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Development of the Tertiary Sector
A Comparative Analysis Between BRIC Countries and Select
Developed Economies

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The thesis examines the development of the tertiary sector in the BRIC (Brazil, Russia, India and China) countries in comparison to developed countries. Three factors are attributed to the growth of the tertiary sector: globalization, technological development and deregulation as part of the government policies. Globalization consists of integration between countries and the removal of protection policies, which helps to promote service trade activities across borders especially in the financial sector. Technological development decreases employment opportunities in the manufacturing sector as less labor unit inputs are required for output. Deregulation in policies reduces the government's presence in the market and causes countries to transform into more liberal market economies, which destroy complementary institutions such as labor unions and reduces employment in the manufacturing sector. Theoretical framework was utilized to define these terms and to show their effect in statistical values.

Statistical data was analyzed from various institutions, such as World Bank World Trade Organization and International Monetary Fund in order to prove that proportion of the

tertiary sector is increasing in the BRIC countries. Currently the traditional models of the tertiary sector growth are not fully representing the correct rate of growth of the tertiary sector in the BRIC countries in respect to manufacturing and agricultural sectors. For example, India and Brazil still have larger agricultural sectors than manufacturing although they both have very large service sectors. The reason for the lack of appropriate models is the lack of research being done on the topic and lack of general consensus on what exactly constitutes the tertiary sector.

In order to fill the literature gap, the thesis analyzes each BRIC country individually to outline specific factors that lead to growth of the tertiary sector. The research is limited due to bias and systematic errors in the collected statistics and due to varying definitions of tertiary sector by various organizations. The conclusion states that while the growth of the tertiary sector is certainly visible in the BRIC countries and highly probable, in the long run the BRIC countries will have similar GDP composition to the currently developed countries. Nevertheless, it is useful to study historical economic data of the currently developed countries and then compare them to the current time in order to outline main differences and patterns that might make conclusion more accurate. Furthermore, it is useful to use comparative and absolute advantages of the BRIC countries in order to deduce how far their service sector can expand in proportion to the agricultural and manufacturing sectors.

Keywords

Service, Tertiary, BRIC, Growth, Globalization, Development, Economic

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1 Introduction

The World Trade Organization (WTO) (2012) states that services constitute 60% of global production yet only constitute 20% of global trade. However, the percentage of global trade with services will increase because services such as telecommunications, education and finance are becoming internationalized and are being offered beyond domestic markets. Thus, globalization is changing national economic structures across the entire globe. The current trend of economic development shows relative growth of the tertiary sector while there is decline in growth in manufacturing and agricultural sectors. Deregulation leads to increasingly liberalized transfer of factors of production across national borders, which consequently lead to the emergence of liberal economies. As a result, the service industries in the developed countries began emerging thereby replacing the manufacturing sector. These manufacturing activities are continuously outsourced to peripheral countries, which make developed countries increasingly more reliant on service sector.

The growth of the tertiary sector is influencing the capitalistic system as a whole. The developing and developed countries are moving toward more liberal economies, where privatization of service industries is occurring. The increasingly liberal economy leads to market failures, which were evident during the recent financial crisis. On the other hand, Brazil, Russia, India and China appeared to be more resilient toward the financial crisis unlike developed countries that are considered as tertiary economies. The volatility of the tertiary economy must be examined when BRIC countries are becoming tertiary as well.

The thesis examines reasons for the increasing growth of the tertiary sector, such as globalization, technology and deregulation as part of the government policies. Therefore, it is important to examine effects on the global economy as the BRIC countries continue to transform themselves into a full tertiary economy and becoming increasingly economically significant. The hypothesis is that the BRIC economies follow the trend of

becoming increasingly “tertiarized” as they transform into more liberal market economies. BRIC countries will have similar GDP structure to other developed countries. In other words, outsourcing production due to cheaper labor costs might only be a solution in the short-term as economic growth in India and China will lead to economic development that will increase wages and consequently increase demand for services. As a consequence, China and India will have to relocate their labor force into tertiary sector as well. Nevertheless the growth of tertiary sector, which is largely becoming privatized, is becoming more volatile because of the decrease of complementary institutions that will create bigger ripples during busting economic cycles.

2 Literature Review

Currently there is limited available research regarding the current development of the tertiary sector in developing countries. Certain authors have published extensive research about development of the tertiary sector in Brazil and India (Andrade and Azzoni, 2003; Joshi, 2008). The growth of tertiary sector is largely attributed to deregulation, globalization and technological development. Chen and Wolf (2001) make an argument that the Chinese economy has changed because of the United States. They give a historical analysis of the economic cooperation between the two countries as well as an attempt to make predictions about the future. Additionally, Chen and Wolf (2001) acknowledge that there are various definitions for globalization but they provided two alternative definitions which are "the act, process, or policy of making something worldwide in scope or application" and "globalization represents the increased speed, frequency, and magnitude of access to national markets by non-national competitors". The general consensus is that globalization leads to increased trade that contributes to the growth of the tertiary sector in the BRIC countries (Joshi, 2008; World Bank, 2011).

The side effect of the tertiary sector is growing income disparity and reduction of wages among labor (Joshi, 2008). Krugman (2007) states that international trade and globalization are not the reasons for income disparities. On the other hand, Joshi (2008) states that the growth of the tertiary sector directly leads to wage reductions and income disparities as a result of technological development and globalization in India. Krugman (2007) gives different reasons for wage reductions such as government policies that reduce taxation. He further states that unemployment and wage reductions in the USA are not the result of technological development or increased globalized trade.

Robinson (2004) uses a different approach in analyzing future of the global economy by focusing on the transformation of sovereign states into one globally integrated economy. Additionally, he provides unique perspectives on what he regards a new social class he refers to as "transnational capitalistic class" as well as new emerging state "transnational

state". Robinson (2004) combines highly theoretical concepts from individuals that belong to several different schools of thought. Specifically, he is against using limited definitions for various concepts such as nation states and instead combines them in order to provide a more realistic analysis of the current situation. For example, he provides two alternative definitions of state, which are either "a moment of class power relations" or "a set of political institutions". Additionally, Robinson (2004) criticizes Max Weber of utilizing only one of these definitions which in itself is limited in scope and therefore limits the assessment's capability. To correct the mistake by Weber Max, he utilizes both of these definitions in order to create his own definition for a state.

An insightful overview of how economies developed throughout history is provided by Canterbury (2001) in the book titled, "A Brief History of Economics". The theoretical framework provided by the author is very useful in analyzing the exact thoughts of economists who share specific economic perspective. He suggests that certain economic theories that have been developed decades or centuries ago only show practical relevance during the economic conditions of the time, but nevertheless are still applied today with questionable success. These economic theories and interpretations in relation to tertiary economy might be either outdated or inaccurate. In fact, classical economists completely neglected the tertiary sector (Joshi, 2008). Classical economists only valued production of physical products which were attributed to the agricultural and manufacturing sectors. We follow the conceptual frameworks developed by the Canterbury (2001) particularly because of their relevance to this study.

Furthermore classical economist Karl Marx predicted that as technology improved, labor would be more manageable to control because attention will be deviated elsewhere (Robinson, 2004). However, improvement in technology often leads to more unemployment in the manufacturing sector, prompting able workers to relocate to lower wage tertiary sector (Joshi, 2008; The Economist, 2011). Nevertheless the labor exploitation is still relevant today, especially in the developing world and if revolution did happen in a country such as China then the future of global economy might be in jeopardy.

There is a possibility that the wealthy developed countries will prevent the developing countries into maturing into full developed economy under the capitalistic system. It is quite possible that once semi-peripheral markets are exploited, they will revert back to being peripheral market and not core markets. A number of peripheral markets are utilizing their natural resources for sustained economic growth without differentiating their economy. For example, the 2008-2009 financial crisis in Russia largely occurred due to sharp drop in the price of oil which was country's primary export. The ecological critique also will point out that outsourcing production abroad and using limited available natural resources at an increasing rate will simply add to the world entropy and destroy the environment. On the other hand, liberals or neoclassical school of economics always believed that there should be free-market economy and boundaries are just distortion. In their perfect world of one big fully globalized and integrated economy, the tertiary sector could be hypothetically sustained.

Reviewing all the aforementioned sources, it can be seen that different perspectives will reach different conclusion. It is quite clear that Marxists would state that a capitalistic economy as a whole is not sustainable and eventually the labor would revolt against bourgeoisie. However, Karl Marx was incorrect in predicting the labor revolution because labor classes wanted to live in capitalistic world themselves (Canterbury, 2001). In fact, as pointed out by Robinson (2004) there are existing class struggles which happen from organizations such as "World Social Forum". These organizations do not appear to wish to topple capitalistic system itself but rather make it more regulated. After the collapse of the Soviet Union, the superiority of capitalist system over the command economy became unquestionable. However, over the years several variants of the capitalistic system have evolved in different countries, which is a trend is beyond the view of classical economics (Hall and Soskice, 2001).

Robinson (2004) portrays negative global trends in which multinational companies will take over sovereign national states and force unfavorable economic conditions on the global labor. However authors such as Dicken (2003) argue that threat of states losing influence is a fear originating from 200 years ago and in the global economy they only

gain more influence. Additionally, Chen and Wolf (2001) argue that privatization which occurred in developing countries is highly beneficial. There are number of theoretical frameworks which help to analyze modern capitalist systems by examining the function of the government and structure of society in respect to the economy (Hall and Soskice 2001; Hirshman, 1970). The theoretical arguments clash due to different perspectives. It is important to consider all their perspectives and then use objective data in order to form conclusions. Additionally these are important points because the role of states is directly dependent on how the developing countries will transform and whose interests will be represented during policy decision making process.

Robinson (2004) further argues that supranational policies set up by organizations such as World Trade Organization (WTO) will dictate actions of the national states. WTO which was created in 1995 as part of Uruguay Round to promote liberalization policies to encourage trade and abolish protection policies of individual countries (WTO, 2010). The protection policies are used by national governments to protect domestic industries from foreign competition through imposition of quotas, tariffs and subsidies. In fact, during financial crisis in 2008 the WTO was restricting government's ability to impose protectionism to protect domestic industries from the effects of the global crisis. Nevertheless, nationalism is on the rise in many parts of the world that are unhappy with the consequences of globalization. In fact, Robinson (2004) himself acknowledges that there is a possibility of globalization from down to up where policies toward globalization are not guided by the interests of multinational firms but instead of working class in different countries. Specifically the national interests that are represented by countries such as Russia and China are going to be obstacles in pursuing a truly globalized economy.

Increases in globalization, technological developments and deregulation policies contribute to the statistically visible growth of the tertiary sector in the BRIC countries. Joshi (2008) utilizes human development index to determine percentage of labor which is working in the tertiary sector. Joshi (2008) also includes other factors: employment, percentage of labor force in manufacturing service and rate of urbanisation. The author

states that the service sector growth is largely contributed to IT and telecom, retail and health tourism. Similar methodology has been utilized to show increasing proportion of labor in the tertiary sector and the rise of tertiary industries by other international organizations and other authors (Waylett, 2004; World Bank, 2011).

The biggest problems in the current research are bias, systematic errors in statistical figures and lack of research in the service sectors in the BRIC countries. According to Joshi (2008), the analysis of tertiary economies has only been conducted in the developed countries. A similar problem is observed by Andrade and Azzoni (2003) who wrote that researchers in Brazil are more concerned about agricultural and manufacturing sectors. As a consequence, there has been neglect of analysis of tertiary sector in the developing countries. However, Joshi (2008) references a lot of other prominent economists and uses statistical data acquired from reliable sources such World Bank to support his own analysis of tertiary sector in Indian economy. Therefore it could be stated that the book is conducted mostly as secondary research by compiling the sources together to create a conclusion.

The government sources in developing countries might be subject to bias. In China there is a certain level of censorship and propaganda. It is probable that development figures might be exaggerated and should be compared to other sources if they are available. On the other hand, there is large possibility of systematic errors. As mentioned by World Bank (2010), it is not possible to include the black economy into statistical figures despite its considerable size and effect. Additionally, the accuracy of statistical figures is questionable due to many credible sources publishing different figures due to different calculation methods. As the World Bank (2010) explains it, the reason lies that it is very hard to estimate macroeconomic figures that are associated with the entire country and also figures in financial sector due to limited transparency and sheer volume.

Authors of many articles are belonging to different schools of thought which will lead to inherent bias of a situation. The debate regarding liberalized economy is particularly subjected to bias because liberals, mercantilists and socialists will have different

perspectives. The effect of liberal economy is privatization and its effect on population can also be viewed at different angles. This especially concerns regarding the private health care system whose statistical performance can be viewed in different ways.

Furthermore there is going to be a challenge in choosing the most suitable definitions for hotly debated concepts as mentioned by Robinson (2004). All these definitions are very subjective and as a result the thesis might contain certain degree of bias. The definition of service sector is defined differently by different scholars and institutions. In order to create a more objective research it is necessary to consider most prominent definitions and then provide reasons for choosing them.

The thesis uses secondary sources of information, such as data figures from regional government agencies, Asian Development Bank, International Monetary Fund, United Nations Conference on Trade and Development and World Bank. In the developing countries, the information is not always transparent, but certain estimates could also be used from foreign agencies. Usually the general statistical data is available from databases. For example, there are annual Asian Bank Development reports available regarding developments in the Asian region.

Secondly, it is important to link any major trends and developments to recent news. There are various media sources for any news coverage such as CNN, BBC, Financial Times, and The Economist etc. All the books which are written are becoming outdated the very same day they are published because any major event could change economic and social policies as well as development trends.

3 Theoretical Framework

3.1 Understanding Globalization

The central theme to this study is the term "globalization". A number of authors argue over the precise definition of globalization. The main disputes arise on whether globalization is a completely new phenomenon or an old trend from the ancient times. For example, hyper globalists state that the current stage of globalization represents a world without borders (Dicken, 2003: 10). On the other hand, there is a view that World War I was much more integrated than the current stage of globalization (Dicken, 2003: 10). Nevertheless, Dicken (2003) offers his position on globalization by describing it as a phenomenon consisting of many ongoing processes. These processes are described as internationalizing processes and globalizing processes. The internationalizing processes imply additional trading activities beyond national borders, while globalizing processes are not mere extensions of trading activities but instead are more integrated functional developments (Dicken, 2003: 12). For example, the formation of North American Free Trade Agreement (NAFTA) and European Union (EU) could be considered as global processes.

Furthermore Robinson (2004) brings globalization in the context of capitalistic development. There are four epoch shifts, period of times when fundamental restructuring occurred, in the capitalistic development (Robinson, 2004: 4). The first epoch (1492-1789) marks abolition of the feudalism and discovery of Americas. The second epoch lasted until the 19TH century which signified the Industrial Revolution and rise of industrialists during the French Revolution. The third epoch has lasted until 1970s which marked the rise of monopolies and robber barons. The current fourth epoch is being categorized as globalization where technology is developing at a rapid pace and all the substitutes to capitalism have been nearly eradicated (Robinson, 2004: 4-5).

Both Dicken (2003) and Robinson (2004) agree that the current stage of globalization is

unique in terms of growing complexity and methods of integration. These authors have analyzed the role of transnational corporations (TNCs), transnational state and transnational capital in the process of globalization. The role of national state in the globalized economy appears to change into transnational state which implies further integration in the global economy (Robinson 2004: 39-49). After the abolition of gold standard, International Monetary Fund (IMF) was established that is considered as an "apparatus" for the transnational state (Belaam and Dillman, 2010; Robinson, 2004: 118). During the financial crisis in Latin America in the 1970s, the IMF was heavily influenced the international policies of lower developed countries by opening them up for international trade (Belaam and Dillman, 2010; Stiglitz, 2002). In fact, Stiglitz (2002) criticizes the neoliberal policies that United States was conducting through the IMF. The result of IMF loans to least developed countries (LDCs) did not help in development and economic growth but instead caused more poverty and made Western TNCs richer. Volpi (2009), along with Robinson (2004), offers controversial view that the US is politically managed through lobbying by a political elite that owns TNCs. Naturally TNCs will utilize transnational capital that includes labor, financial and other tangible assets.

Due to the dynamic process of globalization and conflicting interests within the political groups it will be inaccurate to describe globalization in this study as anything else other than ongoing process of economic integration. In particular, the rise of Casino Economy during the Reagan years is characterized as liberating financial markets, increasing speculation and contributing to the free movement of transnational capital (Canterbery, 2001). The globalization does signify particular form of integration between national states due to TNCs but it is important to remember the emergence of developing countries such as Brazil, Russia, India and China. Specifically, Stiglitz (2002) complimented China on its rapid development and pointed out that China refused any loans from IMF. Additionally, China is currently under strict state control and it appears that national interest will prevail over any TNCs interests, at least in the foreseeable future. Therefore the shape of global economy along with role and influence of national states, TNCs and capital is largely depended on the developing economies going forward.

3.2 Economic Development as a Structural Change

Countries start producing a different variety of goods and services as they grow and develop or in other words countries and economies structurally transform as they develop. Romer (2007) provides a metaphor for economic growth where in the kitchen the high value final product could be prepared through the combination of variety of cheaper inputs. However, the cooking needs to be diversified where a different combination of ingredients are used because producing the same meal would exhaust the current because of the fundamental scarcity issue. Therefore economic growth should also stem from different resources through innovation and increased efficiency. The economic growth is generally measured in terms of real gross domestic product (GDP) which is the output of all the services and goods produced within national borders (Cornwall, 2011).

In reality, structural transformation takes place as a prerequisite to economic growth and development which includes industrialization, re-allocation of resources and factors of production and technological changes. Further Cypher and Dietz (2009) provide a similar explanation where growth and development move in a circular pattern. They attribute this pattern to increased education which leads to ideological change as well as other economic reasons.

Thus for the purpose of this study, the term economic development is used to imply the structural change (Joshi, 2008: 17). The structuralists define structural change in the context of increasing economic development where the agricultural sector experiences decline in terms of its share in national income and employment (Joshi, 2008: 17). Additionally, Jesus (2010) argues that growth and structural transformation are related and dependent on each other.

3.3 Stages of Structural Changes and Economic Development

The three sector hypothesis, developed by Colin Clark and Jean Fourastie, states that all economies are divided into three sectors: primary, secondary and tertiary (Leseure, 2010). Primary consists of extraction of resources from the earth including agriculture and mining. Secondary consists of manufacturing while the tertiary consists of services. The model highlights that there is going to be a natural transition from primary to secondary sector and finally into tertiary sector.

Based on world economies that have progressed historically, there are three stages that emerge according to Jean Fourastie (Fuellack, 2009). The first phase includes traditional civilizations where primary sector employs 70% of the work force followed by secondary sector employing 20% and the rest are employed by tertiary sector. The next stage which followed signified industrialization where the share of secondary sector increases to 50% and that of tertiary rises to 30% while the primary sector falls to 20%. The next stage is known as "tertiary civilizations", where the tertiary sector becomes the largest at 70% followed by secondary sector at 20% and primary sector at 10%. These estimations are supported by findings of Ingraham (2011), prime minister of Bahamas, who confirms that the economies of developed nations are divided between 60%-75% of tertiary sector, 15%-25% of industrial sector and smaller than 5% of agricultural sector.

However, Leseure (2010) notes that there is debate going on about what is beyond tertiary sector. For example, Leseure (2010) gives also possibility of a fourth sector and fifth sector. He gives possibility that fourth sector is referred by some as the information economy (education as well as research and development) which contributes to spread of information. However the definition of fifth sector is currently debated while some refer to it as government services or non-profit services such as police while others describe it as "experience economy" which is defined by level of customer satisfaction.

However, the thesis is primarily focusing at analyzing the sectoral changes happening in BRIC countries in comparison with developed countries only with respect to the primary, secondary and tertiary sectors.

3.4 Understanding the Tertiary Sector

The precise definition of tertiary sector is disputed so it can only be analyzed in terms of historical trend (Joshi, 2008: 26). Economists from different schools of thought gave a different definition to the tertiary sector. Modern organizations use the term differently as well. Therefore, it is important to understand these differences.

The Physiocrats (c. 1750)	All activities other than agricultural production
Adam Smith (1723-1790)	All activities that do not end in tangible products
J.B. Say (1767-1832)	All non-manufacturing activities that add utility to goods
Alfred Marshall (1842-1924)	Goods (services) that pass out of existence at the moment of creation
Western Countries (1925-1960)	Services do not lead to a change in the form of a good
Contemporary	An activity that does not lead to a change in the form of a good

Figure 1. Different definitions for the tertiary sector (Source: Joshi, 2008: 27)

The tertiary sector is mainly associated with services, but many classical economists define service differently as could be seen from Figure 1. Furthermore Joshi (2008) argues that lack of definition and lack of research of the tertiary sector originates from classical economist Adam Smith, who criticized service sector as offering product which immediately vanishes unlike outputs from primary and secondary sectors which are tangible and contribute to development. Joshi (2008) further mentions that Adam Smith and Karl Marx viewed tertiary sector as “residual sector”. Both economists included physical products and transportation as part of manufacturing sector; the services of

lawyers, physicians and other occupations which didn't produce any physical products were classified as unnecessary part of tertiary sector (Joshi, 2008: 31). As a consequence, Marx's view on productive class and unproductive class were imprinted in the model of socialistic countries. Only the productive class was counted as part of national income which included: industry, construction, agriculture, transportation and trade (Joshi, 2008: 31). On the other hand, unproductive class as part of tertiary sector included: public administration and justice, education science and culture, health, sport, finance and insurance, political and religious activities, defense and other services (Joshi, 2008:31).

In the present era, it may be useful to look at modern definition of tertiary sector from World Trade Organization (WTO). WTO (2010) classifies "service" into two categories: change-effecting services (transformation services) and margin services. Change-effecting / transformation services are defined as activities of producers that change properties of consuming units. For example, physical goods could be transformed through repairing, cleaning or transporting, change of physical condition of a person through different services such as medical services, transportation or accommodation or change in the mental condition of persons through variety of services, for example education and entertainment. Additionally, their ownership cannot be established because they are not separate entities and cannot be separated from production.

Margin services, on the other hand, are defined as the change of ownership of goods, financial assets or other kind of services of institutional units (an economic entity which is capable of changing ownership) (OECD, 2005; WTO, 2010). These margin services are offered by wholesalers, retailers and financial institutions. Specific examples of these services include: insurance, packaging, intellectual property rights and distribution. Both change-effecting / transformational services and margin services must be provided to the consumers by the time their production has been completed because it is not possible to hold them in inventories. The ownership cannot be established of these services because they are not unique and are integrated into production.

1. Manufacturing services on physical inputs owned by others.
2. Maintenance and repair services not included elsewhere (n.i.e.).
3. Transport.
4. Travel.
5. Construction.
6. Insurance and pension services.
7. Financial services.
8. Charges for the use of intellectual property not included elsewhere (n.i.e.).
9. Telecommunications, computer and information services.
10. Other business services.
11. Personal, cultural and recreational services.
12. Government goods and services not included elsewhere (n.i.e.).

Figure 2. Types of industries in the service sector as defined by WTO. (Source: WTO, 2010)

Figure 2 shows examples of industries which considered as part of the service / tertiary sector. It is useful representation of main industries which are referred in universal works when dealing with tertiary / service sectors. In this study, we assume that these are the main industries which belong to the tertiary sector. It is also important to note from Figure 2 that WTO does not include entities such electricity, gas, water supply and construction as part of services by arguing that they have more "good" characteristics. This would later contradict with other modern authors who group these activities into "services" instead of "goods".

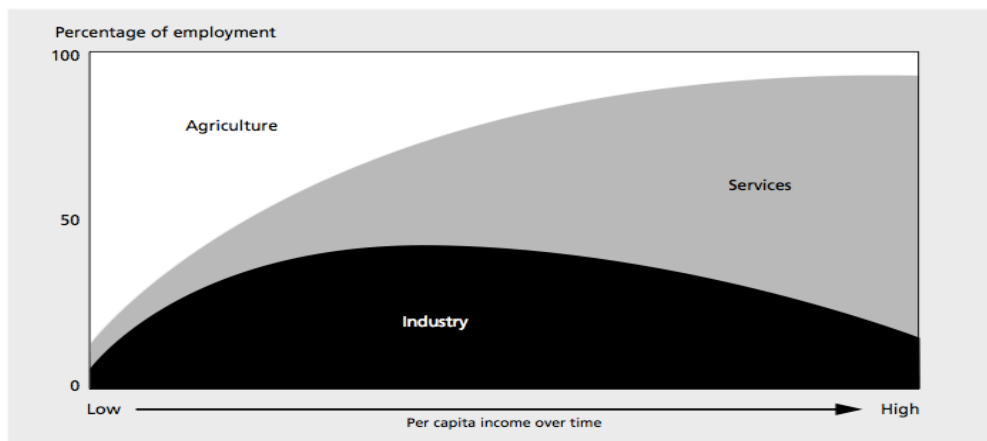


Figure 3. Relationship between employment and per capita income (Source: Shera and Soubbotina, 2000)

In Figure 3, Sheram and Soubbotina (2000) show that increase in income leads to increase in demand for services and decrease in demand for agricultural and industrial products. During industrialization, demand for agricultural products was met with fewer and fewer workers due to machinery and innovation. As of consequence, agricultural products were becoming less expensive which caused a reduction in agricultural sector's proportion in the GDP and allowed people to purchase industrial goods instead. Similarly in the post-industrialization period, income was increasing which led to decreasing demand for industrialized goods and increasing demand for services, such as entertainment, education, telecommunications, health and other products. However, later in the report India and Brazil will be exception to this model because they have high agriculture and service sectors but low industrial sector.

There is disagreement between the authors regarding the effect of tertiary sector development. Joshi (2008) states the expansion of service sector leads to decrease in wages because low-skilled labor is required to perform tasks required by the service sector. On the other hand, Sheram and Soubbotina (2000) state service sector is focused on human capital that is prompting governments to invest more heavily on education. In reality all of these authors are correct but they have different perspectives because they talk about different countries. Joshi (2008) uses India as an example which is a developing country and still have high illiteracy rate among its growing population which creates a labor market where there is high supply of unspecialized labor. Therefore, majority of workers can find themselves in occupations such as storekeepers, waitresses and clerks. As a result, due to high supply of labor for these occupations the wages will be naturally lower. On the other hand, developed countries such as Germany and Finland already have high literary rates and continue invest heavily into public education to increase worker's expertise and make them more competitive. Additionally, in these developed countries technology plays a large role which requires education and training. Therefore salaries should increase as each worker becomes more specialized and experienced in the specific field. Additionally, Sheram and Soubbotina (2000) provide a unique perspective on the development of tertiary sector by stating that it's more sustainable for the environment due to it being not dependent on natural resources.

4 Global Trends Related to Tertiary Sector

4.1 Transformation to Liberal Economies

As previously mentioned by Robinson (2004), capitalism has many different forms throughout history. In fact, it is very adaptable model as long as there is room for growth. Even in today's world there are still different types of capitalism systems: liberal market economies (LMEs) and coordinated market economies (CMEs) (Hall and Soskice, 2001). Furthermore Hirshman (1970) outlines different business cultures using relation between shareholders and organizations and distinguishes them into three groups: exit, voice and loyalty. The liberal market economies are characterized by exit group, where there is coordination by contract which is determined by supply and demand. The private sector is very important in liberal market economies and there is always short-term relationship between shareholders and organizations. On the other hand, coordinated market economies which are coordinated by complementary institutions, for example labor unions. They represent voice and loyalty where shareholders have a long relationship with the organizations.

Currently most capitalistic countries such as United States belong to the liberal market economies. There are countries that still belong to coordinated market economies such as: Germany, Japan, China and South Korea. It takes a lot of time to develop coordinated economy unlike liberal market economy which is easy to copy because there is no need for trust. However, the global trend is that most coordinated economies are slowly being transformed into liberal market economy because of the financial sector.

The significance of transformation from CME toward more LME economy is increased privatization of industries, including service industries. Muller (2006) states Austria was CME during the post-war period. The characteristic of Austrian CME economy was that many service industries defined by WTO (2010), such as telecommunications, water,

electricity, transport and post, were owned by the government. Furthermore, Austrian government had ownership stake in banks that in turn had ownership of corporate companies. Similarly, many Austrian companies were family businesses. All these characteristics had a different objective which was being sustainable in the long-run instead of focusing on the short-term profit maximization objectives. Hall and Soskice (2001) describe "exit" business culture which is found in LME, where shareholders can easily sell their share in the companies if they are not satisfied with the performance prompting the company to be more susceptible for a takeover. To view a more detailed example of Austrian transformation from CME to LME, refer to Appendix.

Furthermore BRIC countries have undergone even bigger structural reorganizations. Russia and China have transformed themselves from command economies to largely capitalistic economies. Mohanty and Utkarsh (2010) state that neoliberal reforms in India occurred because of pressure from World Bank and other financial institutions during the 1990s. Furthermore, the authors state that these reforms forced the government to reduce public expenditure on social sectors, including health care. The authors outline impressive growth of private health care in India which fills deficiencies of public health sector. On the other hand, private health sector also implies profit maximizing goals which can pose challenges to lower income individuals. Nevertheless, Russia is the last country expected to join WTO out of the BRIC countries. WTO promotes free trade and liberalization which forces members to liberalize their economy. More specifically, The General Agreement on Trade in Services (GATS) was issued in 1995 during Uruguay Round which must be implemented by all WTO members to deregulate financial and telecommunications industries.

4.2 Deregulation

During Ronald Reagan years, the financial sector was deregulated which led to flight of capital abroad and decline of the American manufacturing industry. The financial global crisis in 2008 is partially a result of the expansion of tertiary economy, specifically from the growth and dominance of the financial sector. Deregulation helped to increase the size of the service sector, but made the economy very volatile.

One of the consequences of the financial crisis is the government intervention and shift away from neoliberal policies started by US President Ronald Reagan and British Prime Minister Margaret Thatcher (Dick, 2009). Prior to the financial crisis, the US government was diminishing their presence and financial sector was getting more freedom. Less control over the financial sector meant following short-term strategies of profit maximization that puts long-term sustainability in jeopardy. The banks created collateralized debt obligations (CDOs) to create secondary market for subprime loans, where other banking institutions could buy these debts (Singh, 2009). Additionally, on October 2004, the Securities Exchange Commission (SEC) reduced net capital requirement for major banks which allowed them to leverage 30 or 40 times the initial deposit amount. These actions led to increased borrowing from private individuals to purchase private homes. This subprime lending led to many individuals defaulting on their loans during the burst of housing bubble. Due to collateralized debt, other banks across the world were also affected because of defaults. The banks were unwilling to loan money to each other and investor confidence was very low, which could be seen from the historical fall of global financial markets. After the collapse of Lehman Brothers, US government felt the need to intervene and bailout other major banks to prevent massive defaulting. The US government came up with \$700 billion stimulus package to buy "toxic assets" (Singh, 2009). This reminded neoclassical liberal economists about the importance of state regulation. Without the government to provide regulatory framework in which firms can function, the capitalism will cease to function and cause social unrest as could be seen from the historical example of the collapse of Soviet Union.

The current Eurozone debt crisis is also impacting most recent economic developments. As a consequence, there are many social and political events that are directly interrelated with the economic developments and that therefore must be considered. The Eurozone debt crisis is originating from weaker European economies, such as Italy, Spain, Portugal, Greece and Ireland. These countries have accumulated large amounts of debt which they are unable to pay due to low economic growth. Therefore, IMF and other EU countries are extending loans to these countries in exchange for austerity measures. These austerity measures include lowering debt through privatization, tax increases and decrease in welfare expenditure. As a consequence, these austerity measures led to social unrests in various areas. Additionally, government responses to tackling economic crisis have mixed results as they failed to restore investor's confidence prompting rating agencies to downgrade countries from their AAA rating.

Here, it is important to provide statistical data to provide a clearer picture of the situation. According to Elliot (2011), Spain is currently initiating a privatization program in which it would sell 30% stake of its national lottery. Greece has already accepted loans from the EU and IMF and is currently undergoing €50 billion privatization program of its government utilities such as railroad. Portugal has already undergoing cuts in the state budget and accepted a bailout from Brussels valued at €70 billion. Portugal seeks to raise VAT taxes and increase tax on corporate profits while the unemployment is forecasted at 13.2% for 2012. In 2010, Ireland was bailed out by IMF with a €85 billion loan and plans to decrease government expenditure and raise taxes. The major trend of tax increase and decrease in government expenditure is receiving negative response from the general population. The government policies appear to mainly benefit the wealthy segment of population while the majority suffers from increased taxes and reduced welfare.

Various social and political events have also occurred during the last two years such as the worldwide campaign "Occupy Wall Street", which aimed against financial institutions (Pepitone, 2011). While the movement in itself has no specific agenda, it represents dissatisfaction with financial sector on the international level. Protests in the European

countries occur due to privatization and increasing income disparities. Warren Buffet, US billionaire investor, asks to raise taxes for the rich by citing his own example of where he only pays 17.4% out of his total multimillion dollar income, due to capital gains and dividends, unlike many of his co-workers who earn much less and pay on average 36% tax on income. Therefore, there are current trends that labor is uniting across the world to tackle the issues of income disparity. This concept is outlined in Robinson (2004) who also argued that large corporations might be countered by more united international labor. It appears that the growth of social media gave public access to information and tools to organize themselves more effectively. The "Arab Spring" revolutions across the Arab world prove that people indeed could organize themselves through social media to overthrow government that is not representing their interests. Therefore, theoretically it could increase bargaining power of the working class for a more even income distribution.

4.3 Technological Developments

The trend of technological development leading to unemployment needs to be taken into consideration when discussing the future growth of the tertiary sector. This type of unemployment is known as "structural unemployment" and could also be categorized as technological unemployment, when the skills of the workers are no longer in demand. The Economist (2011) article outlines a period of 1920s and 1930s in the US when unemployment and productivity had a positive correlation. During that same period, inequality in income was also increasing along with social unrest. The parallel could be drawn to the recent decades, including the financial crisis, since the gap between the rich and poor increases and so are incidences of social unrests. It is evident that capitalists own the capital and supernormal profits also belong to capitalists. If machinery can be bought that replaces labor and save costs then there would be more profit. On the other hand, if there is higher unemployment then aggregate demand would be reduced because people will not have enough income to buy goods. Consequently, both the owners and the workers will be hit by weakening demand and recession but it is obvious that workers will risk crossing into poverty line while owners generally lose on profits.

The Economist (2011) outlines two conflicting arguments from different economists. The first argument states that currently there are not enough innovations to bring growth. The second argument states that there are a large number of innovations that cause unemployment that exceed the time to find new occupation for laid-off workers. The structural unemployment takes a very long time to adjust because without government investment into education, it would be very difficult for workers to gain employment. An example of structural unemployment can be seen in Detroit. Prior to USA outsourcing its production to China, Detroit contained large number of manufacturing jobs. However after USA outsourced its production, Detroit was never able to recover and still has unemployment levels as high as 50% (Veneziani, 2009). Furthermore, Sheram and Soubbotina (2000) state that productivity in the service sector does not increase as fast as in agricultural and industrial sectors. The reason is that the jobs in service cannot be replaced by current machines which make these jobs more expensive, which consequently adds more to service sector's proportion in the GDP.

The technological development and outsourcing jobs abroad will reduce aggregate demand due to lower income in the developed countries. In effect, developing countries such as China are dependent on their exports to the developed countries. If the demand for import drops, then it will also affect manufacturing in developing countries. On the other hand, Williamson and Zeng (2007) provide an example of battery production in which manual labor in China still producing at lower costs than fully automated assembly lines in Japan.

5 Sectorial Sector Development in the BRIC Countries

5.1 Overview of the BRIC countries

The term "BRIC" that describes of Brazil, Russia, India and China was coined in 2001 by Jim O'Neill, head of global economics at Goldman Sachs (Gosling, 2011). Jim O'Neill further predicated that BRIC economies would equal G-7, which consists of Canada, Germany, France, Japan, Italy, United States and United Kingdom, by 2032 (Gosling, 2011). The BRIC countries have large populations that will contribute to the further growth of their economies. The increase in income in these populations will further stimulate aggregate demand. The last decade showed an ongoing trend in which the amount of people that earn from \$6,000 to \$30,000 is increasing substantially (Ahmed, Kelston and Wilson, 2010). Coincidentally, this will reduce demand for low value goods imports and increase demand for high value added goods.

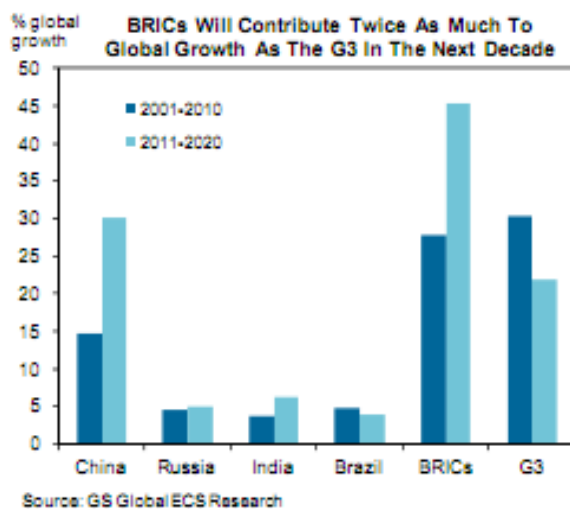


Figure 4. Contribution of BRIC countries to the global growth (Source: Ahmed, Kelston & Wilson, 2010)

Figure 4 shows that from the period 2011-2020 the economic growth of BRIC countries

should be equivalent to 45% of all global growth. The global growth implies the sum of individual economic growths of every country. Very high economic growth will change the structure of the GDP as was shown earlier by Sheraam and Soubotina (2000) in Figure 2.

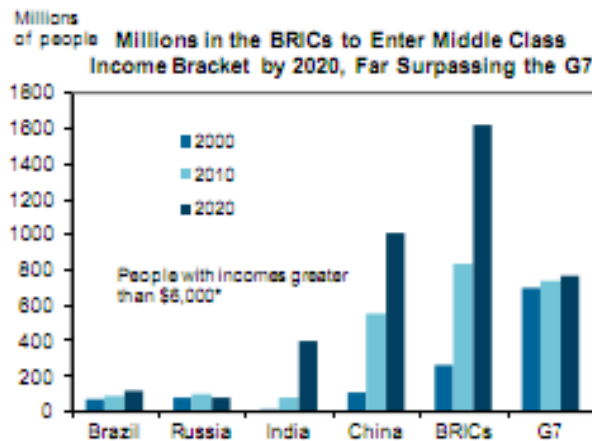


Figure 5. Number of people belonging to the middle class in the BRIC countries (Source: Ahmed, Kelston and Wilson, 2010)

Figure 5 shows that income in the BRIC countries will increase. The earlier chapter of this report mentioned that increase in income will also increase demand for services. Therefore it is inevitable that growth of the BRIC countries and development of their tertiary sectors will affect the global economy. In the subsequent chapters there is an overview of each BRIC country and analysis on how their tertiary sector interacts with the global economy.

Definitions of export / import of services are provided in order to analyze figures provided later in the study which shows activity of tertiary sectors of BRIC countries in the global trade. All the following definitions are taken from The World Bank (2011) due to the fact that analysis in this study is based on their statistical data. The commercial service exports are defined as "total service exports minus exports government services not included elsewhere". Conversely, the term commercial service imports, is defined as "total

service imports minus government services imports not included elsewhere". Both commercial service imports and commercial service exports are comprised of four areas: (1) transport, (2) travel, (3) insurance and finance services and (4) computer, information, communication and other commercial services. Transport includes services for all forms of transportation provided by residents of one country to the residents of the other. Travel includes goods and services acquired by foreigners during a visit which lasted less than one year in the destination economy. For example, if French tourist purchases a hotel room in Spain then the transaction would appear in France's commercial service imports and Spain's commercial exports. Insurance and financial services include foreign transactions, freight insurance on goods, brokerage services and financial market services. The fourth group comprises of international telecommunications, postal, construction services, professional services, royalties and licensing fees and computer software. These are vague definitions because in reality it is difficult to classify certain services into specific categories, but they should provide general concept.

The variables commercial service exports and commercial service imports are chosen in order to analyze how the service sector of the developing countries affects the global economy. It is also important to emphasize the growing importance of the tertiary sector in the developing economies by comparing it to the 1995 statistical values.

5.1.2 Brazil

The trend of growing importance of tertiary sector in the Brazilian economy is consistent with Andrade and Azzoni (2003), who wrote a comprehensive research on the development of tertiary sector in Brazil. The authors conclude that the employment in the tertiary sector has increased from 51% in 1980 to 65% in 2001. Additionally, according to Andrade and Azzoni (2003) the tertiary sector also increased in proportion of the GDP from 50% in 1980s to 57% in the early 2000s. However, Andrade and Azzoni (2003)

figure of 57% consisting of Brazilian GDP in the early 2000s contradicts World Bank's figure of 67% as shown later in Table 1. The reason for statistical discrepancies could be the result of qualitative methods or problematic definition of the "tertiary sector" as pointed out in the Section 4.3 of this thesis.

Table 1. Sector service statistics of Brazil for 1995 and 2009.

	1995	2009
Gross Domestic Product (GDP)	\$768,951 million	\$1,594,490 million
-Service Percentage of GDP	67.0%	69.0%
Commercial Service Exports (CSE)	\$6,005 million	\$26, 245 million
-Transport Percentage of CSE	43.0%	15.0%
-Travel Percentage of CSE	16.0%	20.0%
-Insurance and Financial Services Percentage of CSE	17.0%	7.0%
-Computer, Information, Communication and other Commercial Services Percentage of CSE	24.0%	57.0%
Commercial Service Imports (CSI)	\$13,161 million	\$44,074 million
-Transport Percentage of CSI	44.0%	18.0%
-Travel Percentage of CSI	26.0%	25.0%
-Insurance and Financial Services Percentage of CSI	10.0%	8.0%
-Computer, Information, Communication and other Commercial Services Percentage of CSI	21.0%	49.0%

Sources: Data used from World Bank, World Development Indicators, 2011

Table 1 shows that the Brazil's GDP proportion has grown least in respect to other BRIC countries with only 2% increase. Specifically the tourism industry is developing in Brazil due to increase in travel percentage. It is important to mention that both commercial service exports and imports figures have increased from 1995 and 2009. However decreasing percentage comprising transport in commercial service imports / exports does not indicate reduction in absolute numbers. Instead it implies that there was much larger increase in commercial service imports and exports in other areas, such as travel and

telecommunication industries.

Report conducted by Filgueiras and Veloso (2009) shows that retail/wholesale comprised 11.5% of the entire service sector in Brazil. Real estate activities comprised of 8.7% while financial and insurance activities comprised of 7.2%. These figures should only be viewed as representation of actual composition of major industries within tertiary sector in Brazil and not directly compared with the previous figures from World Bank (2011) regarding the commercial service imports and exports. The reason is that World Bank (2011) figures do not reflect government activities in the tertiary sector, such as public education, public health care and social security unlike in the Filgueiras and Veloso (2009) report. However, it could be deduced that while Brazilian financial sector does not play major role in international activities, it is mainly used to support domestic economy which is very similar to China's situation that would be analyzed later.

5.1.2 Russia

Sheram and Soubotina (2000) state that crises which came after collapse of Soviet Union gave rise to tertiary sector in Russia, from 39% of GDP in 1990 to 55% of GDP in 1994, because they affected more negatively industrial and agricultural sectors than service sector. On the other hand, the growth potential of Russian economy is a matter of debate. For example, Alexander Morozov, chief economist at HSBC, believes that Russia has limited potential for economic growth due to labor deficiency and declining population (Bloom, 2011). Additionally, Russia is the only BRIC country which had significant negative growth during the recent financial crisis (Gosling, 2011).

Table 2 shows that service sector has experienced 8% increase in proportion of GDP during the 1995-2009 period. Russian economy is mainly based on commodities such as gas and oil. However, main increase came from IT and telecommunications. Waylett (2004) states that Russia wants to position itself as reliable exporter of the IT services.

Table 2. Sector service statistics of Russia for 1995 and 2009.

	1995	2009
Gross Domestic Product (GDP)	\$395,528 million	\$1,231,893 million
-Service Percentage of GDP	56.0%	62.0%
Commercial Service Exports (CSE)	\$10,567 million	\$41,068 million
-Transport Percentage of CSE	36.0%	30.0%
-Travel Percentage of CSE	41.0%	23.0%
-Insurance and Financial Services Percentage of CSE	1.0%	4.0%
-Computer, Information, Communication and other Commercial Services Percentage of CSE	23.0%	44.0%
Commercial Service Imports (CSI)	\$20,205 million	\$59,241 million
-Transport Percentage of CSI	16.0%	16.0%
-Travel Percentage of CSI	57.0%	35.0%
-Insurance and Financial Services Percentage of CSI	0.0%	4.0%
-Computer, Information, Communication and other Commercial Services Percentage of CSI	26.0%	45.0%

Sources: Data used from World Bank, World Development Indicators, 2011

Furthermore, Waylett (2004) mentions that telecommunications market in Russia is nearly monopolized by state owned company "Rostelecom" because competitors have very low market capitalization. Consequently, monopolization of telecommunications market is drawing strong criticism from the WTO. According to Coalition for U.S.-Russia Trade (2010), Russia agreed to allow duty-free imports of telecommunications equipment and foreign telecommunications firms operating in local market as part of the deal to join WTO. The demand for IT services will also increase because Russian domestic market is expanding as could be seen that number of internet users have increased to 38% in 2009 from 22% in 2006.

5.1.3 India

Joshi (2008) provides an overall view of the growth of tertiary sector in India. Growth of the tertiary sector in India could be attributed to different causes: liberalisation, technological advancement, urbanisation and consumerism (Joshi, 2008: 44). The Indian government had introduced liberalisation policies which increased privatization and deregulation in order to attract foreign direct investment (FDI) in 1991. Urbanisation led to greater demand infrastructure and other services. Additionally, the demand for services also increased due to rise in the disposable income. From 2002-2003, the Indian current account became positive due to more exports than imports. Apart from being the destination for cheap labor, India also has comparative advantage in following tertiary services: postal, finance, telecommunications, insurance and tourism.

Table 3. Sector service statistics of India for 1995 and 2009.

	1995	2009
Gross Domestic Product (GDP)	\$356, 299 million	\$1,377,265 million
-Service Percentage of GDP	46.0%	55.0%
Commercial Service Exports (CSE)	\$6,763 million	\$90,193 million
-Transport Percentage of CSE	28.0%	12.0%
-Travel Percentage of CSE	38.0%	12.0%
-Insurance & Financial Services Percentage of CSE	3.0%	5.0%
-Computer, Information, Communication and other Commercial Services Percentage of CSE	31.0%	70.0%
Commercial Service Imports (CSI)	\$10,062 million	\$80,274 million
-Transport Percentage of CSI	57.0%	44.0%
-Travel Percentage of CSI	10.0%	12.0%
-Insurance & Financial Services Percentage of CSI	6.0%	10.0%
-Computer, Information, Communication and other Commercial Services Percentage of CSI	28.0%	35.0%

Sources: Data used from World Bank, World Development Indicators, 2011

Table 3 shows that that proportion of service sector had increased by 9% from 1995-2009. Export of computer information and communication category has increased by staggering 39%. India is known for its IT services and one of its cities in Bangalore is known as "Silicon Valley of India". Bangalore attracted over 1500 multinational companies due to its educated IT workforce (Chengappa, 2011). Furthermore, Chengappa (2011) specifically mentions that these IT companies contribute to 38% of Indian IT exports which contribute to 22 billion dollars. Furthermore, a number of Western companies are setting up call centers in India which further contributes to the export growth of Indian service sector.

Furthermore Joshi (2008) outlines "operation of demonstration effect" which is attributed to growth of tertiary sector in India due to globalization. The "operation of demonstration effect" stats that there is growing mobility of the population due to greater integration of the world economy caused by globalization (Joshi, 2008: 46). The globalization leads to growth of tourism and trade of goods and services. This process of globalization is also spearheaded through supranational agencies such as WTO which create legal framework for exchange of these services.

5.1.4 China

Evanor (2005) states that Chinese service sector is growing but it still has low proportion in respect to China's overall GDP. The reason is that China has been focused on manufacturing its exports that it has neglected the service sector. The author states that in 2001, China first began focusing on liberalizing its financial sector in its Tenth Five Year Plan. China also joined WTO in 2001 which meant that China had to deregulate and restructure its industries with principles of the free trade.

Table 4 shows that Chinese service sector is still relatively small in terms of its overall GDP. On the other hand, it had the biggest increase of 10% in proportion of the entire

GDP from 1995-2009.

Table 4. Sector service statistics in China in 1995 and 2009.

	1995	2009
Gross Domestic Product (GDP)	\$728,007 million	\$4,985,461 million
-Service Percentage of GDP	33.0%	43.0%
Commercial Service Exports (CSE)	\$18,430 million	\$128,600 million
-Transport Percentage of CSE	18.0%	18.0%
-Travel Percentage of CSE	47.0%	31.0%
-Insurance and Financial Services Percentage of CSE	10.0%	2.0%
-Computer, Information, Communication and other Commercial Services Percentage of CSE	24.0%	49.0%
Commercial Service Imports (CSI)	\$24,635 million	\$158,107 million
-Transport Percentage of CSI	39.0%	29.0%
-Travel Percentage of CSI	15.0%	28.0%
-Insurance and Financial Services Percentage of CSI	17.0%	8.0%
-Computer, Information, Communication and other Commercial Services Percentage of CSI	29.0%	35.0%

Sources: Data used from World Bank, World Development Indicators, 2011

Furthermore China had the biggest economic growth out of all the BRIC countries as could be seen by its increase in GDP. The reason for economic growth is largely attributed to large availability of cheap labor which made China a top outsourcing destination for manufacturing. Ironically, it appears that China is contributing to development of tertiary

economy of other countries by importing travel services. In other words, the result of economic growth is the rise of income level that makes more Chinese tourists to travel abroad. These Chinese tourists boost the growth of tourism service in the destination countries, for example Brazil where the travel industry is booming.

Furthermore China is the only BRIC country where there is decrease in imports and exports of insurance and financial services. The reason is that financial sector is still controlled by the government and domestic economy is dependent on loans from the banks. As a result, 84.9% of external financing is dedicated to private Chinese firms (Kern, 2009). As a result, Chinese companies that operate internationally received large criticisms due to government funding unlike the Western companies that also compete in the same markets (Chen and Wolf, 2001). In addition, China does not wish to depend on high value imports, but also produce their own high value goods. Western train companies such as Alstom, Bombardier Inc. of Canada and Siemens have complained that Chinese companies have copied their technology and started exporting it themselves (The Seattle Times, 2009). Furthermore these Western companies also state that Chinese local railway market is not open to foreigners.

5.2 Trends of BRIC versus Select Developed Countries

The BRIC countries follow the path toward the tertiary economy. The current trend is that in the developing countries the tertiary/service sector has been growing faster than the secondary/manufacturing/commodity sector (Joshi, 2008: 13). It is probable that the BRIC countries will have a similar structure to the currently developed countries. It is useful to analyze factors such as GDP composition, labor occupation by sector and economic growth between developed countries and BRIC countries.

In Table 5 and Table 6, Central Intelligence Agency (CIA) classified agriculture as farming, fishing and forestry. Industry is classified as mining, manufacturing, energy

production and construction. Services are classified as government activities, communications, transportation, finance and other economic activities that do not produce goods.

Table 5. GDP composition by sector in the BRIC countries in 2010.

	Agriculture	Industry	Services
Brazil	6.1%	26.8%	67.4%
Russia	4.0%	36.8%	59.1%
India	18.5%	26.3%	55.2%
China	10.2%	46.9%	43.0%

Sources: Data used from CIA, The World Factbook, 2011

Table 5 shows GDP composition in the BRIC countries. It is highly plausible that in the upcoming decade the developing countries will experience enlargement of their service sector as people move away from agriculture and industry. The results are consistent with Jean Fourastie (Fuellack, 2009) and Ingraham (2011) model classifications that label countries with GDPs consisting of 70% of service sector as "tertiary economy". It is further supported by the model made by Sheram and Soubbotina (2000), where increase in per capita income will create a shift toward tertiary sector. Nevertheless it is important to notice that the BRIC countries are already past the industrialization phase and becoming increasingly close to becoming tertiary economies. As outlined earlier by Jean Fourastie (Fuellack, 2009), the characteristics of industrializing economies is 20% in agriculture, 50% in manufacturing and 30% in service. It appears that only China is still dominated by their industry sector, where as other BRIC countries have already biggest shares of GDP in the service sector. Lastly, it appears that Brazil is closest to achieving tertiary economy which is reflected in lowest predicted GDP growth in Table 1 out of the BRIC countries. It is very similar to earlier statement by Jesus (2010) that economic growth and structural transformation are linked in a circular fashion. In other words, as

Brazil's rate of structural transformation reduces due to becoming increasingly close to the tertiary economy, and so does the rate of economic growth also reduces.

Table 6. GDP Composition by sector in certain developed countries in 2010.

	Agriculture	Industry	Services
Austria	1.5%	29.2%	69.4%
Japan	1.4%	24.9%	73.8%
Spain	3.3%	26.0%	70.7%
United States	1.1%	22.1%	76.8%

Sources: Data used from CIA, The World Factbook, 2011

Table 6 shows that the developed countries have large service sector and the agriculture is almost non-existent. The hypothesis is that the BRIC countries will show similar results with future economic growth and increase in population's income. These GDP composition statistics are the current definitions of a tertiarized economy.

Table 7. Labor force by occupations in the BRIC countries.

	Agriculture	Industry	Services
Brazil (2003 est.)	20.0%	14.0%	66.0%
China (2008 est.)	38.1%	27.8%	34.1%
India (2009 est.)	52.0%	14.0%	34.0%
Russia (2008)	10.0%	31.9%	58.1%

Sources: Data used from CIA, The World Factbook, 2011

Table 7 shows how labor is divided by different economic sectors in the BRIC countries. India has high proportion of labor in the agriculture which will shift toward service sector with increase in income and economic growth. Countries like India and Brazil do not follow traditional model set by Shera and Soubbotina (2000) because labor occupation

is much greater in agricultural and industrial sectors than service sector. These reasons might come from historical development and hypothesis is that irrespective of intermediate GDP structure, in the end BRIC countries will have similar structure to currently developed countries.

Table 8. Labor force by occupations in the developed countries.

	Agriculture	Industry	Services
Austria (2009 est.)	5.50%	27.50%	67.00%
Japan (2010 est.)	3.90%	26.20%	69.80%
Spain (2009 est.)	4.20%	24.00%	71.70%

Sources: Data used from CIA, The World Factbook, 2011

Table 8 shows figures for labor occupations in the developed countries. The service sector has the largest number of job occupations.

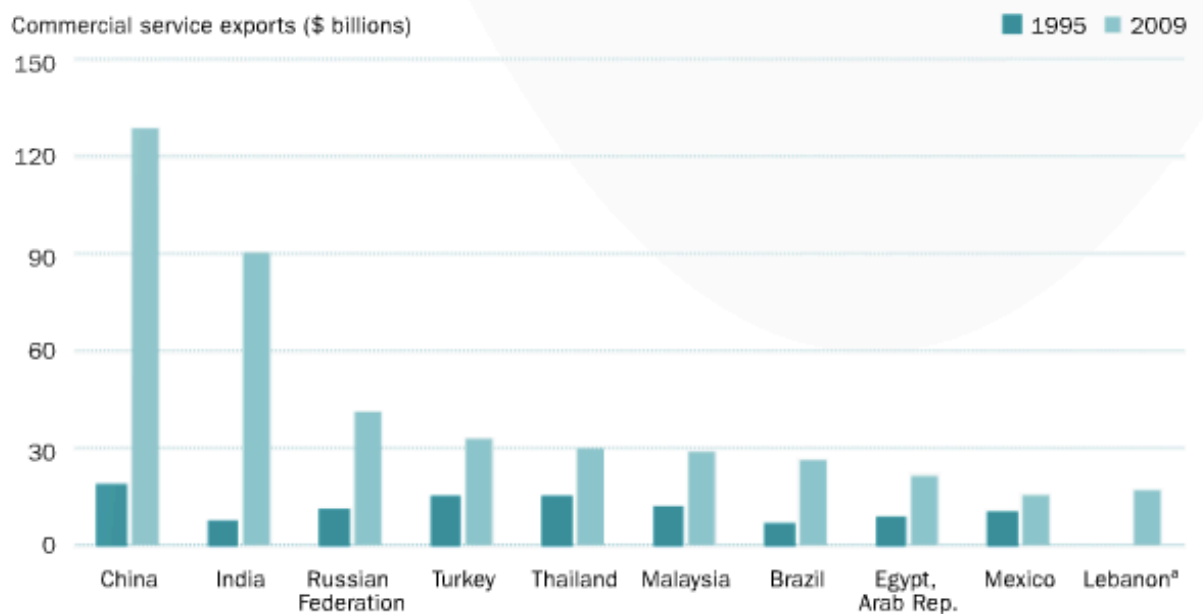
Table 9. Labor force by occupations in the United States.

	Farming, Forestry and Fishing	Manufacturing, Extraction, Transportation and Crafts	Managerial, Professional and Technical	Sales and Office	Other Services
United States (2009)	0.7%	20.3%	37.3%	24.2%	17.6%

Sources: Data used from CIA, The World Factbook, 2011

For unclear reasons, United States was classified by CIA in different categories of force labor occupations which are shown in Table 9. The major limitation is that it is very difficult to compare service and manufacturing sector in the United States because manufacturing and transportation are grouped together although they belong to different sectors.

The foremost limitation of these figures is that data present for individual countries is made for different years. Therefore only general analysis could be made. Joshi (2008) presents facts that employment increases in tertiary sector due variety of reasons. For example, there are arguments that there is more preference for service positions due to increased automation instead of working with equipment to manufacture goods. Secondly, there are not as many employment opportunities available in agriculture or industry due to technology and outsourcing to cheaper countries. Thirdly, there are many people that engage in self-employment that only require social skills. Similarly, it is much more difficult to acquire specialized skills to work in the industry sector due to education requirements.



The top 10 developing country exporters of commercial services accounted for almost 68 percent of developing country commercial service exports and 13 percent of world commercial service exports.

a. Data are unavailable for 1995.

Source: International Monetary Fund balance of payments data files.

Figure 6. Volume of service exports in the top ten developing countries.

In the Figure 6 shows a trend in which commercial service exports of services is increasing in the developing countries. The four BRIC countries are in the top 10 developing countries with biggest commercial service exports. However, at this point only 13% of world commercial service exports constitute these 10 developing countries. In contrast, United States has \$480.5 billion of commercial service exports in 2009 which is higher than the sum of commercial service exports of 10 biggest developing countries (The World Bank, 2010). However in 2008, USA had \$512.6 billion of commercial exports (The World Bank, 2010). This shows that developed nations were very heavily affected by the global financial crisis which, particularly those whose economies were heavily development on the tertiary economy.

Table 10. GDP growth of countries from 2008-2010.

	2008	2009	2010
Brazil	5.20%	-0.60%	7.50%
China	9.60%	9.20%	10.30%
India	6.20%	6.80%	10.40%
Russia	5.20%	-7.80%	4.00%
Austria	2.00%	-3.90%	2.00%
Japan	-1.20%	-6.30%	3.90%
Spain	0.90%	-3.70%	-0.10%
United States	0.00%	-2.60%	2.80%

Sources: Data used from CIA, The World Factbook, 2011

The Table 10 provides statistical evidence which shows that all the developed countries had negative growth during the financial crisis, where in the BRIC countries Brazil and Russia had negative growths while India and China were largely unaffected. BRIC countries have higher economic growth and better performance during and after crisis. At the rate of these economic growths, it is plausible that tertiary sectors in the BRIC countries will overcome current tertiary economies. From the current trends, the increasing importance of the tertiary sector in the BRIC countries will contribute to

increased trade and deregulation. In Russia and China there is strong government presence in the economic sector but it appears that WTO will continue to put pressure on the local markets for foreign competition. Domestic demand for services is growing in the BRIC countries due to economic growth, but service exports are also growing in these countries. Consequently, the increasing importance of service exports to these BRIC countries will create initiative to follow WTO demands in order to operate more freely on the global market.

6 Conclusions

The hypothesis is that there is a trend towards "tertiarization" in the BRIC countries. Given that the developing economies have a larger share of primary and secondary sectors in their GDP, it was important to test whether the BRIC economies have been experiencing growth in their services/tertiary sector that signifies following the trend of the developed nation that already have a significantly large service sector. Certain scholars have suggested that the development of economies is a cyclical trend and going by this, the trend of increasing significance of service sector should be visible in BRIC countries as well.

To test this hypothesis, secondary data and published reports of the World Bank and other agencies was relied upon to analyze the trends of change over the years in developed nations such as USA, Spain, Japan and Austria, and the BRIC countries. It was found that indeed there is a growing increase in the tertiary sector in the BRIC Countries. Between 1995 and 2009, the proportion of the service sector within the BRIC economies has increased 3-10% according to the World Bank figures. Specifically, BRIC economies have drastically increased the commercial exports of their services. The stagnant growth of the developed countries is diminishing their proportion in the global trade in respect to the BRIC countries.

Therefore, globalization and increase in trade between nations leads to growth of the tertiary sector and evidently, the tertiary sector is expanding proportionally in all the BRIC economies. Another important reason behind this trend could be the growth of domestic market and government's deregulation policies that are encouraged by supranational agencies, such as WTO and World Bank. Technological development also contributes to service sector development. It is hard to provide statistical figures regarding the effect of technological development on such a macroeconomic scale, but a qualitative research method can be used.

While, it can be concluded with some certainty about the trends visible in BRIC economies, the analysis was restricted to certain variables such as globalization, technological development and government policies. It is important to highlight that there could be several other relevant variables that could also potentially explain the cyclical move towards service sector. These causes could be uncovered through studying in detail the historical development of the currently developed countries. The traditional model created by Shoram and Soubbotina (2000) did not perfectly in explaining India's and Brazil's transformation into a tertiary economy. Future research could include this analysis and explore further the interacting variables explaining the growth of the tertiary sector in the BRIC countries that can take comparative and absolute advantages into account.

For future studies, it would be useful to analyze labor market more specifically with the development of tertiary sector. It has been hypothesized by Joshi (2008) that the average wages will be reduced due to expansion of tertiary sector. However, more detailed research is required as labor market in each BRIC country is different and its impact will be different on the global market. Moreover, it is important to look in terms of longer-term wages because financial crises may impact wages negatively in the short-term.

7 References

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APPENDIX

Muller (2006) provides study analysis of Austria shifting from coordinated market economy toward liberal market economy. Earlier Austrian government held large nationalized part of the industrial sector and stocks in major banks, including Credit-Anstalt. Additionally, these banks owned large portion of industry and engineering companies. Due to regulated financial market, taxation made investment in stock not as profitable due to opportunity cost. Muller (2006) mentions that nearly entire "service" industries such as electricity, gas and water belonged to the public sector. However, we must remember that in this report we are using WTO (2010) definition of "services" which does not include electricity, gas and water because we treat them as "goods". As a consequence of being public goods, these public sector firms also experienced expected losses. The remaining Austrian companies mainly had family ownership and many board members belonged to several companies which brought long term overlook about decision-making process regarding industry. Political parties also were playing role in the industry by appointing their favorable candidates to these public firms. Even today membership in Austrian Federal Economic is compulsory since it sets stage for government presence. All of these characteristics are part of coordinated market economy in which there are informal relations and external institutions which bind the economic activity that is dependent on trust.

However, while Muller (2006) states that many of these characteristics are still present in the Austrian economy, there are ongoing changes that will eventually lead Austria into liberal market economy. The privatization has decreased public ownership which puts more emphasis on short-term decisions or exit strategy outlined by Hirshman (1970). Additionally, there is still ongoing trend of where many state monopolies within EU, including Austria, are broken up due to competition laws enforced by EU legislation. Specific examples include railway systems, energy sectors and postal services. The break-up of these monopolies doesn't necessarily benefit the customers due to reduced economies of scale that leads to higher costs and less efficiency. Moreover, the

deregulation of financial sector and more flexibility to transfer capital abroad had increased opportunity cost for banks to maintain capital in Austria instead of relocating it abroad. As a consequence, the workers' wages have also been reduced since 1980s due to less powerful collective agreements where companies are getting more flexibility in setting wages. Additionally, the companies are now in position to determine the number of hours the workers are liable to work without overpay. Initially Austrian labor force was gradually losing working holidays which led to strikes against the private sector. However, later the strikes were directed against the government instead of capitalists due to the pension reform. This portrays a very complex relationship between the state, capitalists and labor force.

Theoretically there is always conflict between capitalists, workers and government that provides legal framework for that capitalists-workers relationship to exist. At two different points in time, Austrian government was representing either capitalist interests or workers' interests. Muller (2006) outlines the political reason to join EU behind deregulation and privatization instigated by the coalition of Social Democrats and People's Party. Robinson (2004) correctly described the new era of capitalism where states become transnational and more integrated as a result of globalization and labor becomes forcefully more flexible.