BRIC AND CANADA'S DEPENDENCE: IMPACT OF MANUFACTURING COSTS

by

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Abstract

Brazil, Russia, India, and China together form the BRIC group of developing economies and are experiencing growth much greater than both the G7 and world as a whole. All four countries have significant ties to Canadian business and through the process of this project; we will look at how our economic landscape is affected by their growth.

The focus of this project will be on the manufacturing sector and how the rising cost of labour in the BRIC will affect Canadian producers and manufacturers. The research performed notes the increased cost of labour has reduced the benefits for Canadian companies to offshore their manufacturing requirements and goes on to demonstrate that this cost will exceed that of onshore manufacturing by 2025.

Recommendations are made for the producers, manufacturers, and Canadian governments to both mitigate this risk and take advantage of the BRIC’s growing economies. Primarily, these recommendations are focused on the onshoring of manufacturing.
Table of Contents

Abstract ................................................................................................................................. ii
Table of Contents .................................................................................................................. iii
List of Tables ........................................................................................................................ iv
List of Figures ....................................................................................................................... iv
Introduction .......................................................................................................................... 1
Chapter 1: Literature Review ............................................................................................... 5
  Importance of the BRIC ........................................................................................................ 5
  Economic Indicators .......................................................................................................... 5
  The Developing Nation ...................................................................................................... 13
  Dissenting View of the BRIC’s Importance .................................................................. 14
Offshore Manufacturing ....................................................................................................... 15
Onshore Manufacturing ........................................................................................................ 17
Manufacturing Labour Costs ............................................................................................... 18
Components of the BRIC ....................................................................................................... 21
  Brazil ............................................................................................................................... 21
  Russia ............................................................................................................................ 22
  India ............................................................................................................................... 23
  China ............................................................................................................................... 24
BRIC summary ...................................................................................................................... 24
Observations ......................................................................................................................... 25
Analysis Methodology ......................................................................................................... 26
Chapter 2: Analysis – The Impact on Canadian Business .................................................. 27
  Producers ......................................................................................................................... 27
    Empirical Examination ................................................................................................. 28
    Onshoring ...................................................................................................................... 33
    Offshoring ..................................................................................................................... 35
    Industry Example: Stuffed Toys .................................................................................. 36
  Manufacturers .................................................................................................................... 37
  Retailers ............................................................................................................................. 37
Growth Sustainability ............................................................................................................ 38
Weaknesses and Limitations of Analysis ............................................................................ 39
Chapter 3: Opportunities and Challenges ......................................................................... 41
  Producers: Risk Mitigation .............................................................................................. 41
List of Tables
Table 1 - Minimum Wage and Unemployment by province .................................................. 44

List of Figures
Figure 1 - World map highlighting BRIC (Bric 2011) .......................................................... 1
Figure 2 - World, G7 and BRIC GDP 2000-2009 ................................................................ 7
Figure 3 - World, G7 and BRIC year-on-year GDP growth 2000-2009 .............................. 8
Figure 4 - World, G7 and BRIC GNI per capita, PPP .......................................................... 9
Figure 5 - Average Wage of Manufacturing Staff and Workers (historical) 1998-2008, in international dollars .......................................................... 19
Figure 6 - Average Wage of Manufacturing Staff and Workers (projected) 2009-2027, in international dollars .......................................................... 20
Figure 7 - Price of low-labour involved product manufactured in Canada vs. in BRIC (historical, 1998-2008) .......................................................... 31
Figure 8 - Price of low-labour involved product manufactured in Canada vs. in BRIC (projected, 2009-2027) .......................................................... 31
Figure 9 - Price of high-labour involved product manufactured in Canada vs. in BRIC (historical, 1998-2008) .......................................................... 32
Figure 10 - Price of high-labour involved product manufactured in Canada vs. in BRIC (projected, 2009-2027) .......................................................... 32
Introduction

In a 2001 article entitled "Building Better Global Economic BRICs," (O'Neill, Building Better Global Economic BRICs 2001) Goldman Sachs’ head of global economic research Jim O’Neill identified the BRIC group of countries to be increasing in worldwide importance. These countries, O’Neill argued, should find amongst themselves at least one seat, if not two, among the G7 finance ministers.

This growing significance is important to business in Canada due to our dependence on foreign manufacturing in many industries, particularly that of consumer goods and electronics. This manufacturing is often performed in the largest (both economically and by population) of the four BRIC nations: China.

Like the rest of the BRIC, China’s economic landscape has changed drastically over the last two decades. With a shift from strictly government-run organisations to a situation where
capitalist corporations are now allowed to function, this is affecting all aspects of doing business in and with these countries.

This project will examine these developing economies of the BRIC and determine the advantages and disadvantages of offshore and onshore manufacturing. We will also look at cost of having manufacturing outsourced to the BRIC and compare it to the cost of performing this task in Canada, particularly concerning the growing cost of labour. We will seek an appropriate response to these economic changes for Canada’s producers and manufacturers of consumer goods, and provide recommendations that will mitigate these concerns.

Of primary concern is the growing cost of overseas labour and the role this may play as an inflationary force in Canada. It has been noted that China’s labour cost has already had this effect (Wheatley 2011) and is an ongoing concern. The research conducted here is of significant importance as it seeks to determine the possible effects of this concern as it relates directly to Canadian business, as well as to provide recommendations and solutions to maximise profit for these businesses.

This research began with an analysis of key economic indicators including GDP, GNI, PPP, and average wages, along with an analysis of their growth in both Canada and the BRIC. The dissenting view of this group’s importance was also examined. Further research was done on offshore and onshore manufacturing, as well as the cost of labour in the manufacturing sector in Canada and each of the four BRIC countries. Each individual country in the BRIC was examined and observations noted.
The theoretical basis for our analysis and recommendations was primarily that the cost of labour was the most significant variable in manufacturing costs between various nations. By determining the labour cost for manufacturing in Canada and each of the BRIC countries, a determination of future product costs was available.

An empirical analysis of the impact of the research was performed, using the most recent decade of data available to extrapolate future growth. The analysis noted that the total cost of offshore outsourcing is often more expensive than onshore manufacturing. Furthermore, within the next decade and a half, only one of the BRIC countries is likely to offer cost savings when used for offshore manufacturing, as the cost to produce goods in China and India will likely exceed the onshore manufacturing cost by 2015, followed by Russia in 2023.

Finally, we provide recommendations for the Canadian producers, manufacturers, and governments to mitigate the concerns surrounding these price increases, along with suggestions for ways in which these groups can capitalise on the noted rising economies.

The key recommendations are: producers should be seeking onshore manufacturers for their goods as soon as possible; manufacturers should increase their facilities and plan for expansion, as well as establish relationships with overseas manufacturers of similar goods; and all levels of government should be seeking opportunities to encourage this onshore expansion through the use of tax benefits.

The rest of the report is organised as follows. Chapter 1 contains the literature review, looking at the importance of the BRIC and the use of onshore and offshore manufacturing. Chapter 2 details the analysis performed, looking at the empirical data as well as a theoretical perspective. Chapter 3 details opportunities and risks for Canadian producers,
manufacturers, and government. Finally, Chapter 4 provides conclusions and recommendations.
Chapter 1: Literature Review

In preparing a basis for this project, there are several areas of academic study that have available literature. We will begin by establishing the importance of the BRIC using economic indicators such as GDP and GNI along with minimum wages. We will then proceed to examine the understanding and significance of offshoring and onshoring of manufacturing, followed by an analysis of manufacturing labour costs.

We will look at each aspect individually, and then use their combined relevance to continue our analysis in Chapter 2.

Importance of the BRIC

Analysts at Goldman Sachs noted the importance of the BRIC as early as 2001. They used several economic indicators and their increasing values to determine its value. We have examined the same indicators and noted that Goldman Sachs’ predictions have not only been met, but also exceeded.

Canada relies upon these nations for various purposes, including manufacturing – the subject of this study.

Economic Indicators

Several economic indicators are available to analyse the progress of individual nations on the international stage. Of those, the gross domestic product (GDP) and gross national income (GNI) per capita demonstrate some key findings for the importance of the BRIC group as compared to the G7. We will also take a look at the concept of purchasing power parity (PPP) conversions along with minimum and average wages.
The GDP has been accepted as the de facto standard by which a country’s production is measured. This indicator looks only at the production of goods, materials, and services within the country’s borders. It includes all production, whether the funds received stay in the country or are shifted to overseas ownership.

The GNI differs from GDP, particularly in our analysis on a per capita basis, as the GNI reflects earnings of a country’s nationals and corporations abroad as well as domestically, while also subtracting the funds transferred to overseas ownership of materials produced domestically. When examined on a per-capita basis, the GNI represents the average income produced by each member of the country’s population. This provides a reasonable look at the increase or decrease of earnings, though does not translate directly to wages as it represents a mean value throughout the population.

Following that examination, we will consider the changes in minimum and average wages, and then later in the review, we will look at the manufacturing sector specific wages and their potential for growth.

While these indicators do not directly impact the Canadian business, we must satisfy ourselves that the BRIC group is important and worth studying. When used in conjunction with each other, these indicators will demonstrate that the BRIC’s importance in international business is increasing and will have a significant impact on business operations in Canada.

**National Wealth: Gross Domestic Product (GDP)**

The gross domestic product signifies the gross production of a country’s domestic assets and is often used to determine a country’s overall prosperity. It can also be used as an indicator of personal production when scaled per capita, however the measure can be deceiving as
there is little indication of whether those earnings are actually received by the individual worker. Furthermore, the earnings from the product sales do not necessarily remain in the country of manufacture and hence do not give a true representation of the country’s purchasing power on an individual level.

That said, on the world stage, the GDP is an exceptional indicator of a country’s economic power in relation to others. In looking at the BRIC and G7 groups, there has been a growth of 46% in the decade ending in 2009 for the G7, while the BRIC has seen a staggering 255% growth over the same period. (World Bank, The 2011)

**Figure 2 - World, G7 and BRIC GDP 2000-2009**

Of the three groupings (the World, G7 and BRIC), the BRIC is the only one to show consistent year-on-year growth, even with the world’s economic crisis leading into 2009.

While the 2009 growth was very small in comparison to previous years, the G7 experienced
negative growth of nearly 5% and the world overall experienced negative growth of nearly 6% in the same time. (World Bank, The 2011)

![Year-on-Year GDP Growth](image)

Figure 3 - World, G7 and BRIC year-on-year GDP growth 2000-2009

While this index has no direct impact on Canadian business, it is an important indicator as to a country’s importance in the world economy. Furthermore, the growth demonstrated, even in the face of the 2009 world economic crisis, shows the robustness and eagerness to grow of the BRIC economies. This has a trickle-down effect and relates directly to the role the BRIC is playing and will continue to play in international trade, particularly with Canada.

**Personal Wealth: Gross National Income (GNI) Per Capita**

The gross national income (or GNI) per capita represents the average income per person for the population of a given nation. When adjusted for purchasing power parity (PPP), the per capita income can be compared between nations, corrected for exchange rates and inflation differences through the use of a common basket of goods. (Antweiler 2011)
Between 2000 and 2009, the average GNI per capita in the G7 increased by approximately 33%. During this same period, the BRIC’s average GNI per capita grew by 123% (World Bank, The 2011). While Russia has the highest GNI per capita of the BRIC group, achieving approximately half of the average GNI per capita of the G7, China saw the highest gain during over that period, with GNI increasing by 194%.

![GNI per capita, PPP](image)

**Figure 4 - World, G7 and BRIC GNI per capita, PPP**

**Purchasing Power Parity (PPP)**

The Canberra Group (2001) recommends “that when cross-country comparisons of real incomes are to be made, Purchasing Power Parities should be used in preference to exchange rates.”
While not an economic indicator, per se, the Purchasing Power Parity (PPP) measurement allows us to compare different international currencies and compensations. This figure allows us to convert foreign currency to an “international dollar.” In order to determine the PPP conversion ratio, a basket of goods and services is valued against an identical basket of goods and services in other nations. The value of an international dollar in a foreign nation is roughly equivalent to the value of one United States dollar when the basket is purchased in the United States. The PPP differs from an exchange rate in that the exchange rate is largely driven by the goods and services that are imported and exported, whereas the PPP is driven by the price of goods consumed inside the country.

When evaluating a foreign wage, the PPP gives a better indication of the value in the home currency than the exchange rate and allows a universal and neutral currency to be used: the international dollar.

To determine the PPP adjustment factor, analysts examine the cost of a basket of goods and services in a given country. This basket is compared against a similar basket in the United States. The adjustment factor is determined so that the US dollar purchases the same amount of that basket in the United States as a PPP-factor amount purchases in the given country. For instance, in 2008, Brazil’s PPP adjustment factor was 1.508. This means that R$1.508 would purchase a similar basket of goods and services in Brazil that US$1.00 would purchase in the United States.

As the basket price relies on market prices in both countries, inflation has already been taken into consideration. Furthermore, it establishes an exchange rate apart from the currency exchange markets that are affected by factors beyond that of international trade and currency
exchange, rather, the value of the currency is established for its ability to purchase goods in the local market.

In converting a local currency to the PPP-adjusted international dollars, a similar procedure is undertaken as for converting a local currency to a foreign currency. The International Monetary Fund publishes PPP conversion rates for all countries, with six years of estimated forecasts. The published PPP adjustment factor takes the place of a published exchange rate for the purpose of comparing a country’s financial statistic with another without having local currency exchanges affect the outcome of the comparison.

**Currency Exchange Rates**

The currency exchange rates of the BRIC have fluctuated significantly against the Canadian Dollar, partly as an effect of being tied to the United States Dollar. The Brazilian Real has moved from approximately CA$1.30 per R$1.00 in 1998 to a value that has remained largely between CA$0.50 and CA$0.60 per R$1.00 since 2005.

Russia’s Ruble has been relatively stable since late 1999. Between 1998 and 1999, however, there was a significant devaluation when it lost over 75% of its value. Since 1999, the Ruble has been in steady decline against the Canadian Dollar, experiencing a high of CA$0.067 per Ruble in early 1999, to a low of CA$0.0325 per Ruble in late 2010. It is currently fluctuating around CA$0.034 per Ruble. India’s Rupee has experienced a steady decline in value from 1998, with a high of CA$0.037 per ₹1 in 1998 to a present CA$0.0215 per ₹1.

The Chinese Renminbi has historically been pegged against the US Dollar, though since 2005, the rate has been allowed to float separately within a specified range. The fluctuation of the Renminbi has been significant, with rates as low as CA$0.13 per ¥1.00 in late 2007.
and as high as CA$0.185 per ¥1.00 in early 2009. Since late 2009, the rate has remained close to CA$0.15 per ¥1.00. Overall, the Canadian dollar has appreciated against all of the four BRIC currencies since 1998, some significantly.

**Minimum and Average Wages**

One additional indicator we can look to is that of average wages for a region. China, specifically, has seen tremendous average wage increases: approximately 290% between 1998 and 2008 (National Bureau of Statistics of China 2009). Similarly, Brazil’s minimum wage has increased by 210% (Ministério do Trabalho e Emprego 2011). By comparison, Canada’s average minimum wage rose 52% over the same period (HRSDC 2009).

Furthermore, the enactment of minimum wage law in China has resulted in a more fairly paid workforce, with a stated intention “to meet the requirements of developing the socialist market economy, to ensure the basic needs of the worker and his family, to help improve workers’ performance and to promote fair competition between enterprises.” (Regulations concerning minimum wages in enterprises 1993) As the 2008 enactment of the revised Labour Law has also gone into effect, a number of changes have occurred in the political and legal landscape as well (Harris 2007) further demonstrating China’s shift to a developed nation.

These indicators demonstrate the move from developing nation to developed nation, as it begins to reduce the disparity between the lower class and the upper class through the appropriate payment of the working class.
Interestingly, neither Russia nor India appears to have adopted uniform minimum wage laws across their respective countries. While India’s states are free to set their own, there is little documentation available on what that may be.

**The Developing Nation**

The terms “developing country” and “developed country” stir up images of very different socioeconomic climates. Interestingly, there is widespread disagreement on what the terms actually mean and how to determine whether a nation fits in one classification or the other, depending greatly on the method used to classify a country.

The World Bank notes “low-income and middle-income economies are sometimes referred to as developing economies. The use of the term is convenient; it is not intended to imply that all economies in the group are experiencing similar development or that other economies have reached a preferred or final stage of development.” (World Bank, The 2011) The World Bank’s index of nations uses the GNI per capita to determine a country’s status as a low, middle or high income economy.

The United Nations Development Program has developed the Human Development Index (HDI) for determining the level of advancement a country holds. The HDI is “a summary composite index that measures a country's average achievements in three basic aspects of human development: health, knowledge, and income.” (United Nations Development Program 2011)

Rather than focusing on this differentiation, we will instead limit our comparisons and analyses to two groups: the countries represented by the G7 – the Group of Seven industrialised nations whose finance ministers have met since 1976: Canada, France,
Germany, Italy, Japan, United Kingdom, and United States – and one or more of the BRIC group of developing nations: Brazil, Russia, India and China.

This limitation has been made to reduce the scope of this study to a manageable size. The G7 represents an adequate cross-section of the developed world, that is, the “high-income” economies; the BRIC is our focus of study as an identified group of developing nations that are likely to have a significant impact on the developed world in the coming decades. The studies pertaining to the BRIC suggest that one or more of its component nations will qualify as a “developed” or high-income economy in the near future.

As Canada represents a portion of the developed world, it stands to reason that the BRIC countries will affect our business atmosphere significantly in the coming years.

**Dissenting View of the BRIC’s Importance**

John Frankenstein (2010), a faculty member at Brooklyn College/CUNY, posits that indicators demonstrating their status as “emerging” economies should sober our view of the BRIC’s potential. He claims there are several challenges that must be surmounted prior to seeing the BRIC realise their potential as the “structure of a new economic order.”

He further notes that all four countries are “difficult to do business in, have problematic legal systems, are plagued by bureaucracy and corruption, have infrastructure issues, and need to upgrade mass education and improve labor markets.” Frankenstein’s conclusion is that, “while the BRICs certainly should not be ignored, the problems of their business environments show that their fundamentals are perhaps less promising than BRIC enthusiasts make out.”
Interestingly, the BRIC has outperformed Goldman Sachs’ 2003 predictions, noting improvements that are approximately 5-7 years earlier than originally believed. (O’Neill and Stupnytska, The Long-Term Outlook for the BRICs and N-11 Post Crisis 2009)

Despite the indicators as to the importance of China’s manufacturing sector for North American business, Tiagi notes some strong empirical evidence to the contrary of common perception: “contrary to the widespread public perception that everything is ‘made in China,’ more than half of Canada’s imports originated in the United States while only 9% originated in China in 2007.” (Tiagi and Zhou 2009) While this appears to deflate the argument that China’s increasing wages could lead to global inflation (Wheatley 2011), Tiagi continues “compared to 1998, trade with China grew by more than 350% by 2007 while trade with the world, excluding China, grew by only 33% over the same period. All trade indices point to the same conclusion. For example, Canada’s trade dependence index (the ratio of Canada’s overall trade with China to GDP) increased from 1% in 1998 to 3% in 2007.” (Tiagi and Zhou 2009)

The one thing O’Neill and Frankenstein agree on, however, is that the BRIC group has phenomenal potential to perform well – the difference lies only in their outlook. Frankenstein’s conservative academic approach may be partly due to an Americentric view, while O’Neill represents a less-biased British viewpoint.

**Offshore Manufacturing**

Offshoring has been recognized as “the shifting of tasks to any country outside the home country” (Olsson, et al. 2008) and is typically accompanied by outsourcing, or “the transfer of activities and processes previously conducted internally to an external party” (Ellram and Billington 2001). This represents a very broad definition, and has been further revised to
describe “the shifting of tasks to low-cost nations often referred to as developing nations or emerging nations.” (Olsson, et al. 2008)

The primary reason for offshoring the manufacturing process is that of potential cost savings, however access to an increased labour pool and extended work hours also play a part. (Olsson, et al. 2008) There must be a full accounting of direct and indirect costs, however. Mucha (2003) notes that many offshoring decisions are made without looking at the total cost of offshore outsourcing, as manufacturing lines that rely heavily on automated processes are not largely affected by labour costs. Furthermore, large or heavy objects are exceptionally expensive to ship by air, and the cost of a four to six week delay in inventory shipments via sea can be expensive. There are also concerns surrounding the security of sensitive items and the issue of patent protection.

APQC (2010) has assembled a paper addressing the total cost of offshoring manufacturing and has concluded that the additional tangible costs of offshore manufacturing in China cause an 11.21% premium over onshore manufacturing. This cost differential takes into consideration the FOB price, duty, associated clearance fees, increased en-route inventory, several risk factors including intellectual property theft and product liability, and quality concerns. They concluded that after the second year of production, the tangible cost of having the items manufactured overseas exceeded the cost of keeping production onshore.

The challenges associated with offshore facilities also include differences in cultural context, both international and inter-company; and perceived status differences. (Levina and Vaast 2008) These differences may include language barriers, work ethos and expected communication and provision capabilities.
Onshore Manufacturing

Onshoring of manufacturing, also referred to as "reshoring" when it relates to the reversal of a previous offshoring activity, is when a company retains the manufacturing facilities inside their home country.

Haflich (2010) notes that the start of reshoring began to accelerate in 2008 "when the global economic boom resulted in shortages of containers, upward spiralling freight rates and 'massive bottlenecks in the ports.'" While the global economic crisis of 2009 reduced many of these constraints, further observation noted "difficulties in maintaining 'an extended supply chain.'" With the growth of regions such as the BRIC, "some plants located in fast-growing developing economies that supply both their own markets and North America are being pressed to devote a larger share of their capacity to local customers, which could encourage boosting output in the U.S.." (Haflich 2010)

This increased demand in the offshore markets provides an opportunity for Canadian producers to onshore some of their manufacturing without affecting overseas contracts and factories. This allows for substantial risk mitigation and allows the producer to remain flexible in terms of future decisions.

William E. Gaskin, president of the Cleveland-based Precision Metalforming Association, is "moderately optimistic there will be more opportunities for manufacturers in the United States, both through exporting and from companies realizing that they need to produce at least in the region where they are selling." (Haflich 2010)

In performing the analysis, these factors motivate us to examine the possibility of onshoring of manufacturing facilities – while one alternative is to find a different shore to which we
move offshored capabilities, the general displeasure experienced by producers who have offshored manufacturing suggests that a better solution would be to find ways in which we can make onshore manufacturing cost-effective.

While it seemed that offshoring led to “work [leaving] the country in a wave in 2001,” (Zelinski 2010) there are many reasons for it to be reshored. Concerns with shipping disruptions, unstable pricing, inter-company relationships, and quality have resulted in U.S. producers reshoring the manufacturing of their products. Zelinski also notes “‘emerging economies’ are found in many places, including within our own borders.”

In looking at the established literature, it seems as though there is a strong movement towards restoring manufacturing onshore. This works to resolve several developing issues: the concern of trade disruptions due to concerns of civil unrest, the growing concern of piracy and theft of intellectual property and concerns about the extensive impact of fossil fuel consumption for transportation.

Further concerns have been noted due to the increasing cost of labour overseas. We will address those next.

**Manufacturing Labour Costs**

Of further interest is a look at current and forecast wages, particularly in the manufacturing sector. A great deal of the cost of manufacturing relies on commodities tied to inflation; however, a growing percentage of the manufacturing cost is starting to be allocated towards labour. In the manufacturing sector in China, the average wage has increased by 240% between 1998 and 2008. (National Bureau of Statistics of China 2009) This momentum is considered sustainable – it is not a one-of occurrence. Over the same period, Canada’s
manufacturing wage increased only 23%, while Brazil's increased 103%. Between 2001 and 2008 (a shorter period, due to limited data availability), Russia’s manufacturing wage increased 268% and India’s increased by 60%.

In order to determine future wages, we have taken the wages and PPP adjustments over the decade of 1999-2008, determined the average annual growth, and then extrapolate future increases accordingly. The calculations have been published in Appendix C; however the following graphs are included for illustration.

**Figure 5 - Average Wage of Manufacturing Staff and Workers (historical) 1998-2008, in international dollars**
While the line for Canada’s wage appears to be linear and the rest appear exponential, this is an illusion. The same calculations were performed, however due to Canada’s stable and nominal growth in this area in comparison to the BRIC countries, the compounding growth is not as visible in this illustration.

In determining the projected values, the published average wage from 1998 through 2008 was evaluated for annual year-on-year growth. Next, the PPP factor growth was evaluated for annual year-on-year growth. These values were averaged and applied to determine projected wages for 2009 through 2027, assuming the growth remained steady. This results in an average year-on-year PPP-adjusted growth rate of approximately 2% for Canada, 5% for Brazil, 26% for Russia, 5% for India, and 20% for China.
As we will examine further in Chapter 2, “cheaper labour doesn't necessarily give offshore manufacturers an insurmountable advantage. They can face additional costs from time-to-market delays, air freight charges, employee travel, and local corruption” (King 2003).

While much of our analysis focuses on the labour cost, the additional costs of doing business overseas have been examined and, as much as possible, enumerated. The tangible costs increase the product production cost by 11.21% (APQC 2010), while the intangible cost increases due to challenges such as local corruption remain undetermined.

**Components of the BRIC**

**Brazil**

Brazil’s economy is increasing more rapidly than any other South American country. With the advent of the 2016 Olympics, Brazil is also quickly working to improve their image on the world stage. There is a developing middle class and while their PPP-corrected GNI per capita has only increased 49% over 1999 to 2009, it remains in second place among the BRIC, after Russia. As for GDP, in 2009, Brazil held second place in the BRIC behind China, despite their growth being the lowest among the BRIC at 144% from 2000 to 2009.

Brazil’s responsibility for consumer goods manufacturing has experienced an increasing role in Canada, though still comes nowhere close to that of China’s.

Their growing middle class could be a major market for Canadian producers as the desire to demonstrate their monetary success through the acquisition of consumer goods increases along with their ability to afford such luxuries.

In our analysis of the dissenting view of the BRIC’s importance, John Frankenstein identified the need for infrastructure improvements. As they prepare for the 2016 Olympics, the
infrastructure is being rapidly developed, along with a strict crackdown on the criminal underworld, especially in Rio de Janeiro.

These changes will help position Brazil to be a desirable location for Canadian business to explore opportunities in, especially considering the closer proximity to the centres of commerce as compared to the rest of the BRIC.

**Russia**

In looking at the same economic indicators as we have for China and Brazil, it is clear that Russia’s purchasing power is the highest among the BRIC. Russia’s PPP-corrected GNI per capita is the highest among the group at 18,350; nearly double that of any of the other BRIC countries and half of the average in the G7. Russia’s GNI has grown 176% between 1999 and 2009, with the second highest growth rate among the BRIC, behind only China.

As for GDP, Russia has seen a growth of 374% from 2000 to 2009 and while this is the highest rate of growth among the BRIC, they still rank at the lowest of the four nations for overall size.

In late 2009, O’Neill noted “because of its poor performance since the crisis, Russia has now ‘disappointed’ us” yet goes on to note that “it has performed better than many realise, despite having had a very poor crisis.” (O’Neill and Stupnytska, The Long-Term Outlook for the BRICs and N-11 Post Crisis 2009)

Once the world’s economic crisis has been resolved, it is likely that consumer spending in Russia will become a prime market for Canadian producers. As Russia experienced a “very poor crisis,” it would be likely that this recovery should coincide with that of North America.
As for their manufacturing capacity, it would seem that Russia still holds a great deal of cold-war stigma and has not been exploited as a resource for North American manufacturing, perhaps due to the perceived logistics challenges and higher-than-average wages for a developing nation.

**India**

While India has gained a substantial reputation in Canada as being a source for offshore knowledge workers, they do not seem to be as responsible for consumer goods manufacturing to the same degree that China, and to a lesser extent, Brazil has become. They have great potential to increase in this area, having already marked a GDP increase of 185% from 2000 to 2009.

Despite their gains in GDP, they show the lowest GNI per capita (PPP-corrected) of the BRIC, representing less than 10% of the G7 average and relatively modest gains of only 108% from 1999 to 2009. This figure demonstrates that India is still far from becoming the consumer-driven markets that are growing in Brazil, Russia, and China.

Given the low wages and tremendous human resource capacity still available in India, this country remains a viable alternative for offshore manufacturing until it catches up with the rest of its cohort.

As the average purchasing power of the Indian population remains extremely low, this does not represent a suitable market for most Canadian consumer goods producers to consider.

Furthermore, 43 percent of surveyed manufacturing companies were unable to reach the goals they set for their offshoring of manufacturing facilities to India. There is a substantial dearth of manufacturing and supply chain infrastructure, resulting in a location that is
unappealing for offshore manufacturing. (India Could Overtake China as Offshore Manufacturing Location - Survey 2007)

**China**

As Canada’s second largest source of imports, (Tiagi and Zhou 2009) China’s potential to influence Canadian producers is greater than the rest of the BRIC and any other developing nation. Wheatley (2011) has suggested that “China is on track to become an inflationary force for the global economy” as the rising cost of labour has resulted in a China import price index increase of 0.9% in the fourth quarter of 2010. The increase in GNI shown by China between 1999 and 2009 was 194% -- the highest among the BRIC.

Despite China’s incredible GDP growth of 316% between 2000 and 2009, Frankenstein (2010) notes a report from PriceWaterhouseCoopers that holds China’s GDP growth will slow down in 2025.

Furthermore, on an individual level, the personal wealth of the Chinese people is increasing dramatically. This increase has resulted in increased purchasing power, especially for consumer goods, while also increasing the cost of labour. It is now predicted that China’s purchasing power will rival the United States within the next two decades (Wilson, Kelston and Ahmed 2010).

**BRIC summary**

As discussed, Brazil, Russia, and India have not been exploited as major centres for offshore manufacturing, though they have been used as locations for offshore service sourcing, such as information technology support centres and software development firms. Frankenstein (2010) noted they lack the necessary civil infrastructure, something that cannot be remedied
quickly. Should Brazil, Russia, and India wish to compete for a share of the manufacturing sector, they would be well advised to seek out and implement ways in which their infrastructure could be improved, allowing for greater logistics flow.

For the purposes of our analysis, they have been included as potential alternatives, should the option to continue offshore outsourcing with existing major sources of imports become unpalatable.

In order to become desirable locations for offshore outsourcing of manufacturing, their current legal and political structure would also have to change to open their borders for business by reducing bureaucracy and becoming friendlier for business.

**Observations**

As the examined indicators of GDP and GNI increase, along with the minimum and average wages, the purchasing power of these nations will also increase. The amount of income available to individuals within that country to be used for consumer goods will also increase. In looking at the expected growth of manufacturing sector wages, it makes sense that the cost for manufacturing the consumer goods overseas will also increase. The analysis in Chapter 2 will examine their impact empirically.

The dissenting opinions expressed, particularly by John Frankenstein are interesting, though, due to the gains already achieved, perhaps moot. In looking at the cost of manufacturing offshore, the BRIC economies and wages would have to decrease substantially in order to once again be a profitable solution for most manufacturing solutions.
Analysis Methodology

Having established the importance of the BRIC and their potential impact on overseas outsourced labour through looking at their growth in economic indicators, we will proceed to analyse the impact of their growth on the Canadian market.

The analysis of our studied literature will look at the impact of the increasing cost of offshore labour, resulting in greater offshore manufacturing costs. This will begin with an empirical evaluation of the impact of rising labour costs, then examine the impact of a decision to onshore or offshore further manufacturing will have on three sectors of Canadian business: producers, manufacturers and retailers.
Chapter 2: Analysis – The Impact on Canadian Business

For the purpose of our analysis, we will examine three broad sectors of Canadian businesses that are affected by the manufacturing supply chain: producers, manufacturers, and retailers.

A producer is a company that designs, contracts the manufacture of, and markets a manufactured product. They may choose to do one or more of these roles in-house, or they may outsource the task. When outsourced, the producer may choose either an onshore manufacturing facility, or an offshore one.

Once the producer has designed the product and contracted the manufacture of it, it is up to the manufacturer to turn the raw materials into an assembled product. Typically, it is then up to the producer to get the goods to market, where the retailers take over and provide the ability for the consumer to purchase individual items.

Producers

Producers of goods will have to make some difficult decisions in the upcoming years. The cost of offshore labour is rising at a rate much faster than the cost of labour in Canada, and while transportation costs are somewhat variable, the increasing cost of fuel also increases the impact of offshore manufacturing decisions by, at very least, introducing a variable element that becomes difficult to account for.

While there is still a great disparity between the cost of labour in Canada and the cost of labour in the BRIC, this is narrowing. If both Canada’s and the BRIC’s manufacturing wages continue to increase at the rate they have been since 1998, the labour cost in China will be higher than that of Canada by 2019 and Russia’s will exceed Canada’s by 2027. (see Figure 5 and Appendix C – Average Wages for Manufacturing Staff and Workers, 1998-
2027). These values have been corrected by PPP, using the past several years' growth in both the local currency's wage and the country's PPP to determine these figures. By using the PPP, the risk of exchange rate fluctuation and inflation is minimised.

This presents some challenges and opportunities. Even before the wages have reached parity with each other, a break-even point will be reached. This will occur when consideration is paid to not only the offshore labour cost, but also the entire manufacture and logistics chain required to get goods manufactured abroad to the Canadian market, along with the inventory pool created by the overseas shipment delays. This break-even point will allow the Canadian producer to find equal cost effectiveness by having their product manufactured onshore and near-market, rather than from an offshore source.

This break-even point will require a shift in cultural perception: the cost to manufacture goods in offshore locations will no longer be lower than the cost to have them manufactured locally. Producers are faced with a choice: to onshore their manufacturing or find alternative offshore manufacturing sites.

**Empirical Examination**

There does not appear to be any firm data available on the relevance of the cost of labour to produce an item, aside from some anecdotal notes. There appears to be a widely held belief that the cost to manufacture a product offshore accounts for approximately 25% of the consumer's price. The remaining 75% belongs to supply chain costs and retailer mark-up (Udall 2008).

From the 25% of the product's retail price, there is further consensus of a direct labour cost of 8-15% (Vyas, Santini and Cuenca 2000), depending on product and degree of automation.
applied in the manufacturing plant. This results in the direct labour cost for manufacturing a product to be between 2% and 3.75% of the product’s retail price.

While this value appears small, it is nevertheless a direct cost for each product – increases in this area often affect the product price directly.

Due to the unavailability of suitable data, we must make several assumptions. These are:

- examined countries hold similar political landscapes,
- similar overhead costs
- product’s raw materials costs are the same
- the hidden intangible costs apparent with offshore manufacturing are ignored, including
  - overseas consulting costs,
  - additional cost due to corruption, and the
  - potential losses incurred due to shipping delays
- the quality of the product is identical

Following the analysis presented by APQC (2010) concerning the evaluation of the total cost of ownership for offshore manufacturing, the per-unit cost must be marked-up by 11.21% in order to account for increased transportation and other costs associated with foreign trade (APQC 2010).

At present, labour costs in China are approximately 26% of Canada’s, leading to a product that, if manufactured in Canada would be more expensive, despite the supply chain efficiencies available if there was a substantial involvement of labour in the manufacture of the product. These calculations and the previous assumptions mean that an item whose retail
price when manufactured in Canada was $100 in 1998, would retail in Canada for $95.56 when manufactured in China. These differences are apparent in the other parts of the BRIC also. The same product would retail for $99.35 if manufactured in Brazil, $94.78 if Russia and $96.71 if India.

As noted earlier, the labour cost growth rate in China is considered sustainable at approximately 22% per year, the average over 1998-2008. Canada’s labour cost growth rate over the same period was approximately 2%. Brazil demonstrates an average of 5% over the period; Russia shows a 7% gain; and India 5%. After PPP correction, Russia’s future year-on-year wage increases appear to be approximately 26%, while the others appear to remain consistent with their native currency increases.

While exchange rate fluctuations can play a role here, these numbers have been corrected for PPP, taking into consideration both inflationary forces and exchange rate changes over this time.

Based on these assumptions and the noted increasing costs found during our literature review of manufacturing labour costs in Chapter 1, the following curves have been produced:
Figure 7 - Price of low-labour involved product manufactured in Canada vs. in BRIC (historical, 1998-2008)

Figure 8 - Price of low-labour involved product manufactured in Canada vs. in BRIC (projected, 2009-2027)
Figure 9 - Price of high-labour involved product manufactured in Canada vs. in BRIC (historical, 1998-2008)

Figure 10 - Price of high-labour involved product manufactured in Canada vs. in BRIC (projected, 2009-2027)
From these graphs, based on our conservative calculations of price point, we see that in a low labour involvement manufacturing line, it is already more expensive to manufacture the product overseas. In a high labour involvement manufacturing line, we will see the price differences of Chinese and Indian manufacturing facilities disappear between 2014 and 2016.

Like in Figure 5, the line for Canada’s involvement appears to be linear and the rest appear exponential, this is an illusion. The same calculations were performed, however due to Canada’s stable and nominal growth in this area in comparison to the BRIC countries, the compounding growth is not as visible in this illustration.

**Onshoring**

The decision to onshore their manufacturing should happen before the total cost of offshore manufacturing is greater than having this role performed onshore. As described in the literature review, the total cost of offshore outsourcing includes tangible costs such as labour and freight, but also intangible costs such as increased risk exposure through a longer supply chain. There are also additional costs of doing business in a foreign market: lack of local knowledge and dealing with local corruption are extremely important aspects, especially in relation to a developing nation.

As we identified in the previous section, the tangible cost of manufacturing offshore will reach parity with onshore manufacturers in approximately 2015. When factoring in the aforementioned intangible costs, we can expect this to occur sooner – perhaps even in the next three to four years.

While mitigating many of the concerns of offshore outsourcing, onshoring of the manufacturing process also brings some strong advantages. The flexibility to adapt a product
manufactured onshore is substantially higher, as the manufacturing facility is very close to the market. This reduces the in-transit inventory pool that can range from four to six weeks for ocean-going freight, down to a few days or a week. Furthermore, by establishing relationships with manufacturers in the same market as your product, a degree of brand loyalty is gained, increasing product sales.

As manufacturing is moved to Canada, the goods will be closer to their market, resulting in both lower transportation costs and allows the producer to market their environmentally friendly decision. Furthermore, as more people are seeking to “buy local,” having goods produced in local markets increases their appeal.

By dealing with an onshore manufacturer, the producer also has the culture in common. It becomes much easier to communicate changes and improve the manufacturing process with both companies speak the same language and trade in the same currency.

The onshoring of manufacturing will have many positive impacts on Canada: less fossil fuel will be used to get the goods to market; unemployment will be reduced; manufacturing controls will be more strictly supervised; and the GDP will rise. All four aspects of this allow the Canadian producer to see substantial gains, both directly and indirectly.

By improving local economic factors such as the GDP and unemployment, a producer’s market increases. This increased market size will allow for greater product sales and an increase in revenue for the company.

Finally, bringing the manufacturing facilities onshore allow for greater supervision of the product manufacture by the producer and enable them to ensure strict quality controls and workplace environment standards are met. They are also able to make changes to the
manufacturing plant more quickly, allowing for rapid development of new product lines and quick improvements to existing products.

**Offshoring**

As a second option, finding other offshore manufacturing locations presents some significant challenges, though the producers would be able to carry on business in much the same way as they have been.

The decision on whether to continue with offshore manufacturing or to move the facilities onshore centers primarily on greater cost-effectiveness, though sometimes also to find an increased labor pool. As noted in the literature review, the offshoring of manufacturing does not always result in reduced costs, especially considering the total cost of offshore outsourcing. (Mucha 2003)

Should the producer decide to relocate offshore manufacturing to another country, the established relationships would have to be rebuilt in the new country, and a substantial amount of training and development would have to take place to ensure they are able to achieve the same level of quality from these locations. Furthermore, the risk of operating in these unknown and potentially unstable environments creates a less-than-desirable situation.

GlobalSourcingNOW reported on a 2007 survey by Capgemini and ProLogis that notes “India could overtake China as a global offshore manufacturing destination” though “about 43 percent of the international manufacturing companies surveyed across Europe, Americas, and Asia Pacific were not able to achieve their initial objectives by offshoring manufacturing activities to India. This was primarily attributable to a lack of appropriate manufacturing and
supply chain infrastructure in India.” (India Could Overtake China as Offshore Manufacturing Location - Survey 2007)

**Industry Example: Stuffed Toys**

The stuffed toy industry is dominated by Chinese manufacturers. In 2000, 82% of the United States’ stuffed toy imports arrived from China (Department of Export Promotion n.d.). As we are very similar marketplaces, it is likely that Canada’s dependence on China for this industry is similar. The manufacturing of stuffed toys is also particularly labour-intensive, with labour accounting for 25% of the manufacturing cost (ibid.). Using our previously examined data with this information presents us with very similar results.

Using 2008 as our base year, as it is the last year for which we have historical data; we can follow the same projections. In 2008, the stuffed toy that retails for $25.00 in Canada, when manufactured in Canada, would have a retail price of $21.91 if it was manufactured in China. It would retail for $22.81 if manufactured in Brazil, $21.00 if manufactured in Russia, and $21.84 if manufactured in India.

Assuming the average year-on-year increase remains the same over the decade following our baseline, there will be a substantial shift. In 2017, that same toy will retail for $26.29 if it is manufactured in Canada, $27.02 if it is sourced from China, $23.99 from Brazil, $22.02 from Russia, and $28.40 from India.

As the product is particularly consumable and little attention is paid to the location of manufacture, the key differentiating factors are design and price. Since we are focusing on producers that are based in Canada, the design would be identical regardless of the location of manufacture – only the price would be variable.
Purchasers of stuffed toys will notice this difference. Naturally, they will gravitate towards lower priced toys, especially when they are able to support Canadian industry. The impact will become even more pronounced as wages in the BRIC approach parity with Canada and the developed world.

**Manufacturers**

Canadian manufacturing facilities stand to benefit greatly by the increased costs of offshore manufacturing. As producers increase their onshore manufacturing, the manufacturing market in Canada must increase capacity.

It is unlikely that manufacturing needs in Canada will decrease beyond the levels they have already. That places the Canadian manufacturing sector in an optimal position to be taking advantage of the increased costs of doing business offshore. According to Industry Canada (2011), the manufacturing sector remained relatively stable from 2004 through 2008, though experienced a gain of approximately 20% between 1999 and 2004.

Additionally, for producers outside of North America, the availability of manufacturing facilities near the North American market would be very useful. As the BRIC, and specifically China, become more affluent, their ability to innovate new products and market them to the North American population will increase substantially. They, in turn, will be seeking opportunities to compete with the North American producers by finding the lowest-cost manufacturing facility.

**Retailers**

While the scope of this project is limited to the manufacture of goods, one would be remiss to not make mention of the trickle-down effect that is likely to come because of this shift.
Should the producers not find a viable alternative to production in these countries, it is certain that the cost of goods will increase to allow for the increased labour costs.

This will affect the retailer by increasing the cost of maintaining inventory while reducing gross margins. Furthermore, as the GNI growth rate in Canada is substantially lower than that of the BRIC, the Canadian consumer’s spending will not increase substantially and they will not be able to afford the items they once could. This will lead to reduced volume and profit for the retailer.

As the cost of doing business increases, the remaining businesses would begin to exit the marketplace. The market would shrink in size and the economic disparity between the working class and the business owners would increase dramatically.

Of special note is the retailer that already operates on a basis of high-volume, low-margins. Due to the reduction of purchasing power for consumer goods, these retailers will find their volume decreased significantly and will find themselves on a level playing field with other retailers.

While this progression will not happen quickly, it must be recognised as a possibility and measures taken to avoid it.

**Growth Sustainability**

While our analysis has allowed the growth of the BRIC economies and wages to proceed through 2027 at the rate they experienced between 1998 and 2008, it would be foolhardy to believe this is sustainable for the long-term. The idea that manufacturing sector wages in China could be nearly four times that of those in Canada seems implausible at best.
In the medium-term, however, it seems to be probable. While the published economic and wage data is limited to the years up to 2008, further evidence has shown this growth continuing through 2011 and has represented an inflationary force (Wheatley 2011).

Analysts believe the economic growth of the BRIC countries to be sustainable until at least 2020 (Goldman Sachs Global Economic Group 2007). when we may begin to see the growth rate slow and achieve a more sustainable rate for the long-term. It is not clear whether the cost of labour will continue to grow at a similar rate to the overall economies in the BRIC, or if they have experienced a rapid growth spurt that will soon slow down despite the ongoing growth of the economies.

As we examined above, we are less than five years away from achieving a break-even point with two of the four BRIC countries for many manufactured goods, providing this growth is sustained. At present, this much appears to be a virtual certainty.

**Weaknesses and Limitations of Analysis**

This analysis has several weaknesses and limitations, though we have attempted to mitigate their importance in determining our conclusions. The analysis lacks concrete data on the true costs of manufacturing a product, so several assumptions were made. Furthermore, the analysis relies on past performance of the economies in question to determine future expectations. In an ideal world, these growth expectations would be met precisely, though that is rarely the case. There are plenty of opportunities for fluctuation, including natural disasters or significant changes in the political landscape.

Additionally, it is difficult to truly predict the manner in which businesses will react. Many may choose to reshore their manufacturing facilities, though they may also seek to find other
offshore venues in which to have their goods produced at the lowest cost possible. Overall, the limitations and weaknesses are rather inconsequential in drawing the conclusions, though they affect the timeline in which these changes may occur.
Chapter 3: Opportunities and Challenges

Several different groups will be affected by this shift and have the ability to influence the degree to which these changes alter day-to-day life. The producers should begin seeking ways to mitigate the risk of increased manufacturing costs and find ways to take advantage of the increasing market in China. Onshore manufacturers should begin researching locations in which to begin or expand operations. Additionally, local and provincial governments should begin competing for the onshoring of manufacturing through the provision of grants and other assistance for manufacturers looking to locate in their jurisdictions. Furthermore, the use of investment capital to perform an outward foreign direct investment into the Chinese marketplace can lead to advantages for any Canadian corporation.

Producers: Risk Mitigation

While all indicators are suggesting that China is positioned to achieve some incredible economic heights, it is important for Canadian producers to not be quick to change their manufacturing strategy. However, they must determine ways in which they can avoid unnecessary exposure to this risk.

Producers who currently offshore their manufacturing to China would be well advised to find alternate arrangements onshore for their markets here. By the estimates discovered during the above analysis, price parity for onshore manufacturing is likely to occur within the next eight years. This will result in onshore manufacturing being cheaper at that time, when the product is being manufactured for the Canadian market.

The overseas manufacturing contracts should remain open, both to serve the North American market until cost parity has been reached and to retain their competitive advantage in the developing overseas marketplace.
Given the benefits of choosing an onshore manufacturing facility and the risks involved with offshore manufacturing, it is clear that the price differential between the two alternatives must be substantial. The hurdles of dealing with an offshore manufacturing facility are substantial, especially when starting a contract with a new supplier in a new country. The onshore facility presents clear and definable risks, as well as a consistent and predictable cost structure.

**Producers: Taking Advantage of the Foreign Market**

Producers should seek to exploit the BRIC market as the middle class expands to create a new consumer-driven market segment in these societies. They would be well advised to enlist the assistance of an international business consultant to enter this emerging marketplace in an appropriate manner.

There are many options to weigh as they proceed down this road, including appropriate (re)naming of their products to avoid potential poor connotations in the local marketplace and making necessary adjustments to the product’s formula or construction to adapt to the local standards.

Those that have already established an offshore manufacturing facility are well positioned to take advantage of this market. With local manufacturing, the cost of getting goods to market is greatly reduced, allowing for increased competitiveness and a strong possibility for profits beyond the capabilities of strictly a western market.

In June of 2009, it was identified that year-on-year growth of China’s retail sales had achieved a historical high of 17.6% (Yamakawa, Ahmed and Kelston 2009). The same study also identified consumer goods as being the most significant to this growth.
Yamakawa, Ahmed and Kelston also noted that the real retail sales in Brazil, India, and China “held up much better than in the advanced economies over [2007-2009].” They predict that the world’s spending power will move from the richest countries to the BRIC, and a higher consumption “as the BRIC’s middle-class consumers catch up with their counterparts in richer countries.” (Yamakawa, Ahmed and Kelston 2009)

With this noted growth, this market is ripe for the producers who has already brought their product to market and established manufacturing facilities in these foreign markets.

Manufacturers: Seeking Additional Business

Manufacturers should begin seeking additional business from Canadian producers. By proactively approaching local and provincial governments with appropriate proposals, they should be able to find a location where the labour force is available and the overhead costs are low. It is likely this will lead to a location where unemployment is high and the cost of living is low, enabling them to be competitive with the offshore manufacturers more quickly. These locations are also likely to find increased support from local and regional government as the economic stimulus provided by a large manufacturing facility is substantial.

At present, North American manufacturing plants are operating at approximately 70% (Haflisch 2010) as much of North America’s manufacturing potential has been stagnated by the moves offshore. With only 30% of the capacity remaining, this sector is ripe for new involvement. Should a company already have substantial capabilities in the manufacturing sector, it would be prudent to begin seeking ways to expand their capacity in the interest of contracting excess capacity to other producers.
These manufacturers will be well positioned to take advantage of the shift to onshore manufacturing, while minimising the switching cost by providing the lowest labour cost available in North America.

Canadian manufacturers should also establish relationships with offshore manufacturers, whether it be in the area of knowledge transfer or a complete joint venture, allowing the two companies to gain from their combined experience while also securing the necessary local knowledge to allow for competition in their respective marketplaces.

**Government: Assistance**

In areas where unemployment is high, provincial governments would be well advised to establish assistance and incentive programs for manufacturers willing to locate their facilities in their jurisdictions. Assistance could be given in the form of reduced-tax or tax-free construction and land purchases, along with partial wage subsidies during the start-up phase.

Of prime consideration should be the maritime provinces of Prince Edward Island and Newfoundland and Labrador. Both have strong industrial ties to the commercial fishing sector and have experienced high unemployment (presently, both are over 11%) (Ferrao and Gilmore 2011) because of poor fishing seasons and decreased profits in that sector.

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Minimum Wage</th>
<th>Unemployment</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Columbia</td>
<td>$8.00</td>
<td>8.8</td>
</tr>
<tr>
<td>Alberta</td>
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<tr>
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</tr>
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<td>Ontario</td>
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<td>7.9</td>
</tr>
<tr>
<td>Newfoundland and Labrador</td>
<td>$10.00</td>
<td>12.8</td>
</tr>
<tr>
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</tr>
<tr>
<td>PEI</td>
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</tr>
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<td>New Brunswick</td>
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<tr>
<td>Yukon</td>
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</tr>
<tr>
<td>Northwest Territories</td>
<td>$9.00</td>
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</tr>
</tbody>
</table>

*Table 1: Minimum Wage and Unemployment by province*
Additionally, they have relatively low minimum wage levels that will be especially noticeable once the recently announced increases in other provinces take effect. Being positioned on the eastern seaboard, these two provinces could very easily establish significant shipping ports, allowing for easy trade to much of the United States and Europe.

Should these governments choose to exploit this, it would be a prime opportunity to also conduct the new construction according to green principles, allowing the facilities to contribute to environmental improvement. This move would further promote the importance of onshore manufacturing and reduce dependence on fossil fuels for excessive transportation.

**All Companies: Foreign Direct Investment (FDI)**

Canadian corporations can also benefit from wise investment in similar companies in the BRIC group. By leveraging the foreign company’s knowledge of the marketplace, but also introducing the new capital and technology, both companies can realize great profits. Similar to Jeep’s long-term involvement in China through the Beijing Jeep joint venture, there are some great opportunities for joint ventures and foreign investment that can lead to unprecedented growth for the Canadian corporation if executed properly.

This opportunity is available for virtually any Canadian retail or production business that seeks to capitalise on their existing competencies while increasing their international market and the ability for substantial profits through sales to the aforementioned growing middle class consumer.

At this time, the Chinese marketplace is very appealing to Canadian investors given the favourable exchange rate and relatively low cost of operating a business. A modest
investment could mark a substantial influence in a local company, allowing for significant expansion and growth of the joint venture.

The Canadian company must take very careful steps to not repeat Beijing Jeep’s mistakes; however, the potential outweighs the risk in nearly every circumstance. As China’s population becomes more affluent and the middle class becomes more significant, the technology and innovation found in Canadian companies will be found in greater demand. Entering this market for a previously unattainable product with a mix of North American capitalism and local \textit{guanxi} will result in a company that is virtually unstoppable.
Chapter 4: Conclusions and Recommendations

The last decade has firmly established that the BRIC group is a force to be reckoned with. The predictions that O’Neill made several years ago have actually proven very conservative in comparison to the growth that has occurred and current expectations are that “many of the trends we have already seen [will] continue over the coming 10 years and become even more pronounced.” (Wilson, Kelston and Ahmed 2010)

The four countries in the BRIC are responsible for 36% of the world’s GDP growth from 2000-2010 and show no signs of letting up at this time. In 2010, the BRIC accounts for 17% of the world’s GDP, and this is expected to reach 47% by 2030. (Ebeling 2011)

China, in particular, is showing extreme potential for becoming an economic superpower, with a GDP that may be as big as the United States’ by 2027. (O’Neill and Stupnytska, The Long-Term Outlook for the BRICs and N-11 Post Crisis 2009)

Despite the dissenting views, including that of Frankenstein, one thing is clear: our economic landscape is changing dramatically. The BRIC’s growth will affect Western society in a way unparalleled by few other developments in the last century.

Canadian businesspeople must make a decision: to either ignore the BRIC and hope it is a passing phenomenon; or take advantage of this economic shift and seek the potentially huge earnings. The first sectors to experience the impact will be in the producing and manufacturing of consumer goods, with the impact becoming more widespread as the changes filter down.
Recommendations

Producers

Based on the information discovered in the literature review and the further analysis performed, we recommend Canadian producers to begin seeking onshore opportunities for manufacturing.

While the opportunity to simply relocate their facilities to another offshore country exists, the time seems optimal to shift these often poor performing contracts back to Canada lessening the economic uncertainties surrounding the foreign manufacture of goods and building the local economy while also lessening the environmental impact of overseas production.

Manufacturers

We also recommend that Canadian manufacturers increase their facilities and plan for further expansion in the upcoming years.

They should seek out relationships with “sister” companies in China, where both manufacturers produce similar goods. This relationship would be mutually beneficial by allowing both companies to manufacture goods for their respective marketplaces, while allowing for extensive knowledge transfer. This knowledge transfer would allow for increased operating efficiencies and allow both companies to increase their local competitiveness.

Should they establish a joint venture with a Chinese manufacturing firm, they would gain some synergies by being able to protect the producer’s intellectual property abroad, while better understanding efficiencies gained in the offshore market. This would promote further
development as both manufacturers continue to manufacture the same product for the two different markets.

**Government**

All levels of Canadian government should seek out ways in which to encourage the onshoring of manufacturing in their jurisdictions. They should consider offering property tax discounts for new facilities or facility improvements, labour subsidies for manufacturers seeking to expand to their region, along with assistance pursuing exports of the products manufactured in Canada. As manufacturers are incentivised to improve their facilities and build new ones, the local economies will grow and unemployment will drop, resulting in a stronger tax base and economy.

**Final Note**

Ultimately, the BRIC will affect the way business is done in Canada, and its role in our daily lives may be even more significant than today’s “Made in China” stamp found on many of our consumer goods. As businesspeople in Canada, we must seek ways in which to both mitigate our risk and take advantage of the developments in these up-and-coming countries’ economies.
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Appendix A - GDP of Select Nations, 2000-2009

(in billions $)

<table>
<thead>
<tr>
<th>Country Name</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
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<td>32,011</td>
<td>33,288</td>
<td>37,447</td>
<td>42,193</td>
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<td>49,453</td>
<td>55,837</td>
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<td>715</td>
<td>735</td>
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(World Bank, The 2011)
### Appendix B – GNI per capita (PPP-corrected) of Select Nations, 1999-2000

(international dollars)

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(World Bank, The 2011)
## Appendix C - Average Wages for Manufacturing Staff and Workers, 1998-2027

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2009-2027, extrapolated estimates in italics.

(Statistics Canada n.d.)

(National Bureau of Statistics of China 2009)