of foreign direct investment. The development and implementation of special economic zones, which manufacturing and foreign direct investment could occur with dramatically reduced taxes, provided an opportunity for large scale economic growth (Yu, 2018).

Finally, as economic growth gained steam significantly impacting the country, the government stayed focused on the long-term, and invested heavily in infrastructure, often focused on transportation, so that the roads, rail, air, and ocean ports had the capacity to support the growing levels of international trade. Without this foresight and the associated significant levels

of investment required, economic growth at the levels experienced from the late 1970's onward would likely not have been possible.

Government Regulation:

Closely tied to government policy is government regulation. Government regulatory practices stem from government policy, and are the resulting mechanisms that in this case, allowed for corporate China to take advantage of the opportunities present for growth.

The change in regulation allowing for excess workers in the rural areas to migrate to the urban areas was a major contributing factor to the rise of manufacturing and exporting, particularly along the eastern coast of China (Fang, 2018). Prior to these changes, freedom of migration was not allowed, and peasant workers were forced to stay on the communal farm, with little opportunity for economic success. Through regulatory changes allowing for migrant workers, the workforce required to bolster the industrial sector was realized.

Regulatory change allowing for some private participation in a free market economy provided the means to spur private investment, allowing for the realization of economic growth throughout the nation. By government focus solely on the larger state-owned enterprises and allowing the smaller ones to fall into private hands, the country was able to shift and promote free enterprise, having a major impact on overall economic growth (Vairon, 2013).

In the cases where government regulation did prevent the private sector from executing on market opportunities, the tendency of the government to be highly selective in enforcement allowed for market opportunities to be aggressively pursued, to the benefit of the overall economy.

The government also began to decentralize and deregulate some of the decision-making, permitting the localized governments to determine what industrial opportunities best suited their needs. This created increased local government investment, and set the stage for rapid, localized economic growth.

Finally, government regulation related to the banking industry, supported the rapid availability of capital for those who needed it, allowing companies to grow fast, and eliminating an important constraint for companies faced with significant growth opportunities.

Relevance and Future Implications

It is expected that China's dominance in the global economy will continue to grow over the coming years, although likely at a slower annual rate of economic growth. With many of the factors that contributed to China's unprecedented rise abating, growth at annual levels of above 10% are unlikely (Fang, 2018). The export gap filled by extremely low production input costs, the population dividend and mass migration of workers from agriculture to industry (and rural to urban), and the advantages obtained from being a least developed nation have eroded, and will not longer provide a comparative advantage for the Chinese moving forward.

In addition, least developed countries are often lagging in many of the social areas, with respect to occupational health and safety requirements, the requirement to meet stringent government regulation, and in areas such as environmental sustainability. With the evolution of the China economy over the past few decades, and their ascension to the World Trade Organization earlier in the millennium, the Chinese government will no longer be able to move forward lacking focused improvement in these areas, especially with the country moving into the international spotlight due to their global economic impact.

China will continue to launch additional Five-Year plans, with a focus on meeting the challenges of the new market economies. As mentioned above, a shift towards more social issues and less economic ones are likely as China approaches the establishment of its 14th Five-Year plan, commencing 2021. These issues will be driven by enhanced visibility due to their membership in the WTO and their presence on the world stage, and the need to improve economic relationships with the West (Vairon, 2013).

As far as the role of perception goes, China's economic dominance will likely see them become the largest global economy over the coming decades, making them a continued target for criticism from the West. Their policies around the environment and social issues will continue

to be closely scrutinized. Evidence of change in these areas will be predominant in the 14th Five-Year plan, which is anticipated to contain a significant component around environmental issues and a concern for renewable energy. This could have a significant impact on coal production throughout the country, historically a major Chinese industry.

China will experience difficulties in continuing to grow their economy, as growth due to export opportunities subside, and the population dividend they have been experiencing evaporates (Fang, 2018). As with other countries who have evolved from a least developed nation to a developing one, the growing middle class will lead to an increase in labour cost, additional regulation placed on businesses, and a fleeting comparative advantage in these areas. It is also likely that the younger generation will continue the shift from saving to consumption, taking away another of the factors that yielded an advantage for the Chinese economy over the past few decades.

The increased size of middle-class China, and the increased desire for consumption, will positively result in growing opportunities related to the domestic marketplace. It is likely that future Five-year plans will adjust from a focus primarily on exports, and to growth through filling export opportunities while simultaneously meeting the growing needs of the Chinese domestic economy and becoming truly integrated into the global economy.

Chapter 6: Empirical Data

Introduction

At the onset of our study, it was decided to utilize a mixed methods research methodology. The philosophical underpinning of our approach is based on an explanatory sequential design, in which quantitative data would be utilized to understand the key global sourcing decision making factors, from a sourcing location perspective. Following the collection and analysis of quantitative data, qualitative semi-structured interviews would be conducted to further explain the factors identified, and to add richness to our understanding of why global sourcing decision makers identify with the factors detailed during the quantitative portion of the data collection.

This approach was selected as it was deemed the most appropriate to answer the relevant research questions, which were focused on how global sourcing practitioners think when making sourcing decisions, and why they feel the way they do about pursuing global sourcing opportunities.

Our research was set out to answer the following research questions:

1. What location specific factors are considered important by supply chain practitioners when considering whether or not to source products and services globally, and what weight does each carry in the global sourcing decision-making process?
2. How do countries measure up in relation to each other today, with regards to their relative attractiveness as a global sourcing destination?

If we were to consider these research questions in an attempt to form some type of hypotheses of what we currently expect to see as a result of this research effort, it would lead us to the following two primary research hypotheses:

- H1: Cost reduction is the major objective for most companies pursuing global sourcing strategies, but is not the most important decision-making factor on whether or not to go global, or in who to buy from

- H2: The perception of the current state of the factors is more important than the actual state of the factors in determining whether or not global sourcing decision makers decide to source globally or not

Data Collection

This research project involved the collection of data by two primary means; a quantitative survey supplemented by semi-structured interviews. The survey data was used to gain an understanding of the main decision-making factors used by global sourcing decision makers (the “what”) while the interview data was intended provide a deeper understanding, and to add richness to the data, allowing us to understand “the why”.

As a means of collecting survey data, with a focus on global sourcing practitioners, it was decided to utilize the Supply Chain Management Association membership as a means of accessing a large volume of participants, and to enhance the expected response rate from potential survey respondents. The Supply Chain Management Association has a membership comprised of Supply Chain practitioners across Canada, that ranges between 7,000 and 8,000 members.

One limiting factor in reaching this membership was a new law in Canada preventing organizations from contacting people via email without their prior consent. This impacted our research efforts by limiting the number of members available for us to sample to those SCMA members who had “opted in” to receiving electronic communication from the association, reducing our number of potential respondents from the 7,000 to 8,000 association members to 4796 potential participants who had previously opted-in to receiving electronic communication from the association.

The survey was originally distributed on October 15th, 2015, with reminders sent out on October 29th and November 5th (See Appendix 2-1).

The distribution of our survey resulted in a total of 217 responses being received, giving us a response rate of 4.52%. This response rate is an acceptable rate in which to make inferences about the global sourcing practices of the supply chain practitioner population being sampled.

The questionnaire in this research was aimed at answering the following two primary questions:

- Given a list of several potential global sourcing decision-making factors, which factors were thought to be important, and to what degree, when making global sourcing decisions?
- Based on the above, what would be the rank order of factors, with regards to relative importance?

Of the 217 respondents, 42 (19.4%) indicated that they do not currently participate in global sourcing activities yet responded to the survey anyway. The remainder consist of participants with varying degrees of exposure to global sourcing, with some respondents likely well versed in global sourcing activities, and others minimally involved in global sourcing. The respondents with little or no global sourcing experience are more likely basing their responses on what they hear and see from others (including the media), therefore being based more on perception than reality. This uncovered yet another potential theme of this research, which is the extent to which real factors vs. the perception of factors influence the global sourcing decision-making process.

The survey data discussed above was an excellent method of gathering specific data from a large volume of participants. The data gathered, however, only speaks to the specifics of what was asked in the survey, and its primary purpose was to gain an understanding of the decision-making factors considered by global sourcing practitioners, as well as the relative importance of each in the decision-making process.

In an attempt to understand the reasons why global sourcing decision makers think as they do, we utilized a series of semi-structured interviews. These interviews provided the opportunity to include both supply chain practitioners, as well as other individuals who play a role at influencing whether or not Canadian companies implement global sourcing strategies.

The purpose of the semi-structured interviews was to add a richness and depth to the data, by allowing us to gain a much deeper understanding from participants. This was achieved by

following a set of standard questions as a guideline, but then giving participants the ability to talk and explain what it is they feel, and why they feel the way they do. It also allowed us the opportunity to probe participant answers, to truly understand participant points of view, and in some cases, to provide us with themes and other considerations we may not have anticipated when we embarked on this global sourcing study.

Although a standardized outline of questions was used for all interviews (see Appendix 2-2), each particular interview is somewhat unique as participants were allowed to deviate their responses. It was important for the researcher to take care not to lead participants in their responses, and to remain objective. This will be discussed further in the section on reflexivity of the researcher.

A total of 25 semi-structured interviews were completed. 15 of the 25 were individuals who were supply chain practitioners, with titles ranging from Purchasing to General Manager, allowing for a deeper understanding of the reasons behind the results found in the survey data, since these individuals were what we referred to as the “in group”, or people with direct experience sourcing products.

In addition to the above, it was decided to also interview some individuals who did not have direct experience in the sourcing of products, but who advised business owners on a variety of business issues, including purchasing and supply chain considerations. These individuals, who we labelled the “out group”, could potentially add another dimension to the study, and provide an indication of how aligned these business advisors are with the way the practitioners actually think, and how they make decisions. This information could be a key contributor to new knowledge, and be of interest, to government economic development strategies, as to the value of the resources the government makes available to support the domestic business community.

Quantitative Surveys

The primary goal of the quantitative survey was to gather data from supply chain practitioners with regards to what the relevant decision-making factors are when making global sourcing

decisions, including how important each of these factors are to the global sourcing decision-making process.

The survey asked questions related to the relative importance of 27 potential decision-making factors in the global sourcing decision-making process, and participants were asked to identify the level of importance of each of these factors on a five-point Likert-like scale. Likert scales are a tool often utilized when conducting surveys about participant's opinions or perceptions related to a particular topic of interest (Allen & Seaman, 2007). A copy of the survey can be found in Appendix 2-1.

As can be seen in this appendix, a variety of questions were asked to determine the relative importance of a host of factors identified as potential factors of influence in the global sourcing decision-making process. The factors selected are supported by previous research indicating their relationship to the purchasing decision-making process (Min, 1994; Kalicharan, 2014).

As mentioned above, a total of 27 decision-making factors were listed in the questionnaire delivered to participants in a Likert-like survey format. The development of the questions, primarily based on what the potential decision-making factors could be, were based on other prior research which discussed the decision-making factors considered by global sourcing practitioners and domestic purchasers (Carter et al. 2010). Assigning a numerical value to each of the rank-order categories allows us to calculate a value that can be used to rank each factor by relative importance in making global sourcing decisions, according to the survey respondents (see Appendix 6-1).

As we can see from the appendix, the single most important factor considered when making global sourcing decisions is product or service quality. This contrasts what many people believe, in that global sourcing is an exercise that is totally focused on cost reduction, and that cost is the primary decision-making factor. Also demonstrated in this appendix, is that participants consider total cost of ownership considerations to be the second most important factor, followed by lead time consistency (i.e., a delivery or service consideration). The survey data indicates that the overall order of factor importance would be Quality, Cost, then Delivery.

Upon further review of the data included in this appendix, it is also worthy to mention the high level of scores for all factors included in the survey. The lowest scoring factor is culture, with a weighted rating of 3.01 out of 5. The high level of scores across all categories indicates that the factors suggested in the survey were all considered to be important to the decision-making process, although some factors are considered more important than others.

As researchers, we must be cognizant of the potential influence the survey design itself may have had on participant responses. The fact that we asked, “is this factor important” may have influenced the respondents to say “yes”. In other words, would culture have come up as an important factor if participants were asked open-ended questions, and were not asked specifically about culture? It is likely that the same level of importance may not have been indicated for each of the individual factors if the respondents were not asked specifically about the factors mentioned in this survey, and were instead left to their own devices to come up with the list of factors deemed to be important. This is one reason why the semi-structured interviews were added to this project and did demonstrate that some factors listed in the survey were rarely mentioned by the interview respondents.

Another important take-away from the data presented in this appendix is the ranking of societal factors such as culture, language, and environmental considerations. These factors are often spoken of in the media as to their increasing level of importance in today’s society appear to be unsupported by the data collected and presented here.

With reference to global sourcing activities overall, the common belief reported in much of the mainstream media as well as in the perception of those who are not intimately involved in global sourcing decision-making, is that the process is all about cost, and only about cost. The data presented here again suggests that this is not the case.

When reviewing the individual factors presented in the survey questions, we get an indication from respondents that the number one factor considered in the global sourcing decision-making process is product or service quality, followed by total cost of ownership and then lead time consistency (a delivery or service criteria).

Other factors not mentioned above, however, also could be included into these three categories. For example, total cost of ownership is made up of many different cost factors which are listed in the survey questions. Similarly, delivery factors are made up of many different factors, not just lead time consistency. For these reasons, it makes sense to group the individual factors from the questionnaire into categories, where the different factors involved have a high degree of similarity.

Further to above, we can infer that quality factors and delivery or service factors, are indeed closely aligned, as they represent risk to the sourcing organization. Poor quality can result in unanticipated cost, and also in failure to meet the expectations of the customer. Late deliveries, likewise, can result in increase risk in failing to deliver to customers.

It would appear, then, that the global sourcing decision-making process is about weighing the risks and rewards related to the opportunity, to come up with decisions that contain the appropriate amount of potential reward, given the associated risk. It is important to note that the amount of reward required to compensate for the associated risk would be different from organization to organization based on that organization's understanding of the inherent risk, and their specific risk profile.

The potential rewards, likewise, would be different from organization to organization, based on the geographic area they are located in, and where the sourcing opportunity lies geographically as well. For example, many factors associated with cost are higher for delivery locations farther away from the country being sourced from, so would lend different economic benefits to different companies, depending on their delivery location.

Given the above argument, a model based on the trade-off between risk and reward, that is capable of taking into account the differences in potential economic benefits as well as different organizational risk profiles, would seem useful to organizations when making global sourcing location decisions, based on their unique organizational situation.

Quantitative Data Analysis

Data by Individual Factor:

The data captured during the quantitative survey portion of our data collection efforts was analyzed by applying a factor weighting to each individual response, with those responses in the “Always Important” category receiving a weighting of 5, while at the other end, those responses in the “Never Important” category receiving a weighting of 1. The responses in the other categories receiving values of 4, 3, and 2 representing their relative level of importance in the decision-making process.

Assigning the weightings described above allowed for the calculation of an overall weighted rating by factor, allowing for all factors to be rank ordered in relative importance, based on the responses to the survey questions from the respondents. As can be seen in Appendix 6-1, product or service quality was ranked number one in importance with a rating of 4.79, followed by total cost of ownership and lead time consistency, with ratings of 4.49 and 4.41 respectively. The factor found to be least important was culture, with a rating of 3.01.

The next step in our analysis of the data was to eliminate all factors that fell below the median value. This was done to streamline the factors for our model to those that were deemed to be most critical in the global sourcing decision-making process, as opposed to trying to deal with all potential factors. This was also important since as mentioned previously, all factors were considered important by respondents, so although the factors rating just below the median would seem to indicate a high level of importance, it is unlikely, when considering their relationship to the scores of the factors at the top end of the scale, they play a significant role in the decision-making process. This elimination process reduced our decision-making factors from a total of 27, to the 19 factors deemed to be of utmost important.

From the remaining 19 factors, we then considered whether or not a factor was most related to a country, or a company, since our model is primarily to identify future location opportunities for global sourcing, as opposed to firm-specific factors. After taking this into consideration, we

were able to reduce the number of potential decision-making factors down from 19 to 13. From these remaining 13 factors, two further adjustments were made.

Border-related costs, although deemed a relevant country-level factor, are costs that are related to the importing process in general and lack differentiation between importing from the variety of potential offshore sourcing locations. This lack of differentiation led to the elimination of this factor as consideration for the model.

In addition, total cost of ownership, although rated high in the decision-making factors by participants, is a sum of several of the other factors included in the list of potential factors. Therefore, the decision to eliminate total cost of ownership due to the inclusion of the detailed costs factors was made.

The final count of factors for model inclusion was 11. The next step was to divide these eleven factors into two groups; factors primarily related to cost, and factors primarily related to risk. The costs factors included for model consideration were cost of duty, cost of supplier labour, and cost of transportation. From a risk perspective, the factors included were environmental factors, government factors, political factors, product or service quality, infrastructure, lead time, currency stability, and corporate social responsibility.

These final 11 factors would then be utilized in the building of our model, allowing us to rank countries as to their relative risk/reward trade-off (see Appendix 6-2).

Grouping of Data:

The data analysis described above was conducted based on the individual factor responses and was a means to identify which factors were deemed to be most important, and what weight in the decision-making process each of these individual factors carried.

Sometimes, however, grouping of data into “like categories” can add additional understanding to conclusions we are able to draw from the data. Based on the research conducted, it became increasingly apparent that a model that reflected on the trade-off between risk and reward was a beneficial way to represent the global sourcing decision-making process. This led us to the

decision to take a look at the data based by grouping individual factors into these two broad-based groups.

The results of this data grouping are shown in Appendix 6-3. It is interesting to note that the weighted average level of importance for each category is almost identical, with risk indicating a value of 4.01, and cost 4.02, respectively. This result indicates that the development of a model with two axes carrying equal levels of importance should be adequate to represent the global sourcing decision-making process.

Quantitative Survey Summary

The survey data acquired through our quantitative survey goes a long way to tell us what factors supply chain practitioners consider to be important when they decide whether or not to undertake global sourcing strategies. The data strongly supports our hypothesis that cost is not the most critical factor considered when making global sourcing decisions.

As mentioned previously, our approach to conducting this research was to not only conduct surveys to gather data, but to also conduct semi-structured interviews as a way of not only understanding the “what” but also the “why” in the global sourcing decision-making process. Therefore, we decided to include semi-structured interviews as part of our research, to add richness to the data, and to aid in our explanation of the “why” global sourcing decision-makers make the decisions they do.

Semi-structured Interviews

While the quantitative surveys were the chosen method for getting an acceptable sample-size related to what the relative factors might be, including how important each factor was to the decision-making process, semi-structured interviews were deemed an appropriate method for drilling down into each of the individual factors in order to determine why global sourcing decision-makers feel the way they do with regards to each of the factors identified for model consideration. The interviews were also a way to support (or not) the data gathered from the quantitative surveys, and to identify the views of the business advisors who have the potential to influence the global sourcing decision-making processes for the businesses they advise.

The interviews were also an opportunity to gather additional data that might be of interest to this and other research efforts, resulting in several additional questions being added for inclusion in the survey. These additional questions consisted of the following:

- Does the individual respondent currently participate in global sourcing?
- What are the organization's objectives are around global sourcing?
- What factors influence the global sourcing decision-making process?
- How is the global sourcing system performing?
- What are the past and future trends with regards to "going global"?

Our method of data collection via the interview method was considered to be "semi-structured", meaning that although an outline of questions was developed to guide the interview process, some degree of flexibility was given to follow up on items of interest that came to surface during the interview process. The use of semi-structured interviews in this manner accomplishes a number of positive contributions to this research project.

Firstly, the use of semi-structured interviews is a means of gathering additional data that either supports or does not support the information gathered during the quantitative survey portion of the research. This allows for the data collected to be triangulated with other data sources, such as the primary quantitative survey data, and secondary research data deemed to be relevant to our research goals. This triangulation would provide strength of argument to the research outcomes, if indeed the data gathered through these different methods demonstrates alignment with the outcomes identified (Carruthers, 1990).

Secondly, semi-structured interviews allowed for a deeper understanding, and further explanation of, conclusions drawn from the quantitative data. So, while the surveys tell us what response categories respondents indicated were relevant, the semi-structured interviews provided further insight into why the survey respondents responded the way they did.

A great example of this deeper understanding was demonstrated in questions related to the importance of lead time, and lead time consistency, in the global sourcing decision-making process. When these questions were originally added to the survey questionnaire, the researcher perceived lead time to be a cost element, since longer lead times are associated with larger safety stock inventories, additional space requirements, additional movement of materials, and other cost factors. Lead time consistency, alternatively, was perceived to be a service dimension, where higher variance in experienced lead times would increase the risk associated with potential disruption of service to the organization serving its customer base.

But when reviewing the data on lead time and lead time consistency from the semi-structured interview process, it became clear that the majority of respondents deemed both lead time and lead time consistency to be related to service, and the connection of total lead time to the cost component appeared not to be considered. This optic is demonstrated by the following comment from one interview participant:

“The other thing would be delivery. Knowing that the product comes from China, or wherever in the world, you know it takes two months, so not running out of product, and not having product when you need it”.

The reality is that if one reviews the list of factors considered as potential model factors, many of these factors have both a risk and reward element to them. The real question for us, then, is which of the two elements are strong enough to be considered primary for each of the decision-making factors. As mentioned above, total lead time was considered by the researcher to be primary a cost element, although respondents opinions differed, believing it to be primarily associated with risk.

In reviewing the questions in the survey, we also need to recognize that not all of the factors included in the survey are related to the country that goods are sourced from. While some are indeed country factors, others are related to companies, whether being the company doing the sourcing, or the vendor being considered for supply. Once again, similar to the cost/risk argument above, some factors have a degree of overlap between company and country, but our interest lie again in which of the two can be considered the primary relationship to the

particular factor. For example, product quality is primarily determined by the company we may source from, although *perception* of product quality has been shown to be highly influenced by the country of manufacture (Chu et al. 2008; Kalicharan, 2014). Since it is perception of quality that is of most interest to us in this research, quality was deemed to be a country-related factor.

The semi-structured interview question outline can be seen in Appendix 2-2.

A total of 25 semi-structured interviews were conducted and targeted two distinct groups; supply chain practitioners who make global sourcing decisions (i.e., those who do), and business advisors who regularly provide advice to business people who potentially make global sourcing decisions (i.e., those who advise those who do). The participants were selected by means of purposeful sampling to ensure maximum exposure to relevant data from the experience of the interview participants (Merriam & Tisdell, 2016).

A standardized list of questions was used to guide the interview, although the semi-structured design allowed for deviation from the questions as the interviewer deemed fit to provide further information on information deemed highly relevant and of interest given the goals and objectives of this study (see Appendix 2-2). All interviews were conducted, transcribed and documented by one researcher for consistency.

The NVIVO software package was utilized to accurately and efficiently record, categorize, and analyze the data to provide meaningful information and output to this research. The data analysis included the identification of nodes or topics of interest, the frequency of occurrences related to these nodes, the number of participants commenting on these nodes, and specific comments made that were highlighted due to their relevance.

Interview Data Analysis

When analyzing the transcripts from the semi-structured interviews, each transcript was transcribed in detail, word for word, with the content then analyzed, with individual passages noted in relation to themes which emerged in relation to global sourcing. These major themes were identified within the NVivo software as “nodes”, used as a means of grouping like

comments related to thematic outcomes. A constant comparative method of analysis was used, which over time, restricted the themes or nodes to group comments with regards to their similarity to major global sourcing themes. A sample transcript can be seen in Appendix 2-3.

The results of the information gathered during the semi-structured interviews is outlined below:

Global Sourcing Goals and Objectives:

When reviewing the data on goals and objectives (see Appendix 6-4), it is clear that lowering cost is a major driver in the decision pursue global sourcing options, with 92% of sources listing this as a key goal and objective. Next to cost, availability was the second biggest goal with 28% of respondents, indicating that respondents were engaging in global sourcing activities to acquire products and/or services that were not readily available domestically, or at least readily available in a timely manner.

The third most frequent goal mentioned, listed by 20% of the sources, was to achieve the desired quality level for the goods and/or services sourced, an example indicated by the participant comment “there is a particular unit that we buy, actually from Denmark, that is top of the line quality. Their technology is top of the line”.

Several other goals and objectives were mentioned, although the remainder of the items were cited by few respondents. A total of 13 different goals and objectives were mentioned in all.

Volume and Type of Global Sourcing:

When interviewing participants, we were also interested in understanding how significant global sourcing was to the individual businesses, and becoming more and more of a service market in Canada, whether or not companies were sourcing products, services, or both globally. This was of interest due to the fact that we hear a lot in the media (which has created a huge perception in the Canadian community) that outsourcing of services is a growing trend.

From a volume of global sourcing perspective, participants were asked if they were sourcing a low level, medium level, or high level of products and/or services globally. Although in the

research we didn't define exactly what dollar volume or number of products that each level would entail, we were interested in the respondent responses based on the perception of the respondent, related to how critical they saw this activity as far as importance to the future of the business.

The data collected on volume is listed in Appendix 6-5. The results clearly indicate that many businesses (36%) consider their level of global sourcing to be at a low level compared to their overall purchasing activities. Another 24% of respondents felt their global sourcing activities could be best described as being at a median level of volume, indicating that much of the Canadian business supply chain is still serviced by the domestic market. Only 16% of respondents described their global sourcing activities as high volume. In this research, we defined domestic sourcing as being supplied by Canada or the United States.

When asking respondents about the type of global sourcing they do, 80% of respondents were maintaining a focus on the sourcing of products, as opposed to services. With only 8% of respondents indicating that they sourced primarily services, it is clear that product sourcing is still the dominant type of global sourcing strategy (see Appendix 6-6).

Decision-making Factors:

In an effort to understand the factors deemed to be important to global sourcing decision makers, and to also provide comparison to what was gathered in our survey of supply chain practitioners, participants were asked about the factors they considered to be important, and to what degree, when analyzing whether or not to implement a global sourcing strategy.

When reviewing the data of decision-making factors (see Appendix 6-7), we note that Quality topped the list with a total of 92% of sources citing quality as a key decision-making factor. This indicates that global sourcing decisions are not all about cost, and that cost is not the primary decision-making factor. Although cost reduction is often the overall objective or driving force, it is not necessarily the most important factor in making the decision on whom to purchase from and from where.

Cost is however, far from irrelevant, as it shows up in second place on the list (cited by 80% of sources), with total lead time (a delivery and service consideration) coming in third with 64% of sources cited.

When viewing the data collected through the interview process, the order of importance to decision makers seems to be quality, followed by cost, and then delivery, once again in contrast with the perception that global sourcing is solely about cost.

Most Important Decision-making Factor:

Contrary to what we find when reviewing the information described above from all individual factors, we find a different picture when we ask participants directly what the most important factor is in the decision-making process. In this case, 48% of respondents mention price as being the most important, followed by quality (32%) and delivery a distant third (8%) (see Appendix 6-8). These results suggest inconsistency in the data.

One possibility for this inconsistency is the potential lack of clarity and distinction between our goals and objectives, and the factors we consider when making decisions. An example of this confusion was a response from one participant when asked what they believed to be the most important decision-making factor, “I think definitely as I’ve said, price is always what had driven us to go and to take a look at it in the first place, right, trying to compete with our competitors, who were going overseas and getting that type of discount, you know in order to compete, we had to be doing the same thing, so price was definitely a factor”. It is possible that these lines become less clear and confusing, particularly with those respondents who are not practitioners, requiring us to dig deeper into the data to explain this inconsistency.

Second Most Important Decision-making Factor:

When respondents were asked about the second most important decision-making factor, Price topped the list at 28%, followed by Quality at 24% and Lead Time, at 12% (see Appendix 6-9).

Although there may be some debate as to what comes first, second, or third, it appears clear that the most critical considerations are consistently thought to be price, quality, and delivery.

Third Most Important Decision-making Factor:

When respondents were asked directly what the third most important decision-making factor was, delivery topped the list, cited by 20% of respondents, again followed by cost at 16% and Quality at 12% (see Appendix 6-10). Again, the top three factors remain consistent amongst respondents. It is important to note that the three questions posed above are interdependent, and therefore the answers to the first questions impact the responses to the ones that follow.

Barriers to Global Sourcing:

When conducting the semi-structured interviews, we asked a question to participants as to what barriers existed that were considered to be obstacles to implementing a global sourcing strategy. In total, 33 different items were mentioned by respondents as barriers or impediments to moving forward with global sourcing strategies (see Appendix 6-11).

Looking at the data, the single most significant barrier was risk and uncertainty, presumably since the risk with any supply chain practitioner is making any type of vendor change, as it adds an element of risk and uncertainty for future business dealings. The amount of this risk and uncertainty varies from vendor to vendor, and situation to situation, but certainly is elevated when dealing with vendors on a global scale, primarily due to the increase in complexity of global supply chains (Hartman et al. 2017).

Risk and uncertainty, however, can be viewed as a bit of a “catch all”, as it is a broad term than can be a consideration with a variety of factors. For example, it could mean risk of quality issues, or risk of delivery issues. It could also mean, risk of theft of intellectual property rights, or risk of brand reputation from less than acceptable practices from the new vendors brought on board. As mentioned earlier, the same type of “catch all” argument can be made of total cost of ownership, indicating that a model that bases decisions on the trade-off between risk and cost would be of interest to global sourcing decision-makers. Risk and uncertainty were cited as a barrier by 52% of potential respondents.

Three barriers to global sourcing were listed just behind risk and uncertainty, each mentioned by 36% of respondents. These barriers were lack of internal capability, lack of volume to justify

global sourcing, and governmental factors. This is an interesting finding, since many people in our age of technology and the internet talk about how “anyone can source globally, just go online”, yet in actual practice, lack of internal capability and knowledge of global sourcing practices is seen as a significant barrier to implementing a successful global sourcing strategy.

Culture shows up 5th on the list with 28% of respondents citing it as a barrier. This comes as a bit of a surprise, as our quantitative data shows culture and language criteria well down the list of important considerations. The interview respondents saw culture as having a medium level of relevance to their global sourcing efforts.

At the same frequency as culture, with 28% of respondents, is country reputation. This is an item associated with an important emerging theme in this research, that being the role that perception plays in whether or not organizations pursue global sourcing strategies from specific countries. We have mentioned the role of media throughout this research project, and the role they play in creating perceptions that may not be grounded in reality. The identification of country reputation so high on the list of barriers may be evidence of this, similar to the work completed by Chu, et al, in their research on “Countering Negative Country of Origin Effects”, in which the researchers discussed the impact of negative country perceptions on consumer behaviour (Chu et al. 2010).

It is also interesting to note, similar to the data on global sourcing factors, that societal concerns such as corporate social responsibility considerations fall almost to the bottom of the list of barriers to global sourcing.

Global Sourcing Issues and Supply Chain Performance:

Implementing a global sourcing strategy increases the level of supply chain risk, for several reasons. There is more inventory in the pipeline. It takes longer to get the inventory you need, when you need it. You are dealing with vendors that are remote to your organization, and vendors that you may not know well or have ever visited. The increase in complexity of global supply chains translates into increase risk (Hartman et al. 2017). As a result, issues can and do arise from time to time.

When interviewing participants, one of the questions asked was whether or not they were having any issues with their global sourcing vendors, as opposed to their domestic supply chain, and if so, what were those issues?

When reviewing the data on supply chain issues (see Appendix 6-12), three issues stand apart from the rest of the list, namely quality (76% of respondents), delivery (60% of respondents), and cost (52% of respondents). This data is in line with what we have seen in the list of the top three critical decision-making factors.

Several other issues were raised, but a significant gap in importance exists between the top three and the rest of the items (the 4th most frequently cited issue is communication, which was cited by 32% of sources).

When looking at the supply chain performance data, 60% of respondents indicated their global sourcing supply chains are performing to meet expectations, while 36% say they are not (see Appendix 6-13), supporting the notion that concern over associated risks is warranted.

Global Sourcing Risk Mitigation Strategies:

Deciding upon the pursuit of a global sourcing strategy, regardless of how effective you are at the process, increases risk due to the complexity associated with global supply chains (Hartman, et al. 2017). As a result, many participants during the semi-structured interview process commented on things that they do in order to mitigate potential risk to their organizations.

Two items were mentioned more frequently than all other responses and are therefore considered leading strategies for reducing the risk associated with the global sourcing process.

28% of respondents talked about utilizing secondary sources of supply as a back-up plan should their global sources let them down. This practice of avoiding sole sourcing arrangements has been utilized by supply chain practitioners for years and is not limited to those who undertake global sourcing practices. It does however demonstrate the increased value and importance secondary sources play when dealing with the increased risk from global sourcing activities.

Another item frequently mentioned (also by 28% of respondents) was conducting vendor visits or audits. One of the areas that impacts global sourcing strategies resulting in higher potential supply chain risk is the fact that the vendors are not in as close proximity to the sourcing organization, as when dealing with domestic suppliers. One method of mitigating this risk would be to visit the suppliers, and to conduct supplier audits. Although this strategy has also been used with domestic supply chains for years, the value and importance of this risk mitigation strategy is amplified when undertaking global sourcing strategies, due to the increased organizational exposure to risk. The data related to risk mitigation can be seen in Appendix 6-14.

As can be seen in this appendix, the use of secondary sources and vendor visit are the main risk mitigation methods mentioned significantly more by respondents than any of the other items in the list. The practice of carrying increasing amounts of inventory, engaging in product sampling (cited by 16% of sources each) and asking for vendor references (12% of respondents) were also considered to be significant strategies at mitigating risk exposure due to global sourcing.

In total, 15 separate risk mitigation strategies are listed in this appendix, almost half of which were only cited once. Of particular note is that formal vendor certification (such as ISO, etc.) does not seem to hold much weight as a global sourcing risk mitigation strategy amongst supply chain practitioners.

Past and Future Trends in Global Sourcing:

As mentioned previously in this research, it is hypothesized that cost is not the primary factor in determining whether or not to do business with global sourcing vendors. Although cost is thought to be the overall objective in the majority of global sourcing situations, the factors related to which vendor to buy from offshore often have little to do with supplier cost.

This hypothesis does not state that cost was never a primary decision-making factor. In fact, it is further hypothesized that it once was the primary factor, but that things have changed and as the world has become increasingly globalized, that the cost factor has lost some of its luster,

and has become more of a secondary consideration behind other more concerning factors, such as product or service quality, and overall supply chain risk.

Participants in this study were asked the question as to whether or not the way they make decisions today is consistent with how global sourcing decisions were made ten, fifteen, or twenty years ago. The data resulting from this question is shown in Appendix 6-15.

72% of respondents reported that the way global sourcing decisions are made today is significantly different than what was done in the past. Many have commented on the fact that cost is taking more of a back seat to quality and delivery, and that although cost is an important factor in whether or not the deal is done, that other factors associated with risk are the primary decision-making drivers, as indicated in one participant's comment "It's changed slightly because back then it was more focused on buying it cheaper, finding a better price. You didn't look at all the other areas as much, you were just looking at a way to save money. But over time I found that you had to really focus on the quality side of that too, because that's where you really run into problems down the road". This response was not a surprise, as we commonly hear, often in the media, about global sourcing issues, of people who did not get what was expected dealing with offshore vendors, hence the discussions in the research paper around perception vs. reality. Given these ongoing discussions, it is not surprising to hear that the methods and activities utilized when considering implementing a global sourcing strategy has indeed changed as the world has become increasingly globalized.

When participants were asked where the whole globalization movement is heading, and whether or not concepts such as nearshoring and concerns over environmental impact such as our carbon footprint would bring sourcing back to the domestic supply chain, the majority (56%) felt that global sourcing would continue to grow in the future (see Appendix 6-16). One participant comment summed up their views on nearshoring, "you talked about nearshoring a little while ago. We did look at that, because that was a consideration for us, if we could get the production closer to North America, then we would have been in a much better position in terms of, you know, how much inventory we had to carry, the time frame to get the product into the market, and so on, but we just weren't comfortable with any of the locations close to

North America, and feeling comfortable that we would get the performance that we needed to, you know, remain competitive". Another 20% stated that global sourcing activities would at least keep pace with where they are now, while almost a quarter of respondents (24%) felt the future would result in a retraction, with some sourcing of supply moving closer to home.

Further Analysis through Grouping of Data:

The previous analysis looks at the data collected during the semi-structured interview process by individual factor.

Although we get a good indication from this data on how the respondents think and feel about a variety of criteria based on the questions asked by the interviewer, the picture painted from the individual factor response data does not always reveal the full story, particularly when related to the specific themes of our research effort.

In order to get a good indication of what the data really means related to the various themes and research questions, grouping of the data for further analysis is often helpful.

Grouping of Data by "In" and "Out" groups

In the research results, we refer to two separate groups of respondents. These two groups are referred to as the "In" group (those within an organization who make global sourcing decisions) and the "Out" group (those external to the organization who offer advice and counsel on what businesses should consider when assessing global sourcing opportunities). The key reason for the inclusion of the "Out" group in the semi-structured interview process was to identify whether or not those who are entrusted with advising businesses (bankers, financial advisors, and economic development officers) have views similar to those who actually make decisions (global sourcing decision-makers), or whether they are somewhat disconnected from what we would consider to be the reality faced by the global sourcing practitioner. The hypothesis around this significant theme of this research, was whether or not these trusted advisors were in a position to offer valuable "real world" advise to clients, or not.

Below are the results of our analysis based on the grouping activities, both from the “In” and “Out” group formulations.

Goals and Objectives:

When asking about goals and objectives, respondents had indicated that the goals and objectives were primarily about lowering the organization’s cost structure (92% of respondents), followed by availability or delivery (28% of respondents) and then quality (20% of respondents, see Appendix 6-4). This indicated a strong picture that global sourcing practitioners are implementing global sourcing strategies primarily as a cost reduction exercise.

Further analysis of the data by “In” and “Out” groups confirms our understanding of global sourcing goals and objectives drawn from the individual factor data (See Appendices 6-17 and 6-18).

The “In” group respondents see cost reduction as a primary objective (93.3% of respondents), followed by availability (33.3% of respondents) and then quality (26.7% of respondents). The “Out” group similarly shows the lowering of costs as number one (90% of respondents), followed by availability (20% of respondents) and then quality (as well as other criteria) at 10% of respondents.

From the data collected, cost reduction is a major driving force behind global sourcing strategy, for both the “in” and “out” group respondents.

Volume and Type of Global Sourcing:

When attempting to understand the volume and type of global sourcing being practiced by Canadian businesses, we were interested in getting a feel for the degree that global sourcing has penetrated business’s procurement practices, and the emphasis or importance of these strategies to the overall success and/or viability of the businesses interviewed. With regards to type of global sourcing, our interest lies in whether or not most businesses are sourcing products, services, or both?

Responses by individual factor indicated that most respondents pegged their global sourcing activities at lower levels (36%), while some (24%) deemed these activities to be at a medium level. Only 16% of respondents felt their global sourcing activities were considered to be at a high level (See Appendix 6-5).

When grouping the data by “In” and “Out” group, we see similar results from the “In” group, with 53.3% seeing their global sourcing activities at the lower level, and 26.7% seeing them at the medium level. Only 13.3% of respondents from the “In” group felt their global sourcing activities could be described as a high percentage of their sourcing activities (see Appendix 6-19).

When examining the responses from the “Out” group, however, the low volume category had the least number of respondents at 10%, with the other two categories having an equal split at 20% each, possibly indicating that these business advisors are somewhat out of touch with the reality of global sourcing from a practitioner (see Appendix 6-20). It is also possible, however, that the individual clients specifically assigned to the business advisors interviewed are not representative of the population sampled in this study.

Given the information extracted from the interviews above, the indication from our research seems to be that most Canadian businesses still seem to be engaged in global sourcing activities at the lower level, where volume of sourcing is concerned. From a type perspective, our original analysis of data by individual factor indicated that most respondents (80%) were focused on products, while only 8% were engaged in the sourcing of services (see Appendix 6-6). The grouping of data by “In” or “Out” groups indicates similar results, with the majority of focus being on products (80% for “In” group, 80% for the “Out” group), leaving our conclusion drawn from the original raw data unchanged (see Appendices 6-21 and 6-22).

Decision-making Factors:

The determination of the decision-making factors that organization’s use when making global sourcing decisions is a central part of the research we are undertaking and is the main area that

we are attempting to understand. Our conclusions will be pivotal in the development of our global sourcing model.

When reviewing the information gathered from the semi-structured interview process by individual factor, the factor importance when making global sourcing decisions, based solely on number of respondents, indicated that Quality led the way, followed by Cost and then Lead time (See Appendix 6-7). We are also interested in how responses on decision-making factors aligns between respondents in the “In” and “Out” groups.

When examining the individual factors by “In” and “Out” groups, we see some differences between the groups (see Appendices 6-23 and 6-24). While the “In” group shows similar results to the individual factor data, with Quality leading the way (93.3%) followed by Cost and Total Lead time (80% each), the “Out” group indicates a more pronounced value place on cost in the decision-making process. Although this group still ranks Quality at number one based on number of respondents (90%), Cost is a close second (80%) with Total Lead time thought to play a lesser role (40%) tied with many other factors. This once again indicates a difference in the way actual practitioners view global sourcing decision-making as compared to the respondents in the advisory “Out” group.

It is important to point out, however, that the indications noted above from our data analysis on the importance of decision-making factors is ranked by the frequency of respondents for each item, leaving us to wonder how this picture might change if we specifically ask participants what is most important, second most important, and third most important to them in making global sourcing decisions. Furthermore, what would we learn if we analyzed these three categories into a weighted average factor for decision-making?

Most Important Factor:

When looking at the individual factor data related to the question on which factor did the respondent deem to be most important in the global sourcing decision-making process, Price was ranked number one by a reasonably large margin, with 48% of respondents identifying

Price to be the most important factor (see Appendix 6-8). Quality was ranked second at 32% of respondents, followed by Delivery in third place at 8% of respondents.

When we analyze this data by “In” and “Out” group however, we see a much different picture. Those in the “Out” group of advisors believe it is all about price, with 70% of respondents choosing Price as the number one factor (see Appendix 6-25). Quality only received a most important rating by 10% of respondents, and Delivery was not selected by any of the “Out” group respondents.

Alternatively, the “In” group of practitioners indicated Quality as the most important consideration (with 46.7% of respondents), followed by Price in second place chosen by 33.3% of respondents. Delivery shows up at number three selected by 13.3% of respondents (see Appendix 6-26).

This data clearly demonstrates a difference between the views of the “In” and “Out” groups with regards to how global sourcing decisions are made, and in reality, skews the results when looking solely at individual decision-making factors.

Second Most Important Factor:

Similar patterns are visible related to the question on what the second most important factor would be when making global sourcing decisions.

When viewing the data by Individual Factor All Participants, we see the Price/Cost argument lead the way with 28% of respondents, followed by Quality in second place at 24% and Lead Time in third at 12% respondents respectively (See Appendix 6-9).

When we analyze the data by “In” and “Out” group however, the “In” group sees both Quality and Price tied as second most important at 26.7% respondents each, with a whole range of other factors (six in total) falling behind Quality and Price (see Appendix 6-27).

The “Out” group on the other hand, views the Price/Cost argument as leading the way for second most important factor, with 30% of respondents, followed by Quality and Lead Time at 20% response rates each (see Appendix 6-28).

Third Most Important Factor:

When viewing the individual factor data related to the question on what the third most important factor is, Delivery led the way with 20% of respondents, followed by Cost with 16%, and Quality at 12% (see Appendix 6-10).

Once again however, there are differences noticeable when analyzing the data between the “In” and “Out” groups. The “In” group sees the third most important factor being Cost, followed by Delivery, and then Price and Vendor Reputation, with response rates of 26.7%, 20%, and 13.3% each (see Appendix 6-29).

Alternatively, the “Out” group ranks the third most important factor with Quality and Delivery tied for first with 20% response rates for each, followed by Brand or Reputation in third place with 10% respondents (see Appendix 6-30).

It is important to note that the responses for the second most important factor is highly influenced by what respondents thought the most important factor was. The same is true for the third most important data, being highly influenced by what was believed to be the most important and second most important factors, due to the interdependent nature of these questions. As a result, we have developed a weighted factor importance measurement in an effort to combine the data for all three questions, to see if our conclusions on factor importance would be influenced by this weighted factor analysis.

Weighted Factor Importance:

As mentioned above, when conducting the semi-structured interviews, participants were asked what the most important, second most important, and third most important factors were in making global sourcing decisions. The data was then weighted with a value of 3 for most important down to 1 for least important in an effort to give us a clearer perspective on the rankings, and possibly to lead us to stronger conclusions regarding how global sourcing decisions are made.

The weighted factor data for all participants indicates that the single most important factor given consideration is cost, followed by quality and then delivery. Cost is clearly the leader, with a weighted factor rating of 40.9%, compared to 28.5% for Quality and 14.6% for Delivery (see Appendix 6-31).

But when one divides the responses into “In” and “Out” groups, a different picture emerges. Those from the “In” group (the practitioners) indicate Quality as the most important factor (at a rating of 34.9%), closely followed by cost at 33.7% and then Delivery at 16.3% (see Appendix 6-32). The “Out” group alternatively remain as strong proponents that it is all about cost, with a weighted rating of 52.9%, with a huge gap between cost and the second and third weighted factors with Quality at 17.6% and Delivery at 11.8% (see Appendix 6-33). This supports the hypothesis that those in business advisory roles (banks, financial advisors, economic development officers) are somewhat disconnected from the real world, and how the business owners and supply chain practitioners actually think and make decisions.

Barriers to Global Sourcing:

When reviewing the data by Individual Factor with regards to the presence of barriers to global sourcing, 52% of respondents indicated the biggest barriers were risk and uncertainty (see Appendix 6-11). The next three biggest barriers were thought to be lack of internal capability, insufficient volume, and the presence of governmental factors, each at 36%. In total, 33 individual barriers were identified.

When analyzing this data by “In” and “Out” groups, some differences are noted, although both groups see risk and uncertainty as the biggest barrier to businesses going global. The “In” group had Risk and Uncertainty tied at number one with Governmental Factors, each with 46.7% of respondents, followed by Internal Capability, Culture, Language, and Company Policy each with 26.7% response rates (see Appendix 6-34).

On the other hand, the “Out” group rated Risk and Uncertainty tied at number one with Volume, at 60% response rates each, followed by Internal Capability and Cash Flow, with 50% respondents each (see Appendix 6-35).

Global Sourcing Issues and Supply Chain Performance:

When reviewing the data on Global Sourcing Issues by individual factor, 76% of respondents ranked Quality issues at the top of the list, followed by Delivery and Cost issues, at 60% and 52% respectively (see Appendix 6-12). This is a potential reason why cost may not be the primary consideration in the global sourcing decision-making process.

The “In” group indicates similar concerns over supply chain issues, although the gap between each of the three concerns is much tighter, with Quality and Delivery tied for top spot at 73.3% of respondents, followed by Cost with 66.7% of respondents (see Appendix 6-36).

The “Out” group, on the other hand, shows a clear distinction between the top three issues, with Quality in first place with 80% of respondents, followed by Delivery with 40% and Cost at 30% (see Appendix 6-37).

When asking about Global Supply Chain Performance, the data by Individual Factor indicates that 60% of respondents are meeting their global sourcing expectations, with 36% percent unhappy with the results they’ve achieved (see Appendix 6-13).

This large gap holds true if we look at the “In” group respondents at 66.7% and 33.3%. When looking at the “Out” group however, the gap closes significantly, with only 50% indicated meeting expectations, and 40% not meeting expectations (see Appendices 6-38 and 6-39). This once again could potentially be an indicator that the “Out” group business advisors may be somewhat disconnected with what is actually happening in the real business world, or possibly that these specific respondents deal with clients that lack the in-house expertise to be able to manage or mitigate the risks associated with a global sourcing strategy.

Risk Mitigation:

When looking at risk mitigation strategies from the data gathered by Individual Factor, the most popular methods of mitigating risk are the utilization of a second sourcing strategy and vendor visits/audits, mentioned by 28% of respondents each (see Appendix 6-14). The next most

common methods are the carrying of additional inventories, and product sampling programs, with 16% of respondents each.

The data changes little when analyzing it from an “In” and “Out” group perspective, primarily due to the fact that the “Out” group really didn’t have much of a feel for risk mitigation strategies of their practitioner clients. (see Appendices 6-40 and 6-41). Clearly from the practitioner group however, risk mitigation is something that is on the minds of the global sourcing practitioner.

Past and Future Trends in Global Sourcing:

The final questions asked during our semi-structured interviews dealt with past and future trends in global sourcing for businesses. What we were attempting as researchers to understand was if there has been any change over the past decade or two in how business views and executes on global sourcing activities, and what the respondents felt was likely to happen going forward over the next few decades.

When viewing the data by individual factor (see Appendix 6-15), it is clear that the majority feel that global sourcing activities, and the way they are approached today, is significantly different than what was done in the past, with 72% of respondents feeling there has been a significant change in approach, as indicated by the comment “It’s changed slightly because back then it was more focused on buying it cheaper, finding a better price. You didn’t look at all the other areas as much, you were just looking at a way to save money”.

This data is further supported when analyzing responses from an “In” and “Out” group perspective, although only 60% of the “In” group referred to the change, while 90% of the “Out” group felt that a change had occurred (see Appendices 6-42 and 6-43).

As far as the future goes, 56% of all respondents still feel that global sourcing will continue to grow, with only 24% seeing that a contraction in global sourcing is likely (see Appendix 6-16). 20% felt that global sourcing activities are likely to stay at existing levels. Similar views were indicated when analyzing the data between “In” and “Out” groups (see Appendices 6-44 and 6-45).

Semi-structured Interview Summary

The summary of the data from the semi-structured interviews supports the views found in the survey portion of our data collection when it comes to the importance of the variety of decision-making factors. The importance of quality as a primary concern is validated.

We also recognized, however, that the interviews included participants who were not supply chain practitioners but in fact business advisors. Although these advisors had little direct experience with making global sourcing decisions, these individuals had the potential of influencing practitioners in the decisions made through the global sourcing decision-making process.

The recognition of these two distinct groups added another dimension to this study. In reviewing the data from both the quantitative survey and the qualitative interviews, it became clear that a significant difference in the beliefs were present between the practitioner group and the business advisory group. The factors that the practitioner group deemed to be of utmost importance were in stark contrast to what was believed most relevant by the business advisors. In fact, some participants in the advisory group stated that much of their optic on global sourcing was opinion, often based on what they read, saw in the visual media, or heard from others. This is both a notable and unexpected finding, potentially indicating a disconnect between those who do, and those who advise those who do, when it comes to making global sourcing decisions. This finding suggests that further research may be warranted and could have potential significance in the design and role that economic development officers play moving forward.

Also worthy of note, is that although there is a disconnect between the practitioner group and the advisory group in the interviews, that there is alignment between the semi-structured interview practitioner group, and the responses from the respondents in the quantitative survey, who are also primarily supply chain practitioners. This gives some credibility to the views of the semi-structured interview practitioners and provides support for basing model factors on the views of these two participant groups, as opposed to the opinions of the business advisory group from the semi-structured interviews.

This finding is significant, given the resources typically allocated by governments to make these resources available to the business community, in an effort to bolster the domestic economy. If these resources are more theoretical, and somewhat disconnected from reality, governments may need to rethink their strategy with regards to support for domestic economic development.

The interviews also provided us with more breadth and depth of information related to global sourcing, as it allowed us to probe deeper into how the participants thought about global sourcing efforts. One great example of this is the direct question on what the most important factor is in the decision-making process. While the frequency of occurrences supported our data from the survey, this specific question demonstrated the difference between the two groups, with the “in” group indicating quality as most important, while the “out” group indicating price.

Major Themes Identified

As this research effort unfolded, several key themes emerged that are believed to be of interest to supply chain practitioners, and to our effort in developing a model for global sourcing. Some of these themes were hypothesized prior to embarking on the study, while others emerged over time as we gathered more information. In total, six major themes have emerged.

The first theme that was hypothesized prior to commencing this research, and in fact was a driving motivation for conducting this research, is that although cost reduction is indeed most often the overarching objective of a global sourcing strategy, other factors supersede cost in importance in the decision-making process. In other words, the decision on whether or not to source globally is often based on whether we can reach a cost reduction objective, but who we buy from, and from where we buy, is not primarily based on lowest cost but rather other factors deemed to be more important in the global sourcing decision-making process.

Secondly, when supply chain practitioners are conducting the overall evaluation of global sourcing initiatives, delivery and quality have grown in importance in the decision-making

process as opposed to price. In other words, the weight given to quality and delivery in the global sourcing decision-making process is higher than that given to price.

The third theme to emerge is the concept of risk and risk mitigation. This theme would suggest that supply chain practitioners are more concerned with managing risk, than simply lowering costs when pursuing global sourcing opportunities. Factors such as quality and delivery (as well as others) are potentially fraught with risk and are therefore elevated in the global sourcing decision-making process due to concern over their inherent risk. This would suggest that risk mitigation, and risk mitigation strategies, are a critical consideration for today's supply chain professional, and that the concept of risk and risk mitigation is a major factor in the global sourcing decision-making process.

A fourth theme to emerge as we began gathering data was the consideration that the actual state of any given factor is potentially not what is most important, but rather the supply chain practitioner's perception of that factor. So, using quality as an example, the actual quality performance of a given factory in a given country oftentimes may not influence the decision on whether or not to source from that country, but rather the supply chain practitioner's perception of the quality produced in that country. This is an important distinction, as oftentimes the media may portray a view of a country that is not always grounded in reality (Beamish & Bapuji, 2008). Therefore, if the global sourcing decision-maker is constantly hearing that China produces inferior quality goods, and if that decision-maker has no personal history or experience doing business in China themselves, they may forgo opportunities from vendors in China who produce exceptional quality product merely based on their preconceived notions about the quality of Chinese product.

Our fifth theme is based on the difference between the "In" and "Out" groups. For this research, we have defined the "In" group as those internal to the actual business, who are hands-on and actively involved in making global sourcing decisions. The participants in this study who form the "In" group are supply chain practitioners, business owners, and general business managers who actually make the global sourcing decisions for the business. The other group of participants, the "Out" group, is comprised of people external to the business, who are

not hands-on, and who do not make these decisions, but can potentially be highly influential in the global sourcing decision-making process. Participants in this study who we have defined as part of this “Out” group are economic development managers (primarily from government), bankers, and other financial advisors (such as accountants) who offer opinions and advice, but who do not necessarily have much real-world global sourcing experience. It is this “Out” group of participants who may be more influenced by media and perceptions, due to their limited personal experience in actual global sourcing activities.

Our research suggests that there is a difference in how the “Out” group participants view how global sourcing decisions are made, versus how they are actually made by the “In” group. In other words, those who are advising businesses on things like “best practice” may be providing advice that is inconsistent with the way successful supply chain practitioners actually make global sourcing decisions, do to being somewhat disconnected from reality.

The final theme to emerge from this research project is the relative importance of environmental and corporate social responsibility considerations, and their impact on the global sourcing decision-making process.

The media often reports on the trends towards environmentally conscious decisions, and “thinking green” more than any previous time in history; that we are concerned with the fate of our fellow man, and that social considerations such as those put forth by the fair-trade movement have resulted in a major shift in our business behaviours. That the “nearshoring revolution” has started, and that organizations will buy closer to home, simply as a means of reducing their organization’s carbon footprint, and their desire to be environmentally conscientious.

Although we may indeed be able to find evidence of such examples, our research data indicates that this is not necessarily the case in actual practice, which supports earlier research conducted by (Andersen & Skjoett-Larsen, 2009). While most people may want to do the right thing when it comes to corporate social responsibility considerations, there is an economic reality in business as well, and this economic reality trumps corporate social responsibility concerns in the decision-making process. In other words, when all things are equal, we may

more often than not make the more socially responsible decision. The problem being all things are rarely equal, resulting in corporate social responsibility factors being shown to be the least important factor in the global sourcing decision-making process.

Empirical Data Conclusion: What Does It All Mean?

This research has provided answers to the research questions of interest, as well as has uncovered some new ones. It has also provided some degree of support for the two hypotheses outlined at the beginning of this research engagement.

From a hypotheses perspective, the information supports the H1 hypothesis that the primary goal and objective of global sourcing is cost reduction, but that the decision-making process consider factors, other than cost, as most important.

The H2 hypothesis regarding perception being more important than reality, however, is only partially supported. This appears to be true when it comes to individuals who lack real “hands on” experience in global sourcing, whether they are part of the “Out” group of outside business advisors, or are individuals who may be part of the “In” group, but that do not have personal experience conducting global sourcing strategies themselves. These individuals are probably more susceptible to media reports and other second-hand information that have the potential to form inaccurate perceptions, that may not be grounded in reality.

When it comes to the “In” group, and people who have actual real-life experience, reality plays a much larger factor, as the reality has been experienced directly by the decision maker.

In summary, the following are the key take-aways from our analysis of the data:

Goals and Objectives:

From a goals and objectives point of view, the research data clearly supports the fact that the majority of individuals who undertake global sourcing strategies do so with the primary objective of reducing cost leading to a potential advantage over others in their industry. While there are other possible goals such as gaining access to products or technologies not available

domestically, or gaining access to new markets, these other objectives for sourcing globally are in the minority.

The above finding coincides with research conducted in 1994 that found that Global Sourcing strategy was focused primarily on cost concerns. Alguire, Frear and Metcalf (1994) went further to put forth that although this was the case, that firms would need to focus beyond cost in order to sustain global sourcing advantages into the future. As indicated from the results of our current study, global sourcing decision-makers have gone beyond cost from a decision-making factor point of view, although the primary goals and objectives for global sourcing remain unchanged, which is contrary to the 1994 findings of Alguire, Frear, and Metcalf.

How Decisions are Made:

Despite the fact that the overarching goals are founded in cost reduction, it is clear from the research that although cost is indeed an important factor, it is not the most important factor when deciding whether or not to source globally.

Factors such as quality and delivery are critical components of the global sourcing decision-making process, and in many cases, are a more important consideration than the cost/price argument. The research data suggests that in rank order of importance, the top three factors are quality, cost, and then delivery. Similar results related to quality being the most critical decision-maker factor was found by Handfield's 1994 research, "US global Sourcing – Patterns of Development". Handfield's (1994) study found that the number one criterion used to evaluate both domestic and foreign suppliers was quality.

Perception vs. Reality:

Our research also indicates that perception can play a critical part in whether or not global sourcing strategies are pursued and implemented, although this is demonstrated to be more likely with groups who have little hands-on experience in implementing global sourcing strategy.

When reviewing data from the “In” group as compared to the “Out” group, significant differences are apparent. We can also see that much of the opinion of the “Out” group tends to mimic what we see in the media; this is not so evident from the “In” group respondents.

While the “In” group clearly feels that cost is not the most critical decision-making factor in the global sourcing process, the “Out” group does not agree, and still primarily feel it is all about cost. It would appear that the lines between objectives and decision-making factors is more clearly defined in the practitioner group, but more blurred in those respondents tasked with providing advice to businesses with regards to global sourcing opportunities.

Research conducted during 2010 entitled “Countering Negative Country of Origin Effects” similarly explored the role of perception vs reality when marketing products sourced from offshore destinations (Chu et al. 2010). Although this study was focused on the marketing of products, and the potential impact that brand may have on consumer perception (i.e. negative country or origin effect), it found that consumer perception of products from certain countries did indeed impact buying behaviour. From our study’s point of view, these perceptions are more prevalent in the non-practitioner group of respondents (the “Out” group) and have potentially been overcome through practical experience in the practitioner “In” group.

Barriers and Risk Mitigation:

When analyzing the data on barriers to global sourcing, the element of supply chain risk is clearly identified as a major concern, as was found in the 2010 research of “Approaches to Managing Global Sourcing Risk” (Christopher et al. 2010). These risks may represent themselves in a variety of ways, from quality, delivery, or cost issues to also some of the “softer” criteria such as trust and cultural considerations. However, we define it, supply chain risk is clearly the largest barrier to the decision to execute on global sourcing opportunities.

To combat the increased amount of risk present in global sourcing activities as compared to dealing with domestic sources, a variety of risk mitigation strategies were identified, the largest being the use of secondary sources and vendor visits to help reduce potential risk to the organization. Handfield’s 1994 study mentioned above also found that firms participating in

global sourcing activities utilized the practice of secondary sources to a much greater extent than firms whose primary strategy was to source domestically, which is consistent with the findings from our study.

The carrying of extra inventories and the use of product sampling programs also ranked high in risk mitigation strategies in our study.

Global Sourcing Trends:

When asked about past and future trends in global sourcing, respondents clearly identified that global sourcing considerations have changed over the past few decades, and that the way global sourcing is practiced, and the factors given consideration, have indeed changed over time. What was once all about price, has now shifted towards risk, with quality and delivery being key considerations in who and where organizations buy from.

With regards to the future, despite the media attention given to “nearshoring” and the retraction of global sourcing as a key supply chain strategy, the majority of participants feel that global sourcing will continue to grow into the future. And for those who do not agree with this, they feel it is most likely to at least maintain current levels moving forward. It seems from the data gathered in this study, that the concept of a major retraction back towards the domestic marketplace is unlikely, at least for the foreseeable future.

Volume and Type of Global Sourcing:

Although it is clear that global sourcing presents itself as a significant opportunity for many businesses, the volume of global sourcing activity from an overall spend perspective still appears to be small, with most respondents describing their organization’s global sourcing activities at the lower levels from a volume perspective.

In addition to the global sourcing volumes being considered at the lower levels, it appears that the outsourcing of services still remains to be a small portion of global sourcing activities, with a focus on product being the primary driver of global sourcing purchases.

Global Sourcing Performance:

And finally, from a supply chain performance perspective, most participants who practice global sourcing feel they are meeting their expected goals.

Of those who are not meeting their goals, or those that are meeting their goals but experience some issues, product quality seems to be the biggest concern, followed by delivery or service interruptions, presumably due to longer supply chains with many more “touch points” than exist within the traditional domestic sources of supply.

Chapter 7: Introduction to the Model

Introduction

This research engagement began with the goal of developing and validating a current state model for global sourcing locations. The model developed would be utilized to understand shifting global conditions with regards to country of manufacture, and where opportunities might currently lie for the development of global sourcing supply chain strategies for domestic organizations looking to gain competitive advantage through purchasing offshore. The model would be utilized to anticipate which countries are the most likely to be attractive locations for global sourcing at present.

Over the past several decades, China has immersed as the “world’s manufacturer”, and has become the sourcing location of choice for many organizations throughout the world. Many of these sourcing organizations have become highly dependent on low-cost Chinese goods, and as a result, their supply chain strategies based on China sourcing are a major component in gaining and holding competitive position in the marketplace. In recent years however, China has been experiencing a steady rise in costs, primarily related to the increasing standard of living of their citizens, but also impacted by other manufacturing input costs. Since many businesses are dependent on low-cost Chinese manufacturing, the question of what the future holds for global sourcing opportunities is becoming increasingly important to the future of these businesses.

Although some research has previously been done with regards to international business, country competitiveness and global sourcing practices, and in some cases, models developed that deal with the competitive or comparative advantages of countries, no model currently exists that has future predictability as its sole focus, which is the intend of our future research once our current state model has been developed. In addition, the existing research has not created a model that considers that global sourcing advantages vary depending on the destination location, which is a relevant and important consideration for a model to have practical application for sourcing organizations. The model that is a result of this research endeavour will consider destination location considerations in the output from the model.

As an initial step, to be built upon in future research, this research involves the gathering of data that will fit with the overall end goal of predictability, but focuses on the development of a model that indicates where countries stand today (the current state) with regards to their relationship to each other as far as their value as an attractive global sourcing destination. Once this initial phase of the model has been developed and validated, future research efforts will focus on adding the predictability dimension of the model.

As a starting point, the first step in the development of our model was to determine which potential global sourcing decision-making factors need to be considered, what weight each factor holds in the decision-making process, and then to analyze these factors as to their relevance for inclusion in the model based on our research data. Our methodology of choice was to utilize a quantitative survey of supply chain practitioners to gather the relevant data, with the survey questions based on likely factors as indicated in previous research efforts done related to the factors affecting sourcing and vendor selection decisions (Min, 1994). This approach provided the opportunity to utilize previous findings which became the basis for determining the content of questions to be asked during both the survey and semi-structured interview stages of this current study. Our goal was to determine what factors supply chain practitioners consider when making the decision on whether or not to source globally, and on which countries to source from.

During the course of our data collection, the concept of global sourcing decision-making as an attempt to balance the two dimensions of risk versus reward was emerged, resulting in the decision to view each of the decision-making factors as they relate to either the potential for economic benefit (reward), or to the potential for increased organizational risk. During the data analysis stage, each individual factor was assigned to one of these two categories, allowing the model to consider the trade-off between risk and reward as a major fundamental component of the global sourcing decision-making process.

Tool Selection

Any investment decision requires the expectation of a reasonable return. These returns typically represent a trade-off between risk and reward; the higher the risk, the higher the

potential the reward required to justify the associated risk. It is through this lens that we embarked on the selection of a tool to be used that would appropriately represent the risk/reward trade-off.

When reviewing potential tools for representing our research output, and the model that would be available for use by supply chain practitioners, it was decided that a position map, indicating the relative position to each other of the various countries included in the study, would be an ideal means to graphically represent the risk/reward trade-off with regards to making decisions on which global sourcing locations indicated potential opportunity, given the purchasing organization's unique business challenges. Each country would be located on the map in relative position to each other with regards to where they scored on potential global sourcing risks versus their potential for economic gain.

Part of the reason for selecting a tool such as a position map to represent our model output was the simplicity of the output presentation for a process that is in fact quite complex. Decision-making inputs are fluid and are constantly changing. As well as fluid model inputs, risk tolerances differ significantly between sourcing organizations, as well as their unique business and industry requirements. Smaller organizations may be significantly impacted by relatively small levels of risk, with a high potential of their long-term viability threatened, should they make a purchase that does not meet expectations. Alternatively, larger multinational corporations would be minimally impacted by isolated global sourcing failures and are therefore likely more willing to engage in higher levels of risk in search of potential rewards.

The advantages available to global sourcing organizations also differ significantly depending on where the sourcing organization is geographically located. China may offer significant return on investment opportunities to sourcing companies located in Australia, but only moderate to those located in Canada, due to the much higher costs associated with ocean freight in shipping from China to destinations in Canada, particularly to the ports on the Atlantic coast.

Creating a model that is a finite "calculated index value" made little sense as there are too many variables, and a high degree of input variability limiting the usability of a model based on detailed calculated values. What was deemed to be a more practical solution in the creation of

a model was the ability to indicate where countries stood in proximity to each other, as indicated on a 2x2 position map considering each country's risk/reward trade-off. This type of model would involve data-driven results related to the individual country's relative location on the position map, indicating whether or not a particular country showed potential as a good fit for the sourcing company, and if so, what other potential considerations might need to be considered (such as the material being sourced, the industry the sourcing organization is in, and the organization's tolerance for risk) before executing a global sourcing strategy dependent on sourcing goods from the identified country.

Model Design

When designing this global sourcing model, we first considered what relevant factors would be included in the model, and then how these factors should be weighted with regards to their impact in the global sourcing decision-making process. Each factor also needed to be categorized as either contributing to risk or reward for the sourcing organization.

Factor Selection

This study, utilizing a mixed methods approach, is primarily based in qualitative research methodology. The research utilizes an explanatory sequential design, using quantitative survey data to determine what the relevant factors are, and then supporting the research findings with qualitative semi-structured interviews to add breadth and depth to our understanding of the relevant factors.

Supply chain practitioners who were members of the Supply Chain Management Association were chosen as potential survey participants for the quantitative survey, with the survey's primary role being to determine which factors should be considered for inclusion in the global sourcing model, and what each factor's relative weight in the global sourcing decision-making process should be.

The qualitative interview portion of our data collection involved study participants who were supply chain practitioners, as well as participants who were primarily in a business advisory capacity. It was decided that the supply chain practitioners from the survey were the most

relevant for factor identification, due to the tacit knowledge gained through hands-on global sourcing experience. The group of business advisors would possibly offer a slightly different perspective, leading to additional information of potential interest.

Much research has been conducted on the value of tacit knowledge, highlighting the value of the tacit knowledge gained from experience. Tacit knowledge has proven to be enormously valuable to organizations, although this knowledge is often difficult to communicate and transfer to others, and difficult to document for reference purposes (Leonard & Sensiper, 1998).

This research engagement and other research endeavours provides support for the value of tacit knowledge (Kuznetsov et al. 2016). This was the primary reason the decision was made to focus the development of this model based on responses from the quantitative survey, and to exclude the qualitative interview data in the factor determination process. The qualitative interview data would be later utilized to demonstrate a deeper understanding of the global sourcing process, through explanation of why global sourcing practitioners feel the way they do. It would also provide the opportunity to identify differences in how global sourcing practitioners and business advisors think, such as the apparent disconnect between those with actual global sourcing experience, and those without.

The results of the survey data gathered during the data collection process can be seen in Appendix 6-1.

This appendix depicts the twenty-seven decision-making factors listed in the quantitative survey, and the number of respondents that answered each question in each of the five Likert-type scale categories, ranging from never important to always important. A category weighting was then applied to each category allowing us to calculate a weighted score for each decision-making factor. The list was then sorted from the highest score to the lowest score, to identify the most relevant factors.

Once the list was sorted, all factors that scored below the median value were eliminated from consideration for the model, as they were deemed less important to the global sourcing

decision-making process. This reduced the number of potential factors from twenty-seven to nineteen, whose median scores landed in the usually important to always important categories.

When the survey was originally developed, the decision-making factors listed consisted of factors that were both country-level factors, and company-level factors. Since our end goal is to identify which countries have the highest potential to have a location advantage for future global sourcing activities, the company factors were of little value for the purpose of developing our model. The survey factors related primarily to company were also eliminated from model consideration, as listed below:

- **Lead Time Consistency:** the performance level of a vendor to produce and deliver product on time is primarily a factor of the ability of the vendor to meet commitments, as opposed to the country that the vendor operates in.
- **Supplier Reputation:** the reputation of a supplier from a supply chain performance standpoint is more associated with the particular supplier, than to the country the supplier operates in.
- **Liability considerations** are a primary consideration for some sourcing organizations, but not for others. As a result, this factor is more related to the sourcing organization, as opposed to the country where the product is sourced from.
- **Intellectual property rights** are an important consideration for some sourcing organizations, but not for others. As a result, this factor was considered more of a company factor, related to the sourcing organization, as opposed to related to the country the product is sourced from.
- Some companies feel the need to utilize intermediaries to support their global sourcing practices, potentially due to the industry they are in, but also due to lack of supply chain in-house expertise. This factor therefore was considered company-related, and not country-related, as it was more closely related to the sourcing organization.

- Some companies require the availability of financial instruments to support global sourcing purchases, often related to larger scale buys. This factor was therefore considered to be more related to the company doing the sourcing, or the specific industry the company operates in, as opposed to the country where the product is being sourced from.

The elimination of these six company factors reduced the potential factors for inclusion in the model from nineteen to thirteen.

One final adjustment was necessary in order to finalize our list of factors. This adjustment involved the subsequent elimination of two other factors, bringing the final list of model factors to eleven.

Total cost of ownership, although ranked high in the list of decision-making factors, is a “catch all” that is comprised of many different individual “sub-factors” related to cost. Total cost of ownership was therefore eliminated from the model as it was represented by other factors that make up total cost of ownership, namely transportation costs, cost of duty, and supplier labour cost.

The second factor considered for model elimination was border-related costs. The reason for the elimination of this factor is that it is primarily related to whether or not a company chooses to source globally, as opposed to from which country. These costs are realized when global sourcing is the selected supply chain strategy as opposed to domestic sourcing, but the actual costs incurred in relation to which country products are sourced from has little differentiation, and therefore would have minimal impact on the output of our model. This factor is more related to an individual company’s supply chain strategy with regards to global sourcing, than to which global country a company decides to source from. In addition, border-related costs tend to be minimal when compared to total cost of ownership.

The final list of eleven factors were then divided into two distinct groups, related to an economic opportunity or to the potential for increased organizational risk.

Factor Weighting

Secondary research was utilized to determine which category each of the eleven decision-making factors were to be assigned to (Min, 1993).

For the risk factors, the total ratings for all of the risk factors were calculated, and the percentage of the total risk that each individual factor made up was determined, as indicated below:

Environmental Factors	3.59	11.1%
Government Factors	3.71	11.6%
Political Stability	4.16	13.0%
Quality	4.79	14.9%
Infrastructure	3.87	12.1%
Total Lead Time	4.36	13.6%
Currency Stability	3.97	12.4%
Corporate Social Responsibility	3.65	11.3%
Total	32.10	100%

These percentages became the basis for the model in weighting the different decision-making factors with regards to the risk component of the decision. Within each factor, a rating method was used to differentiate between the various countries included in the model, then the individual country rating used to calculate the value that a particular country had earned with regards to their portion of the weighting outlined in the above structure (see Appendix 7-13).

For example, if a given country, based on their rating within the factor, was assigned a value of 80% for the factor currency stability, that country's overall performance related to risk would be assigned a value of 3.18 (80% of 3.97).

For cost, a different approach was required. Cost factors, as indicated in our data in the table in Appendix 7-1, indicates the relative percentage of each cost factor in relation to the overall value of cost factors from the survey, as indicated below:

Cost:

Cost of Duty	4.05	33.6%
Cost of Transportation	4.34	36.0%
Supply Labour Cost	3.66	30.4%
Total	12.05	100%

Simply utilizing these percentages, however, does not take into account the relative impact that each of these costs have on the total cost of ownership. We therefore needed to access secondary research data as a means of determining the individual impact on total cost of ownership for each of the factors listed above requiring a different approach to properly gauge their overall influence in the decision-making model.

A method for determining the relative impact of each factor with regards to total cost of ownership needed to be determined, and then the relative impact used to determine the overall percentage of economic opportunity each factor should be assigned.

For the Freight cost factor, a study conducted at the Port of Prince Rupert in British Columbia was utilized. This study evaluated the freight cost as a percentage of the cost of goods in the containers moved through this port over a twelve-month period (InterVistas Consulting Group, 2012). From the data gathered, it was determined that on average, ocean freight costs represented 23.9% of the value of the goods being transported. Since this data considered containerized goods from around the globe, resulting in a multitude of origin-destination pairs, we deemed this percentage relevant for the purposes of our current state model.

For the cost of duty, data published from World Bank database that determined the average cost of duty charged for product purchased from a variety of countries was utilized. When

taking the values from this study for each of our 29 countries considered for the model, an average overall duty rate of 4.6% was identified, and used as a cost component in our model.

Supplier labour cost involved utilizing information provided from a European study from CEEC (Bellak et al. 2006). The result of this particular study found that on average, the percentage of total unit cost of manufactured goods related to labour was 26.4% of the total cost.

The information above needed to be adjusted to determine the impact of each item on the total landed cost of goods. To accomplish this, the three percentages listed above were totalled, and then each individual factor considered as to what portion of that total they represented. This allows us to determine the impact of these three respective costs on the economic advantage component of our global sourcing model. The results of these calculations are:

• Transportation cost	23.9	43.5%
• Duty cost	4.6	8.4%
• Supplier Labour Cost	26.4	48.1%
Total	54.9	100%

Similar to the risk factors discussed above, these percentages then formed the basis for factor weighting for the economic driver factors in the model. Each individual country was ranked within each factor, and the weightings listed above applied to determine the value for each economic factor given to differentiate each country in this study.

The data related to cost can be found in Appendix 7-1.

Model Inputs

This model is an attempt to show the relative attractiveness of a variety of countries with regards to their potential as a global sourcing destination. The countries in this study will be

located on a position map as to their relative attractiveness compared with each other, given a specific destination for the product being shipped. As mentioned earlier, this relative attractiveness is based on a trade-off between risk to the sourcing organization and potential rewards.

Once the relevant decision-making factors were identified, including the weight each factor carries in the decision-making process, a model input was required to run the model and produce results. Given the substantial amount of secondary data available, it was decided that secondary research data would be a valid source to provide the necessary inputs to the model. The process of collecting and inputting these model inputs would then allow us to differentiate between the various countries with regards to their relative attractiveness as a global sourcing destination.

In the section that follows, we will review each model factor, and discuss the input data that was chosen to be utilized when calculating the relative attractiveness of the various countries represented in this model.

Economic Drivers:

First, we consider the reward portion of the decision-making trade-off, the economic drivers that represent potential gain for the sourcing organization. Our model has three main economic drivers, all related to total cost of ownership, namely freight cost, cost of duty, and supplier labour cost. For the purpose of demonstrating model results in this research, we used a sourcing destination of Halifax, Nova Scotia, Canada, and determined the model input values based on that particular sourcing destination.

The model inputs for these three economic drivers are outlined below:

Freight Cost:

Freight is a significant cost in total cost of ownership for goods being sourced globally, and therefore can be a differentiating factor for which country one chooses to source from. It is,

however, only one of the key factors making up total cost of ownership, so needs to be weighted versus the other relevant costs, namely the cost of duty and supplier labour cost.

To determine a data input for freight cost for our current state model, secondary data from the World Freight Rates Calculator was utilized (Worldfreightrates, 2018). This calculator was used to calculate freight rates between the various countries in this study, for shipments with a destination of the port of Halifax, Nova Scotia, the gateway to the Atlantic Canadian marketplace. For each country of origin, the port selected was deemed to be optimally located for shipment to Atlantic Canada (i.e., the closest port in proximity to shipping towards the Atlantic Coast of Canada).

The calculator allows the user to select the mode of shipping, the product type and the value being shipped. For our study, we selected standard 40' containers, shipping rubber and plastic products with a good value of \$40,000. Entering in different containerized products of differing values did not impact the freight calculations, since we were shipping full loads of containerized product, making choices of products and shipment values irrelevant to the model output.

The resulting calculated values for freight cost by origin can be found in Appendix 7-2.

Cost of Duty:

A second cost of significance to total cost of ownership are the duties and tariffs that must be paid when importing goods from a particular country. This model input is particularly challenging, not because of the different rates applied by governments to imports from various countries, but because it is based on product class, and is a complex system of measurement and determination, with a wide range of possible duty values (Moffatt, 2013).

As a means of differentiating between the countries in the model, countries were categorized into one of four distinct groups:

- Group A: This group of countries consists of those who have the lowest possible duty rates for their products, as a result of having entered into a free trade agreement with the destination country.

- Group B: This group of countries have the second lowest available duty rates for their product, due to their WTO designation as a Least Developed Nation.
- Group C: This group of countries do not have a free trade agreement with Canada, or are not designated as a Least Developed Nation, but are still able to achieve a reduction in import duties by being included in the list of countries who are subject to the WTO General Preferential Tariff. The countries included in this category receive lower levels of import duties (compared to Group D companies), primarily to help their economic development through global export opportunities. This list was recently revised, removing several countries from General Preferential Tariff treatment due to the fact that their level of economic development no longer warranted this type of preferential duty treatment
- Group D: This group of countries pay the highest levels of duty, under the Most Favoured Nations tariff treatment. Most Favoured Nations tariff treatment is part of an agreement with nations who sign on to be part of the World Trade Organization, and simply states that no nation who is part of the WTO will be treated any differently than other WTO nations. This principle is founded on a policy of non-discrimination amongst WTO member countries (WTO, 2014).

In order to determine which class of duty was relevant to each individual country in this study, a source document was located that indicated which class would apply to which country when importing into Canada (Canadian Customs Tariff, 2018).

The individual country ratings used in this study can be seen in Appendix 7-3.

Supplier Labour Cost:

The third and final economic driver considered for our model was the factor that most people believe to be the primary advantage of sourcing products globally, the low cost of labour.

Labour costs vary from country to country across the globe and are therefore a factor that has the potential to change dramatically as countries evolve economically from being a developing

nation to a developed nation. In fact, that is the primary reason why the need for this research was considered, although there were other cost factors in China seen as indications of a trend of increasing costs.

The data chosen for model input for the supplier labour cost component was taken from data provided by the Organisation for Economic Co-operations and Development (OECD), with the most recent complete data available being 2013 figures (OECD, 2013).

The method for utilizing this data as an input to the model was to compare the hourly labour rates for labour from the various countries in the model representing potential sourcing locations to the Canadian hourly labour values, from the same data set. Each country's relative labour rate was compared to the Canadian rate as a percentage, and then ranked from lowest to highest cost.

The country rankings can be seen in Appendix 7-4.

Supply Chain Risk Factors:

The second category that our decision-making trade-off considers is the potential risk to the sourcing organization should they decide to source globally from a given country. It is the comparison of the potential risks versus potential rewards that ultimately results in the decision to source or not, given other company-related factors such as organizational risk profile, and product and industry factors.

Our research uncovered eight potential risk factors deemed relevant by our study participants. These factors, outlined below, are considered to be the main risk factors leading to a decision on whether or not to source globally:

Environmental Factors:

Concerns over global warming and the impact that businesses have on the environment have been growing over the past decade or two and are now to the point where these concerns have the ability to have a significant impact on organization's supply chain practices. Environmental

concerns are frequently reported by the media, having a potential impact on organizational sourcing practices.

One frequently cited shift in global sourcing practices is the concept of nearshoring, which involves sourcing products closer to the end user location, considered to be advantageous to organizations attempting to shrink their carbon footprint, or levels of CO₂ emissions. Significant debate is ongoing as to whether this trend is indeed a trend for the long-term, or whether some specific short-term examples are being referred to and used to explain a trend that has not yet taken hold.

The secondary data selected for use as a model input for the environmental factor is the listing of total CO₂ emissions by country (TheGlobalEconomy, 2014).

When utilizing CO₂ emissions data, a choice had to be made whether or not to use per capita figures, or total CO₂ emissions. A true relative measure of performance is probably per capita data, but what is referenced most often by environmentalists, and publicized most in the media, are countries with the highest overall CO₂ levels. For this reason, total CO₂ emissions was decided upon as a model input.

The source data used as an input for the model was sourced online, which was based on data from Yale University as part of their Environmental Performance Index (TheGlobalEconomy, 2014).

The data used as the model input for environmental factors can be seen in Appendix 7-5.

Governmental Factors:

Conducting business internationally has many risks. One of the risks that our survey participants were concerned with is the risk related to governmental factors, such as the bureaucracy involved in moving goods across international borders.

These governmental factors may increase delays in processing shipments in to or out of a given country, leading to the inclusion of governmental factors as a risk factor in our model.

As a factor input for governmental factors, we utilized World Bank index data from their regulatory quality index. This index “captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development” (World Bank, 2014). This index is an indicator in how easy it is to adhere to government regulatory requirements, and bureaucratic processes, to expedite the smooth shipments of goods across the country’s borders.

The index values for this factor measurement were acquired online and was taken from the index produced by the World Bank (TheGlobalEconomy, 2014).

The index values used as a factor input for our model can be found in Appendix 7-6.

Other potential model inputs related to governmental factors could have been utilized, such as the data container in the Logistics Performance Index, published for the first time by the World Bank in 2014 (World Bank, 2018). Our selection of the regulatory quality index was believed to be the most applicable model input for the development of our current state model.

Political Stability:

A third factor closely related to risk that was deemed to be a concern by our survey participants is the political stability of the country in which the organization is sourcing from. This concern stems again from potential delivery interruptions, or changes in a vendor’s ability to deliver on their promises, as a result of the potential presence of political upheaval.

To capture concerns over risk to the supply chain as a result of the potential for political instability, we selected data that was available online, which was again based on source data from The World Bank (TheGlobalEconomy, 2014).

This particular index measures the likelihood that a country’s government will be “destabilized or overthrown by unconstitutional or violent means” (TheGlobalEconomy, 2014) and is therefore relevant to our model for global sourcing.

The results of this index for the countries we are interested in for this study can be found in Appendix 7-7.

Product Quality:

Another of the key risk factors that study participants indicated as a consideration for global sourcing decision-making was the quality of the product they were sourcing. What is important to recognize with respect to this factor, is the actual quality level being produced by a country is not as important as the participant's perception of the quality performance related to a country's exported products. Other research efforts have also commented on the role that perception can have on the making of global sourcing decisions (Carter et al. 2007).

As evidenced by our semi-structured interview data, many people who lack direct global sourcing experience base their decisions on what they see and hear from others, including what is published in the various media. Because these individuals lack the tacit knowledge to make solid fact-based decisions, their decisions are highly influenced by subjective accounts of global sourcing, including the perception of product quality.

Perception of quality in a country has been a subject of research for many years. Much of this centered on how perception of quality impacts brand perception, but also on quality perception based on the country the product was manufactured in (Chu et al. 2008; Statista, 2017). This latter research, and the index ratings that resulted, was of interest to us as a quality input for our current state model.

The "Made in Country" Index therefore became our quality input for our model. The various countries being compared received an index value, with Germany landing at the top of the list for perception of good product quality.

A detailed listing of the countries in the Statista study, and their respective Made in Country index values are listed in Appendix 7-8.

Infrastructure:

Another factor for consideration as potential risk when considering global sourcing opportunities is infrastructure development within a country. There may be great economic advantage to buying in a third world country, but if you are unable to get the product to the

port, and shipped to your location, the opportunity is potentially lost, or very difficult to execute on.

The World Economic Forum produces four separate indices related to infrastructure development as part of their Global Competitiveness Index; one for each of the main modes of transportations; road, rail, air, and port (TheGlobalEconomy. 2014). These indices are based on a survey conducted by the World Economic Forum, in which respondents indicated their feelings about the state of the various types of infrastructure in their country. For our model, we weighted each of these equally, to come up with an overall infrastructure index value, to be compared and ranked across the countries included in our model.

The index values used as a factor input for our model can be found in Appendix 7-9.

Similar to the comments in the section on governmental factors, the World Bank's Logistics Performance Index was another option to attempt to find a suitable model input for a country's infrastructure capability (World Bank, 2018). An analysis of the LPI's infrastructure data, in comparison to infrastructure metrics utilized from the Global Competitiveness Index outlined above, showed a high degree of similarity, giving us confidence in the model input we selected for use in our model (see Appendix 7-15).

Total Lead Time:

A sixth supply risk factor for model consideration based on the data from our survey respondents was total lead time. Although as mentioned previously, an argument can be made that total lead time is related to cost, with longer lead times resulting requiring extra safety stock, higher risk of scrap due to obsolescence, increased inventory carrying charges, and extra storage requirements. The responses obtained during the semi-structured interviews indicated that respondents primarily associated longer lead times with increased delivery risk, as indicated by the comment "the other thing would be delivery. Knowing that the product comes from China, or wherever in the world, you know it takes two months, so running out of product, and not having product when you need it" is an issue.

Lead time data, from various origin-destination pairs, was readily available from a variety of sources. For our purposes, we chose data published on a freight distances website, and used the distances provided to calculate ocean delivery times to the port of Halifax using published average rates of steaming by today's most common ocean-going vessels (Sea-distances, 2018).

The shipping port for each individual country was selected based on the most likely port at origin for product heading to the Atlantic Canadian marketplace (i.e., the shortest origin-destination shipping point, considered the destination being the port of Halifax, Nova Scotia).

The lead time data can be seen in Appendix 7-10.

Currency Volatility:

For those who choose to source products globally, the risk of sudden changes in foreign exchange rates poses a potential risk due to the uncertain nature of the stability of the currencies of some countries. If product is purchased and paid for at a given exchange rate, and the exchange rate shifts suddenly before the product can be utilized and resold, the potential for sudden cost increase and margin deterioration exists and can represent significant risk. As a result, the risk factor included in our model is the level of stability of each country's currency versus the US Dollar, which is the standard that foreign exchange markets are historically measured by.

It is important to note that for the purposes of our model, we were not concerned with the direction of the change, just the absolute value of variability, since rates tend to rise, and fall based on a variety of market factors. So, for our purposes, we are interested in whether or not the changes tend to be large (high volatility) or small (low volatility) for a certain country over time, with low levels of volatility indicating a more stable currency.

As data input for this factor, changes in exchange rates for the various countries in comparison with the US dollar were considered over the most recent twelve-month period, with the values being acquired from published currency data (TheGlobalEconomy, 2014). As mentioned above, the absolute value of the change was considered most relevant, so the direction of the change was ignored.

The data for currency stability can be seen in Appendix 7-11.

Corporate Social Responsibility:

Similar to concerns over the state of the global environment, much attention and concern over corporate social responsibility factors has garnered attention over the past decade or two. The reputational risk associated with media coverage over child labour, unsafe working conditions, and treatment of employees by firms in developing countries, can have a significant impact on the sourcing firm's public relations, as discovered by several global brands such as Nike and Kathy Lee Gifford (Forbes, 2010).

The source data used to rank the countries in reference to their performance with regards to corporate social responsibility concerns came from the CSRHUB's sustainability management tool. This tool aims to "provide consistent ratings of Corporate Social Responsibility (CSR) performance for as broad a range of companies as possible" (Csrhub, 2018). Although the measurements used by this tool are company specific, the data is summarized by country and geographic region as well, providing us with the opportunity to use this data as a model input.

The data used as our model input for corporate social responsibility can be seen in Appendix 7-12.

Model Input Calculations:

In the section above, we discussed the methodology for applying a weighting to each individual factor regarding their impact on the overall global sourcing decision-making process. After assigning each of the eleven decision-making factors to either the risk category or the reward category, the methodology reviewed above determined what the relative weight of each factor was in relation to either risk or reward.

Within each factor however, we needed a methodology to differentiate each of the twenty-nine countries in the model, regarding their performance related to the individual factor. The following is a description of the process used to determine that differentiation.

Cost Factors:

For the cost factors, two different methods were used to determine where the individual countries rank relative to each factor, and the respective factor weight that would be assigned.

For supplier labour cost and freight cost, a similar approach was used. The range of values for the twenty-nine countries was calculated, and then each country was identified as to where they sat on the range scale for the individual factor being considered. For ocean freight cost, the range of values was from zero dollars (Canada) to \$4515.22 (New Zealand), giving us a total range of \$4515.22. As an example, the Netherlands had a freight value of \$2494.91 (representing 55% of the range of freight cost), so a rating of .45 of the value of that factor weighting was applied. Canada would have received a rating of 1.00 of the value, while New Zealand received a rating of zero. A similar approach was applied to supplier labour cost.

For duty however, a different method was required. Tariffs and duties are calculated from a very complex list of tariff codes, and are specific to different product groups. It is very difficult to determine what any individual country will pay for on average for tariffs, as it depends on the product mix being imported; a consideration that goes beyond the function of our model.

Countries are differentiated, however, based on their level of economic development, and also on their trade relations status with the importing country, as indicated by trade agreements. As a result, these two factors allow us to place each of the twenty-nine countries in the model in one of four categories with regards to import duties coming into Canada:

- Category A: countries with a current free trade agreement with Canada, thereby being subject to the lowest possible import duties, often no duty to import
- Category B: countries listed in the WTO as least developed nation, resulting in the next lowest duty cost on imports
- Category C: countries listed under the General Preferential Tariff, resulting in higher duty costs than the least developed nations, but still receiving preferential tariff treatment

- Category D: all other countries subject to the Most Favoured Nations treatment as members of the WTO.

Determining the individual factor weighting for each country was a difficult challenge, as it was dependent on the specific products and industries that were exporting to Canada. A weighting system was then considered with a value of 1.0 being applied to the lowest duty category (Category A), .75 for Category B, .50 for Category C, and .25 for Category D.

Due to the subjective nature of the values assigned above, the model was recalculated using a specific HS code for the importation of plastic products from China to Canada. This product once carried a 3% duty rate coming into Canada under the least developed nations, but has recently moved to the General Preferential tariff, with a resulting duty rate of 6.5%. The model was re-run using a value of 1.0 for Category A, .98 for Category B, .90 for Category C, and zero for Category D. The resulting changes to the duty weights had little to no effect on the resulting country placements on the position map, indicating the low impact the subjectivity of the factor weighting values has on the validity of the model.

Risk Factors:

The calculating of country differentiation for the risk factors was a straightforward process and was done similarly to the method used for freight and labour costs. The range of values for each individual factor was determined, and then each individual country's position within the range calculated to determine the factor values applied for each country.

The calculations for country differentiation within each factor are listed in Appendix 7-13.

The Position Map

As mentioned previously in this chapter, the tool selected to present the results of the model output was a position map. The x-axis of the map represents the amount of supply chain risk associated with each individual country, while the y-axis representing the opportunity for reward or economic gain available to a sourcing company through sourcing from each of the countries represented on the map. The resulting map, consisting of four quadrants, represents

different levels and combinations with respect to the risk/reward trade-off, with the quadrant dividing lines representing the median values for either the risk or reward dimension.

The map output for the current state is shown below (also included in Appendix 7-14), based on the sourcing organization being located in Atlantic Canada, and goods shipped into Canada via the port of Halifax, Nova Scotia.



Quadrant 1 (Competitive Advantage) consists of countries in which the potential rewards for global sourcing are high, while the relative risks are low. This is the optimal situation when considering the risk/reward trade-off and would be considered high priority sourcing locations for most organizations, provided the products they are looking for are readily available in those specific countries. The current state results listed in the appendix indicates that three such opportunities are available to Atlantic Canadian companies, with those countries being Portugal, Poland and the United States.

Quadrant 2 (Competitive Necessity) consists of countries with high potential for economic gain, but the level of risk associated with doing business in these countries is considerable when compared to the location options from the Q1 quadrant. Companies who look to source from these countries are often in highly competitive industries, creating a willingness to forgo the associated risks in return for the potential advantages present from these sourcing locations. Because of the risk of doing business with these countries, sourcing organizations who implement a Q2 sourcing strategy are often larger organizations or organizations who have internal global sourcing expertise, resulting in risk profiles consistent with the inherent sourcing risk from Q2 sourcing locations.

Quadrant 2 consists of seven countries, namely Greece, India, Philippines, Brazil, Mexico, Turkey and China, with China representing the country with the highest associated risk.

Quadrant 3 (Risk Averse) consists of countries who have low risks associated with their sourcing points of origin, but also have low potential for reward. Companies with a Q3 sourcing strategy are in less competitive industries, where the increased cost of purchasing can be passed on to customers due to limited competitive pressures or are companies who have a very low risk profile, preventing them from sourcing from more advantageous global locations. This low risk profile can be due to a variety of reasons, such as the impact a failed sourcing experience could have on the sustainability of the business, or the lack of global sourcing expertise present in the organization.

The position map depicted in the appendix has a total of eighteen countries located in Quadrant 3, consisting primarily of European nations, in addition to South Korea, Singapore, New Zealand, Australia and Japan.

Quadrant 4 (Sole Sourced) consists of countries with both low potential for economic gains, and higher levels of risk. Companies who adopt a Q4 sourcing strategy do so as no other viable option exists. A great example of this type of sourcing strategy would be the sourcing of goods and services that are unique to the sourcing country, which cannot be bought elsewhere, resulting in a sole sourcing approach from a sourcing location perspective.

When the data is run for organization's sourcing from Atlantic Canada, one country is depicted in Quadrant 4 of our map, Argentina.

Model Calculations:

Earlier in this document we discussed model inputs, and where the source data for input to the model was sourced from. We must also mention here that the available data had a significant effect on which countries could be included in the model, as the data required for each of the eleven factors needed to be available for any given country, to be able to include the country in the model.

As we added the various source data requirements related to the individual factors of interest, the number of potential countries being included in the study was reduced, as not all data was available for all countries. Originally this was a cause of concern, with the total number of countries available for model inclusion being reduced to a total of twenty-nine. When the economic size of these twenty-nine countries was examined however, we found they represented 81% of the total world GDP, a significant percentage of the global economy.

Some disappointments were noted, however, such as countries of particular interest to our research outcomes, who many believe to be potential replacements for China as the world's manufacturer, not being included in the model due to lack of data. Vietnam is one such example. This provides an opportunity for future research efforts to expand the availability of data and the increase in the number of countries represented in the model.

Model Results

The results from running the current state of the model, based on a sourcing organization located in Atlantic Canada, can be seen in Appendix 7-14.

When reviewing the position map representing the output of our model, some interesting findings are evident. With regards to opportunity for economic advantage, the most attractive sourcing destination by far is Mexico, which also has a relatively low level of risk associated with

it. Not only does this indicate potential value and competitive advantage for sourcing organizations, it suggests support for the trend in nearshoring that is often mentioned in research and the media. Canada and the United States are two of the other countries (Quadrant 1) who are shown to have potential for economic gain, further support to the nearshoring argument. This nearshoring finding however is not necessarily due to environmental and corporate social responsibility concerns as many suggest but might simply be due to shifting cost structures between supplier labour cost and freight cost, making some offshore destinations no longer as attractive as they once were.

Mexico is a country that appears to have lost advantage in recent years, primarily as China elevated its status to the leading manufacturer for the world. The results in our study would indicate that the value gained from low-cost Chinese labour, a cost savings once significant enough to justify the freight cost associated with sourcing in China, may no longer be enough to warrant the risk associated with sourcing from this location. Although China still represents an opportunity for significant economic benefit according to the model, these benefits can only be realized through exposure to high levels of risk. China, located in Quadrant 2, is the country in our study with the most significant level of risk associated with global sourcing activities.

A second model finding that is somewhat of a surprise is the fact that China does impose the highest level of risk. One would think given the fact that they are the world's largest exporter, that this would be contrary to what most people would believe to be the case.

One potential explanation for this is that China performs poorly when it comes to the risks associate with environmental and corporate social responsibility. This may become more influential in the global sourcing decision-making process in years to come, but research has indicated that while there is much talk about the impact of the environment and corporate social responsibility on global sourcing, that in practice, companies are not yet using these sourcing criteria in any significant way (Lund-Thomsen, 2007).

The model also indicates that opportunities are present in Eastern Europe, with Turkey, Poland, and Greece indicating potential economic gain at reasonable levels of risk. If we combine this finding with the fact that many countries in Eastern Europe, such as Russia, were excluded from the model due to lack of availability of data, it is likely that many opportunities in Eastern Europe are beginning to emerge as highly probable locations for major sourcing advantages.

South America is unfortunately only represented by two countries in our model, namely Brazil and Argentina. Brazil is shown to have the potential for high economic gains at reasonable levels of risk, while the risk associated from doing business in Argentina does not appear to be worth the potential economic gains. How the rest of South America would be placed in the model, had the availability of data not prevented their inclusion in the model, is an area of interest for future research efforts.

And finally, the levels of risk associated with doing business in India, although placing them in Quadrant 2 presents a reasonable trade-off given the potential economic advantages that are present sourcing there, for organizations with the right risk profile.

Practical Application

The model developed as an output from our research is intended as a current state model of the relative attractiveness of countries from a global sourcing perspective. The anticipated finalized model will give sourcing organizations an early foothold in the identification of developing sourcing locations, and a potential advantage that may bolster their competitive edge in their respective marketplace.

We must recognize, however, that not all sourcing organizations are equal. Some have deep experience in global sourcing practices, with high levels of internal expertise able to drive ever-changing supply chain strategies, while others have no idea how to begin the investigative process into potential global sourcing opportunities. The organization's capacity and internal competency in embarking on global sourcing strategies is one factor in how, or if, they choose to practice global sourcing.

Risk profiles also differ dramatically between organizations. One container shipment of unacceptable quality, while definitely a cost to any sourcing organization, can prove significantly detrimental to some, risking the future viability of the sourcing organization. In other cases, the associated risk is of little concern, as it is considered a minimal cost as a percentage of total organizational spend, allowing those organizations to handle much higher levels of global sourcing risk in search of competitive advantage. The organization's risk profile is therefore another factor that potentially impacts the decision on whether or not an organization implements global sourcing strategies.

The location of the sourcing organization is another significant factor, which can dramatically change the model results as origin-destination pairs shift. This means that in some destination countries, the model results can be significantly different than in other destination countries (ex., China is much closer to Australia than to Canada, so the relative attractiveness of China may be significantly different for companies sourcing from Australia, as opposed to those sourcing from Canada).

The realities listed above indicates that the development of this model as a "live tool", which results in an assessment of the relative risks and economic opportunities of various countries depending on where the sourcing destination country is located, is a desirable objective for our research. The model does not output a "one size fits all, definitive answer" on potentially advantageous sourcing locations, but suggests where opportunities may be found, depending on the sourcing organizations location, tolerance for risk, product purchased, industry competitiveness, and other relevant factors.

As an example, a company located in Germany may run the model, and find that there are significant economic opportunities to be had in sourcing from India. The sourcing organization would then need to assess their tolerance for the associated risks in sourcing there and make decisions based on where India falls on the position map with regards to relative risk versus other potential sourcing origins. As well, the sourcing company would need to consider the industry they are in, and the types of products they buy, and whether or not India makes these products for export. Are there other industry factors that would prevent a German company

from sourcing in India, such as defence contract requirements, or tight tolerance levels unable to be produced by Indian factories?

Only after weighing the specific industry and company considerations, would the sourcing organization be in a position to choose from the countries shown on the position map with regards to what opportunities they might potentially take advantage of from a sourcing location perspective depending on their individual organizational risk/reward profile.

As a result of these and other considerations, German firms utilizing the same model output could in fact make different sourcing location decisions, based on their unique situation, yet all still gaining value from the utilization of the model.

Chapter Summary

Representing the “most likely” future locations for global sourcing activities in the form of a position map, in which the countries included in the model can be compared with each other in terms of potential economic advantage versus potential risk, is a valuable way to represent our research findings. It provides relevant information for global sourcing supply chain practitioners to consider when designing or re-designing their global supply chains.

Another potential method for representation would have been to come up with some form of calculated index value. This approach was deemed of little value, since there are so many factors at the product, company, and industry level that potentially impact these decisions. To come up with some form of perceived “highly accurate, quantitative index score” was deemed not a reasonable solution for the purposes we have identified as our end research goal.

The model presented here will be useful in providing potential location opportunities to be considered while also considering specific product, company, and industry information as well. In terms of application, an organization may first consider their level of risk tolerance, the market competitiveness profile they operate in, as well as where raw materials or products may or may not be available and select the countries which are the most likely to maximize the risk/reward trade-off for them, given all of the factors to be considered.

This model is not intended to give an “absolute location decision” for all organizations, but to guide organizations towards the most likely candidates that suit their individual supply chain needs.

We must also recognize that the results of the model will be different, depending on the global destination of the sourced goods. In some parts of the world, the countries in the European Union may be a more viable source than for other parts of the world, possibly due to the presence of free trade agreements, or the proximity of the EU to the destination country. In fact, there are likely differences between separate parts of the same destination country, if the country is large enough, such as the benefits of China sourcing to the west coast of Canada versus the east coast, due to dramatically different shipment lead times and freight costs.

Phase 1 of this model is an ideal starting point for future research which may be aimed at including additional nations in the data set, as well as the use of time series information for each of the input criteria in order to add a predictability dimension to the model. Over time, the amount of time series data available will increase, which will further enhance the model output to the benefit of model users. In addition, dimensions related to product, company, and industry may then be considered to expand the value derived from the model output for supply chain practitioners,

Chapter 8: Model Validation

Introduction

This research engagement utilizes a mixed methods research methodology, with the theoretical underpinnings based on an explanatory sequential design. This methodology and research design allowed for us to identify, based on a quantitative survey, what the major global sourcing decision-making factors are, and to then explain why this is the case through a series of qualitative semi-structured interviews.

Although this methodology is considered a mixed methods approach, much of our emphasis and analysis is focused on the qualitative portion of the data collection, as our end goal or objective is to understand why sourcing decision-makers make the decisions they make with regards to global sourcing opportunities.

Our efforts in the following chapter with regards to assessing the validity and reliability of our findings are therefore highly influenced by the qualitative methodological approach to research. As such, terms like validity and reliability have been replaced with concepts such as trustworthiness, consistency, credibility, and dependability. This focus on alternate terminology is not something unique to our research but is consistent with the evolution of qualitative methodology that has occurred over the last several decades. Our goal in this chapter then, is not to prove validity and reliability in the statistical sense, but to demonstrate trustworthiness in our research findings based on the methodological and interpretive rigor utilized throughout our research process. Our end goal being to demonstrate that the results of our efforts are findings that we deem to be “sufficiently authentic” (Merriam & Tisdell, 2016).

In order to demonstrate the above-mentioned trustworthiness, credibility and dependability, a variety of methods will be utilized, all of which are widely accepted approaches to support the credibility and dependability of research findings where a qualitative methodological approach is the primary component of data collection and analysis.

Validation Process

As an approach to our research validation efforts, we will utilize three accepted methods of assessment with regards to establishing the trustworthiness, dependability, and credibility of our research findings.

First, we utilize triangulation through the comparison of the data collected during our quantitative survey, as well as the data collection from our semi-structured interviews. By using this approach, we are able to identify the similarities and differences in responses, which is an indication of the trustworthiness of the research findings. In our case, the use of triangulation is utilized to compare the relevant factors and importance between the quantitative surveys and the qualitative interviews. We are also able to compare other data of interest between the practitioner group and the advisory group, both which were respondents to the semi-structured interview process. This allows us to make comparisons between three separate data sets (qualitative practitioners, qualitative advisors, and quantitative practitioners) where possible.

As a second means of determining the trustworthiness, credibility, and dependability of our research findings, we will utilize member checks in which our findings will be presented to a sample of participants to determine whether or not these findings make sense, or resonate, with the respective participants. Utilizing member checks will allow us to determine if the participants agree with the findings presented, why or why not, and any other additional comments they would like to share on each of the findings presented.

Member checks are one approach to determining trustworthiness, credibility, and dependability of findings from qualitative data, and is a method we will use by sampling a portion of respondents from our semi-structured qualitative interview data collection efforts.

The third approach we will utilize in assessing the trustworthiness, credibility, and dependability of our research findings is to demonstrate saturation in the data collected from our semi-structured interviews. By demonstrating saturation, we are able to show that the sample size used in the semi-structured interview process was appropriate to identify research

findings that are credible, and that having completed the twenty-five interviews, no major new information was being uncovered. This approach is a means to ensure that our interview sample size was sufficient to draw our research conclusions on.

Main Findings to be Validated

Before discussing the specific findings from our research, we recognize that the findings from our quantitative survey covered less breadth and depth as compared to our semi-structured qualitative interviews. As a result, the findings from the two data collection methods have some commonality, but also differences, since the breadth and depth, and therefore the number of findings, were larger from the interview portion of our data collection efforts. For this reason, much of our efforts to determine trustworthiness, credibility, and dependability are focused on the qualitative portion of our data collection and analysis, namely the semi-structured interview data.

Survey Findings:

The findings from our survey focused on the degree of decision-making importance with regards to global sourcing of each of twenty-seven items included in our research questionnaire. Each item was ranked in importance on a five-point Likert-like scale.

From the respondent answers, we were then able to calculate a weighted average measurement for each of the items, and then to rank the items in order of importance in the global sourcing decision-making process. As mentioned in the chapter on data analysis, some of the twenty-seven items were excluded from the final findings, for a variety of reasons, such as the items applicability to making location decisions (as opposed to vendor decisions), the degree of importance they held, or the ability to differentiate locations based on the factor in question. In the end, the final list of global sourcing decision-making factors used when making location decisions on where to source from, contained a total of eleven factors. The data for these eleven factors, rank-ordered, is shown in Appendix 6-2.

As indicated in this appendix, the following findings from the survey are considered noteworthy:

- The top three factors, in order of importance, are product quality, total lead time, and transportation cost
- The factors listed above would indicate that cost, which was once considered to be the dominant decision-making factor, although significant, is no longer the most important consideration
- When considering all of the factors in the top half of the list, they appear to be dominated by factors associated with risk, and therefore the concept of risk appears to be a critical one in the global sourcing decision-making process
- An item considered to be a major cost advantage with making global sourcing decisions, supplier labour cost, is located well down the list, as the ninth most important item
- Corporate social responsibility, and environmental considerations, appear at the bottom of the list, suggesting that they are not yet a major component in the global sourcing decision-making process

These findings support our original hypothesis that while cost factors are important to the global sourcing decision-maker, that they are no longer the most important decision-making factor. In addition, they would suggest that while we see highly publicized discussions on the importance of global warming, environmental concerns, and corporate social responsibility issues in the media, that the desire by many to demonstrate good corporate citizenship has yet to impact the global sourcing decision-making process in any significant way, which supports research previously conducted by others (Lund-Thomsen, 2007).

Interview Findings:

When analyzing the data collected from our semi-structured interviews, it became readily apparent that two distinct groups of participants, namely the practitioners and the advisors, had differing views on what factors were important when making global sourcing decisions. This finding is of significant interest, and could have major ramifications on how advisors, including government economic development agencies, work in the future. This differentiation

in perspective means that when discussing the findings outlined below, we will, in some cases, need to differentiate between the thoughts and beliefs put forth by the two distinct groups.

The following findings from the interview data are considered noteworthy:

- The main objective or purpose of conducting global sourcing activities is primarily an effort to reduce cost
- Although a primary objective, cost is no longer the primary decision-making factor, as risk considerations dominate the global sourcing decision-making process
- Corporate social responsibility considerations, including environmental factors, are not yet having an impact on the global sourcing decisions made by participants
- Cultural factors (cultural customs and traditions) are ranked low in global sourcing decision-making importance
- There is a significant difference between what the advisory group believed to be important in making global sourcing decisions, and what the practitioner group believed was important
- Most global sourcing practitioners are sourcing products, not services
- Global sourcing represents a small portion of the overall spend for the respondents
- The primary barrier to global sourcing for participants was risk and uncertainty
- The biggest issue that global sourcing practitioners experience is related to quality issues, followed by delivery issues, and then cost issues
- The majority of those participating in global sourcing find that they are meeting their expectations with regards to their global sourcing activities
- As a means of mitigating risk associated with global sourcing, the primary risk mitigating activities are vendor visits, ensuring a secondary source of supply, and product sampling.

- The way we make global sourcing decisions today is different from the past; the importance of specific decision-making factors has changed over time
- The volume of global sourcing activities is still increasing and will likely continue to increase in the future

Validation Through Triangulation:

One method to assess the trustworthiness, credibility and dependability of our research findings is the congruence, or lack of congruence, between the data collected in the quantitative survey, and that collected by means of semi-structured interviews. Although the semi-structured interviews contain a wider range of data, the core findings with regards to what factors are considered when making global sourcing decisions, and the relative importance of each are common to both data sets, which allows for comparisons to be made. As also mentioned above, we may, in some cases, need to consider differences that exist between the two distinct groups within the interview data set, namely the practitioner group and the advisory group.

When considering the data analyzed as a result of this research, and the overarching findings that we conclude from this research, there are a total of thirteen main findings we deem of interest. Below we discuss these thirteen findings, with regards to the similarities and differences between the interview participants (both the practitioner group and the advisory group), and the survey participants.

It is also important for us to recognize that the survey participants consist of respondents that are primarily practitioners, so finding differences between the survey findings and what was found with the advisory group from the semi-structured interviews does not necessarily indicate that our overall research findings lack trustworthiness, credibility, or dependability. Just as we found differences between the interview practitioner group and the interview advisory group, we would expect to find similar differences between the survey participants and the interview advisory group, since both of these groups, based on our findings from the interview data sets, likely have a different perspective on global sourcing practices.

Alternatively, we are most interested in the congruence, or lack thereof, between the interview practitioner group, and what the survey participants, who are also practitioners, with regards to the importance of the various potential global sourcing decision-making factors. Differences between these groups could potentially indicate issues with the trustworthiness, credibility, and dependability of our research findings, while similarities would bolster the perceived trustworthiness, credibility, and dependability of our research findings.

The results of the application of our triangulation approach by research finding are outlined below:

Finding #1: The primary reason why participants choose to source products globally is to reduce cost.

When reviewing the data, our research finds a high level of congruence between the interview practitioner group and the interview advisory group with regards to why participants consider global sourcing to be a potentially viable strategy when it comes to organizational sourcing strategy. Both groups indicate that the primary objective in most cases is to reduce cost.

This finding was not a surprise finding from our research, since global sourcing strategy has inherent risks that are not present to the same degree from domestic sourcing practices. It would make sense that in order for organizations to take on the increased level of risk, there needs to be a return, which as indicated by our interview participants, is the potential for a financial reward. As indicated by some interview participants, there are situations in which the benefits can be related to excellence in quality, or in product availability, but those cases appear to be the exception rather than the rule, as indicated by the research data we collected.

Finding #2: When making decisions on whether or not to source products globally, cost is not the primary decision-making factor. Participants are more concerned with factors related to risk.

Many people believe that global sourcing is all about lowering cost, which our findings detailed above with regards to the overall objective of global sourcing strategy, supports. Confusion appears to exist however, between the objective of global sourcing (cost reduction) and global

sourcing decision-making factors (i.e., how we actually make global sourcing decisions). This confusion was evident when conducting our semi-structured interviews. In some cases, participants were discussing cost reduction as a primary decision-making factor, yet when responding to follow up questions asked by the researcher to probe for understanding, often shifted to discussing goals and objectives, as opposed to decision-making factors. When we analyze the data specifically around decision-making factors, lowering of price/cost did not top the list.

The findings from our interview practitioner group ranked quality as the primary decision-making factor, followed by cost and then lead time, although these other two criteria actually had identical scores, so could be considered interchangeable at number 2 and number 3. When looking at the results from the practitioner advisory group, cost was a clear number 2, and only slightly behind quality at number 1. Delivery as a decision-making criterion fell to a distant third, indicating some differences in the perception of how global sourcing decisions are made from the point of view of those who “do”, and those who “advise”.

When analyzing the data from the quantitative survey, quality was clearly ranked number one, followed by delivery and then transportation cost, a significant contributor to overall total cost of ownership.

When considering all three data groups, lowering of cost, while definitively the overall goal or objective, is not the primary decision-making factor, but rather risk factors such as product quality and delivery are of primary importance. These results also demonstrate that there is a difference in the perceptions about global sourcing decision-making between practitioners and advisors.

Finding #3: Corporate Social Responsibility factors, and factors related to the environment, are not yet having an impact on the global sourcing decisions being made by participants

When considering corporate social responsibility factors when discussing global sourcing decision-making, the survey respondents clearly indicated that these factors were not a

consideration in making global sourcing decisions, with factors related to the environment and corporate social responsibility ranking at the bottom of the eleven decision-making factors.

It is important to note, however, that factors from the survey scoring below the median when looking at the weighted average calculation of each individual factor, were excluded. This means that environment and corporate social responsibility factors were deemed to be somewhat important, but the least important of all of the factors considered when making global sourcing decisions.

Similarly, in the two interview groups, corporate social responsibility and environmental considerations were far from the top of the list with regards to important decision-making factors but did rank in the middle of the list of the wide range of factors considered when making global sourcing decisions. It is important to note that these rankings were formulated based on the frequency that each factor was brought up in the interviews, and also that when specifically asked for the top three factors of importance, corporate social responsibility and environmental factors were not raised as a consideration.

Our findings with regards to the importance of corporate social responsibility and environmental considerations when making global sourcing decisions appears to support previous research that indicates that while many talk about the importance of these issues, that in actual practice, they have yet to influence sourcing decision-making processes in any significant way (Lund-Thomsen, 2007).

Finding #4: Cultural factors (cultural customs and traditions) ranked low in global sourcing decision-making importance

We often hear people speak of the importance of cultural traditions when doing business globally and across different cultures, and how cultural traditions such as gift giving or ritualistic practices, if not carefully understood and adhered to, can be a deal breaker when doing business internationally.

While there are likely benefits to understanding cultural differences amongst parties, our data from both groups participating in the semi-structured interviews failed to raise this factor as relevant when making global-sourcing decisions.

In the data from survey respondents, culture was brought up as a factor, but potentially because it was one of the twenty-seven questions specifically asked with regards to global sourcing decision-making factors. If the quantitative survey questionnaire had alternatively been open-ended questions, we do not know if this factor would have been raised. Despite the fact that this potential factor was included as a survey question however, cultural factors ranked dead last in the list of twenty-seven factors and was therefore excluded with the other factors that fell below the median value of ranked global sourcing decision-making factors.

These results support that there is a high level of congruence between all three data sets as to the lack of importance of cultural factors when making global sourcing decisions, and supports the finding that cultural factors do not impact the decisions made on what locations a sourcing organization may decide to source products from.

Finding #5: There is a significant difference in what factors the advisory group felt was important when making global sourcing decisions, and what the practitioner group felt was important when making global sourcing decisions

There are two methods utilized in this research when considering the importance of global sourcing decision-making factors, and their relative weights in the decision-making process, based on the responses from the interview respondents. One method is to consider the frequency that potential factors were referred to by respondents; the other, asking direct questions related to the most important, second most important, and third most important factors, and then calculating a weighted average relative importance score. This research utilized both of these methods.

Utilizing the first method of frequency of responses, there was a difference noted in the frequency of responses between the practitioner and advisory groups, although the difference appears to be minimal. The practitioner group responses indicated that quality was mentioned

as the most important factor based on frequency (with 14), slightly ahead of both cost and lead time (both with 12) who were tied in second place. In the advisory group, quality was also ranked first (with 9 mentions) with cost being a close second (with 8), followed by delivery as a distant third (with 4), tied with several other factors in third place (see Appendices 6-23 and 6-24).

A more noticeable difference is seen, however, when utilizing our second method, a weighted average score based on responses when asked directly about the importance of global sourcing decision-making factors. The respondents were asked what the most important, second most important, and third most important factors were in making global sourcing decisions. Each subsequent question is dependent on the answers to the previous questions, so we chose to calculate a weighted average of these three responses, with a value of three being assigned to most important, two to second most important, and one to third most important. After applying these weightings, we were able to calculate a final score for each factor, and then rank order them as to their level of importance in the global sourcing decision-making process.

The weighted average scores for the practitioner group indicates once again that quality is the primary consideration (with a weighted average score of 30) followed closely by cost (with a weighted average score of 29). Delivery shows up at a distant third (with a weighted average score of 14). The results of this analysis is shown in Appendix 6-32

A different picture emerges however when we consider the responses from the advisory group. This group saw cost as a primary decision-making factor (with a weighted average score of 27) with both quality (with a weighted average score of 9) and lead time (with a weighted average score of 6) much less important when making global sourcing decisions (see Appendix 6-33). This finding is significant, as it indicates a potential disconnect between those who do (the practitioner group) and those who advise (the advisory group) when considering how global sourcing decisions are actually made.

Since this finding is unique to our two data sets in the interview portion of our research data collection, we can only compare the results from the practitioner and advisory groups participated in the interviews. It is not possible to make any comparison to the quantitative

survey data, since survey participants were not asked directly for the most important, second most important, and third most important factors.

Finding #6: Most practitioners who are sourcing globally are sourcing products, not services

There has been much discussion in the media in recent years regarding domestic companies moving work abroad. Some of these discussion focus on manufacturing facilities who are now either outsourcing components as a result of sourcing from manufacturers abroad, or from investing in opening facilities in other countries in an effort to reduce cost and protect or increase margins.

There is also, however, significant discussion regarding the service sector, detailing examples of the many service jobs, such as customer service support, being outsourced to call centers in countries abroad, such as India. These published media reports suggesting a trend or shift in service outsourcing led us to question interview participants as to whether they were currently sourcing products or services from global suppliers.

Both the practitioner and advisory groups in our semi-structured interviews showed overwhelmingly (80%) that global sourcing activities were focused predominantly on product sourcing, indicating that the sourcing of products still dominates the global sourcing activities of our study respondents (see Appendix 6-6).

Once again, since this finding is unique to our two data sets in the interview portion of our research data collection, we can only compare the results from the participant and advisory groups who participated in the interviews. It is not possible to make any comparison to the quantitative survey data, since no question was included in the survey related to whether or not respondents were sourcing products or services globally.

Finding #7: Global sourcing purchases represents a small portion of overall spend for those practitioners who source products globally (i.e., it is not the majority of their purchases)

When asked if the volume of global sourcing represented a small, medium, or large portion of the organization's overall spend, interview respondents indicated that 60% of global sourcing is

in the small to medium range of sourcing activities, with 36% stating global sourcing activities were at a low volume, and 24% stating a medium volume. Only 16% of respondents replied that they felt global sourcing activities were at a high volume, with 24% of respondents unable to answer the question (see Appendix 6-5).

When we look at the data between the practitioner and advisory groups, we see a significant gap between the groups with regards to their categorical responses. The most significant difference is that 50% of advisory group interview participants felt they were not equipped to answer the question. The remaining participants indicated that 10% of advisory group participants felt global sourcing was at a low level, with 20% stating it was at a medium, and 20% stating it was at a high level (see Appendix 6-20).

The data from the practitioner group alternatively indicated that over half of the participants (53.3%) indicated that global sourcing activities represented only a small portion of their overall spend, with another 26.7% stating it was at a medium level (see Appendix 6-19).

The data related to this finding supports that most organizations, based on our interview participant responses, are conducting global sourcing on a small portion of their organizational spend activities. The data also supports our finding that there is a difference in the perception on global sourcing decision-making factors between the participant and advisory groups.

Similarly, to the previous item, It is not possible to make comparisons between the interview participant responses and the survey data, since this question was unique to our interview research respondents, and was not included in the quantitative questionnaire distributed as part of our survey.

Finding #8: The primary barrier to global sourcing is risk and uncertainty

When conducting our research, we were interested not only in why some choose to source products globally, but in why some participants might opt to continue to source through domestic supply chain partners. This led us to the desire to gather data related to what participant's felt were barriers to them participating in global sourcing strategies.

For those who participated in the semi-structured interviews, risk and uncertainty, in both the participant and advisory groups, topped the list. Other significant factors were internal capability to execute on global sourcing initiatives, the volume of purchases made by the sourcing organization, and governmental factors in dealing with foreign governments (see Appendix 6-11). Over half of all participants (52%) stated the biggest issue was related to risk and uncertainty, which supports both the survey and interview findings which indicated the importance of risk factors in the global sourcing decision-making process.

There were also some differences noted between the practitioner and advisory groups, although they appear to be somewhat minimal. The participants saw risk and uncertainty, as well as government factors being the biggest barriers, while the advisory group, although in agreement with risk and uncertainty at number one, felt volume was a bigger barrier than governmental considerations (see Appendices 6-34 and 6-35). The main take-away from the data on barriers to global sourcing is that risk and uncertainty play a significant role in global sourcing decision-making, as opposed to being purely an exercise about cost. The data also again provides support to the gap in global sourcing decision-making perception between the practitioner and advisory groups participating in the semi-structured interviews.

Finding #9: The biggest issue that global sourcing practitioners experience is related to quality issues, followed by delivery issues, and then cost issues

With regards to issues experienced by global sourcing organizations, we again turn to the semi-structured interview participants to analyze responses, as questions related to global sourcing issues were not part of the quantitative survey. We are therefore only able to compare results on global sourcing issues between the two data sets from the semi-structured interview portion of our data collection efforts.

Overall, interview participants indicated that product quality is the number one issue they encountered (76% of respondents) followed by delivery issues (60% of respondents). Issues with cost ranked third, as indicated by 52% of respondents (see Appendix 6-12).

Comments made during the interviews indicated cost issues were often related to the fact that some organizations participate in global sourcing strategies without a true understanding of the costs involved, with the resulting total costs of ownership being higher than anticipated when originally evaluating the global sourcing opportunity. They therefore find that they are not benefiting to the degree expected when global sourcing strategies are in place, as suggested by the comment “all of a sudden getting hit with extra duties, that they didn’t anticipate, or extra costs”. The other item brought up during the interviews was the concept of price creep, or price increases that occur, sometimes due to the increased length of time involved in the sourcing process, that is directly attributable to global sourcing activities. As one respondent commented, “definitely the prices are going up in China. I mean the cost of labour, the exchange rate, just their whole way that China sees themselves, they’re no longer necessarily looking to be strictly cost competitive”.

When comparing the responses between the practitioner and advisory groups, both groups mentioned that quality, delivery, and cost were issues that were being experienced, although the practitioners felt that the issues were quite evenly spread between quality, delivery, and then cost, while the advisory group saw quality as clearly the largest issue, followed by delivery, and then cost being a distant third (see Appendices 6-36 and 6-37).

Finding #10: The majority of those participating in global sourcing find that they are meeting their expectations with regards to their global sourcing activities

When analyzing the data on supply chain performance, 60% of respondents felt that organizations who are participating in global sourcing activities were meeting the expectations they had from those activities (see appendix 6-13), with 36% stating that expectations were not being met. When reviewing the data between the practitioner and advisory groups however, we note a difference in the responses between the two groups.

From the practitioner’s point of view, the results are basically consistent with the overall data mentioned above. The practitioner’s indicated that two-thirds (66.7%) were meeting the expectations from their global sourcing activities. The advisory group, however, were much more critical of the results achieved through global sourcing. This group felt that only half of

those participating in global sourcing activities (50%) were meeting expectations, once again highlighting differences between the perceptions of those who do, and those who advise (see Appendices 6-38 and 6-39).

This difference could be due to the specific experiences of the participants in the interviews, or other factors such as the type of businesses that the advisors tend to advise. It is possible that the category of business that seeks advice from the individual's interviewed may be less sophisticated, with less internal capability to manage global supply chain initiatives. It is also possible that the responses from the advisory group are more grounded in media reports and perception, as opposed to direct experience with global sourcing activities. Further research is required to dig deeper into the details as to why this difference exists between the groups.

Once again, the only comparison that can be made on this finding is between the two groups in the semi-structured interviews, as this question was not included in the quantitative survey that was distributed.

Finding #11: As a means of mitigating risk associated with global sourcing, the primary risk mitigating activities are vendor visits, ensuring a secondary source of supply, and product samples

When asking the question about risk mitigation for global sourcing activities, four primary strategies were uncovered; vendor visits, having second sources of supply available, product sampling to ensure compliance, and carrying extra inventory "just in case" issues arise.

The data for all interview participants indicates that secondary sources and vendor visits are the most common means of mitigating global sourcing risk, followed by the carrying of extra inventories, and product sampling (Appendix 6-14).

When analyzing the data between the groups however, the business advisory group didn't have a feel for what risk mitigation strategies were utilized, with only two of ten interview participants responding. The practitioner group, however, clearly saw vendor visits leading the way as a risk mitigation strategy (with 46.7% of respondents), closely followed by having secondary sources of supply in place (with 40% of respondents). Product sampling, carrying

additional inventories, and vendor references were also indicated to be some of the risk mitigation methods utilized by global sourcing practitioners (see Appendices 6-40 and 6-41).

A comparison to the survey group was again not possible as this question was not included in the quantitative survey.

Finding #12: The way we make global sourcing decisions today is different from the past; the importance of specific decision-making factors has changed over time

Another piece of information that was of interest to our research on global sourcing decision-making was grounded in one of our hypotheses, specifically that the importance of various global sourcing decision-making factors has changed over time. More specifically, that cost was once the primary factor, but has now retracted in importance, and supplanted by a growing concern over risk factors such as quality and delivery. To that end, we were interested in knowing from participants, their perception on global sourcing trends, and if there was a difference in the way these decisions are made today, versus how they were made in the past. As an indicator of this change in decision-making factors, one participant commented “I think once upon a time it was strictly cost, now we’re not just saving cost, but I want to have the same quality I have here, and I want to be aware that the government in that country is not going to do something wacky tomorrow and shut that network down. There are countries that would make great sense, but for political stability reasons, I’m frightened to death to touch that right now”.

The data from the interview group as a whole indicates that the majority of respondents (72%) believe that global sourcing decisions made today take into consideration other factors that were not considered in the past (see Appendix 6-15).

When reviewed the data specific to the participant and advisory groups, differences exist (with the advisory group suggesting from 90% of respondents the change has occurred, while the participant group suggesting change by 60%). Despite these differences, it remains evident that global sourcing decision-making has evolved, and is taking into account factors that were once either not considered or considered to much less of a degree than they are today (see

Appendices 6-42 and 6-43).

This comparison was again not possible with the survey group, as this question was not included in the quantitative survey.

Finding #13: The volume of global sourcing activities is still increasing and will continue to increase in the future

Our final finding deals with future global sourcing trends, and what the participant's perception of what the future holds for global sourcing. Over half of participants (56%) felt that global sourcing opportunities still exist, and that global sourcing volumes would continue to rise in the future. Those not quite so convinced felt that global sourcing volume would at a very minimum stay at current levels, while a smaller percentage (24% of all respondents) feeling that global sourcing was on the decline and would decrease in volume in the coming years (see Appendix 6-16). No significant differences existed between the practitioner and advisor groups, and comparisons with the survey participants was once again not possible, as this question was not included in the quantitative survey (see Appendices 6-44 and 6-45).

Summary Comments:

Comparison of the data between the interview practitioner group and the quantitative survey respondents, where possible, indicates congruence between the global sourcing decision-making factors deemed important in both groups. This provides us with a level of comfort that the findings from this study are trustworthy, credible, and dependable.

Many similarities also exist between the data from the interview practitioner group when compared with the interview advisory group. As indicated by one of our major findings however, differences are also evident, suggesting that the perceptions held regarding global sourcing decision-making between those who do (practitioners) and those who advise (business advisors) exists, an interesting finding which potentially could have ramifications on government policy regarding economic development strategies in the future.

Validation through Member Checks:

Utilization of member checks is the second approach taken to demonstrate the trustworthiness, credibility, and dependability of our research findings. This approach involves presenting the findings of the research to a sample of the original participants to see if the findings make sense to them (Merriam & Tisdell, 2016). The method used to conduct the member checks was to first select a sample from the original participants, to call the selected participants to explain our need for respondent feedback with regards to our findings, and to gain agreement with them to provide feedback in a timely manner (within one week). Once agreement was gained, a member checks document was sent out to each participant, which explained the process and listed the thirteen key findings from the research. A summary of the results from the member checks process is shown in Appendix 8-1.

In the case of this particular research endeavour, we chose a purposeful sample representing 24% of the original interview respondents, with 66.7% of those sampled (4 respondents) selected from the practitioner group, and 33.3% of those sampled (2 respondents) from the advisory group, to ensure the member checks were representative of both groups of participants from the semi-structured interviews.

One of our findings indicated that the advisory group may be somewhat disconnected from the realities of global sourcing decision-making, as compared with the practitioner group. We therefore anticipated that we find differences in the member checks feedback from these two groups, such as realizing a higher percentage of agreement amongst the practitioner group as compared to the advisory group.

When reviewing and analyzing the results of the member checks feedback submitted, there were two primary pieces of information that we were interested in, namely:

- What does the data tell us about the agreement with our findings from a participant response point of view? Were there differences with the participant results between the practitioner group, and the business advisory group?

- What does the data tell us about the agreement with our findings from a finding-specific point of view? Were there differences with the results within the findings between the practitioner group and the business advisory group?

Data Analysis by Participant:

When reviewing participant responses to the member checks document that was distributed, the overall agreement rate with the findings was 80.8%, with 14.1% in disagreement, and another 5.1% providing answers that were unclear as to whether they agreed or disagreed with a particular finding. Based on this information, we feel confident that the majority of the participants agreed with the majority of the research findings.

We also conducted analysis on the feedback responses by group, enabling us to identify similarities or differences that might exist between the two groups of interview respondents.

When looking at the practitioner group, we found an overall agreement rate of 86.5% with the findings, with 13.5% disagreement. When looking at the four respondents individually, we note agreement rates of 100%, 76.9%, 76.9%, and 92.3% respectively.

Alternatively, the business advisory group demonstrated an overall agreement rate that was somewhat less than what was found with the practitioner group, at 69.2%, with 15.4% disagreement. An additional 15.4% of responses from the business advisory group were stated in a manner which was unclear as to whether or not they were in definitely in agreement or disagreement with the particular finding listed. When looking on a participant by participant basis within the advisory group, we find agreement rates of 53.8% and 84.6% respectively, with the lowest of these agreement rates providing responses deemed unclear to 23.1% of the questions, with one of these findings noted to have insufficient information for the participant to respond. An attempt was made later to clarify this question to get an answer, but no additional response was received.

Data Analysis by Finding:

The aggregate analysis of the data for the respondents noted above provides some useful information regarding the overall level of agreement with the findings, but perhaps of greater interest is the data responses that were more finding specific. By analyzing the data on a finding-specific basis, we were able to identify which findings resonated to a high degree with respondents, and which findings the respondents potentially struggled to make sense with.

When reviewing the finding-specific data, we note that six of the thirteen findings (46.1%) respondents were 100% in agreement with. As well, an additional two findings had one participant either disagreeing, or providing a response that was unclear. The total of the findings listed above supports that we have a high degree of confidence in the trustworthiness, credibility, and dependability of our findings in eight of the thirteen (61.5%) findings that were listed.

The eight findings with the high degree of confidence mentioned above are:

- Finding #1: The primary reason why participants choose to source products globally is to reduce cost
- Finding #4: Cultural factors (cultural customs and traditions) ranked low in global sourcing decision-making importance
- Finding #7: Global sourcing purchases represents a small portion of overall spend for those practitioners who source products globally (i.e., it is not the majority of their purchases)
- Finding #9: The biggest issue that global sourcing practitioners experience is related to quality issues, followed by delivery issues, and then cost issues
- Finding #10: The majority of those participating in global sourcing find that they are meeting their expectations with regards to their global sourcing activities

- Finding #11: As a means of mitigating risk associated with global sourcing, the primary risk mitigating activities are vendor visits, ensuring a secondary source of supply, and product samples
- Finding #12: The way we make global sourcing decisions today is different from the past; the importance of specific decision-making factors has changed over time
- Finding #13: The volume of global sourcing activities is still increasing and will continue to increase in the future

Alternatively, the findings that respondents indicated the most surprise or disagreement over were finding #5 (33% agreement) and finding #2 (50% agreement):

- Finding #5: There is a significant difference in what factors the advisory group felt was important when making global sourcing decisions, and what the practitioner group felt was important when making global sourcing decisions
- Finding #2: When making decisions on whether or not to source products globally, cost is not the primary decision-making factor. Participants are more concerned with factors related to risk

The other three findings had a 66.7% agreement rate, showing a majority were in agreement, but not to the extent that we might expect to see to demonstrate confidence in the trustworthiness, credibility, and dependability of these findings.

Additional Comments from Respondents:

In addition to an indication as to whether or not a respondent agreed or disagreed with a finding, respondents in some cases added additional comments to explain their view related to the respective finding. The ability to provide additional information is a benefit that is similar to the benefit received from the semi-structured interview contribution, as compared to the quantitative surveys. These comments in some cases added depth and breadth to what the respondent felt about the findings, and why they felt that way.

Some of the comments provided are considered noteworthy in relation to the end goal of our research, so are worthy of discussion during the analysis and documenting of our member checks results. This contribution is of particular value in the cases where a given finding or findings received low to mixed reviews on whether or not the member checks participant agreed with the research finding in question.

The paragraphs below discuss some of the noteworthy comments made, and what they might potentially indicate, with a particular focus on the findings in which lower agreement rates were found to exist.

Finding #5: There is a significant difference in what factors the advisory group felt was important when making global sourcing decisions, and what the practitioner group felt was important when making global sourcing decisions (33% agreement)

The low agreement rates on finding #5 may have been contributed by lack of clarity in the way in which the finding was stated, as one participant indicated there was not enough information to answer the question, while another asked for clarity on this finding. This lack of clarity is demonstrated by one respondent's comment "the practitioner group's primary concern is a desire to lower costs, as well as risks associated with product availability and quality. I would expect the advisory group, serving in a consulting capacity, to consider a greater number of factors including potential issues the practitioners may not be aware of". While this comment may be an accurate reflection of what this particular respondent perceives to be the case, our finding actually suggests that the practitioner group understands how the global sourcing decisions are actually made, while the advisory group may be somewhat out of touch with the realities of making global sourcing decisions.

Providing some details around exactly what the disconnect between the two groups was (i.e., the practitioner group stressing that cost was not the primary decision-making factor, while the advisory group stating that cost was the primary decision-making factor), may have clarified the finding, and contributed to a higher percentage of agreement on this item.

The fact that one advisory group participant indicated disagreement, and the other indicated a lack of clarity, could also be a result of the sensitivities around what this finding potentially suggests, that the group that these respondents belong to may be out of touch with the realities faced by their practitioner clients.

One respondent also suggested that maybe the interview process potentially contributed to the differences observed, as stated in the comments “the variation may stem from the perceived expectation of the interview process” and “the groups in this exercise may have felt compelled to provide an answer whether verifiable or not”.

Finding #2: When making decisions on whether or not to source products globally, cost is not the primary decision-making factor. Participants are more concerned with factors related to risk (50% agreement).

Comments made during the member checks feedback, similar to what was found in the comments from the semi-structured interviews, indicate some confusion between what is the objective or goal of global sourcing, and what factors are of importance when making decisions with regards to global sourcing. This was previously noted when discussing the interview responses, with some comments noted as examples, such as “cost reduction was the number one reason” and “I mean at the end of the day, the focus was on adding extra value to the bottom line of the MD’s, so again it was demonstrated directly through direct savings”. These comments are directly related to the goals, objectives, or reasons for global sourcing, yet were answers provided when asked about global sourcing decision-making factors, which are not one in the same.

With regards to the comments during the member checks process, comments were identified that once again indicated this confusion between the objective of the global sourcing process, and decision-making factors. An example of such comments when asking about the goals and objectives were “our goal is to reduce costs maintain quality and keep costs consistent over time” and then related to decision-making factors “cost would be the primary factor but keeping those costs on quality products consistent is very important”, again indicating the lines

between global sourcing objectives and global sourcing decision-making factors are somewhat blurred.

Finding #3: Corporate Social Responsibility factors, and factors related to the environment, are not yet having an impact on the global sourcing decisions being made by participants (66.7% agreement)

The data from our research suggests that while there is much talk about environmental impact and corporate social responsibility in the media, that these factors have yet to influence global sourcing decision-making in any significant way. This finding is supported by research conducted previously by others (Lund-Thomsen, 2007).

Although this finding seems clear, we must note that when delving into the specifics, by company, or by industry, we may find that some companies or some industries are more influenced by these factors than others.

The comments made by one of the two dissenting respondents quoted sources that indicated that the world is making a shift towards a more environmental, socially responsible approach to sourcing practices, as indicated by the comments “a Nielsen study showed that purchases of products with sustainability claims outperformed the growth rate of total products in their respective categories” and “more than 9,000 companies globally have joined the UN Global Compact to show support for human rights, labour, environment and anti-corruption principles”. Although these comments are supportive and suggest growth and progress in this area, growth and progress are not the same as these factors taking on a primary role in the global sourcing decision-making process.

Similarly, another respondent commented that “increasing social awareness on the part of consumers, i.e. safe working conditions; worker safety, child labour standards and environmental impact, are now weighing into global sourcing considerations”, indicative of disagreement with our findings. This comment however, based on the data from our research and that of others suggested above, appears to be in the minority, and is likely more influenced

at the company or industry level, as opposed to being a factor considered by the majority of organizations making decisions on what locations to source products from.

Finding #6: Most practitioners who are sourcing globally are sourcing products, not services (66.7% agreement)

This finding regarding the global sourcing of products as compared to services, was 100% agreed to by the practitioner group. Alternatively, one respondent from the advisory group disagreed, and the other provided a response deemed to be unclear as to whether they were in agreement or not, although clearly neither of these respondents were in full agreement with this finding.

Examples of some of the comments made by these respondents were “harder to measure service trade. Maybe a factor based on companies interviewed or sectors” and “the validity of this finding is changing with the rising importance of service providers in the virtual world. Coaching, consulting and support are rising in demand and are typically not geographically bound”. Although both of these comments are supportive in suggesting that a shift is being witnessed, and that growth in global service trade has been happening, but once again, this is different from suggesting that global sourcing in services is dominating the global sourcing activities of companies in Atlantic Canada.

Finding #8: The primary barrier to global sourcing is risk and uncertainty (66.7% agreement)

Comments made by the two respondents who disagreed with this finding seemed to question the validity of the finding but did not seem to be strongly in opposition. These respondents were questioning other potential factors that might represent barriers, and although these barriers may indeed be valid in some cases, they again did not represent the majority of opinion from the respondents which provided feedback for our research.

One respondent commented “I wonder if it really is culture and politics?”, and while that may be a valid question, our data clearly shows that culture is not a primary factor being considered. We also consider political considerations to be a component of risk, depending on the definition of politics used.

The second dissenting respondent made a valid point when stating “no, I believe the major barrier to global sourcing is time. We live in a time where people want things now they do not want to wait 8 weeks unless they need to. This would be for our business not everyone’s business, but I could see where this would be a primary factor in other business”. While I am sure this is valid in the specific business being referred to by the respondent, the respondent also identifies in his response that this may not be true for all, or many other businesses, which would support the findings suggested by our data.

Finding #4: Cultural factors (cultural customs and traditions) ranked low in global sourcing decision-making importance (83.3% agreement).

The lack of the role of cultural factors in the global sourcing decision-making process was a view shared by all respondents except one, so is a finding that we are comfortable with as far as trustworthiness, credibility, and dependability of this finding.

The one dissenting voice as far as agreement with this finding stated “in some industries impacts are higher. I would think the impact in resource sectors would be higher. Firms that understand culture can probably run circles around competitors. It is important”. These comments, while relevant in the eyes of the respondent, are discussing this factor at the firm and industry sector level, as opposed to factors important with regards to location advantage, which is the concern of our research. We are therefore comfortable based on the responses received that his finding is trustworthy, credible, and dependable.

Finding #7: Global sourcing purchases represents a small portion of overall spend for those practitioners who source products globally (i.e., it is not the majority of their purchases) (83.3% agreement).

And finally, our finding that global sourcing purchases represents a small portion of overall spend for most companies was agreed to by all but one member checks respondent. The one respondent who did not agree with this finding had their response categorized as unclear, as they did not answer the question, but simply inserted “??”, seemingly indicating they did not

know, or did not understand what was being asked. We are therefore comfortable based on the responses received that his finding is trustworthy, credible, and dependable.

Summary Comments:

Based on the information outlined above, the member checks responses from the respondents selected are supportive of our overall the findings we have garnished from our research data and the data analysis conducted. While in some cases respondents indicated lack of agreement with the findings, reasonable explanations as to why the lack of agreement may exist, provides us with an overall comfort level with regards to the trustworthiness, credibility, and dependability of our findings.

Validation through Data Saturation:

The third approach in our efforts to validate our research involves demonstrating that our sample size is appropriate to conclude our research findings are trustworthy, credible, and dependable. Since our findings are highly dependent on the semi-structured interviews, the method of determining that we have gathered enough interview data is to demonstrate data saturation, which suggests that no new relevant information was likely to come from extending the interview sample beyond what we currently had, which in our case was twenty-five interviews (Merriam & Tisdell, 2016).

In order to assess the degree of data saturation during the interview process, we conducted an assessment of the raising of global sourcing decision-making factors amongst interview participants. For each interview conducted, starting with interview #1, we charted each decision-making factors raised, and whether or not those factors had been raised by a prior interview participant. Naturally, interview participant #1 had each factor rated as “new”, and then each subsequent participant’s factors charted, but rated as “new” only if that particular factor had not been previously mentioned by a prior interview participant (see Appendix 8-2).

With regards to the global sourcing decision-making factors raised, there were several factors mentioned by interview participants which were not mentioned by the vast majority. We therefore decided to consider only the global sourcing decision-making factors above the

median of responses, as indicated by ranking the factors based on number of sources that cited that particular factor. This means that our consideration only covered those factors that had been cited by five or more interview respondents, out to the total number of respondents interviewed (25).

As can be seen in the appendix, the initial five interview participants all had factors attributed as new to the research, starting with interview participant #1 with eight new factors. Interview participants #2, #3, and #4 each had three new factors to contribute, while interview participant #5 had one new factor. The remaining contributions with regards to new global sourcing decision-making factors came from interview participants #9, #10, and #13, with one new factor each. The remaining twelve interviews following interview participant #13 had no new global sourcing decision-making factors to contribute to our research data set.

To confirm the results indicated in the appendix listed above, we conducted a second exercise by doing the same for the global sourcing goals and objectives mentioned by the interview participants (see Appendix 8-3). Once again, we only selected items above the median value.

The data shown in this appendix indicates that interview participant #1 had three “new” items, interview participant #3 had two, interview participant #5 had two, and interview participant #8 had one. No new goals and objectives that ranked above the median were indicated after the eighth participant interview.

As a result of the analysis outlined above, we are confident that the number of research participants was more than sufficient to satisfy an indication of data saturation, and to determine that the research findings based on our interview data is trustworthy, credible, and dependable.

Concluding Comments:

As mentioned in the introduction to this chapter, our research methodology was grounded in mixed methods, utilizing an explanatory sequential design, and was therefore primarily focused on the qualitative component of our data set, acquired through the use of semi-structured participant interviews. These interviews were utilized to not only help explain what the global

sourcing decision-making factors are, and their relative weights in the global sourcing decision-making process, but also why global sourcing decision-makers feel the relevant factors are important in the decision-making process.

Since our main focal point of data analysis was on the qualitative interview data, our approach to assessing validity and reliability of our findings is impacted with the definition of, and methodology used to assess, these terms. We attempt to measure validity and reliability of the research findings not in the statistical sense, but in line with accepted approaches to validation drawn from the qualitative research realm. As a result, our end goal is to demonstrate an acceptable level of trustworthiness, credibility, and dependability of the findings drawn from the analysis of our semi-structured interview data, to consider these findings sufficiently authentic.

The three approaches utilized to demonstrate trustworthiness, credibility, and dependability in our research findings were the utilization of a triangulation approach focused on highlighting similarities (or lack thereof) in the findings between our three data sets, the use of member checks to receive feedback from a sample of participants on the reasonableness of our research findings, and the demonstration of saturation in the knowledge gained as we proceeded through the semi-structured interview process. This last measure is primarily aimed at ensuring our interview sample size was deemed adequate for detailing findings from our sample that are a reasonable measure of representativeness of the greater population.

We also noted that within the three data sets referred to above, the quantitative survey sample, and the practitioner sample from the interviews, were similar in the sense that they both contained practitioners who source products as part of their day to day functions, while the advisory group in the interview data set did not. We therefore anticipate there may be less congruence in agreement on the findings between the advisory group and either participant group, as there would be between the two participant groups, and that demonstration of such a gap in agreement may not necessarily be a negative reflection on the trustworthiness, credibility, and dependability of the findings, but may be due to the different optic that these groups have based on their relative levels of global sourcing experience (i.e., tacit knowledge).

Our utilization of the triangulation approach was successful in demonstrating significant similarity between the findings of all three data sets, but in particular, between the two data sets consisting of practitioners. This analysis is therefore supportive of an acceptable level of trustworthiness, credibility, and dependability of our research findings

Similarly, the member checks approach demonstrated that when considering all participants in the sample, and all of the findings reviewed, that in excess of 80% of all items were found to be in agreement. Further to this, when analyzing the feedback on a finding by finding basis, the majority of differences were noted from the advisory group, and most differences amongst all member checks participants were rationalized as to the potential reasons why those differences may exist. The member checks process therefore also was supportive in demonstrating an acceptable level of trustworthiness, credibility, and dependability in our research findings.

Finally, the third approach to demonstrating trustworthiness, credibility, and dependability in our research findings was to develop a measure of data saturation, an accepted indication of approach sample size for our qualitative semi-structured interviews. The results clearly indicate that after the first few interviews, little new information surfaced from the additional participants interviewed, indicating that a total sample size of twenty-five interview participants was more than enough to demonstrate an acceptable level of data saturation.

Therefore, the utilization of the three approaches to demonstrating sufficient authenticity in our research findings was successful in providing an acceptable level of confidence in the findings presented as a result of our research efforts.

Chapter 9: Research Limitations and Future Considerations

All research is subject to a variety of limitations, some related to the potential limitations due to the research methodology chosen, and others due to the researcher(s) themselves. The discussion outlined below, details the particular limitations of this study, the potential impact associated with those limitations, and considerations for future research based on the existing research limitations discussed.

Methodological Limitations

A mixed methods approach was selected as the primary methodology for this research project, with a specific emphasis placed on the qualitative portion of the data collection. This choice was believed to be the best fit given the research goals and objectives for this particular study, namely to truly understand how and why global sourcing practitioners make the decisions they make when it comes to deciding on whether or not to source globally, and from which specific locations. Although this methodology was deemed to be a best fit approach, one natural result of this methodological choice was that the research lacks the quantitative rigour that may be preferred or expected by many researchers, particularly to those who subscribe to quantitative methodologies.

In addition, some limitations were inherent in the sample selected for the quantitative portion of our data. When gathering this quantitative data, members of the Supply Chain Management Association in Canada were chosen as the population to draw our survey sample from. In choosing this specific population, we were able to gain access to a relatively large number of supply chain professionals, many of which had practitioner experience in global sourcing activities. While this was a benefit to the research, this approach had some sampling bias, as it did limit our quantitative data through exclusion of other practitioners who were not members of the association, and who may not consider themselves to be specifically supply chain professionals with regards to their primary career, but who still have much practical experience in participating in global sourcing activities.

An additional limitation related to the sampling of the population for the quantitative survey, was the relatively recent introduction of Canada's anti-spam legislation. This legislation prevents organizations from contacting individuals electronically, without those individuals first "opting in" to agreeing to be contacted through electronic means. This law impacted our research by preventing us from contacting the entire membership of the Supply Chain Management Association (approximately 7500 members) and limited us solely to the group of association members who had previously opted in, limiting our total population to 4796 members.

One final limitation experienced in the survey portion of our data collection was related to the structure or design of the survey instrument itself. This survey asked specific questions as to the relative importance of a number of factors related to making global sourcing decisions. Due to the specific nature of the questions on potential global sourcing decision making factors, the survey questionnaire was somewhat leading in acquiring responses from survey participants, resulting in most of the suggested factors being responded to as "important". This is not uncommon in this type of survey, yet still needs to be acknowledged as a research limitation. The research may have been better served through the use of open-ended questions, in which respondents needed to identify what factors they deemed to be important, as opposed to being asked about pre-selected decision-making factors.

The number of countries included in the model developed as part of this research was reasonably limited as well, primarily attributed to the model inputs selected. As our data uncovered the decision-making factors relevant to global sourcing decisions, the search for model inputs that were relevant to the model began. The identification of model inputs was quite challenging, due to lack of available data for some countries. In other words, as the relevant model inputs were identified, the number of countries available for inclusion in our study was reduced. Some countries simply do not make such data available to others, which required us to exclude those countries from our model. In some cases, these countries were believed to be attractive global sourcing destinations for the future, so their exclusion is very material to the quality of the model output.

The data utilized for the cost component of the model had limitations concerning the overall breakdown of total cost of ownership, when considering global purchases. One study based in British Columbia was used to determine the cost breakdown. Although the results of this study is considered relevant, and valuable in producing model results we deem to be trustworthy, additional secondary research, or the undertaking of primary research in this area, could be beneficial in enhancing our understanding of how these cost factors influence the reward side of the risk/reward equation.

The inclusion of case studies, in addition to the quantitative surveys and qualitative interviews, would also have been beneficial in understanding the global sourcing decision-making process, as it would have allowed for a third significant source of data, potentially improving the dependability of the model output through enhanced breadth and depth of the data analysis.

Limitations of the Researcher

As a starting point, limitations in time had an impact on the research presented here. Since this research is associated with the completion of a Ph.D. thesis, time availability was somewhat limited, which impacted the depth and breadth of the overall research project so that the finalization of the project would meet the deadlines inherent in the Ph.D. program requirements.

One significant impact of the time limitations resulted in a narrowing down of the research scope. As a result, this research focused on the current state of the relative advantages of a variety of sourcing locations, to be used as a first step in the future development of model with predictive capacity.

These time limitations also impacted our ability to identify and select the best possible model inputs for the running of our global sourcing model. While this researcher is confident that the secondary research data utilized as model inputs are meaningful ones, that doesn't necessarily mean that improved model inputs do not exist. If this research had a more flexible schedule with regards to time to completion, and additional resources to work on this project, a more

detailed search and analysis of potential model inputs may have been beneficial to the output of the model.

One final limitation, primarily due to the limited amount of time available to conduct this study, was that this model was developed based on the relative attractiveness of the various countries included in the model from the perspective of sourcing organizations who are located in Atlantic Canada. Inclusion of survey and interview participants from other locations would have allowed for comparison to see how the relative attractiveness of the various global sourcing locations might change, when considering alternate sourcing destinations.

Future Considerations for Future Research

Given the limitations outlined above with regards to this research study, several suggestions for future research to deal with these limitations are outlined below to expand on our current research findings.

There are several areas in which future research can enhance and expand on the findings from this study. These include contributing to the inclusion of a larger number of countries in the model, validated and improving the model inputs used, comparing results from participant samples in other geographic destination countries, and improving our understanding of the cost side of the risk/reward trade-off. In addition, further work needs to be done in analyzing trend data for the model inputs, in an effort to build a predictive capacity to the model.

The research summarized in this document utilized a study at the Port of Prince Rupert, British Columbia, to determine the percentage breakdown of landed cost of goods imported. While this study was important to our research in the development of the cost side of the risk/reward trade-off, further work is required in this area. Future research to truly understand the various components of the landed cost of goods sourced globally, and their respective weightings in the total landed cost of goods, would enhance the ability of the model to produce trustworthy results. While further research in this area is valuable, we are confident that the overall impact of this improved understanding to the model results will be minimal, and varying the values currently used and comparing the model output from these variations, demonstrated the

robustness of our current model. We are therefore satisfied with the results the current model demonstrates.

Another area that future research could contribute to improving our model is to analyze the current model inputs used, and to determine opportunities to improve upon the model inputs. The primary contribution of this improvement would be to provide the opportunity to expand the number of countries included in the model. With the current model inputs, and the related availability of data, the number of countries in which data was available was reduced to twenty nine, and although the countries included in our current model represent a large portion of global GDP, some countries of interest to our research unfortunately were excluded due to lack of available data.

Future research might also focus on different sourcing destinations, allowing for enhanced understanding of global sourcing decision-making processes through comparison of destination data. The current study is focused on Atlantic Canada as the destination for the products sourced. Further study from the perspective of different destinations would allow us to compare decision-making criteria, and also to determine the role that destination has on the output of the model's position map.

Future research would also provide the opportunity to conduct the quantitative survey portion of the data collection with an open-ended question format, resolving the potential risk of leading respondents in their assessment of pre-determined decision-making factors. While we remain confident in the decision-making factors and their weightings identified in the current model, the inclusion of this type of questionnaire could potentially uncover decision-making factors that were not represented in the current study.

And finally, the inclusion of case studies in our data collection efforts has the potential to add breadth and depth to the data collected, and to improve our knowledge and understanding of global sourcing decision-making process, and the value gained through global sourcing practices. Utilizing case studies would be particularly beneficial in verifying that the understanding of the global sourcing decision-making process gained through our research is

consistent with the practices found in the organizations in which the case studies are conducted, further enhancing the trustworthiness of our research findings.

All of the above suggestions for future research are in line with building on this current research project towards the end goal of the development of a predictive tool for anticipating future location opportunities for global sourcing activities.

In the current research effort however, we also had an unanticipated finding related to the gap in views towards global sourcing decision-making between the practitioner and advisory groups. This gap is of particular interest and could have significant impact of government policy and support structures for domestic businesses. Given the potential significance of the impact of these findings, further research to understand these findings in more detail, is also warranted, and likely of high interest to government policy makers.

Chapter 10: Conclusions and Recommendations

The concluding chapter of this thesis is intended to tie the previous chapters together and summarize the overall results and implications of the research findings. The chapter will review the original intent of this research, summarize the research findings, reflect on these findings as a researcher, discuss the implications of these findings on the field, and outline what related areas remain to be investigated.

Our research succeeded in allowing us to draw conclusions of some significance with regards to answering our research questions. While some of these conclusions were hypothesized and somewhat expected, others evolved during the project, and resulted in additional findings of interest related to the global sourcing process.

Research Purpose/Objectives:

At the commencement of this research endeavour, a number of research questions were identified as areas of interest to the researcher with regards to how practitioners make global sourcing decisions with regards to whether or not they implement global sourcing practices, and from which countries. The end goal was to identify global sourcing decision-making factors of significance related to global sourcing location, in an effort to build a current state model for understanding high potential global sourcing locations. The significant of such a model to organizations would be to allow them to identify opportunities, and to gain an advantage in setting up strategic supply chains focused on these countries.

Early in the research it became clear that a narrow focus was necessary for the timely completion of this research, primarily due to resource limitations and time constraints associated with this research which was intended as part of the researcher's Ph.D. studies. As a result, it was decided to narrow the focus to the current state of the countries included in this model, which would later be built upon to add a predictive capacity to the model. Despite this narrow focus, the output of this research would include a model, determined to be represented by a position map of the relative attractiveness of global sourcing locations.

The research questions relevant to this end are outlined below:

1. What location specific factors are considered important by supply chain practitioners when considering whether or not to source products and services globally, and what weight does each carry in the global sourcing decision-making process?
2. How do countries measure up in relation to each other today, with regards to their relative attractiveness as a global sourcing destination?

In the early stages of the research, the first four of these questions guided our approach and methodology to conducting this research. As the research unfolded however, the fifth question, indicating the potential for differing views between practitioners and advisors came to surface, and was added to our group of research questions, due to the potential impact of such a gap in perception, and the impact it could have on government economic development policy.

Research Findings:

Below are the main findings considered as outcomes related to this research project. Although the main output intended was the development of model indicating the current state of the relative attractiveness of the countries as a global sourcing destination, other related findings were of interest to not only support the output of the model, but also to understand why global sourcing practitioners make the decisions they do related to the implementation of global sourcing strategy.

The first finding we discuss is the confirmation of a hypothesized outcome that global sourcing practitioners engage in global sourcing initiatives primarily as a means of reducing organizational cost for their procured goods and services. Despite this however, the factors considered most important in determining whether or not to source products and services globally, and from where, are not grounded in cost, but in factors related to organizational risk. Cost remains an important factor, but not the most important.

Closely tied to the above is the belief that the way global sourcing decision-makers make decisions today with regards to global sourcing is different from what they did in the past. This change has primarily resulted in cost becoming a less important decision-making factor, in favour of factors related to the potential risks to the organization, such as variability in delivery and assurance of product quality.

Another finding of interest from this research is that while environmental and corporate social responsibility considerations continue to get much attention in the media, these factors are not yet impacting the day-to-day decisions of global sourcing decision-makers in any significant way. This finding is consistent with other research indicating that while organizational purchasers talk a good game when it comes to these issues, in actual practice are not walking the talk (Lund-Thomsen, 2007).

When research participants were asked about future trends in global sourcing, most respondents felt that opportunities for improvement due to sourcing products offshore would continue in the foreseeable future, but the question of what locations would be the most attractive remains unclear. Respondents felt that although opportunities would likely exist in the future, exactly where these opportunities would be was in doubt.

As mentioned in the introduction to this chapter, one unexpected finding of interest that surfaced as the semi-structured interview portion of our data collection began was a gap between responses received from the practitioner group, and responses from the advisory group, with regards to the importance of various factors in the global sourcing decision-making process. While respondents from the practitioner group felt that cost, although the overall goal of global sourcing, was not the primary factor in driving global sourcing decisions, the advisory group disagreed, stating that cost was indeed the primary decision-making factor. This gap causes us to wonder about the relevance of advice being given by advisors to practitioners with regards to making decisions on whether or not to source globally, and from which sourcing locations.

And finally, in reviewing the output of the position map from our global sourcing decision-making model, some findings are noteworthy. While the focus of Atlantic Canadian global

sourcing decision-makers, as well as others throughout North America has appeared to shift away from some low cost labour opportunities in locations such as Mexico over the past few decades, primarily in favour of China, Mexico seems to be once again gaining in attractiveness, possibly due to the continual rise in freight costs, as well as the lower risk associated with sourcing from suppliers closer to the final destination of the goods procured.

Other noteworthy findings from the position map were also evident. Firstly, sourcing products closer to home, what many may feel is supportive trends in nearshoring, not only have advantages due to lowering of risk, but also carry with them some economic advantages as well. The appearance of two of the three North American countries in Quadrant 1, labelled as “Competitive Advantage”, with Mexico slightly over the line in Quadrant 2, is evidence of this (see Appendix 7-14). The Competitive Advantage label is indicative that the organizations who source from countries in this quadrant are likely in search of improved cost structure in an effort to gain competitive advantage, yet are somewhat risk-averse, and required a balanced approach to risk vs. reward. Other countries present in this quadrant are Portugal and Poland, likely due to a combination of shorter distance to market (as compared to other low-cost labour countries such as China), and lower labour costs than other European locations.

Quadrant 2, labelled “Competitive Necessity”, represents sourcing opportunities which have both high reward and high risk, consisting of locations in which organizations with either low risk aversion, or who exist in markets that are highly price sensitive, and where increases in competitiveness are a necessity. Examples of these types of markets would be the selling of commodity products, known for being highly price sensitive.

Sourcing locations in Quadrant 2 are some of the countries normally associated with attractive sourcing locations such as China and India, but also consider countries which may be relatively untapped from Atlantic Canada, such as Greece, Brazil, Turkey, Mexico and the Philippines. One point of interest is that although many of these countries represent economic opportunities for cost reduction, the advantage they show compared to some of the Q1 countries is not significant, and in some cases, less of an opportunity. This finding is significant since risk and reward are thought of as highly correlated, where decisions are often made to gain exposure to

increased level of risk for the associated rewards. Our position map would indicate that this is not always the case, further support for trends in nearshoring.

Quadrant 3 labelled “Risk Averse”, consists of sourcing locations where the level of risk is quite low, as is the potential for cost savings. Organizations sourcing from such locations would be highly risk averse, or not cost sensitive, and willing to pay premium from a cost perspective to remain with low risk levels. Again, it is interesting to note that some countries with low-risk levels (such as purchasing domestically within North America) actually have cost advantages associated with them, indicating that maybe it is possible to gain economic advantage and low risk at the same time, again supporting the nearshoring argument.

And finally, Quadrant 4, labelled “Sole Sourced”, represents countries in which the risk/reward trade-off makes little sense, since the levels of risk are relatively high, combined with little opportunity for economic reward. Organizations who would source from such locations, according to our map Argentina, likely due so to gain access to products not available elsewhere, hence the sole sourced label.

So in conclusion, with regards to our research questions, global sourcing practitioners indicate that the primary factors associated with deciding whether or not to source products globally, and from where, are grounded more in risk than reward. Product quality and lead time considerations are the primary risk factors, joined by political stability, currency fluctuation, logistics infrastructure, and governmental factors, environmental and corporate social responsibility being the primary ones. With regards to cost, transportation, duty, and supplier labour costs are the primary considerations.

Reflection on the findings

As mentioned at the outset of this chapter, some of the findings support our anticipated expectations when we embarked on this research, while other findings surfaced as we collected data. The primary findings being that cost, while being the overall objective of global sourcing efforts, has fallen in importance as a decision-making factor, supplanted by factors associated with risk, primarily delivery and quality issues.

In reflecting on these findings however, two key items that were not anticipated became evident as our data analysis was completed. Support was demonstrated for the ongoing debate as to whether or not trends in nearshoring are real. Our data would suggest that while much of the argument for nearshoring activities being grounded in environmental and corporate social responsibility considerations are not supported, economic opportunity can and does exist through the implementation of nearshoring practices, as well as opportunities to mitigate risk.

Also unexpected but of interest, is the gap in beliefs regarding global sourcing decision-making practices between the practitioner group, and the advisory group, seemingly indicating that the advisory group may indeed be out of touch with how successful global sourcing decisions are made. The advisory group position may be highly influenced by media reporting, and theoretical arguments often made by those with little direct global sourcing experience.

Implications of the Research Findings:

These findings are significant with regards to the potential impact they may hold, both as far as contribution to global sourcing theory, and the impact they have on the profession itself. The implications of this research are therefore summarized below in relation to these two main categories of contribution.

Contribution to Theory:

Our research related to global sourcing decision-making factors is grounded in several fundamental theories that laid the groundwork for the realities of international trade, and the factors that influence location decisions. The main pieces of research that influenced the research presented here were conducted by Adam Smith (1776), David Ricardo (1911), and Michael Porter (1990).

With regards to the above-mentioned research, all of researchers were focused on location factors that either contributed to or detracted from the relative attractiveness of locations from a global sourcing perspective. In other words, what advantages or disadvantages do countries have that may aid them in economic prosperity in relation to international trade.

While these absolute advantages, comparative advantages, or competitive advantages were detailed as to their impact on location advantages and economic growth, all were tied to the potential reward that one may have in doing business with a given location.

Our model goes beyond the concept of the rewards that may be present, and indicates that global sourcing decisions are made through consideration of the risk-reward trade-off, and therefore whether or not the potential rewards available from a given sourcing location are sufficient enough to offset the anticipated risk. This is a major contribution to international trade theory, and something not considered in the previously mentioned fundamental pieces of research done related to international trade theory.

Other research reviewed dealt with the hypothesis that international trade advantages shift over time, and that those countries who may have relative advantages over others today, may not sustain those advantages indefinitely into the future (Balassa, 1965; Chien, 2010).

Our research supports the concept that relative advantages between nations evolves over time, as indicated in our findings with regards to changes in the global sourcing decision-making processes in how decisions are made today, vs. the way they were made in the past. Research participants also indicated that they saw global sourcing advantages continuing into the future, although they were unsure exactly where those advantages would be located.

And finally, several existing measurement tools were reviewed, that attempt to measure the relative attractiveness of different nations with regards to some form of relative advantage competitiveness. Some of these tools looked beyond economic factors, to include elements of risk, similar to what our model has done (World Economic Forum, 2012).

Our research, however, has gone beyond these existing measurement tools, by introducing the concept that a nation's relative advantage as compared to other nations is dependent on the destination of the goods being sourced. This concept identifies the need for a model that is not static, but that is constantly evolving, with the model outputs changing both over time, as well as in relation to the destination country utilizing the model. This again, is a major contribution to international trade theory, by suggesting that no "one size fits all" measurement of a

nation's competitiveness can be utilized by practitioners in understanding the presence of global sourcing opportunities.

Contribution to Practice:

From the point of view of the profession, this research also makes several contributions to practice, that may potentially change the way global sourcing practitioners, and economic development organizations, conduct their work in the future.

From a practitioner point of view, the understanding that global sourcing is a trade-off between risk and reward, may change the understanding of how those individuals involved in global sourcing make decisions. The inclusion of an element of risk introduces the need to understand not only the inherent risks involved in sourcing from various countries, but also the organization's unique organizational risk profile, and the competitiveness of the markets that the sourcing organization serves. Both of these factors have an impact on where exactly the tipping point will be as far as whether or not the rewards associated with a given sourcing location are worth the risks related to global sourcing from that location.

The findings from our research also indicates, and supports prior research, that global sourcing location advantages potentially change over time (Balassa, 1965; Chien, 2010). This finding has major implications on the global sourcing practitioner community, by indicating that once global sourcing decisions are made, that they cannot be filed away, but must be revisited from time to time to ensure the strategy being taken by the sourcing organization is sound, and that the risk-reward trade-off associated with any given global sourcing decision remains viable and attractive in the future.

Closely tied with the concept of shifting location advantages over time, is the output of our global sourcing model. This model has been developed as a tool that is not static, but that must be "run" at different points in time, and for different sourcing destinations, to identify global sourcing opportunities for sourcing organizations. As an example, the output of the model run during this research engagement indicates some support for the notion of nearshoring, and

that the risk-reward trade-off for some sourcing locations in close proximity to Atlantic Canada indicates some opportunities exist to source from these nearshore alternatives.

Our findings also suggest that while environmental and corporate social responsibility initiatives are often indicated as highly supported by practitioners and their organizations, they have yet to take hold with regards to being influential in the global sourcing arena. This finding has profound implications, as although many in today's society are much more conscious of environmental and social implications related to global sourcing, that this alone is not enough to impact global sourcing practices in any significant way. Although these concerns may result in practices evolving in the future as concerns over environmental and social issues are seen as increasingly important, it is necessary, at least in the near term, to identify the business case and return on investment associated with decisions that can also benefit environmental and social causes.

And finally, this research has a potential impact on how the Canadian Federal and Provincial governments invest in economic development activities in the future. The apparent disconnect in understanding of proven global sourcing practices between those who do (the practitioners) and those who advise those who do (the advisors) is cause for concern. These governmental organizations represent a significant investment in public monies in an effort to guide businesses to reduce risk and maximize the potential for success. The results of this research would suggest that the government may not be reaping the full benefit of this investment, and that a revisit to economic development policy may be required.

Concluding comments:

This research endeavour has succeeded in answering the research questions originally deemed to be our objective, as well as uncovered a couple of other noteworthy learnings that were not originally anticipated, namely the gap in understanding of how global supply chain decisions are made between practitioners and advisors, and the economic rationale for some of the nearshoring activities we hear so much about in the media. But much work remains.

The most significant of the next steps to be identified with regards to future research involves the expansion of our model, through the addition of a predictive capacity. This research will allow us to reach our original end goal of predicting the locations with the largest probability of taking a leading role in the future with regards to being the world's next manufacturer, a role that China has enjoyed over the past couple of decades.

In addition, future research could add significant value by providing primary data on the landed cost breakdown of global purchases. Our current research utilized data from a study conducted in British Columbia, but a larger, more detailed study, could contribute to our understanding of the main factors influencing total cost of ownership where global shipments are concerned.

Similarly, an enhanced study on valid inputs to our model would be beneficial. While we are confident that the inputs selected are reasonable inputs for our model, and the model output is trustworthy, credible and dependable, additional work in this area would provide either improvement in the model results, or confirmation in the trustworthiness of the current inputs used.

One major limitation identified with our current model is the constraint placed on which countries could be included in the model. This limitation is of significant concern, despite the fact that the countries included in the current model represent much of the world GDP. Our concern rests primarily in the fact that many of the countries that are thought to be emerging, representing potential opportunity for global sourcing practices, were excluded due to lack of data. Future research is essential to expand the country representation in our model, either through the expansion of data available from these countries to fit our current model inputs, the identification or development of other inputs that are more inclusive, or a combination of both.

As far as inputs are concerned, the current model only has one data point for perception of quality, being the Statista study conducted in 2017 (Statista, 2017). This constrains our ability to build predictive capacity, due to the lack of time series data, and the ability to identify trends to be extrapolated into the future. If further secondary data continues to be unavailable, the

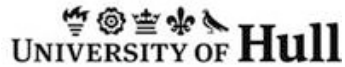
undertaking of primary research in this area would be essential to reaching our predictive capacity goal.

Future research could also be done in running the model for various sourcing destinations. Our current model is based on the sourcing organization procuring products for Atlantic Canada. The results would be different should the product destination be other global locations, such as the west coast of North America, Europe, or Oceania. An understanding of these differences could uncover additional knowledge to benefit the global sourcing practitioners.

And finally, some case study research focused on identifying current global sourcing decision-making practices, and their alignment to our model would be beneficial in further demonstrating the trustworthiness, credibility and dependability of our model, and enhancing the relevance of the work for both researchers and practitioners. We would then be in a position to build a predictive model and associated global sourcing tool that could be utilized by organizations to predict future global sourcing opportunities, and to gain a first-mover advantage in up and coming global sourcing locations.

APPENDICES

APPENDIX 2-1: QUANTITATIVE SURVEY



Supply Chain Global Sourcing Research Project

Welcome to My Survey

Thank you for participating in this important research. The expected time to complete this survey is approximately 15 minutes.

The following questionnaire is part of a research project at the University of Hull to gain a clear understanding of how global sourcing decisions are made when people are selecting suppliers for their organization. The research is being conducted by Keith Carruthers, a PhD candidate at the University of Hull, and will be used in the construction of a global sourcing predictive model which will aid practitioners in determining which countries may be the most attractive for the sourcing of products and services in the future.

The data collected is for academic research purposes only, and all responses will be anonymized and used in a manner which will prohibit the ability to identify responses from individual participants.

Thank you again for taking the time to participate in this research project. Your feedback is very important.

1. Do you currently participate in global sourcing activities?

Yes

No

Other (please specify)

2. What do you source globally?

Products

Services

Both products and services

I do not participate in global sourcing activities

Other (please specify)

3. How important is supplier labour cost in making a decision on whether or not to source globally?

Never Important

Rarely Important

Sometimes Important

Usually Important

Always Important

Other (please specify)

4. How important is the cost of transportation in making a decision on whether or not to source globally?

Never Important

Rarely Important

Sometimes Important

Usually Important

Always Important

Other (please specify)

5. How important are border-related costs (such as fees for container inspection, customs brokerage, etc.) in making a decision on whether or not to source globally?

Never Important

Rarely Important

Sometimes Important

Usually Important

Always Important

Other (please specify)

6. How important is the level of duty paid upon importing in making a decision on whether or not to source globally?

Never Important

Rarely Important

Sometimes Important

Usually Important

Always Important

Other (please specify)

7. How important is the cost of travel to the sourcing country (for supplier visits, etc.) in making a decision on whether or not to source globally?

Never Important

Rarely Important

Sometimes Important

Usually Important

Always Important

Other (please specify)

8. How important is the cost of intermediaries (i.e. middle men or trading companies) in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

9. How important is the availability of intermediaries (i.e., middle men or trading companies) in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

10. How important is the cost of third party inspection agencies in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

11. How important is the availability of third party inspection services in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

12. How important are government support programs in the sourcing country (such as the availability of export subsidies for the supplier) in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

13. How important is total cost of ownership in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

14. How important are cultural considerations in the sourcing country (i.e. cultural customs and traditions) in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

15. How important is the sourcing country's logistics infrastructure (i.e. number of ports, container availability, road infrastructure) in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

16. How important is the language in the sourcing country (i.e. a language that your organization is fluent in) in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

17. How important is the availability of financial instruments (such as letters of credit) in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

18. How important is product or service quality in making a decision on whether or not to source globally?

Never Important

Rarely Important

Sometimes Important

Usually Important

Always Important

Other (please specify)

19. How important is total lead time on making a decision on whether or not to source globally?

Never Important

Rarely Important

Sometimes Important

Usually Important

Always Important

Other (please specify)

20. How important is lead time consistency in making a decision on whether or not to source globally?

Never Important

Rarely Important

Sometimes Important

Usually Important

Always Important

Other (please specify)

21. How important is political stability (i.e. risk of government upheaval) in making a decision on whether or not to source globally?

Never Important

Rarely Important

Sometimes Important

Usually Important

Always Important

Other (please specify)

22. How important is currency stability (i.e. risk of exchange rate fluctuation) in making a decision on whether or not to source globally?

Never Important

Rarely Important

Sometimes Important

Usually Important

Always Important

Other (please specify)

23. How important are governmental factors (such as risk of anti-dumping actions) in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

24. How important is the availability of multiple supply chain tiers (i.e. first tier suppliers who can manage second and third tier suppliers on your behalf) in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

25. How important are liability considerations (such as customer penalties for late delivery, warranty costs for poor quality, etc.) in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

26. How important is the potential risk of intellectual property rights exploitation in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

27. How important are environmental considerations (such as reducing your organization's carbon footprint) in making a decision on whether or not to source globally?

Never Important Rarely Important Sometimes Important Usually Important Always Important

Other (please specify)

28. How important are corporate social responsibility considerations (such as support for the local community) in making a decision on whether or not to source globally?

Never Important

Rarely Important

Sometimes Important

Usually Important

Always

Important

Other (please specify)

29. How important is the reputation of the supplier (such as plant working conditions) in making a decision on whether or not to source globally?

Never Important

Rarely Important

Sometimes Important

Usually Important

Always

Important

Other (please specify)

APPENDIX 2-2: SEMI-STRUCTURED INTERVIEW QUESTIONS

This interview is part of a research project at the University of Hull to gain a clear understanding of how global sourcing decisions are made when people are selecting suppliers for their organization. The research is being conducted by Keith Carruthers, a PhD candidate at the University of Hull, and will be used in the construction of a global sourcing predictive model which will aid practitioners in determining which countries may be the most attractive for the sourcing of products and services in the future.

The data collected is for academic research purposes only, and all responses will be anonymized and used in a manner which will prohibit the ability to identify responses from individual participants.

Thank you for taking the time to participate in this important research project.

General

- a. Do you currently participate in global sourcing? Why or Why not?

Reasons for Global Sourcing

1. Are your global sourcing activities currently focused on products, services, or both?
2. Why do you participate in global sourcing activities? What are the goals and objectives for your global sourcing activities?
3. Are your global sourcing goals and objectives today the same as they were when you started? If not, how have these goals changed?

Decision Making Factors

4. What are the key factors you consider before deciding whether or not to source globally?
 - I. if probing needed, ask about cost, quality, delivery, foreign exchange, duties, lead time, company reputation, availability, etc.)
5. How would you weigh these factors in degree of importance (from most important to least important) when making global sourcing decisions?
6. Has the weighting of these factors changed over the last 5 to 10 years? If so, how?
7. What barriers are present that may prevent you from sourcing globally?

Performance of the System

8. How are your global sourcing activities performing? Are you meeting your goals and objectives?
9. Have you experienced any problems with your global sourcing activities? If so, what are they?
10. What concerns you the most about your global sourcing activities (i.e. what keeps you up at night)?

Current and Future Trends

11. What percent of your spend is being spent on global sourcing?
12. Is the amount of global sourcing your company does increasing, decreasing, or staying the same? Explain.
13. What do you anticipate will happen to your global sourcing activities in the future? Why do you feel that way?

APPENDIX 2-3: SAMPLE INTERVIEW TRANSCRIPT

Participant #2: September 18, 2015

Interview Notes:

- Interviewer's comments are in maroon
- Participant's comments are in black

The first question I guess is, do you do any global sourcing, and if you do, are they products, are they services, or are they both?

OK, and we do, we buy, well I'll just tell you who we buy, where are products come from. Our certain product comes from China, and it's purchased by the container, by the containerload. And because our product doesn't freight that well, a certain portion of our product, such as racking, because it doesn't freight well, would be purchased here in Canada, Montreal and Toronto. There are other products that we sell, that would be, you know probably 5% of our business volume, would come out of the US. And that's pretty typical of what we do. Now we have a number of suppliers that are bringing stuff from China that we would sell

OK, so do you, what about on the service side, do you buy any services, like design work or any of that, do you buy any of that offshore?

No, that's nothing there

Primarily products, so why? In the cases where you are buying stuff offshore, what's the reason, what are you trying to accomplish?

We those things are....a couple of key factors. They are commodity-based items

OK

and they freight well. OK? So basically, what I am staying there, is we can basically fill the container from top to bottom and get as many in as possible, and that keeps my, that keeps my cost to where it needs to be

So why would you buy product let's say in China or wherever, rather than from let's say Toronto? What are you trying to accomplish?

Why would I? The reason why I do that is because my supplier, my supplier has the ability to keep inventory, to keep inventory and we have a good cross-segment of our inventory in stock through my supplier, and basically I am able to call up and get a pallet of this, a pallet of that,

pallet of whatever. And even though, you know it's not price, it's not price, it's the service of being able to have what I need, whenever I need it, and at a competitive price.

So, you say at a competitive price, so price, price is, is an advantage buying offshore, but your service is also critical?

Ya

Like in other words, what, the reason I ask that question is you say it's not about price you need to have close supply, but you could get close supply here from somebody who's buying out of Toronto, but I guess what you are saying, I don't know if you are or not, if they try to do that, the price wouldn't work, it wouldn't be competitive

That's right, that's right, because I have to, because basically what it comes down to, they could be competitive with the price, I would just have to order larger quantities, not way more than a pallet, probably 20 pallets of the product, and then I'd have the expense of storing it, OK, to make that North American, North American product competitive with the Canadian, with the Chinese product.

So is it fair to say price is important because it's a commodity and there is a competitive factor to this, but it's not all about price, service is more critical, less critical, the same, what would you say?

To me personally, I would say service is, probably let's say 60/40

OK. 60% service

Ya, So now, some of the other, that's the commodity based product, some of the other products that we sell that's made offshore, it's, you know, a little bit different, you know we can order 1,2,3 or this that and this, and it comes down to price, I have to be, you know, I have to be in the ball, the ballpark, you know, within 2 – 3%, or I'm not going to get the deal

OK. the, so you have some reasons why you would buy products offshore, and you've talked about those, you know, an affordable price, and then have it locally with a supplier that you can, you can get your service, so are those objectives the same now as they were 5 or 10 years ago, or have they changed? Or are you trying to accomplish the same thing by sourcing internationally today that you were 10 years ago?

No, I would say initially we, we got into this because, because of the price advantage, the price advantage, but that changed really when you look at quality, OK. So, we could buy cheaper stuff in China, we could, but you get what you pay for, OK. So, that's when, you know, we factor that in, that's when, you know, price sort of steps back a little bit

So, if we look, so has this changed, so?

It's, its, when, I would say when we first looking at doing something in china, it was strictly how to save a dollar

And now it's what?

And now it's, providing a quality product, and providing product when required

OK, so it has it has changed a bit, OK so that's interesting. What are the key things, so when you decide that you're going to start ordering products offshore, what are the key things that result in you saying yes or no? Whatever the evaluation process is you do, and you say yes, or you say no, what are the key factors that that are involved in you making that decision? What are you, what are you thinking about, what are you concerned about, what are you evaluating?

Yup, the number one thing would be quality of the product. You know it's got to be the same colour, it's got to be the same material, it's got to be constructed the same way

OK, and what else would you look at?

Well, you know a, we'd look at the, we'd look at the quantity of, the quantity of product that we can, you know it comes down to how many, how many can we get into the container? So that's, you know if we couldn't get as many into the container as we could get, it wouldn't, it probably wouldn't go anywhere

OK, so, that's related to freight, you mean.

Yeah, yeah

OK, so what else would you be thinking about? (13:18)

Well, we'd be thinking about relationship, relationship with the supplier, how we can build, you know, how we can supply business to a good supplier, a good friend type thing

Ya, anything else?

No, I don't think so, not that I can think of right at the moment

So, would price be a factor?

Price becomes a factor after we, you know, after we get, you know, at a certain level

OK, so in other words, you are not primarily focused on price, you are more concerned about is it going to be good quality, do we have the volume we need to make it work, what's the

relationship with the supplier, but obviously if you had all those things but the price was 25% more, it's not gonna fly, right?

That's right, exactly, so it's got to relate, you know, all that stuff has got to add up to a reasonable price. Something that you know we can

So you use the term reasonable price. So, it's not necessarily the lowest price?

Well, on the commodity item it totally depends. If we're getting a big, if we're just going to do a deal where we are using you know a limited amount of this commodity based product on a deal, you know it's a small percentage of the whole deal, it's, it's not a big issue. But if we are doing a big deal, and that, that commodity-based product is 50% or 60% of the deal, then that changes, that changes totally

OK, interesting, OK. So, and we talked a little bit about this, so the next question I have is how would you weigh these factors in making the decision? So we talked a little bit about that I think, and I don't want to put words in your mouth, but basically, what you are saying is really that quality is a bigger consideration than price, although the price can't be exorbitant, the price has to be competitive but, the price is kind of irrelevant if the quality's not there, right?

Right

So, is it true what we just talked about, that you would rate quality at the top, and then you need to look at freight considerations and the relationship with the supplier, and then price would play a role in their too, but it's not your primary consideration

Right, and the relationship that you have, you know, quality and the relationship that you have with the supplier, is key and that relationship that I have, is a quantity, it's a commodity based product, that I don't need to you know look after a complete shipment, you know, so I have special arrangements with my supplier where I can, you know, order what I need, when I need it. So that that would be, you know, I think those type of things change, those type of things change on a situation you know, how you are looking at the situation (17:10). The different, you know, price is a factor, like price is a major factor if the commodity based product is a high percentage of the complete deal, you know, the special relationship where I can order one, one pallet when I need it is a major factor when I look, when I look at my overhead. That would be the, that would be top consideration.

Ok, Ok, interesting. OK, has again to get back to this question, has the weighting of those factors changed, I mean you are talking now about, you know, right now I've got to be concerned about having a good quality product, and the relationship's key, and there are

advantages to having a supplier who can give me smaller quantities, and then price can work its way in there sometimes, and has that changed at all from what it used to be?

Ya, for sure, because when we first got into this no doubt there was price was the major factor, but what it's allowed me to do is it's allowed me to diversify my product and stock more of of other things that would match, you know, that would match up with the commodity based product. So I'm able to store more of something else, because I know I've got the commodity based product which I have to keep lots of, you know, it's sort of my mixture has changed. My product offering, product offering, product mixture has changed

OK. So, before you would have, because you carried so much of the commodity product, you wouldn't be able to carry as much of the things that you are able to now

That's right, or as many different, not only the same amount of the product but I wouldn't maybe be able to handle as many lines (19:16)

OK. What are, if I asked you what the barriers are to you sourcing globally, so if you are considering making a decision maybe we should source product offshore, what are some of the barriers that would cause you to say, you know what, I'm not going to do it?

It's a small company, it would be the paperwork, the paperwork and arranging freight, and timeliness that you would have to be able to do when you are dealing with someone halfway around the world. So, it really probably means more manpower on my end, to be able to increase what I am buying offshore (20:23)

Anything else that might be a barrier to you doing it? One is the hassle of managing it, I think you're saying

Hassle of management and just the expense of, the expense of, you know, ya I could go out and get the, you know I can go out and get the, buy whatever, but it's more than just writing a cheque. It's you know, arranging this, quality control, making sure it ships on time, making sure that when it arrives we have a place so, we can put it, so there's a lot of organizational factors into buying something offshore, than just writing a cheque

And you mentioned, you know, that quality control is something that might be an issue

Yes, and I think that, I think that's a big one that is, not needing to worry about the product after it gets here is, if it's good or, if good or not so good. I just don't have that issue, I just don't have that issue, at current

OK, people agree to buy stuff offshore for a reason, and we've talked about, you know, it could be quality, it could be service, it could be whatever, and you've got your objectives, you're

saying I want a quality product, and I want a really, I think if I look at what you say, you know, you're objectives are I would like to be competitive cost wise, but also, have a good quality product that, from a supplier that can service me well. So those are really what you are trying to accomplish. Have those, how's that working for you? So, the question reads "how are your global sourcing activities performing? Are you meeting your goals and objectives? Are you getting what you hoped to out of this before you started to, or not?"

Ya I think, I think we are. You know, it's a, I think we are at this point. But, you know, the world is fast paced, and you know, just worried that, you know, its fast paced, and it's, what also, what's also factored in that is exchange rates, and freight rates, and you know, the North American plants, the North American plants on this product becoming more efficient, being able to you know build the stuff more efficiently than that have been in the past, or being willing to maybe do it, versus not doing it in the past before the Chinese were here

Ya

OK, so having those type of uncontrollable changes, having those type of uncontrollable changes that are constantly really changing every day, there's always a doubt in the back of your mind is, OK, his has been a good thing for as long as it lasted, but how long is it going to last, or do we have to make a big move to get to play somewhere else

OK so, basically, from a performance stand point, what you're saying is, to date, it's performing, you're getting what you expected, but you are aware that things change, and there are factors that you can't control that could eventually make it not work.

Right, exactly, 100%

Ok, what are what concerned you the most about your global sourcing activities? So another way of of stating that is, what keeps you up at night?

Ya, well I mean, it's, it's dramatic shift, it's dramatic shift of, like exchange rates for one, and you know, so that comes back to, OK we ordered 10 containers of this product, we ordered 10 containers of this product, and then we have a dramatic shift in the exchange rate, and you know, overnight, you know, what we paid for versus what someone can build it, can build it for now because the exchange rate changed big time, you know, because it took a lot more Canadian dollars to buy what we needed to buy, and then all of a sudden, our dollar shoots up or something, and they are buying steel here a lot cheaper, so so you know, something like that, you know, dramatic change, you have all that inventory, having all that money invested in the inventory, and then having a dramatic swing like that, it just made, you know, it just made your product a hell of a lot harder to sell (26:11)

Ya, anything else?

The other thing would be, would be delivery. Knowing that the product comes from China, or wherever in the world, you know it takes two months, so not having, you know, running out of product, and not having product when you need it

OK, anything else?

I don't think so

OK. What percent of your total spend for your company, what percent would you estimate would be offshore?

Less than 10%

And is that typically direct through factories, or do you usually go through an agent or an importer or a trader?

Importer. Importer

OK. Does the amount of product you are buying offshore, is it increasing, it is decreasing, is it staying the same?

It's probably stayed the same. But were, you know, we're dramatically want to see it increase.

OK

And you know, a factor, you know, I just thought of something else that maybe something that could add to an earlier question, the glut, you know, there's times that there's a glut on the market, you know, what keeps me up at night is, maybe it's not that the factories are becoming more efficient, but maybe someone's either having a fire sale, a fire sale, or you know, a whole bunch of product becomes available because of a, used, for instance. And it's as good as new, it's you know, it puts a glut, a glut in the market.

OK. But, OK, so basically I understand that. So, what do you think, this is the last question, what do you anticipate will happen to your global sourcing activities in the future? Like we talked a bit about you kind of said it's staying the same, you kind of like to see it go, go, grow, but you also talked about I'm kind of a little concerned about exchange rates, and freight, and I'm concerned about, you know, deliveries sometimes, we talked about the need for good quality product, and the fact that things are moving, and things are always changing, and then all of a sudden maybe the guys in North America are willing to do more than they were once willing to do for you, because they are losing business offshore, what do you think if you were to guess

what do you think is going to happen based on what you are seeing, and where do you think this is all going?

Well, I don't think China is going away easily.

OK

But, you know, I think that their costs, you know, their costs are rising, and I think the government has really tried to spend the money to make sure that they don't see dramatic plant closures in their country, but I honestly believe that, you know, that the economy is the economy, and that's going to, you know, that's going to happen, you know, so there's going to have to be another China, the next China is going to be, what is it India, or wherever, so you know, if it's not China, the change would be, OK, you know, we're bringing the product from India.

OK, so you, and again I don't want to put words in your mouth but, so you think that there will be a, probably be a change in where we import from, but we're still going to import from somewhere

Yes

So, you don't, you don't necessarily see, OK, China's not competitive now, so manufacturing is all going to come back to Nova Scotia, and away we go?

No, no, I don't see that, you know, at this, I don't see that at this point, unless, you know, the world runs out of oil, or the oil price goes way the, you know, something like that, that happens, or there's, you know, half of China gets blown off the face of the earth or something like that, you know, that could change things dramatically

Ya (31:43)

But the one thing I see about China, is, and this is not, maybe not so much my product but they've pretty much built stuff as cheap as they can build it. You can't really build it any cheaper, as far as, as far as what is actually going in the product, so and I think what's forcing that, is it's costing them more to build things, such as raw materials and labour, so what that's telling me is, you know, there's going to be, there's going to be a new China, you know, out there somewhere

OK, anything else to add?

Or prices will dramatically increase for product

OK, anything else to add?

You know, I think, I think it's getting easier, I think it is getting easier to move products around the world, from shipping it, to government, you know, policies and procedures, to paperwork to, you know, the red tape, so I think it's, it's getting easier to do that. It's getting acceptable in industry, to have a certain amount of that

Ya

And you know, people, what forces all this, is you know, if people only have a certain amount of money to spend, they only have a certain amount of money to spend, so, if you want to sell your product, you have to make it for that amount of money or you know, you're not going to move any product. You know, that's not only, not so much looking at my product, but it's the whole, you know, looking at the big picture

OK. Ya, so we're kind of at the mercy of the market right?

Ya

APPENDIX 2-4: INTERVIEW PARTICIPANT DEMOGRAPHICS

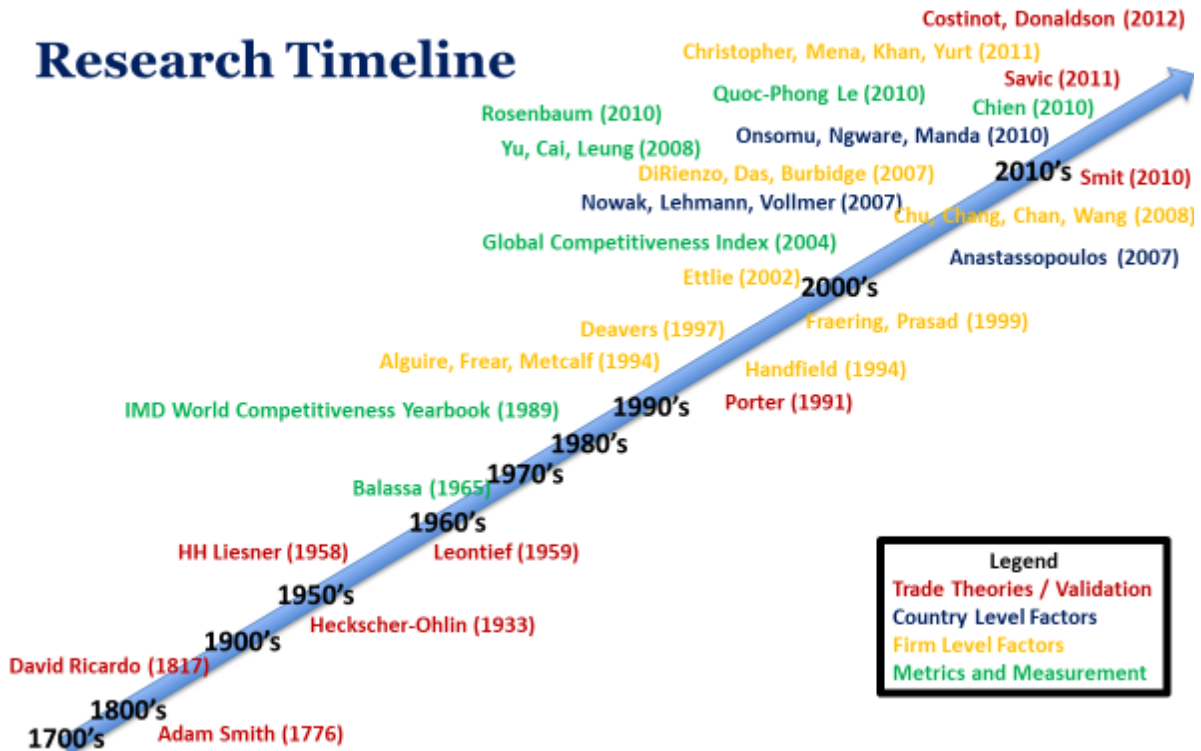
Participant	Type	Role	Age Group	Gender	Company Size (Employees)	Location
1	Practitioner	Purchasing	50 - 65	M	Large (100+)	Nova Scotia
2	Practitioner	Business Owner	50 - 65	M	Small (< 50)	Nova Scotia
3	Practitioner	Purchasing	35 – 50	M	Medium (50 – 100)	New Brunswick
4	Practitioner	Purchasing	50 – 65	M	Large (100+)	New Brunswick
5	Practitioner	Purchasing	35 - 50	M	Large (100+)	Nova Scotia
6	Practitioner	Purchasing	50 - 65	M	Large (100+)	Ontario
7	Practitioner	Purchasing	20 – 35	M	Large (100+)	New Brunswick
8	Practitioner	Logistics	50 – 65	M	Medium (50 – 100)	Ontario
9	Practitioner	Purchasing	35 – 50	F	Small (<50)	New Brunswick
10	Practitioner	Purchasing	50-65	M	Large (100+)	Nova Scotia
11	Practitioner	Purchasing	35-50	F	Large (100+)	New Brunswick
12	Advisor	Accountant	35-50	M	Small (<50)	Nova Scotia
13	Practitioner	Purchasing	35-50	M	Medium (50-100)	New Brunswick
14	Practitioner	Operations	35-50	M	Medium (50-100)	Nova Scotia
15	Practitioner	Purchasing	35-50	M	Large (100+)	Manitoba

16	Practitioner	Purchasing	50-65	F	Large (100+)	New Brunswick
17	Advisor	Economic Development	50-65	M	Large (100+)	New Brunswick
18	Advisor	Economic Development	50-65	M	Large (100+)	Nova Scotia
19	Advisor	Banking	35-50	M	Large (100+)	Nova Scotia
20	Advisor	Banking	35-50	M	Large (100+)	New Brunswick
21	Advisor	Economic Development	50-65	M	Large (100+)	New Brunswick
22	Advisor	Economic Development	35-50	M	Large (100+)	New Brunswick
23	Advisor	Economic Development	50-65	M	Large (100+)	Nova Scotia
24	Advisor	Economic Development	50-65	M	Large (100+)	Nova Scotia
25	Advisor	Banking	35-50	M	Large (100+)	Nova Scotia

APPENDIX 3-1: RESEARCH TIMELINE



Research Timeline



Legend

Trade Theories / Validation

Country Level Factors

Firm Level Factors

Metrics and Measurement

APPENDIX 4-1: GATT NEGOTIATION ROUNDS

The following is a list of the formal trade negotiation rounds that took place from the establishment until the mid-1990s:

- Geneva (1947)
- Annecy (1949)
- Torquay (1951)
- Geneva (1956)
- The Dillon Round (1960 – 1961)
- The Kennedy Round (1964 – 1967)
- The Tokyo Round (1973 – 1979)
- The Uruguay Round (1986 – 1994)

APPENDIX 5-1: CHINA EXPORT PERFORMANCE

Total Merchandise Exports (Million USD)¹

<u>Year</u>	<u>United States</u>	<u>% World Exports</u>	<u>China</u>	<u>% World Exports</u>
2005	\$ 901,082	8.56 %	\$ 761,953	7.25 %
2006	\$ 1,025,967	8.46 %	\$ 968,978	7.99 %
2007	\$ 1,148,199	8.19 %	\$ 1,220,456	8.70 %
2008	\$ 1,287,442	7.96 %	\$ 1,430,693	8.85 %
2009	\$ 1,056,043	8.41 %	\$ 1,201,612	9.57 %
2010	\$ 1,278,495	8.34 %	\$ 1,577,754	10.31 %
2011	\$ 1,482,508	8.08 %	\$ 1,898,381	10.35 %
2012	\$ 1,545,703	8.35 %	\$ 2,048,714	11.07 %
2013	\$ 1,579,593	8.34 %	\$ 2,209,005	11.66 %
2014	\$ 1,620,530	8.54 %	\$ 2,342,290	12.34 %
2015	\$ 1,502,572	9.09 %	\$ 2,273,468	13.75%
2016	\$ 1,451,011	9.05 %	\$ 2,097,632	13.09 %
2017	\$ 1,546,273	8.72 %	\$ 2,263,346	12.76 %
2018	\$ 1,664,085	8.55 %	\$ 2,487,045	12.78 %

¹ <https://data.wto.org>

APPENDIX 5-2: CHINA GDP PERFORMANCE

Gross Domestic Product (Million USD)²

<u>Year</u>	<u>United States</u>	<u>% World GDP</u>	<u>China</u>	<u>% World GDP</u>
2009	\$ 14,418,739	23.92 %	\$ 5,109,954.6	8.48 %
2010	\$ 14,992,052	22.70 %	\$ 6,100,620.5	9.24 %
2011	\$ 15,542,582	21.18 %	\$ 7,572,553.8	10.32 %
2012	\$ 16,197,007	21.58 %	\$ 8,560,547.3	11.40 %
2013	\$ 16,784,851	21.74 %	\$ 9,607,224.5	12.44 %
2014	\$ 17,521,747	22.09 %	\$ 10,482,372.1	13.22 %
2015	\$ 18,219,297	24.28 %	\$ 11,064,666.3	14.75 %
2016	\$ 18,707,189	24.57 %	\$ 11,190,992.6	14.70 %
2017	\$ 19,485,394	24.08 %	\$ 12,237,700.5	15.12 %

² <https://databank.worldbank.org>

APPENDIX 6-1: RANK ORDERED SURVEY RESPONSES

	Never Important	Rarely Important	Sometimes Important	Usually Important	Always Important	Rating Average	Response Count
Product or Service Quality	1	0	1	38	172	4.79	212
Total Cost of Ownership	1	4	24	43	138	4.49	210
Lead Time Consistency	1	2	19	75	113	4.41	210
Total Lead Time	1	4	19	80	106	4.36	210
Transportation Costs	3	8	22	60	119	4.34	212
Political Stability	4	8	36	66	98	4.16	212
Supplier Reputation	1	8	41	72	90	4.14	212
Liability	3	13	32	72	90	4.11	210
Duty	2	17	39	61	90	4.05	209
Currency Stability	4	11	36	96	64	3.97	211
Intellectual Property Rights	3	27	35	57	88	3.95	210
Border-related Costs	3	23	49	57	78	3.88	210
Logistics Infrastructure	6	16	52	61	74	3.87	209
Governmental Factors	5	27	53	66	61	3.71	212
Supplier Labour Cost	9	28	50	64	61	3.66	212
Cost of Intermediaries	9	19	57	70	51	3.66	206
Availability of Financial Instruments	4	30	57	59	58	3.66	208
Corporate Social Responsibility	5	29	57	64	56	3.65	211
Environmental	6	25	57	81	39	3.59	208
Availability of Intermediaries	10	32	68	56	42	3.42	208
Supply Chain Tiers	6	42	67	59	37	3.37	211
Availability of 3rd party inspection services	14	37	59	62	38	3.35	210
Cost of 3rd party inspection	12	36	64	62	34	3.34	208
Language	11	40	69	59	30	3.27	209
Travel Cost	14	53	73	41	30	3.09	211
Government Support Programs	24	48	60	45	29	3.03	206
Culture	22	56	53	49	27	3.01	207

APPENDIX 6-2: RANK ORDERED SURVEY RESPONSES FINAL FACTORS

	Never Important	Rarely Important	Sometimes Important	Usually Important	Always Important	Rating Average	Response Count
Product or Service Quality	1	0	1	38	172	4.79	212
Total Lead Time	1	4	19	80	106	4.36	210
Transportation Costs	3	8	22	60	119	4.34	212
Political Stability	4	8	36	66	98	4.16	212
Duty	2	17	39	61	90	4.05	209
Currency Stability	4	11	36	96	64	3.97	211
Logistics Infrastructure	6	16	52	61	74	3.87	209
Governmental Factors	5	27	53	66	61	3.71	212
Supplier Labour Cost	9	28	50	64	61	3.66	212
Corporate Social Responsibility	5	29	57	64	56	3.65	211
Environmental	6	25	57	81	39	3.59	208
	46	173	422	737	940	44.15	2318

APPENDIX 6-3: SURVEY DATA DECISION MAKING FACTORS

GROUPED BY RISK REWARD

	Never Important	Rarely Important	Sometimes Important	Usually Important	Always Important	Rating Average	Response Count
Risk Factors							
Product or Service Quality	1	0	1	38	172	4.79	212
Total Lead Time	1	4	19	80	106	4.36	210
Political Stability	4	8	36	66	98	4.16	212
Currency Stability	4	11	36	96	64	3.97	211
Logistics Infrastructure	6	16	52	61	74	3.87	209
Governmental Factors	5	27	53	66	61	3.71	212
Corporate Social Responsibility	5	29	57	64	56	3.65	211
Environmental	6	25	57	81	39	3.59	208
	32	120	311	552	670	4.01	1685
Cost Factors							
Transportation Costs	3	8	22	60	119	4.34	212
Duty	2	17	39	61	90	4.05	209
Supplier Labour Cost	9	28	50	64	61	3.66	212
	14	53	111	185	270	4.02	633

APPENDIX 6-4: INTERVIEW DATA GOALS AND OBJECTIVES

ALL PARTICIPANTS

Name	Sources	% of sources	References
Lower Cost	23	92.0%	52
Availability	7	28.0%	10
Quality	5	20.0%	8
Create Competition	3	12.0%	6
Discover new opportunities	3	12.0%	4
Innovation	2	8.0%	4
Service	2	8.0%	2
Lead Time	2	8.0%	2
Business Sustainability	1	4.0%	1
New Market Access	1	4.0%	3
Additional Capacity	1	4.0%	2
Reduced Quality	1	4.0%	2
Partnership Opportunities	1	4.0%	1

APPENDIX 6-5: INTERVIEW DATA VOLUME OF GLOBAL SOURCING

Name		Sources	% of sources	References
Low Level of Global Sourcing		9	36.0%	13
Medium Level of Global Sourcing		6	24.0%	7
High Level of Global Sourcing		4	16.0%	10
No response			24.0%	

APPENDIX 6-6: INTERVIEW DATA TYPE OF GLOBAL SOURCING

Name	Sources	% of sources	References
Products	20	80%	21
Services	2	8%	3
Both	2	8%	2
Neither	0	0%	0

APPENDIX 6-7: INTERVIEW DATA DECISION MAKING FACTORS

Name	Sources	% of sources	References
Quality	23	92.0%	40
Cost	20	80.0%	54
Lead Time (Total)	16	64.0%	32
Supply Chain Risk	14	56.0%	24
Trust and Relationship	11	44.0%	16
Price	10	40.0%	21
Availability	8	32.0%	10
Corporate Social Responsibility	8	32.0%	13
Quantity considerations	8	32.0%	13
Foreign Currency Exchange	8	32.0%	11
Lead Time Consistency	7	28.0%	12
Vendor Certifications	7	28.0%	11
Vendor Reputation	6	24.0%	13
Inventory	6	24.0%	9
Capacity	6	24.0%	13
Logistics	6	24.0%	10
Government Policy	6	24.0%	12
Freight Cost	6	24.0%	6
Communication	5	20.0%	9
Political and Economic Stability	5	20.0%	18
Cash Flow	5	20.0%	10
Vendor Skill and Expertise	4	16.0%	15
Customs Duties	4	16.0%	5
Nationalism	4	16.0%	4
Product Type	4	16.0%	8
Intermediaries	4	16.0%	5
Country Reputation	3	12.0%	4
Intellectual Property	3	12.0%	4
Infrastructure	2	8.0%	4
Value Added Considerations	2	8.0%	5
Vendor Financial Stability	2	8.0%	2
Customer Demands	2	8.0%	2
Product Life Cycle	1	4.0%	2
Potential product liability	1	4.0%	1
Payment Terms	1	4.0%	1
Supply Chain Tiers	1	4.0%	1
Internal Capability	1	4.0%	1
Marketing and Branding	1	4.0%	2
Tooling Investment	1	4.0%	1
Corruption	1	4.0%	1

APPENDIX 6-8: INTERVIEW DATA MOST IMPORTANT FACTOR

Name	Sources	% of Sources	References
Price	12	48.0%	16
Quality	8	32.0%	11
Delivery	2	8.0%	3
Vendor Skill and Expertise	1	4.0%	1
Product Uniqueness	1	4.0%	1
Cash Flow	1	4.0%	1

APPENDIX 6-9: INTERVIEW DATA SECOND MOST IMPORTANT FACTOR

Name	Sources	% of Sources	References
Price/ Cost	7	28.0%	8
Quality	6	24.0%	6
Lead Time	3	12.0%	3
Vendor Relationship	1	4.0%	1
Vendor Health and Safety Record	1	4.0%	1
Capacity	1	4.0%	2
Supply Chain Risk	1	4.0%	1
Delivery	1	4.0%	1
Political and Economic stability	1	4.0%	1

APPENDIX 6-10: INTERVIEW DATA THIRD MOST IMPORTANT FACTOR

Name	Sources	% of Sources	References
Delivery	5	20.0%	5
Cost	4	16.0%	4
Quality	3	12.0%	3
Vendor Reputation	2	8.0%	2
Price	2	8.0%	2
Lead Time	1	4.0%	1
Brand or Reputation	1	4.0%	1

APPENDIX 6-11: INTERVIEW DATA BARRIERS TO GLOBAL SOURCING

Name	Sources	% of Sources	References
Risk and Uncertainty	13	52.0%	18
Internal Capability	9	36.0%	16
Volume	9	36.0%	15
Governmental Factors	9	36.0%	12
Culture	7	28.0%	11
Country Reputation	7	28.0%	10
Inventory	6	24.0%	6
Cash Flow	6	24.0%	10
Language	5	20.0%	5
Communication	5	20.0%	5
Customs and Duties	4	16.0%	4
Company Policy	4	16.0%	5
Brand or Reputation	4	16.0%	5
Lead Time	4	16.0%	4
Political and Economic Stability	3	12.0%	4
Complexity	3	12.0%	4
Vendor Relationships	3	12.0%	3
Customer Perception	3	12.0%	3
Infrastructure	2	8.0%	4
Foreign Exchange Risk	2	8.0%	3
Company Culture	2	8.0%	5
Vendor Certifications	2	8.0%	3
Labour Disruptions	1	4.0%	1
Product Life Cycle	1	4.0%	3
Freight Cost	1	4.0%	1
Availability	1	4.0%	2
Intermediaries	1	4.0%	2
Quality	1	4.0%	1
Corporate Social Responsibility	1	4.0%	1
Intellectual Property	1	4.0%	1
Trust	1	4.0%	1
Change	1	4.0%	3
Impact on People	1	4.0%	1

APPENDIX 6-12: INTERVIEW DATA SUPPLY CHAIN ISSUES

Name	Sources	% of Sources	References
Quality	19	76.0%	43
Delivery	15	60.0%	28
Cost	13	52.0%	24
Communication	8	32.0%	10
Vendor Relationship	4	16.0%	5
Logistics	3	12.0%	5
Foreign Exchange Currency	3	12.0%	4
Availability	2	8.0%	3
Internal Capability or Expertise	2	8.0%	2
Vendor skills and expertise	2	8.0%	2
Packaging	2	8.0%	3
Intellectual Property	1	4.0%	1
Fraud	1	4.0%	1
Governmental Factors	1	4.0%	2
Customs	1	4.0%	1

APPENDIX 6-13: INTERVIEW DATA
GLOBAL SUPPLY CHAIN PERFORMANCE

Name	Sources	% of sources	References
Meeting Expectations	15	60.0%	21
Not meeting expectations	9	36.0%	10
Not sure	0	0.0%	0

APPENDIX 6-14: INTERVIEW DATA RISK MITIGATION STRATEGIES

Name	Sources	% of sources	References
Secondary Sources	7	28.0%	13
Vendor Visits or Audits	7	28.0%	9
Inventory	4	16.0%	5
Product Sampling	4	16.0%	4
Vendor References	3	12.0%	4
Communication	2	8.0%	4
Currency Hedging	2	8.0%	2
Intermediaries	2	8.0%	2
Relationships	1	4.0%	2
Transportation	1	4.0%	1
Vendor certification	1	4.0%	3
Vendor Research	1	4.0%	2
Paced Implementation	1	4.0%	2
Contingency Planning	1	4.0%	1
Vendor Measurement	1	4.0%	2

APPENDIX 6-15: INTERVIEW DATA GLOBAL SOURCING TRENDS

Name	Sources	% of sources	References
Has Changed	18	72.0%	48
Has Not Changed	7	28.0%	12

APPENDIX 6-16: INTERVIEW DATA FUTURE PREDICTED TRENDS

Name	Sources	% of sources	References
Global Sourcing Increasing	14	56.0%	27
Global Sourcing Decreasing	6	24.0%	16
Global Sourcing Stay at Current Levels	5	20.0%	7

APPENDIX 6-17: INTERVIEW DATA GOALS AND OBJECTIVES

IN GROUP

Name	Sources	% of sources	References
Lower Cost	14	93.3%	
Availability	5	33.3%	
Quality	4	26.7%	
Create Competition	3	20.0%	
Discover new opportunities	3	20.0%	
Innovation	2	13.3%	
Service	2	13.3%	
Lead Time	2	13.3%	
Business Sustainability	1	6.7%	
New Market Access	1	6.7%	
Additional Capacity	0	0.0%	
Reduced Quality	0	0.0%	
Partnership Opportunities	0	0.0%	

APPENDIX 6-18: INTERVIEW DATA GOALS AND OBJECTIVES

OUT GROUP

Name	Sources	% of sources	References
Lower Cost	9	90.0%	
Availability	2	20.0%	
Quality	1	10.0%	
Additional Capacity	1	10.0%	
Reduced Quality	1	10.0%	
Partnership Opportunities	1	10.0%	
Create Competition	0	0.0%	
Discover new opportunities	0	0.0%	
Innovation	0	0.0%	
Service	0	0.0%	
Lead Time	0	0.0%	
Business Sustainability	0	0.0%	
New Market Access	0	0.0%	

APPENDIX 6-19: INTERVIEW DATA VOLUME OF SOURCING**IN GROUP**

Name	Sources	% of sources	References
Low Level of Global Sourcing	8	53.3%	
Medium Level of Global Sourcing	4	26.7%	
High Level of Global Sourcing	2	13.3%	
No response		6.7%	

APPENDIX 6-20: INTERVIEW DATA VOLUME OF SOURCING**OUT GROUP**

Name	Sources	% of sources	References
Low Level of Global Sourcing	1	10.0%	
Medium Level of Global Sourcing	2	20.0%	
High Level of Global Sourcing	2	20.0%	
No reply		50%	

APPENDIX 6-21: INTERVIEW DATA TYPE OF GLOBAL SOURCING**IN GROUP**

Name	Sources	% of sources	References
Products	12	80%	
Services	2	13%	
Both	1	7%	
Neither	0	0%	

APPENDIX 6-22: INTERVIEW DATA TYPE OF GLOBAL SOURCING**OUT GROUP**

Name	Sources	% of sources	References
Products	8	80%	
Services	0	0%	
Both	1	10%	
Neither	0	0%	

APPENDIX 6-23: INTERVIEW DATA DECISION MAKING FACTORS

IN GROUP

Name	Sources	% of sources	References
Quality	14	93.3%	
Cost	12	80.0%	
Lead Time (Total)	12	80.0%	
Supply Chain Risk	11	73.3%	
Price	9	60.0%	
Trust and Relationship	8	53.3%	
Vendor Certifications	6	40.0%	
Vendor Reputation	6	40.0%	
Capacity	6	40.0%	
Corporate Social Responsibility	5	33.3%	
Foreign Currency Exchange	5	33.3%	
Logistics	5	33.3%	
Availability	4	26.7%	
Quantity considerations	4	26.7%	
Freight Cost	4	26.7%	
Communication	4	26.7%	
Vendor Skill and Expertise	4	26.7%	
Lead Time Consistency	3	20.0%	
Government Policy	3	20.0%	
Customs Duties	3	20.0%	
Inventory	2	13.3%	
Political and Economic Stability	2	13.3%	
Cash Flow	2	13.3%	
Nationalism	2	13.3%	
Intermediaries	2	13.3%	
Country Reputation	2	13.3%	
Infrastructure	2	13.3%	
Value Added Considerations	2	13.3%	
Vendor Financial Stability	2	13.3%	
Product Type	1	6.7%	
Customer Demands	1	6.7%	
Product Life Cycle	1	6.7%	
Potential product liability	1	6.7%	
Payment Terms	1	6.7%	
Supply Chain Tiers	1	6.7%	
Intellectual Property	0	0.0%	
Internal Capability	0	0.0%	
Marketing and Branding	0	0.0%	
Tooling Investment	0	0.0%	
Corruption	0	0.0%	

APPENDIX 6-24: INTERVIEW DATA DECISION MAKING FACTORS

OUT GROUP

Name	Sources	% of sources	References
Quality	9	90.0%	
Cost	8	80.0%	
Lead Time (Total)	4	40.0%	
Availability	4	40.0%	
Quantity considerations	4	40.0%	
Lead Time Consistency	4	40.0%	
Inventory	4	40.0%	
Supply Chain Risk	3	30.0%	
Trust and Relationship	3	30.0%	
Corporate Social Responsibility	3	30.0%	
Foreign Currency Exchange	3	30.0%	
Government Policy	3	30.0%	
Political and Economic Stability	3	30.0%	
Cash Flow	3	30.0%	
Product Type	3	30.0%	
Intellectual Property	3	30.0%	
Freight Cost	2	20.0%	
Nationalism	2	20.0%	
Intermediaries	2	20.0%	
Price	1	10.0%	
Vendor Certifications	1	10.0%	
Logistics	1	10.0%	
Communication	1	10.0%	
Customs Duties	1	10.0%	
Country Reputation	1	10.0%	
Customer Demands	1	10.0%	
Internal Capability	1	10.0%	
Marketing and Branding	1	10.0%	
Tooling Investment	1	10.0%	
Corruption	1	10.0%	
Vendor Reputation	0	0.0%	
Capacity	0	0.0%	
Vendor Skill and Expertise	0	0.0%	
Infrastructure	0	0.0%	
Value Added Considerations	0	0.0%	
Vendor Financial Stability	0	0.0%	
Product Life Cycle	0	0.0%	
Potential product liability	0	0.0%	
Payment Terms	0	0.0%	
Supply Chain Tiers	0	0.0%	

APPENDIX 6-25: INTERVIEW DATA MOST IMPORTANT FACTOR

OUT GROUP

Name	Sources	% of Sources	References
Price	7	70.0%	
Quality	1	10.0%	
Product Uniqueness	1	10.0%	
Cash Flow	1	10.0%	
Delivery	0	0.0%	
Vendor Skill and Expertise	0	0.0%	

APPENDIX 6-26: INTERVIEW DATA MOST IMPORTANT FACTOR
IN GROUP

Name	Sources	% of Sources	References
Quality	7	46.7%	
Price	5	33.3%	
Delivery	2	13.3%	
Vendor Skill and Expertise	1	6.7%	
Product Uniqueness	0	0.0%	
Cash Flow	0	0.0%	

APPENDIX 6-27: INTERVIEW DATA**SECOND MOST IMPORTANT FACTOR IN GROUP**

Name	Sources	% of Sources	References
Quality	4	26.7%	
Price/ Cost	4	26.7%	
Lead Time	1	6.7%	
Vendor Relationship	1	6.7%	
Vendor Health and Safety Record	1	6.7%	
Capacity	1	6.7%	
Supply Chain Risk	1	6.7%	
Delivery	1	6.7%	
Political and Economic stability	0	0.0%	

APPENDIX 6-28: INTERVIEW DATA

SECOND MOST IMPORTANT FACTOR OUT GROUP

Name	Sources	% of Sources	References
Price/ Cost	3	30.0%	
Quality	2	20.0%	
Lead Time	2	20.0%	
Political and Economic stability	1	10.0%	
Vendor Relationship	0	0.0%	
Vendor Health and Safety Record	0	0.0%	
Capacity	0	0.0%	
Supply Chain Risk	0	0.0%	
Delivery	0	0.0%	

APPENDIX 6-29: INTERVIEW DATA**THIRD MOST IMPORTANT FACTOR IN GROUP**

Name	Sources	% of Sources	References
Cost	4	26.7%	
Delivery	3	20.0%	
Vendor Reputation	2	13.3%	
Price	2	13.3%	
Quality	1	6.7%	
Lead Time	1	6.7%	
Brand or Reputation	0	0.0%	

APPENDIX 6-30: INTERVIEW DATA**THIRD MOST IMPORTANT FACTOR OUT GROUP**

Name	Sources	% of Sources	References
Quality	2	20.0%	
Delivery	2	20.0%	
Brand or Reputation	1	10.0%	
Vendor Reputation	0	0.0%	
Lead Time	0	0.0%	
Cost	0	0.0%	
Price	0	0.0%	

APPENDIX 6-31: INTERVIEW DATA**WEIGHTED FACTOR IMPORTANCE**

Name	Sources	Weight						
	Most Important		Second Important		Third Important		Weighted Factor Score	% Weighted Factor Score
Cost/ Price	12	3	7	2	6	1	56	40.9%
Quality	8	3	6	2	3	1	39	28.5%
Delivery/ Lead Time	2	3	4	2	6	1	20	14.6%
Cash Flow	1	3	0	2	0	1	3	2.2%
Product Uniqueness	1	3	0	2	0	1	3	2.2%
Vendor Skill and Expertise	1	3	0	2	0	1	3	2.2%
Capacity	0	3	1	2	0	1	2	1.5%
Political and Economic stability	0	3	1	2	0	1	2	1.5%
Supply Chain Risk	0	3	1	2	0	1	2	1.5%
Vendor Health and Safety Record	0	3	1	2	0	1	2	1.5%
Vendor Relationship	0	3	1	2	0	1	2	1.5%
Vendor Reputation	0	3	0	2	2	1	2	1.5%
Brand or Reputation	0	3	0	2	1	1	1	0.7%
Vendor Certification	0	3	0	2	0	1	0	0.0%

APPENDIX 6-32: INTERVIEW DATA

WEIGHTED FACTOR IMPORTANCE IN GROUP

Name	Sources	Weight						
	Most Important		Second Important		Third Important		Weighted Factor Score	% Weighted Factor Score
Quality	7	3	4	2	1	1	30	34.9%
Cost/ Price	5	3	4	2	6	1	29	33.7%
Delivery/ Lead Time	2	3	2	2	4	1	14	16.3%
Vendor Skill and Expertise	1	3	0	2	0	1	3	3.5%
Vendor Capacity	0	3	1	2	0	1	2	2.3%
Supply Chain Risk	0	3	1	2	0	1	2	2.3%
Vendor Health and Safety Record	0	3	1	2	0	1	2	2.3%
Vendor Relationship	0	3	1	2	0	1	2	2.3%
Vendor Reputation	0	3	0	2	2	1	2	2.3%
Cash Flow	0	3	0	2	0	1	0	0.0%
Product Uniqueness	0	3	0	2	0	1	0	0.0%
Capacity	0	3	0	2	0	1	0	0.0%
Political and Economic stability	0	3	0	2	0	1	0	0.0%
Brand or Reputation	0	3	0	2	0	1	0	0.0%
Vendor Certification	0	3	0	2	0	1	0	0.0%

APPENDIX 6-33: INTERVIEW DATA

WEIGHTED FACTOR IMPORTANCE OUT GROUP

Name	Sources	Weight						
	Most Important		Second Important		Third Important		Weighted Factor Score	% Weighted Factor Score
Cost/ Price	7	3	3	2	0	1	27	52.9%
Quality	1	3	2	2	2	1	9	17.6%
Delivery/ Lead Time	0	3	2	2	2	1	6	11.8%
Cash Flow	1	3	0	2	0	1	3	5.9%
Product Uniqueness	1	3	0	2	0	1	3	5.9%
Political and Economic stability	0	3	1	2	0	1	2	3.9%
Brand or Reputation	0	3	0	2	1	1	1	2.0%
Vendor Capacity	0	3	0	2	0	1	0	0.0%
Vendor Skill and Expertise	0	3	0	2	0	1	0	0.0%
Supply Chain Risk	0	3	0	2	0	1	0	0.0%
Vendor Health and Safety Record	0	3	0	2	0	1	0	0.0%
Vendor Relationship	0	3	0	2	0	1	0	0.0%
Vendor Reputation	0	3	0	2	0	1	0	0.0%
Capacity	0	3	0	2	0	1	0	0.0%
Vendor Certification	0	3	0	2	0	1	0	0.0%

APPENDIX 6-34: INTERVIEW DATA

BARRIERS TO GLOBAL SOURCING IN GROUP

Name	Sources	% of Sources	References
Risk and Uncertainty	7	46.7%	
Governmental Factors	7	46.7%	
Internal Capability	4	26.7%	
Culture	4	26.7%	
Language	4	26.7%	
Company Policy	4	26.7%	
Volume	3	20.0%	
Country Reputation	3	20.0%	
Customs and Duties	3	20.0%	
Political and Economic Stability	3	20.0%	
Vendor Relationships	3	20.0%	
Customer Perception	2	13.3%	
Infrastructure	2	13.3%	
Foreign Exchange Risk	2	13.3%	
Company Culture	2	13.3%	
Vendor Certifications	2	13.3%	
Complexity	2	13.3%	
Inventory	2	13.3%	
Communication	2	13.3%	
Brand or Reputation	2	13.3%	
Lead Time	2	13.3%	
Cash Flow	1	6.7%	
Labour Disruptions	1	6.7%	
Product Life Cycle	1	6.7%	
Freight Cost	1	6.7%	
Availability	1	6.7%	
Quality	1	6.7%	
Corporate Social Responsibility	1	6.7%	
Intellectual Property	0	0.0%	
Intermediaries	0	0.0%	
Trust	0	0.0%	
Change	0	0.0%	
Impact on People	0	0.0%	

APPENDIX 6-35: INTERVIEW DATA

BARRIERS TO GLOBAL SOURCING OUT GROUP

Name	Sources	% of Sources	References
Risk and Uncertainty	6	60.0%	
Volume	6	60.0%	
Internal Capability	5	50.0%	
Cash Flow	5	50.0%	
Country Reputation	4	40.0%	
Inventory	4	40.0%	
Culture	3	30.0%	
Communication	3	30.0%	
Brand or Reputation	2	20.0%	
Lead Time	2	20.0%	
Governmental Factors	2	20.0%	
Language	1	10.0%	
Customs and Duties	1	10.0%	
Complexity	1	10.0%	
Customer Perception	1	10.0%	
Intermediaries	1	10.0%	
Intellectual Property	1	10.0%	
Trust	1	10.0%	
Change	1	10.0%	
Impact on People	1	10.0%	
Company Policy	0	0.0%	
Political and Economic Stability	0	0.0%	
Vendor Relationships	0	0.0%	
Infrastructure	0	0.0%	
Foreign Exchange Risk	0	0.0%	
Company Culture	0	0.0%	
Vendor Certifications	0	0.0%	
Labour Disruptions	0	0.0%	
Product Life Cycle	0	0.0%	
Freight Cost	0	0.0%	
Availability	0	0.0%	
Quality	0	0.0%	
Corporate Social Responsibility	0	0.0%	

APPENDIX 6-36: INTERVIEW DATA

SUPPLY CHAIN ISSUES IN GROUP

Name	Sources	% of Sources	References
Quality	11	73.3%	
Delivery	11	73.3%	
Cost	10	66.7%	
Communication	8	53.3%	
Vendor Relationship	3	20.0%	
	3	20.0%	
Foreign Exchange Currency	3	20.0%	
Availability	2	13.3%	
Internal Capability or Expertise	2	13.3%	
Vendor skills and expertise	2	13.3%	
Intellectual Property	1	6.7%	
Packaging	0	0.0%	
Fraud	0	0.0%	
Governmental Factors	0	0.0%	
Customs	0	0.0%	

APPENDIX 6-37: INTERVIEW DATA**SUPPLY CHAIN ISSUES OUT GROUP**

Name	Sources	% of Sources	References
Quality	8	80.0%	
Delivery	4	40.0%	
Cost	3	30.0%	
Packaging	2	20.0%	
Vendor Relationship	1	10.0%	
Fraud	1	10.0%	
Governmental Factors	1	10.0%	
Customs	1	10.0%	
Communication	0	0.0%	
Logistics	0	0.0%	
Foreign Exchange Currency	0	0.0%	
Availability	0	0.0%	
Internal Capability or Expertise	0	0.0%	
Vendor skills and expertise	0	0.0%	
Intellectual Property	0	0.0%	

APPENDIX 6-38: INTERVIEW DATA
SUPPLY CHAIN PERFORMANCE IN GROUP

Name	Sources	% of sources	References
Meeting Expectations	10	66.7%	
Not meeting expectations	5	33.3%	
Not sure	0	0.0%	

APPENDIX 6-39: INTERVIEW DATA
SUPPLY CHAIN PERFORMANCE OUT GROUP

Name	Sources	% of sources	References
Meeting Expectations	5	50.0%	
Not meeting expectations	4	40.0%	
Not sure	0	0.0%	

APPENDIX 6-40: INTERVIEW DATA
RISK MITIGATION STRATEGIES IN GROUP

Name	Sources	% of sources	References
Vendor Visits or Audits	7	46.7%	
Secondary Sources	6	40.0%	
Product Sampling	4	26.7%	
Inventory	3	20.0%	
Vendor References	3	20.0%	
Communication	2	13.3%	
Currency Hedging	2	13.3%	
Intermediaries	2	13.3%	
Relationships	1	6.7%	
Transportation	1	6.7%	
Vendor certification	1	6.7%	
Vendor Research	1	6.7%	
Paced Implementation	1	6.7%	
Contingency Planning	1	6.7%	
Vendor Measurement	1	6.7%	

APPENDIX 6-41: INTERVIEW DATA
RISK MITIGATION STRATEGIES OUT GROUP

Name	Sources	% of sources	References
Secondary Sources	1	10.0%	
Inventory	1	10.0%	
Vendor Visits or Audits	0	0.0%	
Product Sampling	0	0.0%	
Vendor References	0	0.0%	
Communication	0	0.0%	
Currency Hedging	0	0.0%	
Intermediaries	0	0.0%	
Relationships	0	0.0%	
Transportation	0	0.0%	
Vendor certification	0	0.0%	
Vendor Research	0	0.0%	
Paced Implementation	0	0.0%	
Contingency Planning	0	0.0%	
Vendor Measurement	0	0.0%	

APPENDIX 6-42: INTERVIEW DATA
GLOBAL SOURCING TRENDS IN GROUP

Name	Sources	% of sources	References
Has Changed	9	60.0%	
Has Not Changed	6	40.0%	

APPENDIX 6-43: INTERVIEW DATA
GLOBAL SOURCING TRENDS OUT GROUP

Name	Sources	% of sources	References
Has Changed	9	90.0%	
Has Not Changed	1	10.0%	

APPENDIX 6-44: INTERVIEW DATA
FUTURE PREDICTED TRENDS IN GROUP

Name	Sources	% of sources	References
Global Sourcing Increasing	8	53.3%	
Global Sourcing Decreasing	4	26.7%	
Global Sourcing Stay at Current Levels	3	20.0%	

APPENDIX 6-45: INTERVIEW DATA**FUTURE PREDICTED TRENDS OUT GROUP**

Name	Sources	% of sources	References
Global Sourcing Increasing	6	60.0%	
Global Sourcing Decreasing	2	20.0%	
Global Sourcing Stay at Current Levels	2	20.0%	

APPENDIX 7-1: ECONOMIC FACTOR WEIGHTINGS

(page 1 of 3)

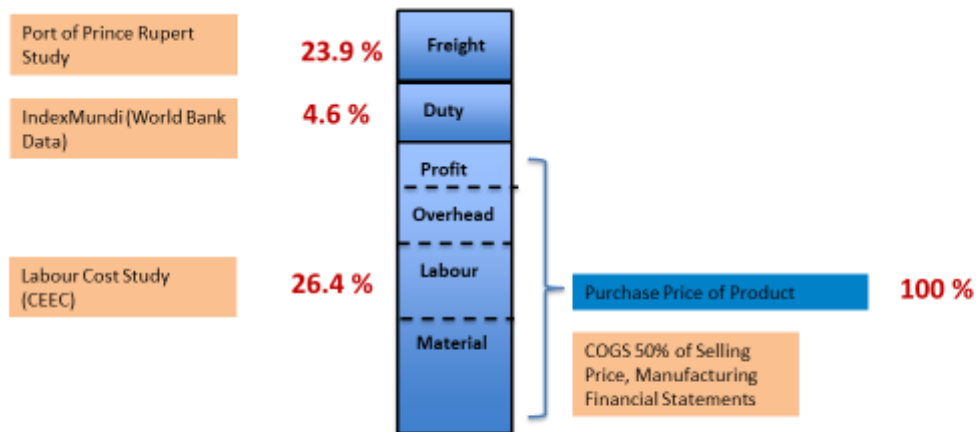
Factor Weightings: Economic Factors

Total Lead Time	4.36	26.6 %	Estimated 2% overall impact
Transportation Costs	4.34	26.4 %	
Duty	4.05	24.7 %	Perception of delivery metric?
Supplier Labour Cost	3.66	22.3 %	↑
Total	16.41	100 %	Support from surveys????

APPENDIX 7-1: ECONOMIC FACTOR WEIGHTINGS

(page 2 of 3)

Determining Cost Impact



APPENDIX 7-1: ECONOMIC FACTOR WEIGHTINGS

(page 3 of 3)

Factor Weightings: Economic Drivers

Factor	Survey	Landed Cost Impact	Weighting
Transportation Costs	4.34	23.9 %	43.5 %
Duty	4.05	4.6 %	8.4 %
Supplier Labour Cost	3.66	26.4 %	48.1 %
Total	12.05	54.9%	100 %

APPENDIX 7-2: FREIGHT COST ANALYSIS

MODEL INPUT

Model Input: Freight Cost					
Country	Continent	Port of Origin	Low Estimate	High Estimate	Average Freight Cost
Argentina	South America	Rio Grande	\$ 2,439.80	\$ 2,696.62	\$ 2,568.21
Australia	Oceania	Sydney	\$ 3,873.38	\$ 4,281.10	\$ 4,077.24
Belgium	Europe	Antwerp	\$ 2,370.16	\$ 2,619.65	\$ 2,494.91
Brazil	South America	Rio de Janiero	\$ 2,463.96	\$ 2,723.32	\$ 2,593.64
Canada	North America	Halifas	\$ -	\$ -	\$ -
China	Asia	Shanghai	\$ 2,957.77	\$ 3,269.11	\$ 3,113.44
Denmark	Europe	Esbjerg	\$ 2,488.66	\$ 2,750.63	\$ 2,619.65
Finland	Europe	Tornio	\$ 2,744.22	\$ 3,033.09	\$ 2,888.66
France	Europe	Dunkirk	\$ 2,488.66	\$ 2,750.63	\$ 2,619.65
Germany	Europe	Travemoude	\$ 2,488.66	\$ 2,750.63	\$ 2,619.65
Greece	Europe	Patras	\$ 2,070.03	\$ 2,287.93	\$ 2,178.98
India	Asia	Mumbai	\$ 2,229.92	\$ 2,464.64	\$ 2,347.28
Ireland	Europe	Limerick	\$ 2,488.66	\$ 2,750.63	\$ 2,619.65
Italy	Europe	Naples	\$ 1,971.46	\$ 2,178.98	\$ 2,075.22
Japan	Asia	Yokohama	\$ 2,957.77	\$ 3,269.11	\$ 3,113.44
Mexico	North America	Tampica	\$ 1,212.74	\$ 1,340.40	\$ 1,276.57
Netherlands	Europe	Amsterdam	\$ 2,370.16	\$ 2,619.65	\$ 2,494.91
New Zealand	Oceania	Auckland	\$ 4,289.46	\$ 4,740.98	\$ 4,515.22
Norway	Europe	Oslo	\$ 2,488.66	\$ 2,750.63	\$ 2,619.65
Philippines	Asia	Manila	\$ 3,046.50	\$ 3,367.19	\$ 3,206.85
Poland	Europe	Gdansk	\$ 2,613.55	\$ 2,888.66	\$ 2,751.11
Portugal	Europe	Lisbon	\$ 2,070.03	\$ 2,287.93	\$ 2,178.98
Singapore	Asia	Singapore	\$ 2,628.61	\$ 2,905.31	\$ 2,766.96
South Korea	Asia	Busan	\$ 2,957.77	\$ 3,269.11	\$ 3,113.44
Spain	Europe	Vigo	\$ 2,488.66	\$ 2,750.63	\$ 2,619.65
Sweden	Europe	Ahus	\$ 2,744.22	\$ 3,033.09	\$ 2,888.66
Turkey	Europe/Asia	Ambarli	\$ 2,194.23	\$ 2,425.21	\$ 2,309.72
United Kingdom	Europe	Aberdeen	\$ 2,488.66	\$ 2,750.63	\$ 2,619.65
United States	North America	NY/NJ	\$ 606.16	\$ 669.96	\$ 638.06

APPENDIX 7-3: DUTIES AND TARIFFS

MODEL INPUT

Model Input: Duties and Tariffs	
Category A: Existing Trade Agreement	
Category B: Least Developed Country	
Category C: General Preferential Tariff	
Category D: Most Favoured Nation	
Country	Duty Rating
Argentina	D
Australia	A
Belgium	A
Brazil	D
Canada	N/A
China	D
Denmark	A
Finland	A
France	A
Germany	A
Greece	A
India	D
Ireland	A
Italy	A
Japan	D
Mexico	A
Netherlands	A
New Zealand	A
Norway	A
Philippines	C
Poland	A
Portugal	A
Singapore	D
South Korea	A
Spain	A
Sweden	A
Turkey	D
United Kingdom	A
United States	A

APPENDIX 7-4: MODEL INPUT LABOUR COST

Model Input: Labour Cost as a percentage of Canada												
Country	ILO (US Bureau 2010)		US Bureau (2012)		% Can	Conference Board (2013)		OECD 2013		OECD 2016	Selected Value	
Argentina	8.68	35.82%	18.87			19.97	54.97%	20.07	54.91%	16.77	55.75%	54.91%
Australia	28.55	117.83%	47.68	130.31%		47.09	129.62%	47.27	129.33%	38.19	126.96%	129.33%
Belgium	24.01	99.09%	52.19	142.63%		54.88	151.06%	55.01	150.51%	47.26	157.11%	150.51%
Brazil	5.41	22.33%	11.20	30.61%		10.69	29.42%	10.49	28.70%	7.98	26.53%	28.70%
Canada	24.23	100.00%	36.59	100.00%		36.33	100.00%	36.55	100.00%	30.08	100.00%	100.00%
China						3.07	8.45%	4.11	11.24%			11.24%
Denmark	34.78	143.54%	48.47	132.47%		51.07	140.57%	51.08	139.75%	45.32	150.66%	139.75%
Finland	25.05	103.38%	42.60	116.43%		44.57	122.68%	44.53	121.83%	38.72	128.72%	121.83%
France	21.06	86.92%	39.81	108.80%		42.85	117.95%	43.33	118.55%	37.72	125.40%	118.55%
Germany	25.80	106.48%	45.79	125.14%		48.98	134.82%	48.29	132.12%	43.18	143.55%	132.12%
Greece	13.01	53.69%	19.41	53.05%		18.96	52.19%	19.38	53.02%	15.70	52.19%	53.02%
India						1.59	4.38%	1.60	4.38%			4.38%
Ireland	26.29	108.50%	38.17	104.32%		41.98	115.55%	41.98	114.86%	36.23	120.45%	114.86%
Italy	18.96	78.25%	34.18	93.41%		36.92	101.62%	36.92	101.01%	32.49	108.01%	101.01%
Japan	18.32	75.61%	35.34	96.58%		29.13	80.18%	28.85	78.93%	26.46	87.97%	78.93%
Mexico			6.36	17.38%		6.82	18.77%	5.01	13.71%	3.91	13.00%	13.71%
Netherlands	23.49	96.95%	39.62	108.28%		42.26	116.32%	41.06	112.34%	34.60	115.03%	112.34%
New Zealand	17.29	71.36%	24.77	67.70%		25.85	71.15%	25.85	70.73%	23.67	78.69%	70.73%
Norway			63.36	173.16%		65.86	181.28%	65.86	180.19%	48.62	161.64%	180.19%
Philippines	1.41	5.82%	2.10	5.74%		2.12	5.84%	2.13	5.83%	2.06	6.85%	5.83%
Poland	4.86	20.06%	8.25	22.55%		9.25	25.46%	9.25	25.31%	8.53	28.36%	25.31%
Portugal	7.16	29.55%	12.10	33.07%		12.90	35.51%	12.90	35.29%	10.96	36.44%	35.29%
Singapore	12.68	52.33%	24.16	66.03%		23.95	65.92%	25.78	70.53%	26.75	88.93%	70.53%
South Korea			20.72	56.63%		21.96	60.45%	22.09	60.44%	22.98	76.40%	60.44%
Spain	14.53	59.97%	26.83	73.33%		28.09	77.32%	28.09	76.85%	23.44	77.93%	76.85%
Sweden	24.78	102.27%	49.80	136.10%		51.10	140.66%	51.47	140.82%	41.68	138.56%	140.82%
Turkey								6.35	17.37%	6.09	20.25%	17.37%
United Kingdom	21.16	87.33%	31.23	85.35%		31.00	85.33%	31.02	84.87%	28.41	94.45%	84.87%
United States	23.32	96.24%	35.67	97.49%		36.34	100.03%	36.49	99.84%	39.03	129.75%	99.84%

APPENDIX 7-5: MODEL INPUT ENVIRONMENTAL

Model Input: Environmental 2014 Co2 Emissions by County	
Country	CO2 Emissions
Argentina	204,025
Australia	361,262
Belgium	93,351
Brazil	529,808
Canada	537,194
China	10,291,927
Denmark	33,498
Finland	47,301
France	303,276
Germany	719,883
Greece	67,319
India	2,238,377
Ireland	34,066
Italy	320,411
Japan	1,214,048
Mexico	480,271
Netherlands	167,303
New Zealand	34,664
Norway	47,627
Philippines	105,654
Poland	285,740
Portugal	45,053
Singapore	56,373
South Korea	587,156
Spain	233,977
Sweden	43,421
Turkey	345,981
United Kingdom	419,820
United States	5,254,280

APPENDIX 7-6: MODEL INPUT GOVERNMENTAL FACTORS

Model Input: Governmental Factors 2016 Regulatory Quality by Country World Bank	
Country	Regulatory Quality
Argentina	-0.47
Australia	1.90
Belgium	1.34
Brazil	-0.21
Canada	1.37
China	1.74
Denmark	1.58
Finland	1.82
France	1.07
Germany	1.82
Greece	0.15
India	-0.31
Ireland	1.74
Italy	0.71
Japan	1.43
Mexico	0.29
Netherlands	1.98
New Zealand	2.04
Norway	1.70
Philippines	0.00
Poland	0.95
Portugal	0.84
Singapore	2.18
South Korea	1.11
Spain	1.01
Sweden	1.85
Turkey	0.20
United Kingdom	1.76
United States	1.50

APPENDIX 7-7: MODEL INPUT POLITICAL STABILITY

Model Input: 2016 Political Stability Index from the World Bank	
Country	Political Stability Index
Argentina	0.20
Australia	1.05
Belgium	0.44
Brazil	-0.38
Canada	1.26
China	-0.50
Denmark	0.87
Finland	1.00
France	-0.10
Germany	0.68
Greece	-0.12
India	-0.95
Ireland	0.85
Italy	0.37
Japan	0.98
Mexico	-0.63
Netherlands	0.91
New Zealand	1.52
Norway	1.20
Philippines	-1.38
Poland	0.51
Portugal	0.97
Singapore	1.50
South Korea	0.16
Spain	0.41
Sweden	1.02
Turkey	-2.01
United Kingdom	0.36
United States	0.40

APPENDIX 7-8: MODEL INPUT QUALITY

Model Input: Quality (Enabler) 2017 Made In Country Index Survey by Statista	
Country	Made In Country Index
Argentina	42
Australia	75
Bangladesh	29
Belgium	71
Brazil	42
Canada	85
Chile	39
China	28
Colombia	39
Denmark	73
Finland	77
France	81
Germany	100
Greece	48
India	36
Indonesia	36
Iran	27
Ireland	65
Italy	84
Japan	81
Malaysia	41
Mexico	37
Netherlands	76
New Zealand	73
Norway	77
Peru	37
Philippines	32
Poland	51
Portugal	54
Romania	37
Russia	46
Singapore	56
South Africa	37
South Korea	56
Spain	64
Sweden	90
Thailand	40
Turkey	37
Ukraine	35
United Kingdom	91
United States	81
Vietnam	34

APPENDIX 7-9: MODEL INPUT INFRASTRUCTURE

Model Input: Infrastructure (2015 Infrastructure Quality Analysis from the World Economic Forum)										
Country	Port Infrastructure	Weighting	Road Infrastructure	Weighting	Rail Infrastructure	Weighting	Air Infrastructure	Weighting	Final Value	
Argentina	3.83	0.25	3.09	0.25	1.94	0.25	3.85	0.25	3.18	
Australia	4.99	0.25	4.72	0.25	3.90	0.25	5.48	0.25	4.77	
Belgium	6.31	0.25	5.14	0.25	4.89	0.25	5.84	0.25	5.55	
Brazil	2.71	0.25	2.75	0.25	1.75	0.25	3.79	0.25	2.75	
Canada	5.46	0.25	5.22	0.25	4.73	0.25	5.84	0.25	5.31	
China	4.55	0.25	4.69	0.25	5.02	0.25	4.79	0.25	4.76	
Denmark	5.76	0.25	5.59	0.25	4.63	0.25	5.58	0.25	5.39	
Finland	6.36	0.25	5.78	0.25	5.82	0.25	6.05	0.25	6.00	
France	5.28	0.25	6.08	0.25	5.81	0.25	5.84	0.25	5.75	
Germany	5.61	0.25	5.72	0.25	5.58	0.25	5.95	0.25	5.72	
Greece	4.59	0.25	4.28	0.25	2.83	0.25	5.12	0.25	4.21	
India	4.21	0.25	4.14	0.25	4.15	0.25	4.26	0.25	4.19	
Ireland	5.33	0.25	5.27	0.25	4.04	0.25	5.76	0.25	5.10	
Italy	4.32	0.25	4.42	0.25	3.96	0.25	4.52	0.25	4.31	
Japan	5.40	0.25	5.98	0.25	6.69	0.25	5.55	0.25	5.91	
Mexico	4.31	0.25	4.32	0.25	2.83	0.25	4.71	0.25	4.04	
Netherlands	6.77	0.25	6.22	0.25	5.69	0.25	6.41	0.25	6.27	
New Zealand	5.47	0.25	4.68	0.25	3.50	0.25	5.84	0.25	4.87	
Norway	5.53	0.25	4.04	0.25	3.73	0.25	5.97	0.25	4.82	
Philippines	3.22	0.25	3.30	0.25	2.18	0.25	3.69	0.25	3.10	
Poland	4.02	0.25	3.81	0.25	3.11	0.25	4.07	0.25	3.75	
Portugal	5.30	0.25	6.16	0.25	4.26	0.25	5.56	0.25	5.32	
Singapore	6.66	0.25	6.21	0.25	5.67	0.25	6.80	0.25	6.34	
South Korea	5.23	0.25	5.59	0.25	5.55	0.25	5.46	0.25	5.46	
Spain	5.65	0.25	5.80	0.25	5.95	0.25	5.89	0.25	5.82	
Sweden	5.62	0.25	5.36	0.25	4.25	0.25	5.60	0.25	5.21	
Turkey	4.42	0.25	4.87	0.25	3.08	0.25	5.34	0.25	4.43	
United Kingdom	5.67	0.25	5.16	0.25	4.78	0.25	5.78	0.25	5.35	
United States	5.73	0.25	5.70	0.25	5.02	0.25	6.21	0.25	5.67	

APPENDIX 7-10: MODEL INPUT DELIVERY

Country	Continent	Distance from Halifax in Nautical Miles	Steaming Rate	Travel time in Hours	Travel time in Days	Travel time in Weeks
Argentina	South America	5990	20	299.50	12.48	1.78
Australia	Oceania	10010	20	500.50	20.85	2.98
Belgium	Europe	2787	20	139.35	5.81	0.83
Brazil	South America	4743	20	237.15	9.88	1.41
Canada	North America	0	20	0.00	0.00	0.00
China	Asia	11281	20	564.05	23.50	3.36
Denmark	Europe	2867	20	143.35	5.97	0.85
Finland	Europe	3525	20	176.25	7.34	1.05
France	Europe	2688	20	134.40	5.60	0.80
Germany	Europe	2940	20	147.00	6.13	0.88
Greece	Europe	4040	20	202.00	8.42	1.20
India	Asia	7829	20	391.45	16.31	2.33
Ireland	Europe	2226	20	111.30	4.64	0.66
Italy	Europe	3693	20	184.65	7.69	1.10
Japan	Asia	10319	20	515.95	21.50	3.07
Mexico	North America	2438	20	121.90	5.08	0.73
Netherlands	Europe	2810	20	140.50	5.85	0.84
New Zealand	Oceania	8852	20	442.60	18.44	2.63
Norway	Europe	2737	20	136.85	5.70	0.81
Philippines	Asia	10962	20	548.10	22.84	3.26
Poland	Europe	3296	20	164.80	6.87	0.98
Portugal	Europe	2469	20	123.45	5.14	0.73
Singapore	Asia	9641	20	482.05	20.09	2.87
South Korea	Asia	10411	20	520.55	21.69	3.10
Spain	Europe	2583	20	129.15	5.38	0.77
Sweden	Europe	3158	20	157.90	6.58	0.94
Turkey	Europe/Asia	4499	20	224.95	9.37	1.34
United Kingdom	Europe	2550	20	127.50	5.31	0.76
United States	North America	593	20	29.65	1.24	0.18

APPENDIX 7-11: MODEL INPUT CURRENCY VOLATILITY

Model Input: 2017 Exchange Rate Change to USD last 12 months		
Country	Currency Volatility	Absolute Value
Argentina	27.78%	27.78%
Australia	-3.08%	3.08%
Belgium	-13.35%	13.35%
Chile	-9.79%	9.79%
Canada	-5.99%	5.99%
China	-8.34%	8.34%
Denmark	-13.25%	13.25%
Finland	-13.35%	13.35%
France	-13.35%	13.35%
Germany	-13.35%	13.35%
Greece	-13.35%	13.35%
India	-2.15%	2.15%
Ireland	-13.35%	13.35%
Italy	-13.35%	13.35%
Japan	-4.62%	4.62%
Mexico	-3.17%	3.17%
Netherlands	-13.35%	13.35%
New Zealand	-4.12%	4.12%
Norway	-7.81%	7.81%
Philippines	3.26%	3.26%
Poland	-15.78%	15.78%
Portugal	-13.35%	13.35%
Singapore	-6.06%	6.06%
South Korea	-4.80%	4.80%
Spain	-13.35%	13.35%
Sweden	-9.66%	9.66%
Turkey	3.14%	3.14%
United Kingdom	-11.60%	11.60%
United States	0.00%	0.00%

APPENDIX 7-12: MODEL INPUT CORPORATE SOCIAL RESPONSIBILITY

Model Input: CSR CSRHUB Rating by County	
Country	CSR Rating
Argentina	48.0
Australia	49.0
Belgium	56.0
Brazil	55.0
Canada	49.0
China	55.0
Denmark	58.0
Finland	62.0
France	61.0
Germany	58.0
Greece	53.0
India	58.0
Ireland	53.0
Italy	59.0
Japan	48.0
Mexico	53.0
Netherlands	59.0
New Zealand	43.0
Norway	61.0
Philippines	53.0
Poland	53.0
Portugal	61.0
Singapore	53.0
South Korea	53.0
Spain	60.0
Sweden	57.0
Turkey	57.0
United Kingdom	56.0
United States	50.0

APPENDIX 7-13: RISK FACTOR ANALYSIS

Risk Factors	Environmental (3.59)			Government (3.71)			Political (4.16)			Quality (4.79)			Infrastructure (3.87)		
	Country	Metric	Ranking	Value	Metric	Ranking	Value	Metric	Ranking	Value	Metric	Ranking	Value	Metric	Ranking
Argentina	204,025	0.98	3.53	-0.47	0.00	0.0	0.20	0.63	2.6	42	0.19	0.9	3.18	0.12	0.5
Australia	361,262	0.97	3.48	1.90	0.89	3.3	1.05	0.87	3.6	75	0.65	3.1	4.77	0.56	2.2
Belgium	93,351	0.99	3.57	1.34	0.68	2.5	0.44	0.69	2.9	71	0.60	2.9	5.55	0.78	3.0
Brazil	529,808	0.95	3.42	-0.21	0.10	0.4	-0.38	0.46	1.9	42	0.19	0.9	2.75	0.00	0.0
Canada	537,194	0.95	3.41	1.74	0.83	3.1	1.26	0.93	3.9	85	0.79	3.8	5.31	0.71	2.8
China	10,291,927	0.00	0.01	-0.26	0.08	0.3	-0.50	0.43	1.8	28	0.00	0.0	4.76	0.56	2.2
Denmark	33,498	1.00	3.59	1.58	0.77	2.9	0.87	0.82	3.4	73	0.63	3.0	5.39	0.74	2.8
Finland	47,301	1.00	3.59	1.82	0.86	3.2	1.00	0.85	3.5	77	0.68	3.3	6.00	0.91	3.5
France	303,276	0.97	3.50	1.07	0.58	2.2	-0.10	0.54	2.3	81	0.74	3.5	5.75	0.84	3.2
Germany	719,883	0.93	3.35	1.82	0.86	3.2	0.68	0.76	3.2	100	1.00	4.8	5.72	0.83	3.2
Greece	67,319	1.00	3.58	0.15	0.23	0.9	-0.12	0.54	2.2	48	0.28	1.3	4.21	0.41	1.6
India	2,238,377	0.79	2.82	-0.31	0.06	0.2	-0.95	0.30	1.2	36	0.11	0.5	4.19	0.40	1.6
Ireland	34,066	1.00	3.59	1.74	0.83	3.1	0.85	0.81	3.4	65	0.51	2.5	5.10	0.66	2.5
Italy	320,411	0.97	3.49	0.71	0.45	1.7	0.37	0.67	2.8	84	0.78	3.7	4.31	0.43	1.7
Japan	1,214,048	0.89	3.18	1.43	0.72	2.7	0.98	0.85	3.5	81	0.74	3.5	5.91	0.88	3.4
Mexico	480,271	0.96	3.43	0.29	0.29	1.1	-0.63	0.39	1.6	37	0.13	0.6	4.04	0.36	1.4
Netherlands	167,303	0.99	3.54	1.98	0.92	3.4	0.91	0.83	3.4	76	0.67	3.2	6.27	0.98	3.8
New Zealand	34,664	1.00	3.59	2.04	0.95	3.5	1.52	1.00	4.2	73	0.63	3.0	4.87	0.59	2.3
Norway	47,627	1.00	3.59	1.70	0.82	3.0	1.20	0.91	3.8	77	0.68	3.3	4.82	0.58	2.2
Philippines	105,654	0.99	3.56	0.00	0.18	0.7	-1.38	0.18	0.7	32	0.06	0.3	3.10	0.10	0.4
Poland	285,740	0.98	3.50	0.95	0.54	2.0	0.51	0.71	3.0	51	0.32	1.5	3.75	0.28	1.1
Portugal	45,053	1.00	3.59	0.84	0.49	1.8	0.97	0.84	3.5	54	0.36	1.7	5.32	0.72	2.8
Singapore	56,373	1.00	3.58	2.18	1.00	3.7	1.50	0.99	4.1	56	0.39	1.9	6.34	1.00	3.9
South Korea	587,156	0.95	3.40	1.11	0.60	2.2	0.16	0.61	2.6	56	0.39	1.9	5.46	0.76	2.9
Spain	233,977	0.98	3.52	1.01	0.56	2.1	0.41	0.69	2.9	64	0.50	2.4	5.82	0.86	3.3
Sweden	43,421	1.00	3.59	1.85	0.88	3.2	1.02	0.86	3.6	90	0.86	4.1	5.21	0.69	2.7
Turkey	345,981	0.97	3.48	0.20	0.25	0.9	-2.01	0.00	0.0	37	0.13	0.6	4.43	0.47	1.8
United Kingdom	419,820	0.96	3.46	1.76	0.84	3.1	0.36	0.67	2.8	91	0.88	4.2	5.35	0.72	2.8
United States	5,254,280	0.49	1.77	1.50	0.74	2.8	0.40	0.68	2.8	81	0.74	3.5	5.67	0.81	3.1

Risk Factors	Lead Time (4.36)			Currency (3.97)			CSR (3.65)			Final (32.10)	
	Country	Metric	Ranking	Value	Metric	Ranking	Value	Metric	Ranking	Value	Final Value
Argentina	1.78	0.47	2.1	27.78%	0.00	0.0	48.0	0.26	1.0	10.54	33%
Australia	2.98	0.11	0.5	3.08%	0.89	3.5	49.0	0.32	1.2	20.89	65%
Belgium	0.83	0.75	3.3	13.35%	0.52	2.1	56.0	0.68	2.5	22.71	71%
Brazil	1.41	0.58	2.5	4.09%	0.85	3.4	55.0	0.63	2.3	14.85	46%
Canada	0.00	1.00	4.4	5.99%	0.78	3.1	49.0	0.32	1.2	25.54	80%
China	3.36	0.00	0.0	8.34%	0.70	2.8	55.0	0.63	2.3	9.34	29%
Denmark	0.85	0.75	3.3	13.35%	0.52	2.1	58.0	0.79	2.9	23.90	74%
Finland	1.05	0.69	3.0	13.35%	0.52	2.1	62.0	1.00	3.7	25.82	80%
France	0.80	0.76	3.3	13.35%	0.52	2.1	61.0	0.95	3.5	23.51	73%
Germany	0.88	0.74	3.2	13.35%	0.52	2.1	58.0	0.79	2.9	25.88	81%
Greece	1.20	0.64	2.8	13.35%	0.52	2.1	53.0	0.53	1.9	16.36	51%
India	2.33	0.31	1.3	2.15%	0.92	3.7	58.0	0.79	2.9	14.26	44%
Ireland	0.66	0.80	3.5	13.35%	0.52	2.1	53.0	0.53	1.9	22.54	70%
Italy	1.10	0.67	2.9	13.35%	0.52	2.1	59.0	0.84	3.1	21.42	67%
Japan	3.07	0.09	0.4	4.62%	0.83	3.3	48.0	0.26	1.0	20.94	65%
Mexico	0.73	0.78	3.4	3.17%	0.89	3.5	53.0	0.53	1.9	16.97	53%
Netherlands	0.84	0.75	3.3	13.35%	0.52	2.1	59.0	0.84	3.1	25.82	80%
New Zealand	2.63	0.22	0.9	4.12%	0.85	3.4	43.0	0.00	0.0	20.88	65%
Norway	0.81	0.76	3.3	7.81%	0.72	2.9	61.0	0.95	3.5	25.52	79%
Philippines	3.26	0.03	0.1	3.26%	0.88	3.5	53.0	0.53	1.9	11.16	35%
Poland	0.98	0.71	3.1	15.78%	0.43	1.7	53.0	0.53	1.9	17.80	55%
Portugal	0.73	0.78	3.4	13.35%	0.52	2.1	61.0	0.95	3.5	22.37	70%
Singapore	2.87	0.15	0.6	6.06%	0.78	3.1	53.0	0.53	1.9	22.82	71%
South Korea	3.10	0.08	0.3	4.80%	0.83	3.3	53.0	0.53	1.9	18.49	58%
Spain	0.77	0.77	3.4	13.35%	0.52	2.1	60.0	0.89	3.3	22.84	71%
Sweden	0.94	0.72	3.1	9.66%	0.65	2.6	57.0	0.74	2.7	25.60	80%
Turkey	1.34	0.60	2.6	3.14%	0.89	3.5	57.0	0.74	2.7	15.66	49%
United Kingdom	0.76	0.77	3.4	11.60%	0.58	2.3	56.0	0.68	2.5	24.55	76%
United States	0.18	0.95	4.1	0.00%	1.00	4.0	50.0	0.37	1.3	23.48	73%

APPENDIX 7-14: POSITION MAP



APPENDIX 8-2: SATURATION MATRIX

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	Column Legend:				
Interview #1	8	x	x	x	x	x			x			x									x			A	Number of New Factors		
Interview #2	3	x	x	x	x	x	x				x										x			B	Quality		
Interview #3	3		x	x	x	x	x	x						x		x									C	Cost	
Interview #4	3	x	x		x	x	x	x	x			x	x					x							D	Total Lead Time	
Interview #5	1		x							x			x			x	x		x	x					E	Supply Chain Risk	
Interview #6	0		x		x	x	x						x	x		x					x				F	Trust/Relationship	
Interview #7	0		x	x	x		x															x			G	Price	
Interview #8	0		x	x	x	x	x							x		x						x			H	Availability	
Interview #9	1		x	x	x	x	x		x	x	x	x		x			x	x	x			x			I	CSR	
Interview #10	1		x	x	x	x	x	x	x					x	x	x		x	x			x			J	Quantity	
Interview #11	0			x		x	x							x											K	Currency Exchange	
Interview #12	0		x	x		x	x				x				x										L	Lead Time Consistency	
Interview #13	1		x	x	x	x	x			x					x		x				x			x	M	Vendor Certifications	
Interview #14	0		x	x	x			x		x	x			x											N	Vendor Reputation	
Interview #15	0		x	x	x				x		x			x				x							O	Inventory	
Interview #16	0		x	x	x	x	x						x			x									P	Capacity	
Interview #17	0		x	x	x	x	x																		Q	Logistics	
Interview #18	0		x			x				x		x			x								x	x	R	Government Policy	
Interview #19	0		x	x	x																			x		S	Freight Cost
Interview #20	0			x	x	x	x			x		x	x													T	Communication
Interview #21	0			x					x		x			x						x	x					U	Political and Economic Stability
Interview #22	0			x					x		x	x							x	x						V	Cash Flow
Interview #23	0		x	x					x	x										x		x					
Interview #24	0		x	x		x						x			x								x	x			
Interview #25	0		x	x	x				x	x	x				x						x			x			

APPENDIX 8-3: SATURATION MATRIX GOALS AND OBJECTIVES

	Number of new Factors	Lower Cost	Availability	Quality	Create Competition	New Opportunities	Innovation	Service	Lead Time
Interview #1	3	x	x				x		
Interview #2	0	x							
Interview #3	2	x	x	x			x		x
Interview #4	0		x						
Interview #5	2	x		x	x	x			
Interview #6	0	x	x						x
Interview #7	0	x			x	x			
Interview #8	1	x		x		x		x	
Interview #9	0	x							
Interview #10	0	x	x						
Interview #11	0	x							
Interview #12	0	x							
Interview #13	0	x							
Interview #14	0	x							
Interview #15	0	x			x				
Interview #16	0	x		x				x	
Interview #17	0	x							
Interview #18	0		x						
Interview #19	0	x							
Interview #20	0	x							
Interview #21	0	x		x					
Interview #22	0	x							
Interview #23	0	x	x						
Interview #24	0	x							
Interview #25	0	x							

References:

- Allen, I.E., Christopher, A. (2007). Likert Scales and Data Analyses. *Quality Progress*. 40(7), 64-65.
- Alguire, M., Frear, C., & Metcalf, L. (1994). An examination of the determinants of global sourcing strategy. *The Journal of Business & Industrial Marketing*. 9(2),62-70.
- Anastassopoulos, G. (2007). Countries' International Competitiveness and FDI: An Empirical Analysis of Selected EU Member-Countries and Regions. *East-West Journal of Economics and Business*. X (1), 33-52.
- Andersen, M., & Skjoett-Larsen, T. (2009). Corporate social responsibility in global supply chains. *Supply Chain Management: An International Journal*. 14 (2), 75-86.
- ASEAN (2015). *Overview*. Available Online: <http://asean.org/asean/about-asean/overview> [Accessed 19/06/2015]
- Australian Government Department of Foreign Affairs and Trade (2015). *Australia-New Zealand Closer Economic Relations Trade Agreement*. Available Online: <http://www.dfat.gov.au/agreements/anzcerta/Pages/australia-new-zealand-closer-ec> [Accessed 21/02/2015].
- Baer, M.D. (1991). North American Free Trade. *Foreign Affairs*. 70 (4), 132–149.
- Baird, A.J. (2001). Container Vessels in the New Millennium: Implications for Seaports. *Ocean Yearbook* 16, 300-327.
- Balassa, B. (1965). Trade Liberalisation and "Revealed Comparative Advantage". *The Manchester School*, 33(2), 99-123.
- Beamish, P.W.& Bapuji (2008), H. Toy Recalls and China: Emotion vs. Evidence. *Management and Organization Review*. 4(2), 197-209
- Belderbos, R. and Zou, J. (2006). Foreign Investment, Divestment and Relocation by Japanese Electronic Firms in East Asia. *Asian Economic Journal*. 20(1), 1-27.
- Brett, J.M. (2000), H. Culture and Negotiation. *International Journal of Psychology*. 35(2), 97-104
- Bryant, D. (2019). *Importing from China is Easy: How I make \$1 Million a Year Importing Products from China*. Escondido: EcomCrew.
- Cairns, R. & Llewellyn, J. (2016) *The First Five-Year Plan*. Available online: <https://alphahistory.com/chineserevolution/first-five-year-plan/> [Accessed October 2, 2019].

- Cairns, R. & Llewellyn, J. (2016). *The Great Leap Forward*. Available online: <https://alphahistory.com/chineserevolution/great-leap-forward/> [Accessed October 2, 2019].
- Cairns, R. & Llewellyn, J. (2016). *The Cultural Revolution Begins*. Available online: <https://alphahistory.com/chineserevolution/cultural-revolution-begins/> [Accessed October 2, 2019].
- Caniato, F., Golini, R., and Kalchschmidt, M. (2011) *Offshoring and nearshoring success: the importance of strategic reasons*. Available Online: https://s3.amazonaws.com/academia.edu.documents/41361974/EurOMA2011_0175.pdf [Accessed 08/02/2019]
- Carruthers, J. (1990). A Rationale for the Use of Semi-structured Interviews. *Journal of Educational Administration*. 28(1), 63-68.
- Carter, J.R., Maltz, A., Maltz, E., Goh, M., & Yan, Y. (2010). Impact of culture on supplier selection decision making. *The International Journal of Logistics Management*. 21(3), 353-374.
- Castañeda, J.G. (2004). NAFTA at 10: A Plus or a Minus? *Current History*. February 2004, 51-55.
- Chan, A., Snape, E., Luo, M., and Zhai, Y. (2017). The Developing Role of Unions in China's Foreign-Invested Enterprises. *British Journal of Industrial Relations*. 55(3), 602-625.
- Chepeliev, M., Wallace, E.T., & van der Mensbrugge, D. (2018) How U.S. Agriculture Will Fare Under the USMCA and Retaliatory Tariff,. *Food and Agriculture Trade Resource Center*. Available Online: <https://ssrn.com/abstract=3317063>. [Accessed June 24, 2019].
- Chien, C. (2010). Study of the Change in Export Competitive Advantage of Japan, China, South Korea, and Taiwan in the US Market – Using RCA as the Measurement Index. *The Journal of International Management Studies*. 5(1), 118-131.
- China Quality.org (2011). *Should you tell China suppliers about your target price?*. Available online: <https://qualityinspection.org/target-price-chin/> [Accessed October 2, 2019].
- Christopher, M. & Lee, H. (2004). Mitigating supply chain risk through improved competence. *International Journal of Physical Distribution & Logistics Management*. 34(5), 388-396.
- Christopher, M., Mena, C., Khan, O., & Yurt, O. (2011). Approaches to managing global sourcing risk. *Supply Chain Management: An International Journal*. 16(2), 67-81.
- Chu, P., Chang, C., Chen, C., & Wang, T. (2010). Countering negative country-of-origin effects: The role of evaluation mode. *European Journal of Marketing*, 44(7/8), 1055-1076.

- Colantone, I., & Stanig, P. (2018). Global Competition and Brexit. *American Political Science Review*. 112 (2), 201-218.
- Comtois, C. (1994). The evolution of containerization in East Asia. *Maritime Policy & Management: The flagship journal of international shipping and port research*. 21(3), 195-205.
- Costinot, A., & Donaldson, D. (2012). Ricardo's Theory of Comparative Advantage: Old Idea, New Evidence. *American Economic Review: Papers & Proceedings*. 102(3), 453-458
- Creazza, A., Dallari, F., & Melacini, M. (2010). Evaluating logistics network configurations for a global supply chain. *Supply Chain Management: An International Journal*. 15(2), 154-164.
- Deavers, K. (1997). Outsourcing: A Corporate Competitiveness Strategy, Not a Search for Low Wages. *Journal of Labor Research*. 18(4), 503-519.
- Dinan, D. (2014). *Europe Recast: The History of the European Union*, Second Edition. Boulder: Lynne Rienner.
- DiRienzo, C., Das, J., & Burbridge, J. (2007). Does diversity impact competitiveness? A cross country analysis. *Competitiveness Review*. 17(3), 135-152.
- Engardio, P. (2001). Why the Supply Chain broke down; their fancy tools blinded tech's wizards to the slowdown. *Business Week*. 3724, 41.
- Erzhen, Z. and Xiang, D. (2012). China's Developing Open Economy: Myths and Realities. *Chief Economist*. 7(4), 91-97.
- Ettlie, J., & Sethuraman, K. (2002). Locus of supply and global manufacturing. *International Journal of Operations & Production Management*. 22(3), 349-370.
- European Commission Directorate-General for Trade (2015). *EU position in world trade*. [Available Online: http://ec.europa.eu/trade/policy/eu-position-in-world-trade](http://ec.europa.eu/trade/policy/eu-position-in-world-trade) Accessed: [10/03/2015].
- Fraering, M., & Prasad, S. (1999). International sourcing and logistics: An integrated model. *Logistics Information Management*. 12(6), 451-459.
- Freund, C.L., Weinhold, D. (2002). The Internet and International Trade in Services. *The American Economic Review*. 92 (2), 236-240.
- Freund, C.L., Weinhold, D. (2004). The effect of the Internet on international trade. *Journal of International Economics*. 62 (2004), 171-189.
- Gardini, G.L. (2007). Who Invented Mercosur? *Diplomacy and Statecraft*. 18, 805-830.

- Goodwin, M.J. & Heath, O. (2016). The 2016 Referendum, Brexit, and the Left Behind: An Aggregate-level Analysis of the Result. *The Political Quarterly*. 86 (3), 323-332.
- Gould, D.M. (1998). Has NAFTA Changed North American Trade? *Federal Reserve Bank of Dallas Economic Review*. First Quarter 1998, 12-23.
- Guerrieri, P. (1991). Technology and International Trade Performance in the Most Advanced Countries. *eScholarship*, University of California. Working Paper 49, 1-37.
- Handfield, R. (1994). US global sourcing: Patterns of development. *International Journal of Operations & Production Management*. 14(6), 40-47.
- Handfield, R. and McCormack, K. (2005). What You Need to Know About Sourcing from China. *Supply Chain Management Review*. September, 28-36.
- Hartman, P.L., Ogden, J.A., Wirthlin, J.R., and Hazen, B.T. (2017). Nearshoring, reshoring, and insourcing: Moving beyond the total cost of ownership conversation. *Business Horizons*. 2017(60), 363-373.
- Hewitt-Taylor, J. (2001) Use of constant comparative analysis in qualitative research. *Art & Science Research Methods*.15, 39-42.
- Hinloopen, J., & van Marrewijk, C. (2012). Power laws and comparative advantage. *Applied Economics*. 44, 1483-1507.
- Hughes, R.L., Ginnett, R.C., & Curphy, G.J. (2019). *Leadership: Enhancing the Lessons of Experience*. Ninth Edition. New York: McGraw Hill
- Iakovou, E., Vlachos, D., Chatzipanagioti, M., Mallidis, I. (2010) Nearshoring, Sustainability and Free Trade Facilitation for Global Logistics Networks. *43rd CIRP Conference on Manufacturing Systems*. Vienna, 10 May 2010,121-128.
- International Labour Organization (2016). *Global Wage Report 2016/17*. Available Online: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_537846.pdf [Accessed 12/12/2017]
- Jones, R.W. (1956-1957). Factor Proportions and the Hecksher-Ohlin Theorem. *The Review of Economic Studies*. 24(1),1-10.
- Kalicharan, H.D. (2014). The Effect and Influence of Country-Of-Origin on Consumers' Perception Of Product Quality and Purchasing Intentions, *International Business & Economics Research Journal* 13(5), 897-901.

- Klonsky, J., Hanson, S., Lee, B. (2012) Mercosur: South America's Fractious Trade Bloc, *The Council on Foreign Relations*. Available Online: <http://www.cfr.org/trade/mercosur-south-americas-fractious-trade-bloc/p12762> [Accessed 10/03/2015].
- Kuznetsov, A., Dinwoodie, J., Gibbs, D., Sansom, M., and Knowles, H. (2016). Knowledge capture to inform sustainable maritime operations, *International Journal of Operations and Production Management*. 37 (7), 882-897.
- Kynge, J. (2007). *China Shakes the World*. New York: First Mariner Books.
- Le, Q-P. (2010). Evaluating Vietnam's Changing Comparative Advantage Patterns. *ASEAN Economic Bulletin*. 27(2), 221-230.
- Leach, P.T. (2014). Global ports grapple with congestion generated by larger ships and alliances, *Journal of Commerce*. Available Online: https://www.joc.com/global-ports-grapple-congestion-generated-larger-ships-and-alliances_20140825.html [Accessed 9/05/2015].
- Leonard, D., and Sensiper, S. (1998). The Role of Tacit Knowledge in Group Innovation, *California Management Review* 40 (3), 112-132.
- Lewicki, R.J., Saunders, D.M., and Barry, Bruce (2015). *Negotiation*. New York: McGraw-Hill.
- Liesner, H.H. (1958). The European Common Market and British Industry. *The Economic Journal*. 68(270), 302-316.
- Lund-Thomsen, P. (2007). Five Myths in and Five Recommendations for the Global Sourcing and Codes of Conduct Debate. Available Online: <http://www.forskningsdatabasen.dk> [accessed 01/01/2018].
- Matsushita, M., Schoenbaum, T.J., & Mavroidis, P.C. (2006) *The World Trade Organization Law, Practice, and Policy* Second Edition. Oxford: Oxford University Press.
- McArthur, J.W., & Sachs, J.D. (2001) The Growth Competitiveness Index: Measuring Technological Advancement and the Stages of Development. *The Growth Competitiveness Index*. 28-51.
- McDaniel, C.A. (2019). *Economic Implications for the United States of a North America without NAFTA or USMCA: A Brief Summary of Key Areas*. Arlington Virginia: Mercatus Center, George Mason University. Available online [Accessed June 24, 2019].
- McGillivray, G. (2000). Commercial Risk under JIT. *Canadian Underwriter*. 67(1), 26-30.
- Merriam, S.B. & Tisdell, E.J. (2016) *Qualitative Research: A Guide to Design and Implementation*. San Francisco: John Wiley and Sons.

- Merk, C., Silver, J., and Torrisi, F.D. (2014), Rebalancing your sourcing strategy. *McKinsey Quarterly*. July, 1-4.
- Meyer, E. and Shen, E.Y. (2010). China Myths, China Facts. *Harvard Business Review*. January – February 2010 Issue.
- Midler, Paul (2018). *What's Wrong with China*. Hoboken. John Wiley and Sons
- Millington, A., Eberhardt, M., & Wilkinson, B. (2006). Supplier Performance and Selection in China. *International Journal of Operations & Production Management*. 26(2), 185-201
- Min, H. (1993). International Supplier Selection: A Multi-attribute Utility Approach. *International Journal of Physical Distribution & Logistics Management*. 24 (5), 24-33.
- NAFTANOW (2012). *Frequently Asked Questions; What is NAFTA?* Available Online: http://www.naftanow.org/faq_en.asp#faq-1 [Accessed 19/06/2018].
- Nowak, F., Lehmann, D., Vollmer S., & Martinez-Zarzoso, I. (2007). Competitiveness – A Comparison of China and Mexico. *CESifo Working Paper No. 2111 ifo Institute for Economic Research*. 1-24.
- Olarreaga, M., Soloaga, I. (1998). Endogenous Tariff Formation: The Case of Mercosur. *The World Bank Economic Review*. 12(2), 297-320.
- Onsomu, E.N., Ngware, M.W., & Manda D.K. (2010). The Impact of Skills Development on Competitiveness: Empirical Evidence from a Cross-Country Analysis. *Education Policy Analysis Archives*. 18(7),1-17.
- Porter, M.E. (1990) *The Competitive Advantage of Nations*. New York: The Free Press.
- Pun, K.F. (2001). Cultural influences on total quality management adoption in Chinese enterprises: An empirical study. *Total Quality Management*, 12(3), 323-342.
- Ricardo, D. (1911) *The Principles of Political Economy and Taxation*. London; New York: J.M. Dent and Sons.
- Rosenbaum, E. (2011). Competitiveness Rankins of European Countries – How Much Do They Tell Us? *Intereconomics*. 2011, 82-90.
- Rosselet-McCauley, S. (2006). Methodology and Principles of Analysis. *IMD World Competitiveness Yearbook*. 2006, 1-8.
- Rudolph J., Szonyi, M. (2018) *The China Questions: Critical Insights into a Rising Power*. Cambridge Massachusetts: Harvard University Press.

- Saunders, N.K., Lewis, P. & Thornhill, A. (2019) *Research Methods for Business Students*, 8th edition. Harlow: Pearson Education Limited.
- Savic N. (2011). Comparative Analysis Based on New Competitiveness Index. *Panoeconomicus*.1, 1-11.
- Shaw, Sarah, Grant, David B., & Mangan, John (2020). A supply chain practice-based view of enablers, inhibitors and benefits for environmental supply chain performance measurement. *Production Planning & Control*. 2020, 1-15.
- Smit, A.J. (2010). The competitive advantage of nations: is Porter's Diamond Framework a new theory that explains the international competitiveness of countries? *South African Business Review*. 14(1),105-129.
- Smith, A. (1776) *The Wealth of Nations*. London: Everyman's Library.
- Smith, D. (2006) Offshoring: Political Myths and Economic Reality. *The World Economy*. 29 (3). 250-256.
- Subedi, D. (2016). Explanatory Sequential Mixed Method Design as the Third Research Community of Knowledge Claim. *American Journal of Educational Research*. 4(7), 570-577.
- The Container Handbook (2015). *The History of the Container*. Available Online: http://www.containerhandbuch.de/chb_e/index.html [Accessed 04/05/2015].
- The World Bank (2018). *Logistics Performance Index*. Available online: <https://lpi.worldbank.org> [Accessed 10/28/2020]
- Tomlinson, J. (2009). History and Impact of the Intermodal Shipping Container. *Pratt Institute*. LIS 654-05, 1-9.
- Trent, R.J. & Monckza, R.M. (2005). Outsourcing: Achieving Excellence in Global Sourcing. *MIT Sloan Management Review*. 47(1), 24-32.
- United States Trade Commission (1985). *China's Economic Development Strategies and their Effects on U.S. Trade*. Available online at: <https://www.usitc.gov/publications/332/pub1645.pdf>. [Accessed October 2, 2019]. 22.
- Urata, S. (2002). Globalization and the Growth in Free Trade Agreements. *Asia Pacific Review*. 9(1), 20-32.
- Vairon, L. (2013) *China Threat? The Challenges, Myths, and Realities of China's Rise*. New York: CN Times Books Inc.

Womack, J.P., Jones, D.T., Roos, D. (1990). *The Machine that Changed the World*. New York: Maxwell Macmillan International.

World Bank Database (2019). Available Online: <https://data.worldbank.org/indicator> [Accessed 6/27/2019].

World Economic Forum (2012). *The Global Competitiveness Report 2012-2013*. Available Online: http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf [Accessed 4/10/2014].

World Trade Organization (2010). *Understanding the WTO* (2011). Available Online: https://www.wto.org/english/thewto_e/whatis_e/tif_e/tif_e.htm [Accessed 6/12/2014]

World Trade Organization Database (2019). Available Online: <https://data.wto.org>. [Accessed 6/27/2019].

Xu, B. & Lu, J. (2009). Foreign direct investment, processing trade, and the sophistication of China's exports. *China Economic Review*. 20, 425-439.

Yu, R., Cai J., & Leung, PS. (2009). The Normalized Revealed Comparative Advantage Index. *Annals of Regional Sciences*. 43, 267-282.