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Tesis Doctoral

A Case For Economic Integration:
A Comparative Analysis in Trade Characteristics of Developing Countries

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Declaration of Authenticity

All data presented in this thesis follows the scholarly system, protocol, rules and standards dictated by the MLA (Modern Language Association of America) system organization founded since 1883.

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Chapter 1

Introduction

1.1 Executive Summary

The progress of the human condition has been remarkable since the dawn of humanity. Intellectually, scientifically, philosophically and socially; the changes to the human condition have been significant. The development of the human condition has been marked by periods of rapid development as well as periods of stagnation. At times centuries have passed with little change to the condition of humanity while in other periods the changes seem to flow. The discovery of fire, the wheel, the enlightenment, the dark ages, all three industrial revolutions as well as economic depressions not to mention numerous wars, are all indications of the cyclical nature of human development.

The development of humanity has been most influenced by the social nature of our existence. Interaction with one another has, through the centuries provided the information and means for efficient progress. Human social interaction is, for the most part, cooperative. That is to say, that humans have the ability and desire to work together to achieve common goals and interests. The concentration of this analysis is concerned with the development of the social condition in general, and the impact of international trade in particular, upon the socioeconomic condition of

humanity.

The case will draw from many disciplines, including; history, economic history, sociology, philosophy, psychology, geography, finance and business. It is the contention of this analysis, that the present and future socioeconomic condition of humanity relies upon an historical context for direction. Moreover, it is also the assertion of this work, that the human condition in general, is ultimately intertwined with the disciplines mentioned above. For example, Smith's identification of the “invisible hand” of the market is not solely economic in nature. Human self interest is psychological, sociological and philosophical. From the philosophical point of view, human activity must not only be judged by the interest served, but also by a code of conduct, i.e., ethics. The notion of self interest and ethical behavior do not run counter to each other, for in a pure market condition the self interest of all parties may be satisfied simultaneously with no harm being done to any party. The pure market condition as described, with all participating parties drawing self interested benefit while acting ethically and fairly may seem utopian. However, this type of social condition and cooperation has historically occurred and is quite possible. Hence, it must not be construed that the object of this analysis is naïve in nature, rather, that basic human characteristics of social interaction are a powerful force for the common good of humanity. The driver of human action in the form of self interest is at the core cooperative in nature. The

reason is that humans are social in nature. History has shown what cooperation has accomplished. What is more, much of the cooperation among individuals throughout history has also provided for great self interested profit.

The market economy as envisioned by Adam Smith is a science with natural causes and results. It needs no manipulation by humans. If left to its own devices the market will perform remarkably well. That is not to say that some individuals and nations may suffer and need to readjust their strategy. However, to attempt to manipulate the force of the "invisible hand" may create short term success but is will result in severe economic damage in the long term. The development of economics as a social science has identified some fundamental patterns by which the human social experience seems to follow. These patterns are typically focused on the specialization of labor and the development/use of capital. The manifestation of these economic patterns in their rudimentary form dwell on market forces and supply and demand. In essence, advanced modern societies have ordered themselves based upon the capitalist model. In retrospect, the patterns of social development are not planned, i.e., there has been no central body in market economies determining how individuals are to conduct themselves. Rather, an identifying characteristic of market economies in their infancy was a lack of the rule of law to govern the conduct of individuals in the realm of the exchange of goods and services with each other.

This model whose identification is most generally credited to Adam Smith was presented through two of his most famous works, The Wealth of Nations and the Theory of Moral Sentiments.

In these works, Smith develops an elaborate epistemological methodology to determine the pattern of the human experience from a truly existential point of view. In other words, Smith was interested in the everyday experiences, habits and behaviors of the individuals who composed society at large. In his micro approach, he forged the macro model for modern market economics and established himself as one of history's most influential social scientists. While Smith's philosophical ideas are considerable, the focus of this work will be concentrated particularly on his economic contributions as they relate to the historical development of economic theory, and perhaps most important, the relevance of these theories in the economic landscape of today.

The capitalist model has served the industrialized nations well. To use industrialized nations as an example of the relevance of Smith's theory of the capitalist model in general, and the “invisible hand” in particular, is common. These nations account for the vast majority of the wealth of the world, have the highest standards of medicine, education and living standards. the most successful

advanced modern economies have embraced the market mechanism ("invisible hand") and encouraged individuals in society to exchange goods and services with minimal government intervention. The results have been twofold. First, the greatest efficiency in the creation of goods and services is achieved through specialization of labor and allocation of resources. Second, creative individuals are encouraged to invent and create. A main concept in the market approach is the idea of self interest. In short, self interest is the motivator in a market economic system for creative individuals to invent. In so doing, the inventor may prosper by sharing his creation with society. In turn, society benefits from the use of innovative creations and inventions. Throughout this analysis the vital aspects of modern economic activity will be explored with relevant historical foundations providing insight. In this connection, it will become evident that cooperation will provide more socioeconomic benefit to humanity than noncooperation.

1.2 Statement of the Problem

The world economy faces special challenges as it enters the twenty first century. Increasingly interconnected yet highly individualistic and specialized. Rare are the countries that can remain economically isolated. More than ever, trade is a necessity. Few are the nations, that are able to produce everything to satisfy the needs of its citizens. The principle of comparative advantage is the rule of the day. Yet, those countries with the comparative advantage in certain industries often

find their products becoming uncompetitive due to tariffs and quotas.

The Doha Round of WTO trade talks are stagnated due to disagreements in trade policies. No doubt, the issues are immensely complicated. However, the general consensus is strong, that the WTO must work toward trade aperture. If the market mechanism of trade is allowed to seek equilibrium without governmental interference, the citizens of all nations will benefit from lower consumer prices and higher quality goods. The market mechanism of trade however, has not been able perform without intervention. A contradiction exists in the world wide socioeconomic model which is the problem addressed by this analysis.

The first assertion to be made in this analysis is that humans are social animals, i.e., humans live in groups and cooperate at various levels in order to facilitate existence. Social living is an undeniable aspect of the human condition. As such, the development of economics has been a reaction to the social nature of the human condition. It then, is asserted that the exchange of goods and services between people is a natural part of the human condition. The exchange of goods and services also known as trade, is at the center of human cooperation that has led to such extraordinary proliferation of the species. It is not often claimed that trade is as natural among humans as is religion, marriage, government and all that is considered part of the human phenomenon. The stigma surrounding trade and

business is contrived and perpetuated by individuals and groups with certain agendas. Therefore, the undeniable fact that trade among people is a natural circumstance of human existence, has become hidden and villainized. Barriers to trade are creations of people who desire to skew the outcomes that unrestricted trade pose. The case then becomes one of manipulation of a basic human characteristic. The charge is serious; the natural tendencies of humans to behave according to certain inclinations is directly related to the need to survive. Survival is inherent to all species as well as humanity. It then becomes strongly suggested; that tampering with the inclination of people to trade is tantamount to creating obstacles to the conditional desire for survival. Once again, the question is begged as to why such obstacles are created.

The creation of barriers to trade is purely a political phenomenon. While government organization is truly an outcome of humanity's social makeup, that is not to say that all government action is logically driven. The unfortunate fact is that government decisions are generally based upon self interest rather than logic. The psychology of group dynamics becomes apparent in government activity. Government officials owe their loyalty to the individuals and constituents who put them in office. What this type of situation implies, is that decisions are based upon what is immediately good for the voting public and special interest.

The second assertion to be made in this analysis is that the exchange of goods and services between human beings is a natural phenomenon defined by social living. In fact, the cooperation between people is the foundation upon which society is built. Therefore, one could assert, that society is actually defined by the interactions between people, i.e., trade. Trade is central to the relationships developed between people of the same nation as well as between people from different nations. The instinct to survive coupled with human intelligence has produced the social living conditions of modern times. The extraordinary accomplishments of humanity are due, in a large extent, to the cooperation between people. Life spans have tripled and the quality of life has increased exponentially in modern advanced societies. These trends however, have not been evident in all societies. The developing countries of the world have struggled to provide such improvements to its citizens. Central to the problem at hand are the trade issues that have handicapped these developing countries in their efforts to advance. Some of the issues are internal while others are external. However, the recurrent theme is that barriers to trade in many forms have hindered human cooperation and thus, economic growth in all countries.

It is the special interest of this analysis to associate the costs and benefits of trade aperture with the socioeconomic conditions of developing countries. For the developing countries of the world, as this thesis sets out to prove, trade aperture

is vital. Generally speaking, these countries have not capitalized on their unique resources thus far. For China, human capital seems to be its major resource, while some scientists believe that the cure for cancer lies in the plants of the rain and cloud forests of Costa Rica. All this is to say , that the challenge is twofold. First, to discover, develop and exploit whatever unique form of capital resource at hand, then second, to create a trade policy, which allows for the transformation of the capital resource into capital itself. At this point it is a mere assumption that trade aperture and economic integration will benefit these societies. However, it will be demonstrated by the case studies to follow that this is the case and arguably that there is absolutely no better alternative for development than through trade aperture. Virtually no nation is able to produce every good and service needed to sustain its society. Therefore, trade becomes a necessity.

The practice of obstructing trade through a variety of barriers and tariffs is counter productive by several accounts. Most obviously, tariffs are paid by consumers in higher prices. Quotas artificially restrict supply, again resulting in higher prices. Government subsidies once again are paid by the citizens in the form of taxation. These are only a few examples of the ill effects of trade distorting policies. Government officials naturally defend these policies by claiming that jobs are created and protected. In fact, it may be argued that jobs are lost due to stagnated economic circumstances due to high prices. Moreover, uncompetitive

industries will eventually fail no matter how much they are protected. This is because subsidized industries lack any incentive to reform and develop new technology and greater efficiencies.

By the conclusion of this analysis, it may become apparent, that trade aperture and economic integration are perhaps the greatest development tools for developing countries. Long-term growth will be achieved in these countries only when capital resources are transformed into capital. Trade will allow for such a transformation to occur.

1.3 Objectives

The objectives of this analysis have a dual nature. In the first case, it is important to have knowledge of the background context of the developing economies of the world. The present conditions of these economies is vital to the survey at hand. In the second case, it will become important to identify the potential opportunities that are latent within these economies and the identification of the conditions required in order to unlock this latent potential. As such, the objectives of this analysis will first be descriptive and then analytical.

With regard to the descriptive nature of this work, the main concerns are thus:
To determine the socioeconomic conditions of the selected group of developing

case countries. This perspective will draw upon the historical as well as current conditions in the case countries. Typical economic considerations will be employed such as the factors which have impacted GDP growth and the United Nations Human Development Index.

Additionally, an examination of the trade characteristics of the case countries will be completed. In this examination it becomes important to determine what has influenced the trade characteristics of these countries. Considerations to be taken into account will be; internal trade legislation, external trade legislation (i.e., trade policies of other countries that impact the case country), and the types of goods and services to be traded.

With regard to the aspect of what a country has to offer the world, it becomes necessary to explore what are known as capital resources. Capital resources have typically been identified as any resource that may be converted into economic gain or advantage. Capital resources are not limited to physical substances, but extend into social, cultural and demographic areas as well. For example, Japan, a country with few natural resources, has developed the capital resource of human ingenuity particularly in the realm of improving on the designs of others. The result, is that Japan has built an extraordinarily successful manufacturing economy without natural resources such as, iron ore and coal readily available. Advanced economies

have been able to convert capital resources into pure capital for decades and even centuries. More than any other, the notion of capital resource has the greatest implication for developing economies. With regard to the case countries in this analysis, the objective will be to identify possible resources for each. All countries have latent resources in the form of natural substances and conditions as well as in human capabilities and competencies. In the recommendation phase of this work, possible ways of converting these resources into pure capital will be proposed.

In exploring the capital resources of the case countries, it follows that the model of comparative advantage must be explored. Comparative advantage is a model at the foundation of modern economic theory. Comparative advantage also holds great implications for trade economics and theory. In sum, comparative advantage is the successful exploitation of capital resources at hand. The result is that a particular country gains an advantage in a particular industry worldwide, because of focused nurturing and management of that resource. Once again, to use Japan as an example, that country has gained a world wide comparative advantage in the manufacturing of automobiles by focusing on the capital resource of human ingenuity. The Japanese studied the competition and learned. The result is that the Japanese car manufacturers have come to dominate the industry in quality and profitability.[1] Comparative advantage is the direct result of successfully converting and managing capital resources. Once the process begins, i.e., of

converting capital resources into comparative advantage and pure capital, other latent resources surface and are born. That is to say, that from the successful conversion of perhaps one capital resource, a country then discovers possibly several other hidden capital resources that would not have become evident until the development process begins.

Perhaps the capital resource that is universally available is knowledge. Knowledge is a broad concept that by be applied to virtually anything. The Japanese gained substantial knowledge about automobile manufacturing from the United States. That knowledge became vital when applied to the aspect of human ingenuity in engineering more efficient car manufacturing plants. Lester Thurow refers to knowledge as the capital resource of the third industrial revolution. The third industrial revolution also known as the information age, is focused on knowledge. With regard to this analysis, it will be explored how knowledge as a resource is available to all countries. The intention is to illustrate how important a component knowledge is, to economic development.

The allocation of knowledge and other capital resources with particular reference to the case countries is of central concern. While knowledge is universally available, the means of transmission and modes of thought are often lacking or altogether vacant. These concerns will be reviewed and exposed. Certainly, the

promise of the new world wide economy has greatly reduced the emphasis on physical and natural resources as the main determinates of economic development. However, the proper infrastructure to insure the allocation of knowledge has become of growing concern. Furthermore, certain modes of thought, i.e., a logical process is lacking. These types of concerns may be addressed by education. However, a certain level of socio-cultural transformation may be required to identify and convert capital resources. This phase of the analysis will focus on resource allocation and perhaps more importantly, the necessary conditions for resource identification and conversion. While developing countries are becoming more skilled in the identification and development of capital resources, it is often the case that foreigners are the individuals who are actually identifying and exploiting the resource. While this process is at the center of foreign direct investment, the system is flawed, in that, the wealth generated by the capital resource is extracted from the country. It is the concern of this analysis, to explore how developing countries can learn to identify and develop capital resources on their own to generate wealth.

The final objective of this analysis is to study the background issue of exchange rates and dollarization practices. While this work will not be exhaustive of the dynamics of exchange rate economics, it will prove helpful in relation to the trade discrepancies the world now faces.

In sum, the objective of this analysis is to determine the socioeconomic conditions of five developing countries using empirical evidence and data analysis. The concentration of the analysis is to determine the particular socioeconomic benefits attributable to higher levels of economic integration and trade aperture.

The purpose of this analysis is to examine the trade characteristics and practices of developing countries. With respect to this objective, the overall assumption is that trade aperture results in increased economic activity which in turn benefits all participants in that economy. The development of economics as a social science has provided some fundamental rules by which the human social experience seems to follow. These rules are typically focused on the specialization of labor and the development/use of capital. The manifestation of these economic rules in their rudimentary form dwell on market forces and supply and demand. In essence, advanced modern societies have ordered themselves based upon the capitalist model. The capitalist model has served the industrialized nations well. These nations account for the vast majority of the wealth of the world, have the highest standards of medicine, education and living standards. Throughout this analysis, the vital aspects of modern economic success will be explored. The implications of globalization, geopolitical organization, capital creation, monetary policy and wealth generation will be central to this analysis. Having said this, it must be noted that

the exploration of these topics is in no way exhaustive. The exploration of these topics has been illustrated as determining components of economic success. Economic history has provided us with a wealth of information on the key components and necessary conditions crucial for economic growth. Once again, it is the purpose of this analysis to reflect on the economic condition and direction of developing economies.

Throughout the theoretical framework aspect of this analysis it will become routine to examine and explore the nature and connection between four distinct yet interrelated topics. These topics are central to the functioning of modern economic systems and play a significant role in the development of trade.

In its most generic form the primary topic includes the other three as components of it. Globalization will emerge as perhaps the primary topic of this analysis; however, at the outset it will be treated as a distinct topic with certain manifest characteristics. To follow, the topics of exchange rates, dollarization and international business will be explored within their own realm. It is necessary to examine each of these topics as separate entities from the inception. In this fashion the basic principles may be identified. From this point it will become relevant to draw the connections between these topics by way of a conclusion which will illustrate these connections.

1.4 Case Countries

Chile

Costa Rica

Lithuania

Singapore

Uruguay

The case countries have been selected for certain design criteria. For certain, all are developing economies. However, the selection process is much more particular. The criteria for selection has been based upon certain characteristics such as, demographics, geography, economic structure, education, core competencies, natural resources, human resources and cultural attitudes and policies toward trade.

From a geographic point of view, the focus of this work concentrates on the Latin American region. Within that region the three selected countries share common traits. Chile, Costa Rica and Uruguay share commonalities such as a democratic tradition, similar sized populations, similar sized land mass and common demographics and economic structure. While it is understood that all countries are unique, from a socioeconomic point of view these three countries share common traits that will become evident through the analysis. As a precursor, it must be

noted that these countries are not narcotics producers on any large scale, nor are they plagued by social unrest and the resulting violence. For these reasons, a functioning economic structure has been able to develop as well as a democratic political system. It is from that basis, that this analysis considers Chile, Costa Rica and Uruguay favorable countries to group for comparison. Progressing from that basis, it is characteristic for these three countries to have exhibited a higher level of economic sophistication than others in Latin America. Furthermore, the economic capabilities of these countries tends to be far superior than others of comparable qualities in the region.

With regard to the other two countries in case country group, the same basic criteria apply. Lithuania and Singapore have similar population and land mass areas as Chile, Costa Rica and Uruguay. The socioeconomic and political situations are typically the same. The contrasts however, provide needed insight with regard to developing economies. Lithuania represents the growing eastern block of European countries that were stagnated under Soviet oppression for over fifty years. Lithuania has had less than two decades of market economic experience in the modern era, yet the development has been remarkable. Singapore, on the other hand, represents the power of the Asian economies. While it is known that China, Japan and South Korea have dominated the economic scene of Asia, a country such as Singapore with a small population base and miniscule land mass has

excelled in economic development. Of the five case countries, Singapore posts the highest GDP with the smallest land mass and no natural resources.

The point of including case countries in an analysis of trade economics is to apply real experiences to theoretical propositions. The experiences of these five countries, positive and negative, provide us with the knowledge of what strategies and actions work well to provide the citizens of a particular country with more opportunity and a higher quality of life. Historical perspective is highly valuable when determining future strategy. To be sure, individual country experiences are particular to the country. This notion of particularity is seldom considered in modern developmental economics.

Perhaps the greatest shortcoming of developmental economics is the lack of understanding of the individualistic nature of nations. The unpopularity of the Washington Consensus in developing countries is a testament to the disregard, of that program, for national sovereignty and individualism. Structural adjustment initiatives such as the Washington Consensus have unfortunately become the representation of modern market economics and the standards of advanced economies. It is the contention of this analysis to dispel that notion. The policies of development banks and donor countries do not necessarily represent the true nature of market economics and the characteristics of trade. It is the generalist

nature of policies such as the Washington Consensus that have left developing countries in perhaps worse condition than before the institution of such programs. Developing countries are justified in their resentment towards development banks and the policies forced upon them. Moreover, developing countries are justified in their skepticism toward trade liberalization. The numerous failures of trade initiatives are the fault of misunderstanding capital resources and core capabilities of developing countries. The structural adjustments that have been forced upon developing countries assume a certain congruity with American and European social and cultural values. Furthermore, the expectation was that one hundred years of infrastructure development as seen in the United States and Europe, could be achieved in less than a decade. These types of assumptions and many more, have created the atmosphere of suspicion and resentment now seen in many developing countries. Once again, the problem has been misunderstanding and a lack of vision on both sides.

The main premise of this analysis is that the exchange of goods and services among people is a natural development of the human condition. As such, the present situation of trade impairment by artificial conditions curtails socioeconomic development in much of the world. While it is understandable how the the world situation has arrived in such a state, it is unacceptable to be satisfied with it. Lack of understanding is the root cause of the current situation.

All countries are unique and have individual capital resources and capabilities. Moreover, developing these resources requires an understanding of the particular nature of a country. The particular nature has many definitions which could include social dynamics, cultural attitudes, lifestyle values and sociopolitical tendencies. While these attributes are purposely vague, it is the duty of all trading parties to develop a mutual in depth understanding of each other. With regard to developing countries, participation in the world market need not require dramatic sacrifices. Conversely, the developed economies of the world need to understand that there is more than one recipe for success. Often times, groups of individuals with varying talents and capabilities form to create excellent teams. The same holds true for trading partners and international business. There is ample opportunity to realize economic growth for all concerned parties using mutual understanding as the foundation for what is the human natural tendency to exchange goods and services.

Table 1.1

Country	Population m 2005	Area '000 sq km	GDP $bn 2005
Chile	15.8	757	72.4
Costa Rica	4.2	51	17.5
Lithuania	3.4	65	18.2
Singapore	4.3	1	91.3
Uruguay	3.4	176	11.2

Source: The Economist Intelligence Unit, World in Figures 2006.

1.5 Definition of Terms

While most terms used in this analysis are standard economic nomenclature, for the context of this work, a list has been compiled.

Barrier to trade: The governmental/political intentional hindrance to trade in certain and/or all products with specific and/or all other countries. These barriers generally come in the form of tariffs or quotas. Hidden barriers include government subsidies to certain protected industries. The reasons for these barriers vary, from protecting domestic industry to producing revenue.

Capital resource: This term is used vigorously throughout the analysis to identify potential sources of capital generation. Capital resources are latent

undeveloped sources that, when developed may produce capital wealth. As an example, China realized a capital resource in its large population base. The result was that China mobilized that population base to create a competitive advantage in labor intensive manufacturing procedures such as garment assembly. China has effectively transformed a capital resource into capital wealth.

Comparative advantage: A country has a comparative advantage in producing a good or service , relative to another country or the rest of the world, if the relative cost of producing the good, that is, its opportunity cost in terms of other goods forgone, is lower than it is abroad. In economic terms, the notion of comparative advantage benefits the consumer as well as the producer.

Dollarization: Also known as the dollar standard. A system of exchange rate management in which countries peg the exchange rates of their currencies with the U.S. dollar, and hold their foreign exchange reserves mainly in the form of US dollars. In many dollarized economies, domestic exchanges occur in U.S. dollars as well as in local currency.

Economic integration: An economic system in which national and political boundaries are insignificant, i.e., the exchange of goods and services is blind to political boundaries. Total economic integration implies free trade in goods and services. Two examples of total economic integration are NAFTA (North American Free Trade Agreement) and The European Union. While a world wide total economic integration is rather distant, it is the aim of this work to propose the merits of an

increased level of integration.

Globalization: The term globalization is used with many intentions. The use of the term within this text refers generally to the nature of the modern economic era to have trade in goods and services without regard to national boundaries. The rule of comparative advantage has given the urge for the realization of globalization.

Human condition: The reference to this term has philosophical connotations linking it with ontology or the condition of human existence in the world. As a sociological reference, the term is interested in those aspects of inter personal contact and cooperation that have profoundly influenced the situation of human life. In sum, for this analysis, human condition is ultimately concerned with those aspects and phenomena that define human existence, particularly the necessary urge to exchange goods and services with others.

Knowledge: For the intention of this analysis, the term knowledge is deliberately broad. As such, knowledge of all kinds is a capital resource in the modern economic era. The information age, as known as the third industrial revolution, places a huge importance on knowledge. The key however, is to acquire the vision to be able to convert the capital resource of knowledge into capital wealth.

Nation-state: The traditional political notion of a country that includes a political/geographic boarder and a legal system dedicated to governing and protecting the citizens of said country.

Region-state: An expansion of the nation-state ideal to include a legal system

regarding conduct and trade with other nation-states within a specific region. Examples of region-stats are APEC (Asia Pacific Economic Consortium and the European Union. The EU, in addition to trade policies has integrated a common currency and relaxed boarder controls. These types of international legal and economic policies constitute a region-state.

Trade: The exchange of goods or services between people of two distinct countries. International trade has been part of the human condition for thousands of years.

Trade liberalization: The term trade liberalization may also be referred to as free trade or tariff reduction/elimination. For the purpose of this work, the term refers to the agreement between two or more countries to reduce or eliminate barriers to trade such as tariffs or quotas on specific products and ideally on all products and services.

Chapter 2

Theoretical Framework & Literature Review

2.1 Synopsis

In this analysis it will be demonstrated that trade is a natural progression of the human social condition. The term natural in the context of this work is synonymous with logical in that, the logical necessity of a phenomenon becomes natural. As was discussed in the introduction, the human condition has progressed from hunter/gatherer status to a modern socioeconomic condition. This development has taken place over two thousand years. It is in no way an artificial phenomenon. The human drive toward progress is marked by ingenuity every step of the way. While this is not a work on human social psychology, it must be noted that this constant striving to progress generation after generation is an inherently human trait. It is in our nature to improve on how things are done and to invent creative alternatives. Humans are creative by nature. Our interests are diverse, yet we enjoy the quest to learn and be creative. Having said this, it is arguable that the human socioeconomic condition today is a natural phenomenon that is an inevitable and moral process. That is to say, that the progression of humanity is an ongoing natural process which has been occurring over thousands of years. Hence, as in natural science, the outcomes of social science, which are determined to be natural rather than artificial, must be considered moral. It must also be noted at

this juncture, that those places in the world where the socioeconomic situation for the populous is less that favorable, that artificial intervention has occurred, thus disrupting the natural operating of economic mechanisms. This artificial intervention which has been mentioned previously, is simply the intervention of humans. To be more illustrative, social sciences such as economics are as susceptible as natural science, to human intervention. That is to say, the forces of economics are as natural as the free flowing of a river. If the river however, is dammed by humans for the benefit of certain humans, then most certainly those humans as well as other wild life living downstream will be adversely affected. In the realm of economics, if leaders of countries manipulate the mechanisms of the market, then generally without exception some people will suffer. In advanced as well as developing economies there is a great temptation to manipulate the market. Leaders tend to convince themselves that they can steer the market to produce desirable outcomes. In general the benevolent intention turns out to produce ill effects for the many and prosperity for a few, or in a worst case scenario, ill effects for all.

There are typically two types of economic intervention which are characterized by their motives. First, dictators and in nations with corrupt political institutions we have seen economic distortion and manipulation for personal and political means. These cases will not be considered in this analysis, as the situation is political

rather than economic in nature. Second, is the scientific/strategic manipulation of market forces by nations for a variety of reasons. The central bank is able to manipulate the value of its currency while the trade authorities are able to levy tariffs on imported goods. Moreover, the federal government may be interested in subsidizing certain industries that employ large numbers of workers. These types of artificial manipulation of economic principles are definitely of interest in this analysis.

It is the assumption of this analysis, that social science runs the course of natural progression. Without exception, economic principles are subject to this natural progression of the human social condition. It is no accident that we have arrived in the particular situation in which we now find ourselves. The combination of the human creativity and aspiration to improve has naturally led to the level of development, which we experience today.

This delivers us to the particular focus of this analysis that is trade. Assuming the natural progression of socioeconomic principles to be true, it then follows that where trade is concerned it too has developed as part of the natural process. It then follows as the main theme of this work, that trade being an integral part of the economic process, must be allowed to follow the natural process of development. As free market economists in the past have posited, the market in

its natural process just as in natural science, is self-regulating and self correcting. The effects of artificial intervention generally are negative. This notion that trade aperture and economic integration will be proven to have significant socioeconomic benefits in the countries studied versus the alternative, which is protectionism and economic isolation. Following this overview, five theoretical frames will be presented. These frames have undeniable connections with trade phenomena and national policies. The first three, The Model of Comparative Advantage, The Role of Product Genres: Manufactured Goods, Services, Commodities, and The Modern Economic Model: The Knowledge Based Economy, are not to be taken as complete trade models. Rather, the import of these three frames is in their vitality to economic practices of trade.

For example, comparative advantage is at the foundation of the main principle of trade, i.e. the most efficient producer of a given product ought to be the preferred supplier of that product.

In considering product genres, there is a vast array of issues including natural resources, climate, geographic location, population demographics, population skill sets, available capital and technological resources. These issues along with many others coupled with the principle of comparative advantage, contribute to the role of product types in trade allocation.

As technology advances and the Third Industrial Revolution reaches maturity a new modern economic model will emerge. This model is distinguished by the mobilization and exploitation of knowledge. This is a departure for the past in that capital resources have generally been concentrated on physical and/or labor. The modern economic model will focus on the mobilization of capital resources, which are largely intangible.

The final two frames are complete trade models. The Protectionist Debate is a model in which immediate national interests are of paramount importance. The word immediate must be noted because protectionist policies address only the immediate situation, these policies rarely benefit national interests in the long term. In the quest to protect local industries nations impose tariffs and/or quotas on imported goods. Moreover, nations may also subsidize certain industries in the name of national interest.

The final frame is the model upon which this analysis sets out to prove as providing the most socioeconomic benefit to the nations included in this study and Costa Rica in particular. This model suggests that the developing countries in this study would benefit substantially from trade aperture, i.e., eliminating trade barriers for imported goods as well as having unrestricted access to export markets.

2.2 Globalization

The term globalization in popular culture draws many connotations. While it is not within the scope of this analysis to explore public perception of the phenomenon, it is one of the objects of this work to assert two judgments with regard to globalization. First, that the exchange of goods and services across national, political or cultural boundaries is not a new phenomenon. And second, that the exchange of goods and services across said boundaries is a natural social condition of humanity, as is the exchange of goods and services domestically. Market forces are part of the human condition, and as such, apply to all humanity blind to national, political or cultural boundaries.

2.2.1 What is Globalization?

The exchange of goods and services across political boundaries has existed since the time humans began to trade. Naturally the complexity of this exchange has intensified as human interaction itself has diversified. Globalization as it has come to be termed, is a phenomenon, which has grown to enormous proportions. While an exact definition of the concept is difficult to pin down, it will be the project of this work to identify and examine the major trends in economics, politics and social living which have most commonly been identified as globalistic in nature.

Goods and services transcend national affiliation and the transfer of capital flows in apparent seamless transactions. Comparative advantage in production and the exploitation of foreign markets are among many of the strategies endorsed not only by individual corporations, but by governments as well. Economies of scale and scope have dominated corporate architecture for the past decade as firms merge and acquire each other in the vital quest for optimal operational efficiency. Intense competition in many industries has created this environment of almost exaggerated proportions of activity. This seemingly hyper activity in world markets has created tremendous wealth and capital. In many ways the United States has positioned itself as the catalyst for this activity. American manufacturing concerns have moved their production to developing countries around the world. Currency speculators transfer astounding amounts of money from nation to nation in the matter of seconds with the aid computers. The development of Pacific Rim countries such as Taiwan and Hong Kong, and to a lesser extent, Malaysia and Thailand are testaments to the intense globalization of economies over the past twenty-five years:

> With the majority of the world population living in developing countries, it is no wonder that globalization has been such a hot topic of debate. Throughout history, humanity has strove to improve and progress. The preceding two industrial revolutions brought technological advances which dramatically changed the lives of humans forever. The third industrial revolution which we are amidst, has not only brought new technologies to our disposal, it has, and continues to reorder our economic,

> political and social infrastructures. "In ancient times the issue was land. Wealth came from having an agricultural base that could produce a food surplus big enough to feed an urban population that could then devote itself to building cities and fighting wars-conquering more land" (Thurow 52).

From a very early point in economic history, two fundamental characteristics of capitalism have emerged. The first is the mobilization of resources. Throughout history those countries and companies who were most skilled at mobilizing resources, whether these resources be natural, human or capital, were the ones who became prosperous and wealthy. The second characteristic of the capitalist system is the specialization of resources and effort. Those who concentrated efforts and allocated resources to become dominant in a particular industry generally reaped handsome rewards. I may add that those, who in particular, concentrated efforts on developing new technologies and exploiting the disequilibrium associated with the market application of such technologies have historically realized substantial profit.[2]

Every industrial revolution brings with it the economic opportunity to prosper and build wealth:

> In the first industrial revolution, coal was the essential ingredient. Coal was too heavy and expensive to move given the technology of the time, and the steam revolution could not occur in places where coal was not available. England's

> easily accessible coal supplies were part of the reason the industrial revolution began there. Its two initial challengers, America and Germany had almost equally accessible reserves of coal. In the second industrial revolution, mass production requiring large amounts of capital was the route to economic success. The winners were those with the most capital-Carnegie at the beginning of the century, Ford in the 1920's, American corporations in the 1950's, and Japanese corporations in the 1980's. The third industrial revolution is reordering and reassembling the basic building blocks of the wealth pyramid. Exactly how the game should be played is uncertain. The winners will be those who first figure out the nature of the wealth pyramid in a knowledge-based economy (Thurow p.52).

As land was the original source of capital production in ancient economies, it was replaced by the power of steam and eventually the power of electricity. The third industrial revolution we are currently experiencing derives its capital production from knowledge. The obvious trend is that each progressive industrial revolution is created by an ever vague means of capital production. The land based ancient economies were not very abstract in terms of capital production. As humanity began to settle and form societies based on locality, the demand for food production became the foundation of the economy. Without the ability to produce a surplus of food it would be impossible for humans to congregate in one place and build cities. This departure from hunter-gatherer forms of living was the first in many steps to the modern economy. The cultivation of crops signaled for the first time, specialization of resources. Individuals could then concentrate efforts on

specific activities. These activities grew into the great means of progress that we know today such as science, medicine, art, engineering, architecture and industry.[3] The engine that originally enabled this societal shift was food production. Hence, the means of food production was land. Land, in its use in food production became a source of capital:

> What made this specialization and exchange possible was capital, which Smith defined as the stock of assets accumulated for productive purposes. The more capital was accumulated, the more specialization became possible, and the higher society's productivity would be (DeSoto 41).

Land created the stock of assets, food, which enabled some members of society to engage in other activities other than food production. Certainly land may be a source of capital by other means, an issue which will be addressed in due time.

The first industrial revolution was fueled by the concept of steam as an energy source. While steam is for the most part a tangible item, it was more of a concept as a source of capital. As an entity in itself, steam may not appear such a significant subject. But as a source of energy used to drive machines, it revolutionized human existence:

> Two hundred years ago, at the end of the eighteenth and the beginning of the nineteenth century, the industrial revolution brought eight thousand years of agricultural wealth creation to an end. Agricultural activities, which had been the sole economic activity for 98 percent of the

> population in the eighteenth century, were the sole source of income for less than 2 percent of the American population by the end of the twentieth century. By providing a source of energy much bigger than either animals or humans could provide, the steam engine opened up opportunities to do things previously impossible. Leonardo da Vinci could imagine all kinds of brilliant mechanical devices, but all of them remained on paper, unbuilt, because he could not imagine an engine to power them. With the advent of the steam engine, much of what he could only imagine quickly became reality (Thurow 3).

The concept of capital and capital resources manifests itself in the potential which some entity may hold. Land for example, in itself has no capital value. It is what the land can be used for which transforms it into an asset with potential for capital production. Today, most land has asset value derived from some use other than agricultural. As farming became more efficient, less land was required to produce the same or greater amounts of food. Hence, the asset value of land for agriculture has declined in most places. However, as society came to demand more land for cities and industrial growth, land became a valuable asset for capital production in these areas. Industrial land for example, is an asset because its use aids in the production of capital. Furthermore, the asset value of a particular piece of land may be enhanced because of location. A site may be more valuable for a particular industry because of its proximity to natural resources, or to target markets for another industry.

When steam was introduced as a capital asset the idea must have seemed absurd. However, the machinery with which the energy of steam was coupled, created so much efficiency that capital was quickly created and thus the modern economic system was under construction.

The second industrial revolution sparked by the invention of electricity created a whole new arena for capital creation:

> A hundred years later, at the end of the nineteenth and beginning of the twentieth century, electrification and the invention of systematic industrial research and development created what economic historians know as the second industrial revolution. Night literally became day. New industries emerged-the telephone, movies, aluminum- and old industries were transformed (steam railroads went underground to become subways) (Thurow 3).

Once again, the assets were to be found in machines to increase efficiency and transform humanity. The entity electricity, while an interesting scientific discovery, holds no intrinsic value on its own. It is the application of electricity which turns it into an asset. So as with the first industrial revolution, the second continued the tradition of the human imagination being central to asset allocation. For without imagination, the energy of steam nor electricity would have been harnessed and applied to the devices which in turn create vast capital.

2.2.2 The Model of Comparative Advantage

The comparative advantage theory has been widely discussed and accepted for decades. The theory of comparative advantage can be interpreted in either a positive or normative sense. In its positive sense the law says that countries tend to export goods in which they have a comparative advantage and to import goods in which they have a comparative disadvantage. As real world trade is affected by tariffs, subsidies, quotas and monopolies, this is an empirical generalization, not a logical necessity. In its normative sense the theory of comparative advantage says that it is beneficial both for a country and for the world as a whole if trade follows the lines suggested by comparative advantage. The comparative advantage theory is compelling as this passage illustrates:

> This division of labor is thus limited by the extent of the market, as is the prosperity which can be generated. Smith argued that the case for specialization and large markets does not stop with national boundaries. The same advantages gained by trade among free citizens within the nation would apply unchanged to exchanges between citizens and firms in different nations. The ideal, according to the theory, is a completely open global market in which goods and services pass freely over all national boundaries. Thus, the basic thesis of free trade is that, instead of a country being self-sufficient, each one should specialize and produce what it is best at and can produce most cheaply, i.e. the things in which it has a comparative advantage. It would then exchange its goods for what could be produced more cheaply elsewhere. As everything would be produced more cheaply, everyone would be better off. The invisible hand of market forces would direct every

> member of society and every nation, using the dynamo of self interest, to the most advantageous situation for the global economies a whole (Lang 21).

In its formative nature the theory of comparative advantage is logically driven. With reference returning back to the natural order of the social sciences in general, and of economics in particular, it seems evident that this theory follows the natural progression of economic law. That is to say, that being natural, without artificial intervention, this phenomenon ought to become inevitable. In essence, comparative advantage would have already become the standard long ago if not for artificial intervention. Therefore, a great benefit for society is being wasted. Obviously the reasons for obstructing the practice of comparative advantage are numerous and complicated. What can be said at this juncture is that they are political in nature as this passage so precisely indicates:

> Another important political factor favoring protectionism over free trade is that protectionist rent-seekers find it easier to generate public support for their position than do free traders. The former are able to point to tangible costs of trade liberalization such as job loss, business failure, and general economic dislocation. By contrast, free traders are reduced to explaining the more abstract benefits of concepts such as comparative advantage, economies of scale, and the potential for greater long-term economic growth. As Tullock suggests: "the arguments for a protective tariff are simple and superficially obvious, while the arguments against it are unfortunately complicated and indirect. Granted that the voter has no motive for becoming well informed, he or she will buy the simpler of the two explanations" (Lusztig 3).

The obstruction of the laws of comparative advantage is clearly illogical. However, that is exactly what happens in the implementation of protective tariffs, quotas and import licenses; illogical behavior. It must be noted at this juncture that tariffs imposed for the sole purpose of generating revenue, while a hindrance to trade, are not completely illogical. The basis of protective tariffs play on the emotional vulnerability of the public. In essence, the developed world elects to office supposedly wise individuals who then conduct themselves not by the virtues of their own wisdom, but by the mood of the masses. It is the unfortunate circumstance of democracy, that the economic direction of a nation is held hostage by the ignorant electorate. While this may seem to be a harsh statement, the Institute for International Economics has studied the public perception of the complex issue of globalization:

> More broadly however, the legislative stalemate reflects the basic political fact that the U.S. public is split almost evenly over the wisdom of further globalization. But studies at the Institute for International Economics point the way toward overcoming the stalemate-because the single key variable that determines public attitudes is education. Workers with college experience welcome globalization, regardless of where they are currently employed, because they feel they can take advantage of it. Workers with a high school diploma or less, who still constitute half the labor force, fear the required adjustment and thus oppose it even if they have good jobs now. The number of actual job losses due to globalization is relatively small... But the split in opinion would shift to solid

> pro-liberalization majorities in the short run if the government were seen to be credibly helping those workers who lose from increased trade The key steps would be improved social safety nets to cushion their transition and training programs to improve their skills (Bergsten 89).

The fact is that the industrialized nations are in control of the trade agenda. Until the populations in these nations feel less threatened by the misrepresentations of trade, the Doha Round will be stagnated. The public in the industrialized world must become informed about the great benefits realized by comparative advantage and the resulting trade. In fact, the industrialized nations have been benefiting by this economic rule for decades, although few people living in those nations truly realize it.

In spite of artificial intervention in the economic model of comparative advantage, the logical systems quite often seem to prevail. In other words, the law of comparative advantage dictates that those who are able to produce a product in the most efficient manner ought to be left to produce that given product. As was aforementioned, governments attempt to level the playing field in favor of domestic industries by levying tariffs and imposing quotas and import licenses. The competitors respond by becoming more efficient. Over time, it has often been the case, that governments are not able to shelter industries. The stress of competition becomes too burdensome. Taxes implemented to feed subsidies

become too high, consumers slow demand by not purchasing higher priced products due to tariffs (domestic companies generally price their products at about the same as dutied imports) and most importantly, sheltered industries fail to innovate and increase efficiencies and productivity because there is no incentive. It might be said that the logical systems will never fail.

The U.S. experienced the law of comparative advantage in steel production. After World War II Germany and Japan built modern, efficient steel mills with which the U.S. mills could not compete. For years the U.S. government protected and subsidized the steel industry until it became economically impossible. The result was that many inefficient U.S. mills closed and other U.S. mills became innovative and efficient enough to compete. While this adjustment elapsed over a period of decades, the result is that the logic of comparative advantage prevailed. As if lessons of the past were not learned, the Bush administration levied tariffs in 2002, on European steel in what has become a very hot topic. Ironically, as "The Economist" pointed out in an article which followed this decision, the competition for large U.S. steel mills comes not from European steel mills, but from small U.S. steel mills referred to as mini mills. These mills are highly efficient, productive and agile making them highly competitive. Once again, the electorate (of West Virginia) has spoken:

> Comparative advantage is a natural system, which orders the production of products. It is not an arbitrary system,

> everyone may compete, what is required is the allocation of resources and a commitment to a certain industry. "The basic issue here for international business is not whether some arcane GATT rules are respected or broken; it is whether or not companies consider that it is in their own best interests to compete and make profits at the most competitive standard" (Oxley 48).

It is the aim of this work to explicitly demonstrate the intimate connections between comparative advantage and trade aperture. The links between these two topics are inherently interconnected. For without comparative advantage, there would be almost no need for trade. If nations could in the most efficient manner, produce everything needed and consumed, then trade would be a moot point. However, we know this not to be the case. Hence, comparative advantage is more than a theory, it is reality and it is what necessitates trade amongst nations.

2.2.3 The Role of Product Genres: Manufactured Goods, Services, Commodities

In considering trade aperture and comparative advantage it must related to product genre. While this work stresses that trade aperture and economic integration will provide significant socioeconomic benefits, it must be contemplated that the type of products that a country decides to gain comparative advantage in, will vary significantly in its contribution to economic development. As the main hypothesis, this work concentrates on the benefits of trade aperture and

economic integration. Moreover, it will be demonstrated that the particular industries concentrated on by a nation will have decidedly particular outcomes. That is to say, that the concentration on the production of manufactured goods or services will result in greater socioeconomic benefit than in primary sector activity, i.e., commodity, natural resource and raw material extraction and production. Even within the manufactured goods genre there are differences in pay back due to the level of technology. Generally, high technology manufactures net greater profits than low technology products, yielding greater socioeconomic benefit to the nation.

The model then, that is being proposed as providing the greatest socioeconomic benefit, is one in which a country assess its capital, natural, geographic and human resources, then sets out to gain comparative advantage in an industry of the highest technology allowable by the resource constraints of that particular country.

As an added precaution, developing countries at this point in time should seek to avoid concentrating resources in the production of commodities and raw materials, particularly agricultural products. The reason being, that trade obstacles are more significant in these product areas than in manufactured goods and services:

> In the areas where GATT trading principles have been allowed to function, primarily in the trade of manufactures,

> the system has been successful. The volume of world trade multiplied nine times between 1946 and 1985... This pattern of growth was not even across all sectors of trade or among all countries, however. Most of this trade was among the industrialized countries. The terms of trade for agricultural and other primary products fell (Oxley 9).

At this point in time, the industry comparative advantage model would suggest engaging in a service or manufacturing industry of the highest technology allowable given the constraints of available capital. Furthermore, the industry must also be well suited to the cultural and educational disposition of the population. For example, India has become a player in the software industry for two reasons. First, English is widely spoken in that country, and second, a strong education system that places an emphasis on mathematics. These reasons coupled with a large population and lower wages than industrialized nations is earning India a comparative advantage in software programming. In this example, the human resource element is the primary resource being utilized to gain comparative advantage.

2.3 The Modern Economic Model: The Knowledge Based Economy

As a most particularly defining model determining a comparative advantage gaining strategy, the knowledge-based economy must be considered. As was expressed in

the introduction and justification of this work, the knowledge based economy is a direct result of the third industrial revolution or as it is also known, the information age. Knowledge continues to grow as a capital resource of the future.

The increasing value of knowledge has conversely eroded the value of physical resources. It is human skills and knowledge which have propelled countries such as Japan with scarce land and natural resources into high levels of economic prosperity. The ingenuity and knowledge to manufacture automobiles and electronics more efficiently gained Japan the comparative advantage in these industries for many years. It became relatively unimportant that the natural resources required to manufacture these products was not locally present. With the ability to transport materials anywhere in the world, the knowledge element becomes all the more crucial. At this juncture, it may be noted that the term knowledge is a generic term which refers to all human capacities such as ingenuity, creativity, education, innovation and so on. What is important is that these are human characteristics. Hence, the implication is that now, more than any other time in history; any country can participate and excel in international commerce.

It is no longer required to possess natural resources or vast tracts of land; the human element has leveled the playing field. Once again, it is that incredible natural force of the social sciences which has given the opportunity to all. To be sure, it is

not so simple to excel in gaining a comparative advantage in a particular industry. It requires time, commitment and resources. However, the strong point to be made with relevance to this work, is that trade aperture helps to create these opportunities to excel by allowing nations to trade unhindered by barriers. With the barriers removed, the natural progression will follow and nations will gravitate to that which suits their interests, capabilities and resources.

The knowledge based economic model has been embraced by industrialized nations even though natural resources may be present locally. It is well understood that the human mind will discover the cures for disease, invent the most technologically advanced digital systems, create naturally disease resistant food crop seeds and engineer the most sophisticated apparatus yet to be seen. With regard to trade, the issue of intellectual property rights is so pressing that the WTO has addressed it and is working to provide the proper system of international law to protect the idea and inventions of those who created them.

With regard to this work, the knowledge based economic model fits well into the scheme of trade. Those nations possessing the capital resource of knowledge and knowing how to exploit it will prosper. Moreover, the knowledge model lends itself well to developing nations that may have scarce financial resources. In this connection, the knowledge model applies well to service industries. To return to the

example of software programming in India; what was required of that country in this particular case was a population who could speak English having a strong background in mathematics. A perfect example of the application of a human resource with a particular knowledge. In essence, to develop this pool of people was relatively inexpensive. With a population speaking over seventy different languages and dialects, English became the lingua franca under the British Empire, leaving the education system only to provide a superior training in mathematics. This is not to suggest that India dominates the software programming industry, merely an example of how a country is able to compete in an industry and participate in international commerce while providing a better standard of living for its citizens. Precisely, this is how the knowledge model applies to trade aperture, for if the U.S. prohibited software engineering to be done off shore, then this case would not exist.

2.3.1 What is a Knowledge Based Economy?

The capital asset of the third industrial revolution is knowledge. In concept, the role of knowledge in the creation of capital seems quite obscure. However, as with the previous two industrial revolutions, it is the application of the asset which makes it a viable asset. The application of land, steam and electricity are what created efficiencies and thus capital wealth. Once again, it takes imagination to envision the potential and courage to propose change. In the name of progress,

change must triumph:

> For thousands of years, agricultural land came next after social organization and entrepreneurship (usually in the form of military leadership) as the basic building block at the bottom of the wealth pyramid. After the first industrial revolution, energy resources replaced land as the basic building block underlying wealth. With the third industrial revolution, knowledge moves into the position previously held by land and energy. Knowledge generates the basic breakthroughs in technology that create the disequilibrium conditions in which high returns and high growth rates are possible. Knowledge allows new things suddenly to be done in new ways. Old activities can be done in ways so different that they essentially become new products (Thurow 99).

While knowledge in relation to the concept of a knowledge-based economy is most commonly associated with computer related or high technology industries, it may be linked in a wider sense to those activities which require advanced levels of education. When the economy of the third industrial revolution is referred to as knowledge based, what is being suggested is that a shift has occurred in the creation of wealth. Throughout the history of economics, the creation of wealth has been intimately tied to land or natural resources. As was discussed previously, the shift away from an agrarian society was a dramatic change. It was this change however, that allowed advances to be made in science and technology. The resulting two industrial revolutions realigned how wealth was to be created.

Imaginative inventions dramatically increased the productivity of common goods. Whole new industries were born. At the core of these inventions was the energy to power them.

Natural resources became the source of new wealth creation. While knowledge, creativity and imagination were undoubtedly the inspiration behind the first and second industrial revolutions, without the energy initiated by natural resources, these advancements would not have been made. The great inventors of these eras most certainly were able to capitalize on their creativity. Entrepreneurs and workers in the newly found industries also profited. The productivity of the economy was increased by both revolutions and with it came the natural tendency to find equilibrium. Disequilibriums which were created by the implementation of new technology were eventually lost as is normally the case. As new technology becomes more widespread the economic phenomena known as democratization occurs. Disequilibrium are lost to falling prices which eventually reach equilibrium status. The new gains in productivity and efficiency become commonplace. Eventually the cycle of revolutionary activity ends and the resulting established industries as they become normalized, realize normal profits. To be sure, the telephone, light bulb and automobile certainly no longer seem revolutionary. The producers of these products and others similar to them, have long since succumbed to the market forces which impose equilibrium. During the periods of

revolutionary change disequilibrium is natural:

> With the electric light bulb, night literally became day. The price-performance curve of the light bulb looked like today's price-performance curve for the computer. To get the lighting that can be bought for $0.33 in a 100 watt bulb at Home Depot today would have cost $1445.00 in 1880 (adjusted for lumens of light, length of bulb life, inflation, and changes in per capita income). The same percentage price declines would turn a $13 million computer into a $3000.00 computer- not far from what has actually happened since the 1960's. The first light bulb was used as a fire prevention device on the steamship Columbia. It was too valuable to be used simply for light. Lamp oil was much cheaper (Thurow 20-21).

Of course we now know that as the technology of the light bulb became democratized, that is to say that the technology became universally available. At some point, the new technology becomes more efficient and thus cheaper than old technology. As for lamp oil, it came the day when it simply was not competitive with the lightbulb.[4]

Why this lengthy discourse on the democratization of the technology of the first and second industrial revolutions? First, as we consider the affects of the third industrial revolution on humanity, particularly the global economy, we must look to the past for clues as to what may happen. Second, the departure from the land and natural resource link proves vital in the dynamics of the global economy. Once

again, for a moment, let us return to the connection between natural resources and the first two industrial revolutions. As was aforementioned, it is known that emerging technology almost always becomes democratized over time. With the new industries of the industrial revolutions being transformed into traditional industries, where is the long-term creation of wealth? Certainly, the inventors and entrepreneurs realized the wealth created by disequilibrium conditions. No one would doubt that names such as Rockefeller, Carnegie, Ford and Bell are permanently etched upon the journals of economic history. However, in the periods between revolutionary change and the disequilibrium conditions that emerge, where is wealth created? The harnessing of natural resources to deliver energy for increased means of production has had a profound affect on the wealth of nations. In the interevolutionary periods where no disequilibrium conditions were created, it is true that tremendous growth occurred. GDP figures in the United States and in Europe soared after both industrial revolutions, but not a lot of entrepreneurial wealth is generally created in these periods. Wealth creation, by and large, was created by the exploitation of natural resources in the periods between the industrial revolutions. Countries with reserves of petroleum, coal, iron ore and copper generally created the most wealth. That is, until recent history where knowledge has come to play a key role in the creation of wealth:

> In the World Bank's estimates of countries' potential productive wealth, the most productive capital per person is found in large, lightly populated, but well educated countries such as Australia ($835,000) and Canada

> ($704,000). In these countries land and natural resources account for 80 percent of productive wealth and human skills account for the other 20 percent. In contrast, in a country like Japan (fifth on the list at $565,000) the proportions are exactly reversed: more than 80 percent of productive wealth is held in the form of human skills and knowledge and only 20 percent in the form of land and natural resources. The United States (at $421,000) falls in between with 60 percent of its wealth in the form of human capital and 40 percent in land natural resources. Being first in terms of actual per capita wealth and twelfth on the World Bank list, the United States is an overachiever when it comes to converting potential wealth into actual wealth. Its social willingness to change and its entrepreneurial drive make up for its fewer natural resources and lesser skills. In the future, with knowledge replacing natural resources as the key ingredient in the third industrial revolution, the same percentage distributions of human and physical wealth will lead to different overall ranking. The value of human resources will be rising and the value of natural resources falling (Thurow 131).

The knowledge being alluded to must not be confused with experience. Experience is what is derived from years in the marketplace. Knowledge, on the other hand is the conception of how new trends and procedures are to be applied as well as skills of the latest variety. What these skills actually are is vague. However, skills related to the computer industry in general, and software programming in particular have been stressed by the developed nations of the world. It has been a concern though, that the skill level in typically unskilled or low skilled professions such as factory labor has decreased. In other words, what is now required of a

factory worker today is quite possibly less than in the past. Automation is the obvious reason for this phenomenon:

> At the same time there is evidence that jobs in the new, high-tech information economy often require less training and education, not more. A celebrated survey by the McKinsey Global Institute noted that manufacturing in Toyota plants in Japan, where productivity and efficiency are as high as anywhere in the world, was designed to stress "ease of assembly and low complexity." Toyota, the institute reports, "attempts to specify designs so that they are easier to produce and assemble." In other words, the jobs at Toyota are becoming easier, not harder, and require fewer skills, not more (Longworth 271).

The automation in the manufacturing sector has become the most obvious example of artificial intelligence. In many respects the Japanese auto maker Toyota has been a leader in factory automation and the use of artificial intelligence. The results have been remarkable:

> I was in Tokyo on a reporting assignment and had arranged to visit the Lexus luxury car factory outside Toyota City, south of Tokyo. It was one of the most memorable tours I've ever taken. At that time, the factory was producing 300 Lexus sedans each day, made by 66 human beings and 310 robots. From what I could tell, the human beings were there mostly for quality control (Friedman 30).

The point is, that a contradiction exists in very identification of a knowledge-based economy. While the professional jobs are increasingly demanding higher skill levels and education, the blue-collar sector may be requiring lower skill levels. In

antiquity, it required ingenuity and craft to perform most trade activities. Carpenters crafted doors, windows and cabinetry while plumbers leaded cast iron pipe. Today windows, doors and cabinets are mass-produced in automated factories. The need for a skilled carpenter is all but gone. In modern terminology, “installers” have supplanted “craftsmen”. The lack of skill in the trades has been noticed by Louisiana Pacific Corporation who announced that it would start producing plywood panels with ink lines because today's “installers” were not able to nail in a straight line. Of course, it was not promoted in such a way, rather the advertising campaign touted “new ease of installation” much in the same way Toyota approaches the assembly line. Why are the skills of workers declining? The answer to that question is, automation and mechanization. Machines are more productive and efficient than humans, and their implementation have replaced the skills of workers. It is not that workers are unwilling to learn skills; on the contrary, it is that the skills are simply not necessary. Why would a carpenter spend years of training to learn how to build a door or cabinet from raw lumber, if doors and cabinets are manufactured in a factory and reach the job site in a box ready to install. And besides, even if there were a carpenter with the available skills to build a door, the cost of that door would be about $1200.00, as opposed to a factory built door for about $250.00. With regard to quality, the factory built door would be built to higher standards and tolerances due to precision CNC machinery. A high level of skills are no longer necessary in much of the blue collar

world, the carpenter who becomes an installer, the pipe fitter (plumber) who then needs only to glue plastic pipe and the machinist who becomes a robot attendant all share the same experience. The skills which at one time defined their professions and to some extent, their existence, have been taken away by machines. These trades people cannot compete with the robotic arm so admired by Thomas Friedman. "I was fascinated watching the robot that applied the rubber seal that held in place the front windshield of each Lexus. The robot arm would neatly paint the hot molten rubber in a perfect rectangle around the window" (Friedman 30). The robotic arm is perfect, it never becomes tired, sick or distracted. It can work 24 hours a day without rest, and once again the completed job is with consistent precision. From a production and efficiency point of view, there is no contest. Corporations agree, and the resulting impact has been felt around the world, but most notably in developed countries where craftsmen have been reduced to installers. This is not to say that there are no high skilled craftsmen, but the trend is certainly eliminating the need for such skills. Skilled carpenters are only needed for custom work, which is rather unusual. The result has been a digression to the opposite extreme where any type of skill at all, is lacking, hence the need for ink lined plywood. Perhaps automation will create a society of idiots who learn nothing because so little is required of them.

So where then is the knowledge required in this knowledge based economy? At the

top in the professional ranks. Those who engineer and program the robots and machines. Those who study and alter the DNA of plants and animals. Those who manage information technology. And certainly all those who work on the fringes of these professions. That is who will need the knowledge, the education, the talent and the intelligence in the new global economy:

> A knowledge economy requires two interlocking but very different skill sets. Knowledge creation requires highly educated creative skills at the very top of the skill distribution. Knowledge deployment requires widespread high quality-skills and education in the middle and bottom of the skill distribution. The same country need not lead in both. As we have seen, in the first half of the twentieth century the United States led the world in per capita gross domestic product (it had the highest deployment of knowledge), but Germany was the world's leader in the creation of new knowledge. Superior deployment skills in the middle and lower skill ranges allowed America to generate higher levels of wealth than Germany without having Germany's creative skills at the very top (Thurow 135).

Knowledge is to the economy of the third industrial revolution, what land and energy were to previous economies. Knowledge is, and will continue to be the source for the creation of wealth in the economy of the globalized world. Once again, this begs the question, what kind of knowledge and skills will be rewarded?

On a most basic level, literacy and mathematical ability are essential. These skills are needed at the bottom two thirds of the work force. These are the individuals

who will not advance their education beyond high school. Their ability to read, write and communicate, although it sounds overly basic for developed countries, are essential for success in the service sector. In the following analysis productivity gains in the service sector will be scrutinized. As for mathematical skills, in the realm of the information economy and high technology sector, these skills are paramount. Of course, the importance of these skills is nothing new. They have been taught in school to children for at least one hundred years if not longer. However, it is the contention of many, that in the United States in particular, these basic skills have been lost. As for the collection of developing countries, these skills many times remain allusive.

Once again, to refer to a past argument, the automation of society has in turn "dumbed down" the individual. There have been many references to the "dumbing of America." This topic in itself is worthy of lengthy discourse, however, this is not such an arena. The main points though, may be touched on. From a societal point of view, such passive entertainment forms as television which have become so pervasive in the United States, require little intellectual involvement and no creative involvement. The process of watching television is purely passive and the individual reacts to the stimulus seen on the screen. Years past, Americans entertained themselves by reading, singing, playing musical instruments, telling stories and engaging in other social activities. People gathered, interacted, learned

from one another and enjoyed each other's company. For years now, Americans spend their leisure time sitting in front of the electronic box without social interaction on any measurable scale. As a result, creativity is lost, and a wide range of skills are lost including the art of social interaction.[5]

On a career level, the "dumbing of America" has taken place as a coincidence to globalization. As we now know, in America there is little commitment by companies toward their employees. The global labor market has enabled companies to locate in any part of the world to benefit from lower wages. Training is an expense, which these companies avoid as they search for workers with the skills required to perform a job function. In addition, as was stated previously, the level of skill required to perform most blue-collar level jobs has declined. The resulting circumstance is that companies need to invest less in training and are able to transport their activities to that place on the globe where labor is cheapest:

> As job uncertainty rises, those with a strong interest in the success of their current employer decrease in number. Surveys show that while attachment to their occupation has remained constant for American workers over the last two decades, those with a strong attachment to their employer have decreased by one-fifth. When more than half of the work force report that they have no attachment to their current employer, something serious has happened. The system is evolving toward less commitment and less skill investment, just as it should be evolving in the opposite direction (Thurow 143).

Nineteenth century Massachusetts mill owners realized that educating the children of their workers would in turn increase productivity and profits. They discovered this by noticing that workers who could read and tell time were more productive because they could read instruction manuals and operate new machinery with little help. In affect, these literate people were self sufficient and more productive. The result was the creation of the public school system in the United States.[6]

Today, however, paternalism has gone, companies avoid investing in developing the skills of their employees. It has become the individual responsibility of each person to acquire knowledge and skills. This is most true in developed countries such as the United States. The acquisition of knowledge has growingly become an individual venture rather than a public venture. What is meant by this, is that specific professional knowledge acquisition is the responsibility of the individual. Corporations are no longer in the business of training. The expectation is that employees come to work with the necessary skill and knowledge to do the job. While schooling provides the foundation for lifelong learning and success, it is impractical for the school system in any country to teach profession specific knowledge. That is not to say that it is not possible nor that is has been done before, only that to completely educate students would be highly resource intensive. While it is not completely within the scope of this analysis to evaluate the educational systems of countries around the world, it must be said that an education system may have

much to do with the success or failure of a nation to compete in the global economy. Certain developing nations have been known to create large segments of the population who are well positioned for success in the global economy. For example, India has focused educational efforts on mathematics for decades. As a result, there is a formidable contingent of Indians who excel in the software programming industry, which requires high mathematical skills. These Indians by and large, have immigrated to the United States and other developed nations where they have profited from their mathematical knowledge. Recently however, software programming firms have established offices within India to take advantage of the high skills and low cost of labor. In the United States, an Indian programmer would earn a salary competitive with his peers in the United States. By moving the operation to India, the programming company can now pay an equally skilled programmer a wage that is typically higher than an Indian wage but substantially lower than an American wage. In a sense, this is the heart of the global economy. To seek out the highest skilled workers in the world who can be paid the least, while selling the finished product somewhere else in the world where the price is the highest.

To return to the topic of knowledge and the role of a knowledge-based economy in globalization, the idea of property rights must be considered. The notion of property rights in developed countries has not been an issue for at least a

century. However, the property rights being referred to are those concerning land and physical equipment. A new type of property has emerged as a result of the third industrial revolution, intellectual property i.e., knowledge:

> Capitalism began in Great Britain with the enclosure movement that converted what had been the communal agricultural lands of feudalism into privately owned land. The process was messy, unfair, and violent-much like the process of establishing who owns what in Russia today. In both cases the strong seized assets that had in the past been used to support the entire community. The strong then called upon the police powers of the state to help them protect their new ownership rights. Whatever the process for establishing clear, enforceable property rights, capitalism does not work unless who owns what is clear. The private ownership of productive assets and the ability to appropriate the output that flows from those assets lies at the heart of capitalism. This principle is what gave capitalism its name. To make capitalism function, legally enforceable ownership rights have to be established (Thurow 116).

A functioning legal system which determines and establishes property rights is vital to the essence of capitalism for two reasons. First, no economic system can function well in chaos. A legal property rights framework eliminates chaos. Secondly, as Hernando DeSoto so emphatically purports in his book, The Mystery of Capital, the ability of individual property ownership under a legal framework acts as an engine which fuels capital growth. Property assets, according to DeSoto have a productive value, i.e., they enable the owner to leverage the asset value in order to produce greater yields. In other words, property assets are something like

potential energy. The potential energy found in items like the sun, a flowing river or fire in themselves have little or no economic value. However, the application of a flowing river for example, to spin turbines and create electricity now releases the economic value of the river. The river then becomes capital. Actually the river has always had capital potential, it is the human mind which has figured out how to release the latent capital. For capital is not synonymous with wealth or income. Capital is that which applied correctly, produces wealth or income, or both. Capital is as energy, latent with potential application and productivity:

> For Smith, economic specialization-the division of labor and the subsequent exchange of products in the market-was the source of increasing productivity and therefore "the wealth of nations." What made this specialization and exchange possible was capital, which Smith defined as the stock of assets accumulated for productive purposes (DeSoto 41).

The productive energy locked in capital assets can only be released through the creative thought process and ingenuity of humans. Asset value is not a given, it must be created by the ability of humans to envision a productive use for the asset. However, there is a vital key to this process, property law:

> Legal property thus gave the West the tools to produce surplus value over and above its physical assets. Property representations enabled people to think about assets not only through physical acquaintance but also through the description of their latent economic and social qualities. Whether anyone intended it or not, the legal property system became the staircase that took these nations from

> the universe of assets in their natural state to the conceptual universe of capital where assets can be viewed in their full productive potential (DeSoto 51). Property, then, is not mere paper but a mediating device that captures and stores most of the stuff required to make a market economy run. Property seeds the system by making people accountable and assets fungible, by tracking transactions, and so providing all the mechanisms required for the monetary and banking system to work and for investment to function. The connection between capital and modern money runs through property (DeSoto 63).

According to DeSoto, a functioning property law framework achieves the goal of releasing the potential asset value from property for several reasons. For one, a property law framework establishes a comprehensive system which is collective and unilateral. That is to say, that there is only one system and one collection of certified records and one coherent legal code. This is essential in the proper functioning of property ownership:

> Accountability of people is enforced under a system of functioning property law. With the advent of titles and legal ownership of property comes the possibility of forfeiture. This possibility creates incentive for individuals to perform. Debts must be paid. If not, property liens, unfavorable credit reporting and possibly the loss of property may result. On the positive side, by creating a national framework the property owner can readily unlock the potential which lies in the ownership of property. This network of ownership is vital to property law. "One of the most important things a formal property system does is transform assets from a less accessible condition to a more accessible condition, so that they can do additional work" (DeSoto 56).

Networking property law not only enables the property owner to unlock the capital asset of that property, it networks people. In years past people rarely traded with others outside their village. The reason for this, is that, not knowing the other party opened the risk for not being paid or other fraudulent activity. Hence, people only traded with people they knew, to add assurance that one would be compensated for the products or services rendered. With the establishment of the network of property systems, one had recourse. Liens could be placed on the property of those in default and suits could be waged against those who provided defective products or services. Now people could trade with strangers with some reassurances. This was a legal development, which led to vast economic changes. National economies were born.[7]

Knowledge is the property which holds vast amounts of capital asset value in the twenty first century. Unfortunately, the laws which establish and protect intellectual property are in the infancy stage. Today intellectual property rights are where land rights were in the United States two hundred years ago:

> With the advent of the third industrial revolution, skills and knowledge have become the only source of sustainable long-term competitive advantage. Intellectual property lies at the center of the modern company's economic success or failure. Raw materials can be bought and moved to wherever they are needed. Financial capital is a commodity that can be borrowed in New York, Tokyo, or London.

> Unique pieces of equipment that cannot be obtained or are too expensive for one's competitors to buy simply don't exist. The knowledge that used to be tertiary after raw materials and capital in determining economic success is now primary. With this reality comes the need for more differentiated systems of determining who owns what intellectual property, better protection for whatever is owned, and faster systems of dispute resolution when disputes arise-as they will. Major companies such as Microsoft (the world's most valuable company in 1998) own nothing of value except knowledge. Fighting to defend and extend the domain of their intellectual property is how they play the economic game. If the intellectual property of industries such as microelectronics, biotechnology, designer-made materials, and telecommunications can be easily copied, companies will not be able to generate either wealth for their owners or high wages for their employees...Everyone understands what it means to own land or productive equipment and how those rights can be enforced. It is not so clear, however, what it means to own knowledge or how those ownership rights can be enforced (Thurow 116-118).

The creation of a comprehensive intellectual property legal system is, for the most part, outside of the scope of this investigation. However, as Thurow identified, the need for this type of legal system is vital for the further development in any high technology industry. If those individuals and companies who make discoveries are not able to capitalize on the potential profits of their effort, then simply put, research will end. Incentive is the engine of capitalism. Without incentive, humans have little reason to progress. The profit motive fuels incentive and must be regarded as central to capitalism. Systems must be

established to protect incentives, i.e., those who legitimately make discoveries and develop new ideas need to be protected just as the patent laws of decades ago protected those entrepreneurs of the second industrial revolution.

However, it must be noted that excessive protection leads to the disruption of application of sciencentific and technological advancements. That is to say, that often times a monopoly on a technology prevents the perfection of that technology by others. While patent law dates back to the 1600's in Italy, history has shown that generous inventors, i.e., those that do not impose lengthy patents or any at all, tend to have their inventions improved upon and reach more of society in a shorter period of time. Hence, the concept of intellectual property rights has the potential to benefit society by protecting the profit incentive while also hindering the advancement of perfected technologies and democratization of products. The former, in economic terms tends to be the lesser of evils. That is to say that, the profit motive is the incentive which advances science and technology. The creators and those who invest in their projects must be protected, however, not to the point of exaggeration. To reiterate, knowledge is the focal point of economic success in the global economy. The accumulation of knowledge and skills will make nations, companies and individuals wealthy.

2.3.2 Creating Capital

Creating capital in a global economy may seem like a daunting task. True enough, for many nations capital creation is elusive while for others it seems to come so naturally. In the economies which followed past industrial revolutions, capital creation clearly featured physical attributes. Early on, as was aforementioned, land was a critical element as a capital asset. In this capacity land was used to generate surplus food to be sold at market. With the advent of the first and second industrial revolutions, land contained valuable natural resources such as coal, oil and to a lesser extent, diamonds, iron ore, timber, copper, aluminum and other materials. In time, the land itself paled in value compared to the resources which were drawn from it. For nearly two centuries natural resources have dominated the wealth creation phenomenon. The implications were grave for those regions which had no natural resources, until and island nation located in the Pacific Ocean proved that knowledge, skills and ingenuity would be the developmental factors and wealth generators of the future.

Japan, a country with few natural resources began to use its human resources. The game of creating capital was forever changed. Once again, the human mind triumphed over typical conventions. The creativity of the Japanese enabled them to compete in industry, with nations which held much more natural resources. The rest of Asia followed:

> With lots of labor and few natural resources in the last half of the twentieth century, Asia mobilized capital.

> Government controls and incentives forced savings rates to levels never before seen. Singapore's savings rate exceeded 50 percent. China, as poor as it is, saved 30 percent of its national income. Rapid growth followed in the wake of huge inputs of plant and equipment. In this initial mobilization phase of development, productivity growth is minimal. Inputs are going up as fast as outputs. Productivity growth comes only, and should come only, after labor and capital resources are fully mobilized (Thurow 51).

In reference to the earlier discussion, capital is similar to energy, in that it fuels productivity and holds the potential to create wealth. In all definitions of capital, what is most pervasive is the notion of potential. The idea of potential in relation to production, relies on the mobilization of assets, i.e., capital assets. The mobilization of capital resources determines increased productivity which creates wealth on a personal, corporate and national level. In the global economy, wealth creation is the name of the game. By creating wealth, that is, the ability to take advantage of disequilibrium situations in the market, enables the wealth creators to reinvest in the increased productivity continuum. However, those who have created wealth must not only reinvest, but also reinvent. What this means, is that, sometimes firms must realize that they need to destroy themselves in order to create the new technology to take advantage of disequilibrium.

First of all, what is meant by disequilibrium especially in the context of global markets? In a functioning economy generally speaking, an equilibrium level of

trading in the market is found. That is, technology is common, and industry standards for price are set by the market willingness to pay. Profits in traditional industries are flat and most companies competing within the given industry reflect similar balance sheets. Certainly, efforts are made to increase profitability through various means. Exploiting economies of scale and scope have been popular means as well as streamlining operations and production to gain efficiencies on the cost side of the equation. In relation to globalization, companies have sought out places in the world where products can be produced for less labor cost. In turn, the finished goods are sold in another location on the globe where the market will bear the highest selling price. Corporate mergers and acquisitions have increased efficiencies. These efforts have been largely successful at increasing corporate profits. In all of these examples, the potential of capital has been mobilized. Wealth has been created by exploiting the gap initiated by a reduction in input. These input versus output gains are accentuated by the global positioning of corporations. Having said this, the largest potential disequilibrium has always existed in emerging industries. New technologies create situations not seen in mature industries and markets. First and foremost, a limited number of players create the imbalance in competitive behavior. Often times, new industries are dominated by a single company for a period of time. During this period, the company attempts to establish itself as the market standard. Done successfully, the barriers to entry become so high that new market entrants are rare. For example, Microsoft has

achieved this with its Office software. While there are other word processing and spreadsheet programs on the market, consumers are reluctant to purchase them because Office is the industry standard as well as compatibility issues with other users.

The emergence of a new industry or industries as we have seen in the three industrial revolutions, have been latent with disequilibriums which were capitalized on by enterprising entrepreneurs. The mobilization of new capital or old capital in new ways, has been the source of wealth creation of extraordinary proportions. Thurow speaks of the disequilibrium conditions which were developed and exploited during the second industrial revolution:

> Entrepreneurs could create new businesses with few or no national competitors and produce new high-value-added products with financial returns and growth rates far above those in the economy as a whole. Entrepreneurs could use these new technologies to transform old industries, dramatically cut their costs, and make profits far above those made by firms using the old technologies. With limited competition in both the new industries and the old industries. With limited competition in both the new industries and the old industries using new technologies, cost fell faster than prices and profit soared. Financial markets capitalized these streams of higher current and future profits at high price/earnings multiples just as they do today. Those who created and owned the new national companies became fabulously wealthy. A generation of great wealth suddenly emerged. Eventually disequilibrium conditions always disappear. New industries with high returns and high growth rates become old industries with

> much lower equilibrium returns and normal growth rates. As technologies mature, profits get squeezed as competitors arise to drive down selling prices faster than technology is driving down costs. Penetration rates for the new products reach saturation levels. Growth markets become replacement markets. But eventually often means several decades. It takes times to attract enough market capital and people into these new industries so that they expand and become normal competitive industries. In the meantime there are great fortunes to be made (Thurow 21-22).

The ability to seek and develop disequilibrium in business obviously takes ingenuity creativity and talent. In his book Global Paradox, John Naisbit explains how he sees the development of the global economy in the terms of the ability to exploit disequilibrium. The subtitle of the book is, The Bigger the World Economy, the More Powerful it's Smallest Players. In this subtitle is Naisbit's hypothesis, which basically claims that the power of the individual entrepreneur has never been greater. With the advent of communications and the seamlessness of international markets, the entrepreneur can and does take advantage of disequilibrium not only at home, but also in the world market. Having realized this, it is evident that the entrepreneur stands to make fortunes of exponential proportions. Certainly, the inventions are dependent in some degree by the social, political and economic situation of the host country to a particular entrepreneur. Wealthy nations spend more on research and development. More advanced nations also have more streamlined legal processes and stricter patent enforcement. To be sure,

entrepreneurs and inventors may be more productive and thus more successful in some countries while in other countries new capital development is elusive. These are only a few of the factors involved in the successful development of new capital. The point is, that once an entrepreneur is able to identify a source of capital which, if used to its potential, may result in a disequilibrium, that individual has the ability to exploit the disequilibrium globally. The lesson is that nations, corporations and individuals are responsible to create and establish the conditions necessary to foster the ingenuity. Whether it be increased research and development funding, or the adoption of social and cultural changes, people of the world need to be focused on the creation of capital which holds the key to wealth.[8]

Many times capital is right before us and it goes undetected or unexploited. According to DeSoto, the developing nations of the world hold more value in dead capital than they have received in foreign aid throughout their entire history. The reason for this is a lack of comprehensive and efficient property laws which enable property owners to use the potential locked in their property as capital. In Western nations, where property laws have been perfected, it is common for entrepreneurs to use the capital resources of home ownership to back bank loans for business endeavors. This is not the case in much of the developing world because of bulky bureaucracies and a lack of comprehensive property ownership laws. Many members of these societies conduct business extra legally, that is, outside of

governing laws. Hence, the capital of property ownership is never realized and is rendered dead. This is a case of capital being clearly visible yet dormant or underutilized. In these nations it is vital to unlock the potential which lies in the ownership of property. Once this is done, as it was in the West centuries ago, the citizens will prosper, develop and invent.

For other countries capital creation may involve the advancement of science or technology. In these situations the new capital may come in the form of a gene, enzyme or microchip. The form of the capital is almost irrelevant, the point is that capital creation must be encouraged. Through the inventing, development and realization of capital, is the foundation upon which wealth is built.

2.3.3 Knowledge as the Capital of the Third Industrial Revolution

Knowledge, skills, know-how, education and similar attributes have come to signify the capital resource of the information age, also known as the third industrial revolution. Intellectual capital or intellectual property has created the majority of the wealth during the third industrial revolution. This trend is most perfectly exemplified by Bill Gates and his company Microsoft which owns nothing but ideas. It is the creation and application of these ideas, which has made Microsoft such a market force in the past decade. Obviously, there are many other successful

individuals and firms which have come to signify what the knowledge-based economy is all about. In general, the notion of knowledge as capital replaces the means of capital wealth of previous economies which relied on natural resources. Oil, coal, iron ore and land are no longer as important as means for wealth creation. Hence, geography no longer dictates the wealth of a nation. The knowledge based economy is truly globalized in this respect because knowledge may be cultivated anywhere.

2.3.4 The Allocation of Knowledge and Capital Resources to Generate Wealth

The nature of the knowledge-based economy is truly global in that knowledge is not contained by geography nor is it exclusive or limited. Knowledge and creativity are limitless and have no boundaries but the human imagination. In this respect, there is more hope for developing nations and small economies than there has been throughout modern history. The key however, is focus. Any country can compete in the global economy and excel. As was mentioned previously, India at one point concentrated its educational focus on mathematics. By focus its limited resources in this direction, India is now becoming a player in the software engineering industry. Japan accomplished great success in manufacturing automobiles and electronics by concentrating its efforts on improving the designs of others and a relentless commitment to efficiency in the manufacturing process. The point is,

that when a nation, company or individual focuses its energy and resources on a particular industry or application, great success may be realized. This is particularly true for developing economies with limited resources. In the global economy, there is the ability for all to participate and compete, however, those who narrow their focus and develop the necessary infrastructure will be the biggest winners.

2.4 The Emerging Role of Political Economies

As the distinction between commerce and politics becomes less clear, it has become evident that the role of government is evolving. Naturally the rudimentary functions of government are to implement social order and the protection of it's citizens. The role of government is evolving to also include the promotion of the socioeconomic prosperity of it's citizens. This evolution in function of government has been marked with success as well as failure. The governments of advanced economies began their evolution with protectionist policies designed to ensure the prosperity of industry by manipulating foreign competition. In the long-term, these protectionist policies proved to cause more harm than good. To this day, the dismantling of the protectionist tariff system has been a challenge. While the consensus among economists is unified with regard to the elimination of protective tariffs, the reality of the power of the electorate has slowed progress to this end.

Slowly, the emergence of trade blocks has been evolving with the goal of trade aperture. Among the member nations of these trading blocks, economic cooperation has been visible. Two of the more notorious trading blocks, NAFTA and APEC, have provided trade cooperation between several nations of various developmental levels. Thus, the evolution of the new role of government is headed in the right direction, i.e., to promote the economic prosperity of it's citizens by developing competitive and comparative advantages through the conduit of trade rather than market manipulation.

2.4.1 The Region-State vs. The Nation-State

As the twenty-first century progresses it has become increasingly difficult for large social organizations to adapt to external forces while protecting the delicate synthesis which defines its very existence. These large organizations which are being alluded to, are nations. The synthesis of norms which defines the culture and ethical values of a complex social arrangement such as a nation are vital to the foundation of that society. However, the glue which proves to be the adhesive for societal composition has proven to be quite fragile. In this connection, the ethical values held dear often times become ambiguous and anything but universal. We are not speculating that the ethical views which encompass negative rights are in question, rather, those standards which have become more associated with positive rights. To be more particular, the ethical standards which have come to be

in question are not as specific as to the provisional application of justice and fairness. As we know, the more advanced societies of the world have come to fully embrace the moral import of the protection of the rights of its less advantaged citizens. We are not arguing this aspect of positive rights. The issue at hand is one with which virtually every nation must be concerned. It is the concept of government protection of national interests.

As a precursor to the forthcoming analysis we must establish some vital points. First, the notion of "national interest" in terms of economics and the ethical ramifications in this connection are highly ambiguous. Hence, it will be one of the main queries of this analysis to determine from an economic and ethical point of view, the parameters of the concept "national interest." To be sure, we are secure to assume that "national interest" in the most rudimentary definition is ultimately concerned with the physical, social and economic well being of the citizens of a particular nation. It is the application of actions to this end which brings us to the next juncture.

With reference to democratic states, promulgation of national interests has, by and large, been left to the discretion of elected officials. In this connection, government has regulated the forces (both inside and outside forces) which impact the well being of society. As we know, government regulatory practices vary

significantly from nation to nation as well as from industry to industry. The reasons behind these regulations are multifarious and not within the scope of this analysis. However, the focus of this analysis is concerned with the validity and impact of government policy. With the assistance of Kenichi Ohmae we will explore the ramifications of government policy from an economic point of view in relation to the impact these policies have on the national interest. Moreover, as a result of this analysis we will be endeavoring to judge the ethical validity of these policies from several viewpoints.

In his article, "Putting Global Logic First," which appeared in the January-February, 1995, edition of the *Harvard Business Review*, Mr. Ohmae elaborates on the fundamental differences between the nation-state and the region-state. A nation-state is largely defined by political borders, an historical trait reminiscent of the eighteenth and nineteenth centuries. Nation-states are bound by political authority evidenced by law and regulation. Moreover, nation-states cement the entity by geographic boundary lines as well as with transcendent sociological concepts such as cultural norms, values and a common language. While the nation-state was preeminent for several centuries, Ohmae argues that this form of organization has outlived its usefulness.

According to Ohmae, nations must organize giving preeminence to economic

forces. “Economics, not politics, defines the landscape on which all else must operate” (Ohmae 119). The obsolescence of the nation-state is due to three factors identified by the author. “First, the often instantaneous movement of people, ideas, information and capital across borders...” (Ohmae 119). The movement of capital and information in particular have greatly attributed to a significant loss of government control. The article cites an example of how governments once controlled the exchange rates of currency. Now however, money speculators are able to influence currency values such that governments can not exercise significant leverage.

The second factor contributing to the demise of the nation-state involves a global consumer awareness. This phenomenon is evidenced by international brand names as well consumer awareness of how others live in other nations. In this connection, it becomes government responsibility to “make sure their people have access to the best and cheapest products from all over the world. When governments refuse-in the name of national interest or market protection or whatever-people will find a way to vote with their pocketbooks” (Ohmae 120). In this connection, citizens of different nations share commonalities, i.e., they are consumers of similar products. Hence, the membership in a consumer market group substantially unifies individuals who live in different nations. This so called unification is not a conscious phenomenon among these individuals, rather, it is an economic

commonality or a unity of a particular market. All this is to say, that the political boundaries of old are being dissolved by forces such as the unity of markets.[9]

The third force working against the nation-state are the political policies of the state itself. "The nation-state, which was a powerful engine of wealth creation in its mercantilist phase, has become an equally powerful engine of wealth destruction. To stay in office, elected leaders know they must satisfy the often unreasonable demands of powerful special-interest groups, such as unions, farmers and fishermen in Japan" (Ohmae 120). To be precise, the failure of the nation-state is founded on its ambition to control economics. "by heritage, nation-states are comfortable with the invisible hand of the market only when they can control or regulate it" (Ohmae 120).

Region-states, conversely, operate according to economic principles while using political policy as a secondary measure. Region-states operate in a borderless economy which include geographically disparate areas. Economic zones are the formational force behind the conglomeration of regions. "Region-states are the natural economic zones in a borderless world because, by definition, the demands of the global economy shape their contours" (Ohmae 122). In practice, an economic zone of a particular nation would pair up with similar zones in other nations to form an economic region. The goal is to effectively pair up with zones of

comparable strengths in terms of market size and infrastructure. In this connection, it becomes vital that a nation develop the infrastructures of its particular economic zones. Hence, a region-state with highly advanced zone infrastructures will compete effectively in the global economy. The degree to which a nation has advanced its infrastructure is referred to as the ladder of development. Obviously the more advanced a nation's infrastructure becomes, the more sophisticated products it is capable of producing. To this end, it is the goal of the region-state to advance its infrastructure as much as possible, and to dedicate resources to particular areas of specialized expertise. Moreover, the region-state is not concerned with foreign investment, foreign ownership or foreign products. It is however, concerned with providing its people with a higher quality of life and the best and cheapest products in the world. “The only real question, then, for political leaders-the only responsible question-is whether those tides can be harnessed to provide a better life for their people” (Ohmae 125).

The economic forces are evidently exerting significant pressures on government to reform and reorganize. The region-state phenomenon has already firmly entrenched itself throughout world economics. The question which must be asked at this juncture is-what is the most ethical choice in this situation? Powerful government officials in the United States have been reluctant to relinquish their sovereignty to the forces of economics. Ohmae suggests that nations which have

ascended the ladder of development typically find it difficult to diminish regulatory practices. The reason for this, he states, is that these nations wish to continue to enjoy a high GNP, and in their insecurity feel it necessary and possible to control the market. Unfortunately the consequences of such actions result in a contradictory outcome. Government intervention has resulted in the hindering of progress for many promising nations. The challenge for policy makers, he claims, is to let the invisible hand of the market system determine what will be produced and in what quantities. Obviously, special interest groups in the U. S. have a difficult time digesting such a notion. After all, many special interest groups strive to keep alive industries in the U.S. which have been long dead. Policy makers are at the mercy of these special interest groups and thus pass into law, regulations which protect many feeble industries by placing high tariffs or quotas on import products. If Ohmae is correct, then these policy makers are doing a great injustice to the American people in the long run. Let us now analyze the ethical import of protectionist behavior.

To reiterate the main focus of this phase of the analysis brings us once again to the issue of the ethical import of policy making with respect to protectionist legislation. This analysis may apply to all nations, however, let us predominantly keep in mind the particular situation of the global economy throughout the discussion.

The father of economics, Adam Smith, identified the economic market as being the primary force in the creation of modern society. His revolutionary ideas which centered on concepts such as self-interest and market power have been much debated. The "invisible hand" leads individuals to produce what is most valued by society thus creating the greatest amount of welfare for society. In this connection, a division of labor is realized in which individuals specialize in employment which is most suitable to their talents and resources. This selection process is mostly determined by comparative advantage. This brief synopsis of Smith demonstrates that the production of goods and services is at the core of modern society. Moreover, it is the value of these goods and services within the market that establishes much of the cultural norms we experience. In essence, my premature conclusion is in agreement with Ohmae, that economics ought to set the guidelines for all else to follow. After all, if it is correct to assume that economics is at the core of modern society, then government must take a back seat. Unfortunately, policy makers have not always accepted this point of view. The result has been a heavy hand placed upon the activity of the market as is typical in a nation-state arrangement.

As this analysis proceeds to discredit protectionist policy making, the use some rather sophisticated philosophical theory shall be employed. The concept of value

has certainly emerged as one of the principal components of economic theory. “The science of value” in its connection with economic theory has engaged rational choice as a preeminent force in economics (Braybrooke 454). Personal and collective rational choice has been cited as the drive behind the market in general and price determination in particular. An individual's choice to acquire a certain product within the system of free trade unequivocally places a value on that product. Moreover, the individual makes a choice as a result of a rational process. Collectively, individuals with similar needs, desires and tastes value similar products and place similar values on those products. Hence, the market system is largely dependent on rational choice as its catalyst. Since the rationality of humans is hardly arguable, let us ascend to the next level.

It has been assumed to this point that the market system is a natural phenomenon that is driven by individual self-interest. Furthermore, the market system is sustained by human rational choice. To clarify, the choices that humans make involve the selection of products and services which are most needed and desirous. This also involves the selection of one product over another of the same type. These two presumptions lead to the deduction that the artificial regulation of the market is unethical on rational grounds. That is to say that government intervention in the market system defies all rationality as it circumvents individual as well as collective rational choice. Once protectionist policies are enacted the

economic forces which are the life blood of the market system are significantly disturbed. Price determination then is no longer a direct result of rational choice and the science of value, but of political policies such as quotas and tariffs. In a well reasoned attack on government policy, David Braybrooke has commented:

> As a general ideal, the classical liberal conception of the market has been politically discredited-perhaps before all its philosophical lessons were drawn. Is it not in some respects a subtler and farther-reaching ideal for collective rationality than, for example, Kant's kingdom of ends, in which every legislator has the same moral tastes and assents to exactly the same way of life? The market ideal offers a collective means for harmonizing a great diversity of tastes-even ways of life-with minimum recourse to prohibitory legislation and minimum use of coercion. Might not the market accomplish, moreover, at least a major part of justice? It seems unjust to give some people's preferences precedence over others' unless there are moral grounds for doing so; the market ideal (in spite of its traditional silence regarding unequal property) shows how equally valid preferences can be treated equally. As a means of expressing many peoples' preferences simultaneously and obtaining some attention for all of them, the market can handle much more complex information than any practical system of voting (Braybrooke 456).

The point once again, is based upon rationality. Braybrooke builds an argument which appears to be soundly grounded in collective rationality. He drives home the point that the market is so purely a result of rationality that it transcends even a utopia such as Kant's kingdom of ends. Moreover, the market system as it is based

upon pure rationality is most probably the most equitable form of justice. The market certainly listens to all, and to some varying degree every individual's needs and desires are satisfied, an ideal which is certainly not evoked by many political systems.

The concept of the market system providing a framework for justice is also addressed by John Rawls in his acclaimed A Theory of Justice. According to Rawls, the principles of equilibrium and economic efficiency are the basis of distributive justice. In his conception of the Difference Principle, the consequences of actions are highly valued. "The intuitive idea is that the social order is not to establish and secure the more attractive prospects of those better off unless doing so is to the advantage of those less fortunate" (Rawls 75). While Rawls is critical of many aspects of the market system, he gives it credit for being a highly equitable system of justice at the point of equilibrium. At equilibrium, he claims, economic efficiency determines the mutual welfare of all participants. This notion of social welfare is central to our analysis of the ethical import of protectionist policy making. Adam Smith certainly formulated a powerful case in favor of the market system as being the most positive determinant of social welfare. Modern thinkers such as Milton Friedman also have embraced the market system as a highly ethical system. In this connection, the market system often times has been regarded as an ethical system in itself. This trend which is British in origin focuses on the

ethical neutrality of economics. While continental philosophical thinkers have endeavored to discredit the ethical neutrality of economics, they have not realized any great deal of success. Economics as a descriptive science remains value-free in its assertions. According to Hume however, economics becomes an ethical system in that its ethical neutrality lends itself to prescriptive deductions. To this end, economics becomes value impregnated only through human interpretation. Economics as a science remains pure in its ethical neutrality.

2.5 The Role of Government in the Global Economy

By and large, the trend in role of government in the global economy has weakened. Corporations have exerted enormous pressure on governments in developed and developing countries alike. In developed countries the pressures have been related to environmental policies and trade regulations. Generally speaking, the strict environmental policies in developed countries elevate the cost of production for manufacturers. This has been an historically common reason for firms to move manufacturing facilities to countries with more lax environmental policies.

With regard to trade regulations, the issues are generally tariff related. Firms such as Honda and Toyota have begun manufacturing cars in the United States to avoid import tariffs among other reasons. As the national origin of corporations becomes increasingly blurred, as well as the multi locations of product

manufacture, it becomes more enigmatic for governments to formulate fair trade policies. Historically, in the United States and other nations, protectionist policies generally fail. For example, the American obsession to preserve domestic steel production eventually failed only after several decades of government support which vanquished billions of dollars of taxpayers money. The truth of the matter is that the modern factories of Japan and Germany coupled with the latest methods of efficiency simply outperformed American mills. If the United States truly wanted to compete, the right path would have been to modernize the industry, not to protect it from competitive forces. Protectionism is only a temporary solution. Companies in a particular industry must compete on their own merits, this is what globalization has taught the business world. Governments, have learned the hard way, great sums of money have been wasted in numerous countries, on protectionist policies and subsidies. Unfortunately, the practice persists. However, the forces of globalism will eventually overcome all protectionist practices.

The pressures that corporations exert on the governments of developing countries are connected to tax advantages and incentives. Corporations are continuously seeking for the place in the world where it is the cheapest to produce their product. In this respect, the equation includes the most skilled labor pool for the lowest wage, favorable environmental policies and tax incentives. In many cases, corporations receive a grace period during which reduced taxes or no taxes are

charged. The host country does this in attempt to stimulate the economy with job growth. Often times however, the infrastructure development costs are burdensome to developing nations competing for international corporate facilities. Roads, communication systems, electric power generation and many other infrastructure components must be upgraded to accommodate large manufacturing facilities.

In the globalized world, national governments have lost a great deal of power. The pressures to compete have led governments in most countries to be servants to corporate interests. Corporate interests are proposed as national interests in the name of job creation or job preservation. Legal entities which involve several nations such as NAFTA and APEC have led the trend of regional governance. Just as the first and second industrial revolutions transformed local economies and government to national economies and government, the third industrial revolution and the resulting globalization, are internationalizing economies and government. National governments many now be subservient to international agreements made by a group of nations. Many times these nations are within a geographic region, thus the term region-state. The power of the region-state supersedes that of the nation-state. The region-state responds to the issues of economics and globalization. In theory the decisions made by the region-states ought to be beneficial to all within the consortium. Furthermore, it is the concern of the

region-state to promote optimum competitiveness among its members in order to compete with those outside of the consortium.

At this juncture we must conclude by way of evaluating the usefulness of the nation-state. As was aforementioned, the nation-state has evolved as a political system that governs not only individuals, but attempts to govern commerce as well. The legislation enacted by the nation-state is an ethical system of human creation. Is it not then irrational to employ a system human in derivation to govern over a system natural in derivation. Assuming as we just have, that economics is a natural science, we must conclude that it is absurd to attempt to control the natural fluctuations of economics. Economics ought to be free from government intervention not only because it is a natural science, but as we presumed earlier, manipulation of the market by government circumvents the collective rationality and is thus unethical. The market system as an ethically neutral process defines a more just ethical system than political legislation. The welfare of society is certainly served better by the market than by politicians. The validity of political policies in the new world order is null and void. Region-states are dominating world economics with good reason. Region-states are free from overbearing government regulation, thus enabling them to compete effectively in the world market. More importantly, the citizens of these region-states enjoy a higher standard of living. Hence, we may deduce, that protectionist policies of nation-states are not

effective means of improving social welfare. Conversely, protectionist policies generally hinder the advancement of society in the long term. What then, would be considered serving national interest? National interest as defined by advancing the welfare of the society is best served by the infrastructure of the region-state. The region-state places the authority of economics over that of government.

Why then, do we go so far as to accuse overbearing government regulation of industry and protectionist policy as unethical? These nation-state policies are unethical for two reasons. First, to reiterate our original presumption, these policies circumvent collective rationality. If we apply the Utilitarian principle to this case it becomes clear that the costs of irrational behavior such as protectionism far outweigh the benefits. Similarly, with respect to the Kantian ideal, we certainly could not universalize irrational behavior, or at least, we could not universalize the hampering of human rational choice.

The second reason why nation-state policies are unethical is that they hinder the welfare of society. Again, this notion of hindering the welfare of people is not acceptable by Utilitarian principles nor is it following the Categorical Imperative. If government is not able to preserve and promulgate the welfare of its citizens (which we know it can not) then economics should then replace it.

2.6 The Challengers

Over the past five years the successes of globalization have been challenged by opponents to this trend. These opponents while fragmented, have exhibited their varying positions in the form of protests at various economic gatherings. The first of these protests occurred at the WTO meeting in Seattle, Washington, USA, in 1997. Protests have been since duplicated in Quebec City, Canada, Stockholm, Sweden and most recently in Genoa, Italy at the G8 summit and the Cancún, Mexico Doha Round WTO meeting. While the exact message of these protesters ranges from environmental issues to political abuse and corporate immorality, the fact is that these opponents assert that globalization and international trade are not beneficial to society. Recent articles and books have also been critical of the effects of globalization. Opponents of international trade in any country point to the loss of jobs among their citizens and the reliance on foreign corporations for products and services, some of which may be vital necessities such as food, as distinct disadvantage of international trade. These opponents lay the claim that the powerful capital rich economies have manipulated world economic markets in such a way that these markets have been coerced into adopting capital intensive means of production. With the infrastructure in place, low cost labor and relaxed environmental regulation pave the way to greater operational efficiencies. Finished goods are then shipped back to the home country of the corporation for a realization of greater profit. The loss to the developing country is the forgoing of

local business activity in lieu of concentrated activity. This argument against focusing on comparative advantage will be explored further in the ensuing discussion. The supposed benefactors of these capital intensive activities are the multinational corporations and financial institutions of the powerful economies while the standard of living has scarcely improved among the citizens of developing countries.

While the opponents of globalization, whether they be political, environmental or otherwise, state their opinions, the rate of international trade continues to grow at great speed. Some may suggest that the reason for such growth is linked to the aforementioned economic plot invented by multinational corporations and supported by their governments. The inherent suggestion is that globalization provides, at best, negligible benefit to developing economies, and at worst, a complete dismantling of a functioning local economy. These are the arguments against international commerce and the resulting globalization. Obviously, these arguments counter the popular trend of the present and most probably the future. Perhaps though, the critics of globalization are faulted with subjectivity. While it is certainly possible to overstate the success of globalization, it also then is true that the pitfalls of this trend may be exaggerated.

2.7 The Protectionist Debate

This model is offered as the antithesis of the trade aperture model. In its foundation this model focuses on establishing barriers to trade in the interest of protecting local industries. These barriers are typically manifested in import tariffs, countervailing duties, import quotas and import licenses. Moreover, the protectionist model often subsidizes local industries which are not competitive in the market.

As was aforementioned, this theory appeals to the emotional uncertainty of the population who fear the dislocation which sometimes accompanies free trade models. This theory concentrates only on the moment, that is, it is reaction based rather than strategy based. In this connection, the protectionist often does not research the issue at hand, rather, if an industry is struggling with competition, the reaction is to establish a barrier. Being politically based rather than economically based, this model often establishes arbitrary or interest influenced resolutions.

For example, the U.S. has established a tariff on softwood lumber imported from Canada. In brief, U.S. mills claim that the Canadian mills are subsidized in that the price the Canadian government charges the mills to cut trees on federal land is substantially less than what the U.S. government charges U.S. mills to cut trees on federal land. These charges are typically referred to as stumpage fees. The U.S.

mills have convinced the government to levy countervailing duties on Canadian lumber based on this difference in stumpage fees. However, researching the topic reveals that Canadian lumber companies are responsible for all of the forest management, that is, the replanting of trees on land that has been logged. In the U.S., it is the government that is responsible for reforestation. The lumber companies in the U.S. log the land and leave incurring no cost of reforestation. Hence, the total cost of producing one thousand board feet of lumber in Canada is about the same as in the U.S. considering the reforestation costs. In this circumstance the lower stumpage fee charged to Canadian firms does not constitute a subsidy. Yet the countervailing duties at twenty-nine percent continue despite WTO criticism. The reason for this is purely political, and the consumer in the U.S. pays for these duties in higher prices.

The protectionist model does have basis, although it is emotional and political. In this way the model is flawed because it is not based on logic. Certainly there are industries in countries that are subsidized. In these cases fair trade measures could be considered. By and large however, as the Canadian softwood duty illustrates, these measures are misguided, arbitrary and illogical.

2.8 The Trade Liberalization Model

The model of trade liberalization is the focal point of this thesis. To this point it

has been argued that trade aperture is the logical progression of any normal operating economic system. This model suggests that free trade provides economic benefit to all participants. The theory determining this suggestion is that of comparative advantage. The law of comparative advantage dictates that every nation is producing something, and doing it well. Just as within a particular society, everyone is working, obviously in different professions. Each individual works at what he/she does best. This basic principle of division of labor applies to nations as well. Certainly this model coincides with the principles of the Washington Consensus.[10] To be sure, the Washington Consensus is a logical extension of what has occurred in the industrialized world, however, the critics of this agenda such as Stiglitz emphasize its lack of attention to development economics.

By nature, development economics does not assume that the characteristics of industrialized economies are inherent to all economies. That is to say, that economies of LDC's are generally lacking in areas of infrastructure and institutional framework. DeSoto's claim that the world's poor actually do possess capital assets with no legal framework to tap into the investment potential of those assets is quite accurate. With the lack of property title systems, an institutional framework which is taken for granted in advanced economies, the citizenry of LDC's are not able to invest in their own ideas, creativity and noble work ethic. This is not to suggest that the Washington Consensus completely

ignores development economic issues; for instance, Williamson concludes that " in a highly unequal region such as Latin America, opportunities for making large distributive gains for modest efficiency costs deserve to be seized. To that end, he suggests more effort to collect income tax, and higher property taxes. But more emphasis goes to helping the poor gain assets, such as education and property titles, and through land reform and micro credit programmes" ("Wanted: a new regional agenda for economic growth" 29). However, until recently the Washington consensus failed to focus on the differences in the economies of LDC's and industrialized nations. The consensus, believed that the structuralist approach of direct application of the principles by which advanced economies operate would work well for LDC's. Critics of this somewhat abrupt approach, such as Stiglitz, make the claim that a more cautious approach to modernization be taken:

> But the protests have made government officials and economists around the world think about alternatives to these Washington Consensus policies as the one and true way for growth and development. It has become increasingly clear not to just ordinary citizens but to policy makers as well, and not just those in developing countries but those in developed countries as well, that globalization as it has been practiced has not lived up to what its advocates promised it would accomplish-or to what it can and should do. In some cases it has not even resulted in growth, but when it has, it has not brought benefits to all; the net effect of the policies set by the Washington Consensus has all too often been to benefit the few at the expense of the many, the well off at the expense of the poor. Globalization itself is neither good nor bad. It has the power to do enormous good, and for the countries of East

> Asia, who have embraced globalization under their own terms, at their own pace, it has been an enormous benefit, in spite of the setback of the 1997 crisis. But in much of the world it has not brought comparable benefits. For many, it seems closer to an unmitigated disaster (Stiglitz 20).

The conclusion that may be drawn in a final analysis of Stiglitz and Williamson, is that the variance in ideology of these two economists is minute. They both believe in trade aperture, economic integration, privatization and foreign investment. The divergence however, is in the application of these principles. As history has illustrated, the less subtle approach of the Washington Consensus has caused some difficulties in LDC's. Hence, we now are witnessing a revival of the Washington Consensus by Williamson with a new approach. This new approach does not vary in principle, rather in application. The new approach emphasizes much more than in the past, the intricate aspects of less advanced economies. For example, Williamson is now conceding a larger role for the government, deterrents to corruption and broader measures to facilitate income distribution. In short, Williamson's new approach tends to emphasize development economics in a neoclassical fashion.[11] The application of strict structural adjustment has proven to have many adverse effects. Sound financial institutions must be established as well as all the necessary institutional and perhaps cultural frameworks.

The softening of the structuralist application seems to have taken certain

directions from Stiglitz. In this connection, the merits and benefits of trade aperture and economic integration are realistic and feasible. What is necessary is the correct approach to each individual country. The intricacies of application of various agendas and principles is just becoming discovered as vital to the success of development programs. However, while an interesting topic, this analysis will make a division and concentrate on the socioeconomic benefits of trade aperture and economic integration as worthy and necessary steps in economic evolution.

At this juncture, however, as in evolutionary science, we have witnessed that not all species evolve the same. To compare evolutionary science to evolutionary economics is plausible. Rodrik points out that the new call for fair trade as a precursor for free trade depends largely on cultural differences. These differences in culture determine how companies in different countries conduct business:

> Gone are the days when trade policy negotiations were chiefly about interference with trade at the border-tariffs and non tariff barriers. The central trade issues of the future are "deep integration," involving policies inside the borders, and how to manage it... Economists have ridiculed the notions of "fair trade" and "leveling the playing field" that lie behind many of these initiatives. But once it is recognized that trade has implications for domestic norms and social arrangements and that its legitimacy rests in part on its compatibility with these, such notions are not so outlandish; they address the concerns to which trade gives rise. Free trade among counties with very different

> domestic practices requires either a willingness to countenance the erosion of domestic structures or the acceptance of a certain degree of harmonization (convergence). In other words, some degree of international harmonization (convergence) may be necessary for the gains from free trade to be reaped (Rodrik 37).

With regard to these trade issues of the future, it certainly complicates the simple theory of comparative advantage; for many countries that experience a comparative advantage in a particular industry do so because of favorable domestic policies. These favorable policies typically come into play with regard to environmental policy and child labor laws. Hence, what must be constantly considered in this analysis is the entire nature of the situation which defines the model of comparative advantage. For example, if a country excels in garment assembly yet the industry predominantly uses child labor at very low rates of compensation, then this can not be counted as a valid comparative advantage. Moreover, the socioeconomic benefit of this type of practice is near zero, as the country in question could not climb the economic ladder with an uneducated work force who quit school to work in the garment factories from an early age. Environmental issues share the same scrutiny. While comparative advantage may be gained in countries that do not regulate industry, little long term socioeconomic benefit will be realized.

The issues of "deep integration" will be integral to this analysis for two reasons. First, valid comparative advantage will result in beneficial outcomes for all engaged in trade. It must be noted that the term valid does not imply that all countries apply the exact some policies and laws. What valid does mean in the context of this work, is that the country with the comparative advantage is realizing true socioeconomic benefit. To use the previous example, child labor, while providing income to the poor, does little to provide any true long-term socioeconomic benefit beyond this. Conversely, India is quickly gaining a valid comparative advantage in software programming which provides substantial long-term socioeconomic benefit to its citizens. Invalid comparative advantage will ultimately drive poor nations into even greater poverty while destroying its ecology.

The second reason "deep integration" is vital to this analysis is that invalid comparative advantage, while providing little long term socioeconomic benefit to poor countries, provokes protectionism in industrialized countries. Invalid comparative advantage undermines the principles of trade liberalization and economic integration. It leads to protectionist policies such as subsidies which are defined as another type of invalid comparative advantage. A higher level of integration is certainly the next step in the evolution of economics in general, and trade in particular.

With regard to eliminating trade barriers, this work will demonstrate the conclusions of case studied countries with varying trade policies. It is the goal to illustrate how diminishing trade barriers yields a net socioeconomic benefit to society. Once again, trade aperture is a logical extension of economic activity and international commerce.

2.9 Dollarization & Exchange Rates:

Bretton Woods as a Precursor to Dollarization Practices

The Bretton Woods system which was established in 1944 created a system of pegged exchange rates. That is to say, the variance between currencies was managed and kept in check. In the post World War II era international financial markets were nonexistent, the two resulting institutions of the Bretton Woods system were the International Monetary Fund and the World Bank. These institutions provided the necessary financial foundation for expanded international trade:

> In fact, the free movement of capital is a relatively recent phenomenon. At the end of World War II, economies were largely national in character, international trade was at a low ebb, and both direct investments and financial transactions were practically at a standstill. The Bretton Woods institutions-the International Monetary Fund and the World Bank-were designed to make international trade possible in a world devoid of international capital movements. The World Bank was meant to make up for the lack of direct investments, the IMF for the lack of financial

> credit to offset imbalances in trade. International capital in less-developed countries was engaged mainly in the exploitation of natural resources, and those countries, far from encouraging international investment, were more likely to expropriate it....Nationalization of strategic industries was the order of the day...The development of international financial markets received a big boost around 1980 when Margaret Thatcher and Ronald Reagan came to power with a program of removing the state from the economy and allowing the market mechanism to do its work. This meant imposing strict monetary discipline, which had the initial effect of plunging the world into recession and precipitating the international debt crisis of 1982. It took several years for the world economy to recover-in Latin America they speak of the "lost decade"-but recover it did. From then on the global economy has enjoyed a long period of practically uninterrupted expansion. In spite of periodic crises, the development of international capital markets has accelerated to a point where they can be described as truly global. Movements in exchange rates, interest rates, and stock prices in various countries are intimately interconnected (Soros 174-176).

In effect, the Bretton Woods arrangements made the exchange of products and services between countries much easier. Fixed exchange rates created a sense of stability, in that, the value of currency was a known factor. This system worked reasonably well for a period of time from 1944 to 1971. In 1971 a large market for Eurodollars began to emerge. What this means, is that, large accumulations of U.S. Dollars were being collected in European banks for the purpose of credit and lending. In a sense, this was an early stage of dollarization. However, the result

was the end of fixed exchange rates. Exchange rates began to float. Floating exchange rates were classified as clean floats and dirty floats. Clean floating of exchange rates are driven by market forces. It is a pure form of market capitalism. Dirty floating of exchange rates result when governments intervene in the value of currencies. Recent history has been dominated by dirty floating of exchange rates.[12]

The decade of the 1970's was marked by this fundamental shift in exchange rates and resulting trade. Global capitalism was in the making with the globalization of the financial markets being the first industry to be radicalized. The real boost came after 1980 when Ronald Reagan and Margaret Thatcher pushed for policies which favored market force predominance. These two leaders who truly believed in the virtues of market economics, trusted that the market was the best instrument for determining currency values. From this point on, the globalization of the financial markets occurred at a tremendously rapid pace. How then, do we make the statement that Bretton Woods acted as a precursor for dollarization practices? And more importantly, what role does dollarization fulfill in a global financial arena?

2.9.1 Dollarization

The practice of dollarization emerged in response to the volatility of currency

values experienced in the global financial market. Developing nations found themselves in precarious situations. The devaluation of domestic currency certainly made the products of a nation more competitive on the world market. However, the result was often inflation or hyper inflation. Countries such as Argentina experienced inflation rates of over 3000 percent. It seemed apparent to many developing nations, that the system of floating exchange rates was adding to the instability of national economies. Even in situations where the rate of float was managed, the result was the same, a spiral of inflation which often times led to the default on foreign loans.

Dollarization reverted back to the principles of Bretton Woods, in that, the currency value of a country would be pegged. In this case, it would be pegged to the dollar. This practice is also referred to as the Dollar Standard. An additional component of the Dollar Standard which actually led to the demise of Bretton Woods, is that a country which adheres to the Dollar Standard hold a significant amount of its foreign exchange reserves in the form of U.S. dollars.[13] Hence, dollarization became the term most commonly associated with the Dollar Standard. Ironically, it was the accumulation of U.S. dollars in European banks during the 1970's which led to the end of pegged exchange rates. Eurodollars were held and used to take advantage of disequilibriums in currency values which eventually led to the capitalization of the financial markets. Today, U.S. dollars are held to

stabilize national economies in developing nations. Another component of dollarization is that the citizens of dollarized economies have access to dollars and conduct a certain amount of business in dollars. In the following IMF report, the basic fundamentals of dollarized economies are depicted as well as some of the benefits and disadvantages of dollarization:

> Dollarization, the holding by residents of a significant share of their assets in the form of foreign-currency-denominated assets, is a common feature of developing countries and transition economies and is thereby typical-to a greater or lesser extent-of many countries that have IMF-supported adjustment programs. Of those countries that have had arrangements with the IMF at one time or another during the past ten years, at least half are dollarized, and a significant number are highly dollarized...The benefits of dollarization include closer integration with international markets, exposure to competition from these markets, and the availability of a more complete range of assets for domestic investors. In countries in which inflationary experience has destroyed confidence in the local currency, dollarization can sometimes help to remonetize the economy, restore local inter mediation, and reverse capital flight. The costs of dollarization include the loss of seignorage and a potential for greater fragility of the banking system... Should dollarization be discouraged? The answer depends on the role of dollarization in the economy. Asset substitution may be a natural accompaniment of the opening of financial markets, and in this respect it should be welcome. Moreover, globalization of financial markets will likely lead to some dollarization. Nonetheless, as with other forms of capital market liberalization, the proper sequencing of policies is essential (Baliños 1-3).

The challenge for dollarized economies is to stabilize the national economy while remaining competitive in the global market. Furthermore, the issue of currency substitution becomes habitual to the point that people have little trust in the solvency of their national currency. With regard to the former, Argentina adopted the Dollar Standard to stabilize its economy. While stabilization was achieved, competitiveness has waned. "A strong dollar has hurt Argentina, while its neighbors have devalued to boost their economies. Yet the benefits are great, too. One is lower inflation" (The Economist. 10/27/01, 72).

2.10 International Business: The Business World Without Boundaries

Decades ago, most businesses were clearly defined as domestic or international. This is no longer the case. With the changes that have occurred in the financial markets which precipitated the globalization of so many industries, it has become the case that international business has become the mainstay of many economies. In search of efficiency and low production cost, companies set up facilities in countries around the world. The goal is to produce a product in a place where the costs are the lowest and sell the product in a place where the price is the highest. Generally speaking, the United States has become the export market for most of the world. Globalization is forcing prices down. Production is being moved from high-cost locations to low-cost locations, and as a result, prices are falling. Name

any product, add up the amounts the world could produce if all the world's factories were operating at capacity, subtract what the world is going to buy, and one finds that the world's production potential exceeds the world's expected consumption by at least one-third-often by far more. With such an excess of production capacity, falling prices are no mystery (Thurow 76).

The high rate of consumption in the United States make it a natural target for export activities. However, with a trade deficit of $250 billion, it is a constant concern that the U.S. market is at saturation levels. What is left are the consumption expectations of the world's second and third largest economies, Japan and Germany. Considering that Japan has been mired in recession for over a decade and Germany tending in the same direction, the production of the world continues to rely on the consumption of the U.S. market. While this topic is vastly important with regard to globalization, it is much too expansive to be covered in depth in this analysis. The point is, however, that the forces of globalization have transformed economies to the extent that, for some nations the majority of GDP is derived from exports.

International trade has created international business. It is commonly stated that money flows effortlessly throughout the world financial markets. Products also have come to flow rather easily. Component parts as well as finished goods travel

great distances to reach their final destination. In this regard, there are two main types of international business which may be identified. The first is the company, often times a manufacturer, which produces a product or service in a foreign country and then ships that product back to the native country for sale. These offshore producers generally manufacture consumer goods and textiles. Companies such as Levi Strauss contract textile plants in developing countries to manufacture clothing then to be shipped back to the United States for sale.

The second type of company may also produce products and services overseas, however, it may market these products internationally as well as domestically. In the first example of Levi Strauss, it is true that it fits the description of both categories. Hence, many companies may meet both criteria. However, most companies which fit into the first category derive most of their sales from the domestic market. Those that fit into the second class have realized extensive foreign exposure. An example of this may be Coca Cola.

The distinctions are becoming more subtle as time passes. The nationality of corporations are becoming lost due to mergers. For example, Daimler Chrysler is an automaker which is both German and American. The result is that corporations will eventually lose any national affiliation as more of these mergers take place. Furthermore, Toyota, Nissan, Hyundai and BMW have established manufacturing

plants in the United States producing cars to be sold in the United States.[14] So then are these cars foreign? They are made in the U.S. by American workers. Obviously the distinctions are becoming blurred. The vast amount of international trade has created a situation in which corporations are viewed as independent from their country of origin.

2.11 Theoretical Observations

By way of predictive observation it is probably most fitting to discuss the topics of globalization, dollarization, exchange rates and international business in the context of trends. As was discussed previously, there are no general definitions of globalization and the associated topics of dollarization, exchange rates and international business. There are, however, trends which give us a great deal of insight as to the nature of these topics.

In closing, it must be noted that the developments made during the third industrial revolution coupled with the trends in the business world, particularly, globalization, are impacting the social arrangement perhaps as profoundly as did the first industrial revolution which ended ten thousand years of agriculture based economies. For the first time since modern economies emerged two centuries ago, the playing field is level. Natural resources nor land play a key role in building wealth and competing in the world economy. Knowledge has become the

determining factor in the global economy of the third industrial revolution. The human ability to be creative and inventive apart from any physical material has established tremendous potential for developing nations. Perhaps it is the developed nations who have the most to lose. Their competitiveness relies on their ability to change and create, not on the accumulation of physical resources. Governments will continue to play a smaller role in the potential success of nations. The cultural environment which is friendly to creative exploration and research will continue to be the foundation for successful nations.

CHAPTER 3

Methodology

3.1 Instrument Development

The methods and procedures that will be employed by this analysis will fall into three categories. The three categories may be characterized as such; analytical, descriptive and investigative.

In the analytical realm the focus relies on econometric models and the correlation among data variables. The data presented will be factual verifiable indications of performance measures in a variety of domains. This approach is rather traditional in nature as it provides empirical evidence of correlation or the lack thereof. The analytical aspect will commence the methods and procedures as it provides solid insight into what exactly the correlations are, as well as trends. With regard to this work, the intention is that the empirical evidence will support the descriptive and investigative findings.

With regard to the descriptive nature of the methodology; current socioeconomic conditions, trade policy, business climate, historical trends, demographics and geography are subject areas in which data will be compiled. The descriptive component of the methodology provides vital background information about the case countries. To gain valuable insight into the nature of a country and its culture

are instrumental in the strategic positioning of that country in the global economy. Hence, any descriptive data that may be related to the topics at hand will be presented. In addition to the inclusion of descriptive data will be case studies. These case studies will focus on particular industries that have thrived in particular countries. The point is to determine the progression from raw capital resource, to capital resource identification, to capital resource development, to comparative advantage and then international competitive advantage. Several examples will be presented, of economic success in the case countries at hand. While all of the case countries offer appropriate examples of capital resource development, some have performed at an exemplary level. As such, it is the concern of this analysis, to recognize trends in achieving high levels of capital resource conversion. Moreover, in addition to recognizing trends in capital resource conversion, identification of capital resource conversion techniques and models will be explored in the investigative realm of the methodology.

The purpose of including an investigative component in the methodology is to explore less obvious resources and conditions that may lead to capital resource development. In the descriptive phase of this analysis the foundation will be established for the investigative phase. That is to say, once the existing conditions, climate and circumstances of the case countries have been identified, less obvious conditions and circumstances may be identified that could lead to

capital resources. To be sure, the investigative phase of the methodology is speculative. In this regard, new territory may be entered in terms of transition from investigative to prescriptive. Much of what may be discovered will be the focus of the recommendation chapter of this work.

Much will be drawn from the case studies in superior capital resource conversion. One important note is that in all cases, the capital resource at hand was initially obscure. That is to say, that the conditions and resource combination was not obvious at first. The history of socioeconomic development has almost always included to a great extent, serendipity. While the apparent accidental nature of serendipitous discoveries seems impossible to harness and model, scientific researchers will attest that the initial goal may not have been attained, however an equal or greater discovery may have been encountered. To be sure, serendipity exists at the micro economic level. Capital resources are most often latent, and need to be combined with some other condition or set of conditions to become feasible and attainable.

The design of the research instrument draws upon several aspects of socioeconomic development indicators. At the foundation of this research, it is fundamental to determine the past and current socioeconomic economic conditions in the case countries. To accomplish this task defined indicators will be explored.

These indicators include, but are not limited to; GDP growth, income distribution (GINI coefficient), foreign direct investment, human development index, unemployment and trade balance. The correlation between these indicators will determine trends and interrelatedness. Analytically, the goal is to identify the trends, correlation and relationships between these most fundamental indicators of socioeconomic economic development. From this analysis an historical condition may be ascertained as well as current conditions and the corresponding trends.

The second approach of the instrument development is an examination of the trade characteristics of the case countries. For the purposes of this analysis, the trade characteristics of concern are; export market share, trade competitiveness, trade restrictiveness, goods traded, tariff rates and tariff escalation. The intention is to establish trends in trade activity concerning comparisons in market share, type of goods traded and trade competitiveness. In turn, these findings will be correlated to the defined economic indicators presented earlier in this chapter. The relationships determined are intended to measure comparative and competitive advantages of each case country. The measures are overall as well as in specific industries.

Competition plays a major role in the modern economic arena. It is a phenomenon that relates back to the basic principles of specialization of resources and capital

utilization and management. The same rules apply when countries compete as do when companies compete. Certainly, countries themselves do not compete directly in economic ways, rather, companies from each country compete across boarders. Hence, when we measure the competitiveness of countries we are actually measuring the competitiveness of the collective corporate competitiveness of that country. Having said that, however, the business environment and the culture of a country has much to do with the competitiveness of its industries. Policy influences industry and industry influences policy. That is why this analysis concentrates on whole countries as a macrocosm. In this respect, a country and its industries are not separable. This is true because corporations and businesses are mere microcosms of a society at large. The dynamics of a business organization reflect the dynamics of a whole society.

The third aspect of the instrument development is connected with the identification of capital resources. This phase will concentrate on research of the case countries with respect to geography, natural resources, human resources and any tangible as well as non tangible consideration that may be deemed a capital resource. In this connection, the process will be highly exploratory in nature. That is to say, while much of what is presented will be obvious, some will be speculative. It is the speculative material that is generally of interest in the consideration of capital resource identification and development.

3.2 Anticipated Theoretical Results

The anticipated results to be generated by the application of the stated methodology are based upon the theoretical framework and literature review. That is to say, that the general direction of this work has emphasized the benefits of trade aperture and the situational conditions needed to create wealth. It is anticipated that certain correlations between economic and quality of life variables will provide insight into the causal determination of economic growth in general and economic growth inspired by trade in particular. The variables chosen are significant in relation to the hypothesis of this thesis.

- Unemployment rates.

The prediction is that unemployment rates are effected by GDP change, i.e., growth or decline. This is a most basic premise, however, one that is integral to the progression of the objectives established by this analysis.

- United Nations Human Development Index.

The UN HDI which is an objective measure of living standards will be correlated to GDP per head, trade restrictiveness and trade balance. It is the assumption of this work, that the UN HDI will be effected by economic efficiency as measured by GDP per head. Furthermore, it has been asserted that quality of life may be in part attributed to trade policy. The following assertion is that the UN HDI is effected by trade restrictiveness and trade balance.

- GINI coefficient.

Another aspect of living standards is the GINI coefficient measure of income distribution. While, as the text explains, there is a range of distribution figures, there are also many attributable explanations. As such, for the purpose of this analysis, it is assumed that greater income distribution is beneficial for society and standards of living. The GINI figures are corresponded to foreign direct investment, and the prediction is that higher levels of FDI will have some effect on income distribution as higher levels of employment are achieved.

- GDP growth.

As a basic foundation of economic measures, GDP growth will be correlated to unemployment and trade restrictiveness. The intuition is that GDP growth will have a positive effect on both of these indicators.

- GDP per head.

The measure of economic efficiency as measured by GDP per head will be correlated to trade aspects of the case countries. Trade balance and trade restrictiveness on imports are the two criteria of interest. In this regard it will be supposed that trade related activity will increase the general economic efficiency.

- Foreign direct investment.

The level of FDI as a percent of goods and service exports it is supposed, will have a certain impact on living standards and income distribution. This is because FDI creates employment.

- **Trade balance.**

A positive or negative trade balance has defined effects on economic variables. It is the intuitive assumption of this analysis, that trade balance affects and is effected by trade policy and economic efficiency.

- **Trade policy (trade restrictiveness/tariff rates).**

Trade policy being a central element of this analysis, is the most human influenced short term aspect of economic impact. Trade restrictiveness and high tariff rates are supposed to have a negative influence on economic indicators as well as standards of living.

3.3 Variable Source Countries

The variables as following from which information will be obtained will be based on the following countries:

Chile

Costa Rica

Lithuania

Singapore

Uruguay

3.4 Variable Modeling Index

The data collected are to be based on the following variable model correlation:

- World market share versus average applied tariff rates.
- UN Human Development Index versus trade balance.
- Unemployment rate versus GDP growth.
- Foreign direct investment versus GDP growth.
- Foreign direct investment as percent of goods and services exports versus GDP growth.
- Trade balance versus trade restrictiveness index on exports.
- Trade balance versus average applied tariff rates.
- Foreign direct investment as percent of goods and services exports versus GINI coefficient.
- Trade restrictiveness on imports versus GINI coefficient.
- Trade restrictiveness on imports versus trade restrictiveness on exports.
- GDP growth versus trade restrictiveness index on exports.
- GDP per head versus trade balance.
- GDP per head versus average applied tariff rates.
- GDP per head versus trade restrictiveness on exports.
-GDP per head versus trade restrictiveness on imports.
- UN Human Development Index versus trade restrictiveness index.
- Unemployment rate versus trade restrictiveness index.

- Unemployment rate versus trade restrictiveness on exports.
- UN Human Development Index versus trade restrictiveness on exports.

Table 3.1

Variable Application Matrix

Independent Variables	**Dependent Variables**
Average applied tarriff rates	World market share
	Trade balance
Trade balance	UN Human Development Index rank
Trade restrictiveness exports	GDP growth
	Trade balance
	Trade restrictiveness imports
Trade restrictiveness imports	GDP per head
FDI as % of goods & services exports	GINI coefficient
GDP growth	Unemployment rates
GDP per head	Trade balance
	UN Human Developmen Index
Trade restrictiveness index	UN Human Development Index rank
	Unemployment rate

3.4.1 Variable Definitions

Average applied tariff rate: The World Trade Organization compilation of the tariffs and duties levied by each country.

Foreign direct investment as percent of GDP: A measure of foreign based investment in real assets in a country as a percent of GDP.

Foreign direct investment as percent of goods and services exports: A measure of foreign based investment in real assets in a country as a percent of goods and services that are produced and exported.

GDP growth: The measurement of annual change in the gross economic activity in terms of output of a country. GDP does not adjust for capital consumption and counts for economic activity of all concerns within a country regardless of origin of ownership. The measure in reality, is of change as often times a decline in output is realized. However, the term growth has predominated because of the long term upward trend in the GDP of most countries.

GDP per head $ PPP (purchasing power parity): PPP statistics adjust for cost of living differences by replacing normal exchange rates with rates designed to equalize the prices of a standard group of products and services. These are used to obtain PPP estimates of GDP per head.

GINI coefficient: A measure of income distribution that uses as a primary method a statistical measure of inequality. In a Lorenz curve, the GINI coefficient is the ratio of the area between the diagonal and the Lorenz curve to the total

area under the diagonal.

Trade balance: The measure of exports versus imports. The excess of imports over exports is referred to as a trade deficit or trade gap. The converse situation is referred to as a trade surplus.

Trade Restrictiveness Index: An index developed by the World Bank (World Bank policy Working Paper Number 3840) designed to measure the effects of trade distortions due to tariffs and duties on the particular economic circumstance of a country.

Trade restrictiveness on exports: An aspect of the Trade Restrictiveness Index that measures the tariffs and duties faced by the export bundle of each country. Also referred to as the Market Access Overall Trade Restrictiveness Index (MA-OTRI).

Trade restrictiveness on imports: An aspect of the Trade Restrictiveness Index that measures the consequences of a country's trade policies on its import bundle. Also referred to as the Overall Trade Restrictiveness Index (OTRI).

UN Human Development Index: A United Nations index formulated to categorize key aspects of human development. The key human development index variables are; life expectancy at birth, adult literacy rate, school enrollment, percent of population undernourished, water accessibility, poverty index, infant mortality rate and income distribution (GINI Coefficient).

Unemployment rate: The number of unemployed as a percentage of the number

of people employed. This rate does not take into account the number of people self-employed.

World market share: A measure calculated by the World Trade Organization that determines a country's export volume as a percent of world trade activity.

3.5 Linear Regression Model

Regression analysis is a technique used for modeling and analysis of numerical data consisting of values of a dependent variable, or the response variable, and an independent variable or the explanatory variable.

The choice of linear regression as the primary instrument of the methodological model is based upon the empirical nature of the method. Data modeling can be used without the knowledge regarding the underlying processes that have generated the data. Hence linear regression is an empirical model. Moreover, in modeling, knowledge of the probability distribution of the errors is not required. Rather, regression analysis requires assumptions to be made regarding probability distribution of the errors. Statistical tests are made on the basis of these assumptions. In regression analysis the term model encompasses both the function used to model the data and the assumptions concerning probability distributions. Regression can be used for prediction, inference, hypothesis testing and modeling of causal relationships. This analysis will utilize regression for the

latter purpose, i.e., in determining causal relationships. These relationships between the independent and dependent variables will be quantified and analyzed with respect to the project at hand.

Regarding the disadvantages of using regression analysis to determine the correlations between the independent and the dependent variables proposed, the primary one is a lack of causal effect. In other words, regression may determine a correlation between the changes in two variables, however, it will not determine if the changes in the dependent were actually caused by the changes in the independent. It is supposed, especially when a strong set of data points are presented, that the causal relationship between the variables is verifiable. It is the scope of analysis to determine the validity of the causal relationship.

3.6 Variable Indicator Analysis & Econometric Results

While regression does not account for the causal effect of variables upon each other, it will be the intention of this work to draw some conclusions based on the correlation as defined by the econometric model results. The selection of the variables is based on their quality as indicators of economic structure and patterns of behavior. The modeling of variables is for the purpose of this analysis and makes no other assumptions outside the realm of interest at hand. All data collected is of sound accuracy and from reliable sources such as The World Bank,

The World Trade Organization (WTO), The United Nations (UN), The International Monetary Fund (IMF) and The Economist Intelligence Unit.

3.6.1 Broad Economic Variable Indicators

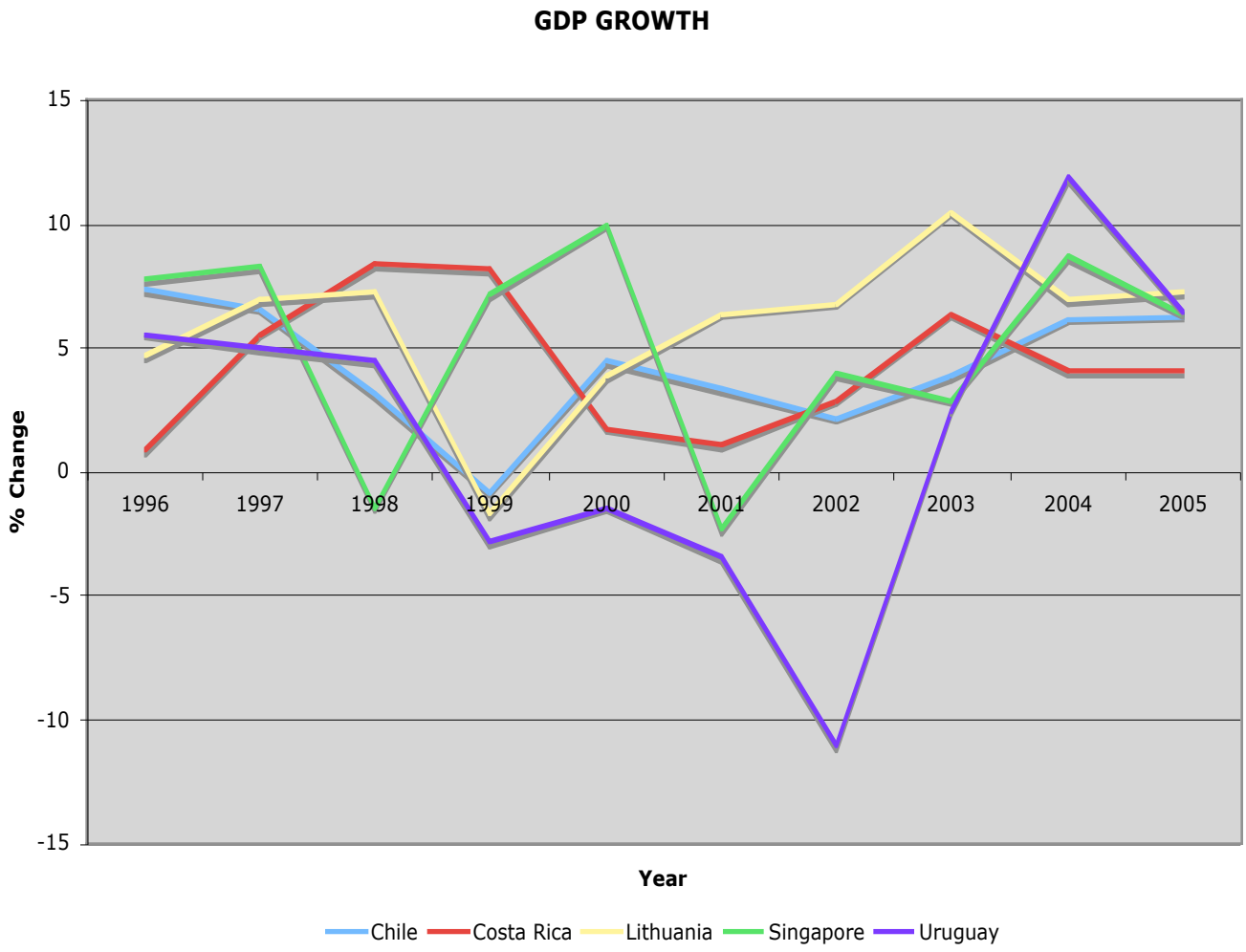
The hypothetical assumption is that trade is related to a variety of economic indicators that are subject to fluctuations in trade. What is more, the type of trade, i.e., primary sector or secondary sector have an effect on economic structure. The selected economic variables have been chosen for their centrality to all economic activity. That is to imply, that these variables are vital indications of economic health to all economies, developing as well as developed. The regression models put forth in this section are designed to provide an insight as to the overall economic conditions of the case countries. However, as this analysis is focused on trade and the socioeconomic economic implications of trade, it must be noted that the design on the instruments are inclined toward the ramifications of trade on the economies of the case countries.

One of the most basic measures of economic activity and development is GDP variation. Figure 3.1 charts the GDP activity of the five case countries over a ten year period.

Figure 3.1

GDP Activity

Source: World Bank, World Development Indicators 2006.



The data and chart depict an average ten year increase in GDP for the five case countries. However, as the chart shows, the GDP activity is not congruent between the countries. For example, while GDP in the late 1990's was declining for Chile, Lithuania, Singapore and Uruguay, Costa Rica was experiencing GDP growth through the year 1999, at which point the converse occurred with the other four countries experiencing GDP growth while Costa Rica went into decline. Overall, the ten year period ending in 2005, represents a period of moderate to strong growth for all of the case countries.

Tables 3.2 and 3.3 indicate the average growth rate for the ten year period as correlated to unemployment rates. The regression results for Table 3.2 indicate a strong correlation between GDP growth and employment rates. While this conclusion is rather intuitive, data for Lithuania was withheld on the basis of nonconformity. Table 3.3 includes the data on Lithuania, and as the regression results indicate, the correlation between GDP growth and unemployment becomes almost nonexistent. The reasons behind the Lithuania data are speculative, however, the most obvious reason is that Lithuania is the only case country that is a former Soviet state. As such, Lithuania has only sixteen years experience at building a market economy. The damage done to former Soviet states that were subjected to nearly a half century of command economic policies has been significant. The high unemployment rates seem to be contrary to the strong GDP

growth, however, this phenomenon is rather typical of former Soviet states. In time, the excess labor will be absorbed by the economy. Over the last ten years unemployment in Lithuania has been in steady decline for highs near twenty percent in the mid 1990's to recent figures close to ten percent.

Table 3.2

Unemployment Rates v GDP Growth
(Omitting Lithuania)

Country	Unemp. Rate %	GDP Growth
Chile	7.33	4.29
Costa Rica	6.04	4.35
Singapore	3.95	5.16
Uruguay	13.44	1.74

NOTE - Unemployment rate is represented by nine year average 1996 - 2004.

NOTE - GDP growth is represented by ten year average 1996 - 2005.

Source: United Nations Development Programme Database 2007.
Source: World Bank, World Development Indicators Database 2006.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.99216245
R Square	0.98438632
Adjusted R Square	0.97657949
Standard Error	0.62416216
Observations	4

Note: Multiple R value of 0.9921 implies that there is a very strong correlation between unemployment rates and GDP growth.

Note: R square value of .9843 indicates that 98.4% of the variations in unemployment rates can be explained by GDP growth or decline.

The line of best fit is Y = 18.2833858 - 2.7267402X where X stands for GDP growth and Y stands for unemployment rates.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	49.1230432	49.1230432	126.09283	0.00783755
Residual	2	0.7791568	0.389578402		
Total	3	49.9022			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	18.2833858	0.99366615	18.39992811	0.00294069	14.0079854	22.5587862
GDP Growth	-2.72674023	0.24282789	-11.22910637	0.00783755	-3.77154432	-1.68193614

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	6.58567021	0.74432979	1.46054047
2	6.42206579	-0.38206579	-0.749697999
3	4.21340621	-0.26340621	-0.516861526
4	13.5388578	-0.09885779	-0.193980944

Table 3.3

Unemployment Rates v GDP Growth (Including Lithuania)

Country	Unemp. Rate %	GDP Growth
Chile	7.33	4.29
Costa Rica	6.04	4.35
Lithuania (EU)	14.56	5.76
Singapore	3.95	5.16
Uruguay	13.44	1.74

NOTE - Unemployment rate is represented by nine year average 1996 - 2004.

NOTE - GDP growth is represented by ten year average 1996 - 2005.

Source: United Nations Development Programme Database 2007.
Source: World Bank, World Development Indicators Database 2006.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.26832406
R Square	0.0719978
Adjusted R Square	-0.23733626
Standard Error	5.20731578
Observations	5

Note: Multiple R value of 0.2683 implies that there is a very weak correlation between unemployment rates and GDP growth.

Note: R square value of .0719 indicates that 7.2% of the variations in unemployment rates can be explained by GDP growth or decline.

The line of best fit is Y = 12.5510457 - 0.8185553X where X stands for GDP growth and Y stands for unemployment rates.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	6.3113071	6.311307099	0.23275096	0.66250421
Residual	3	81.3484129	27.11613763		
Total	4	87.65972			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	12.5510457	7.59379404	1.652803014	0.196941	-11.6157961	36.7178874
GDP Growth	-0.81855532	1.6966892	-0.482442703	0.66250421	-6.21817759	4.58106695

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	9.03944334	-1.70944334	-0.379061925
2	8.99033002	-2.95033002	-0.654223367
3	7.83616702	6.72383298	1.490981898
4	8.32730021	-4.37730021	-0.97064805
5	11.1267594	2.31324059	0.512951445

The GINI coefficient has become a significant measure of income distribution in a society. The GINI index runs from 0 - 100, with 100 representing no income distribution at all. In other words, all wealth would be held by one individual. A GINI score of 0 represents complete equal distribution of wealth throughout society. While no countries score 0, such a score would represent a utopian classless society envisioned by Sir Thomas Moore.

Table 3.5 and the corresponding regression results correlate the connection between foreign direct investment as measured by a percent of goods and services exports produced by each country. From a development point of view, foreign direct investment has been considered a vital channel for infrastructure development. Even industrialized economies rely on foreign investment to maintain or gain a comparative advantage. Of the top five recipients of foreign direct investment, four are industrialized nations, the number two spot is held by China, a newly industrialized country (NIC).

Table 3.4

Foreign Direct Investment Inflow $m

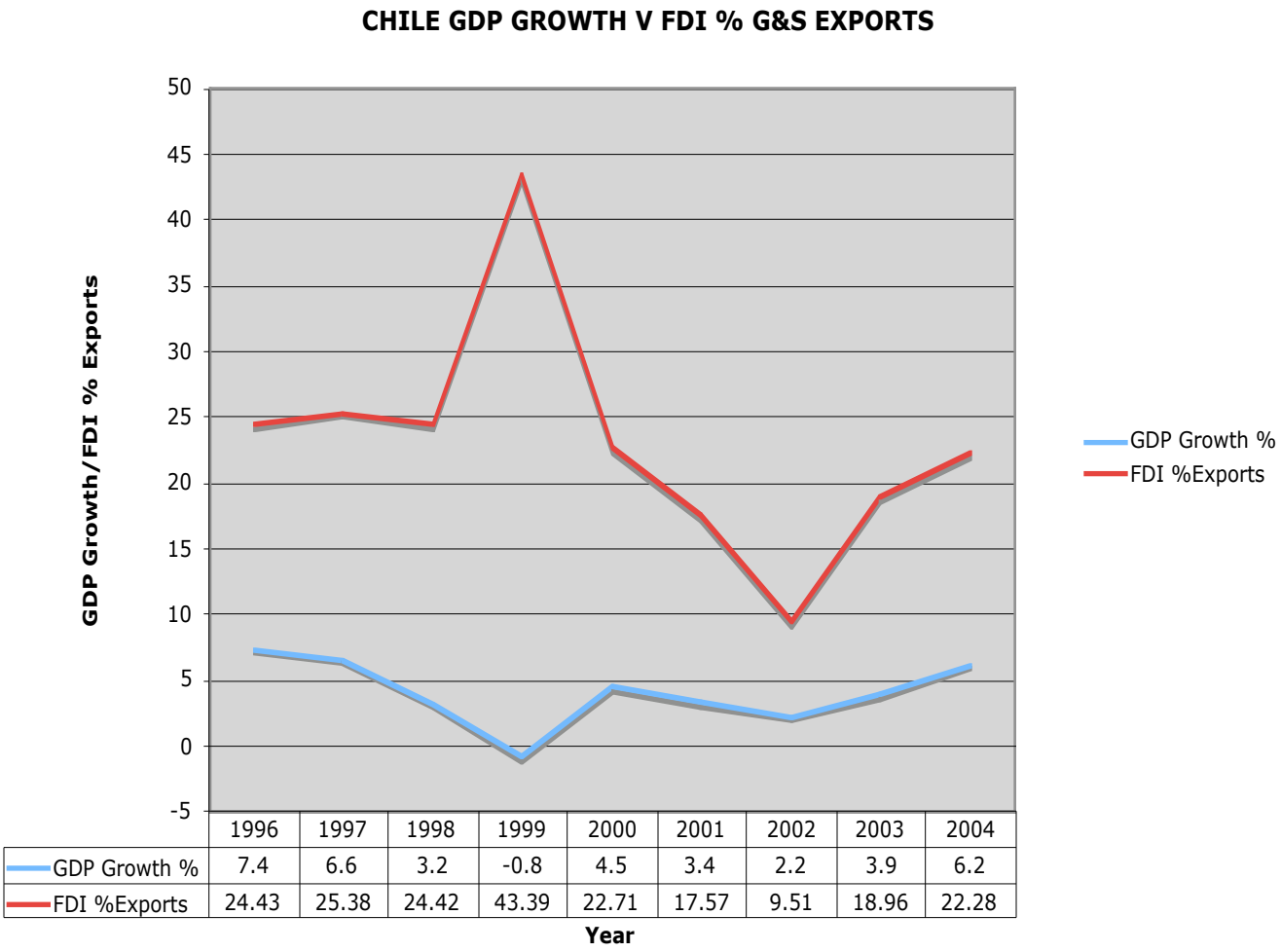
1	Luxembourg	87,557
2	China	53,505
3	France	46,981
4	United States	29,772
5	Belgium	29,484

Source: The Economist Intelligence Unit, World in Figures 2006.

Figures 3.2 - 3.6 depict the relationship between foreign direct investment as a percent of goods and services exports and GDP growth. This data was charted because regression analysis does not take into account the time lag between investment and economic variance. That is to say, that there is certainly a time lapse between the investment and the conversion of that investment into productive resources and infrastructure. Hence, as the graphs show, often the FDI line and the GDP line are incongruent. However, note that the FDI line and GDP are congruent for periods of time in all case countries. In some cases such as, Costa Rica and Singapore, the level of congruency is much greater. This could be an indication of more effective and efficient use of investment. That is, the productive resources have been established and the investment is converted in production quickly.

Figure 3.2

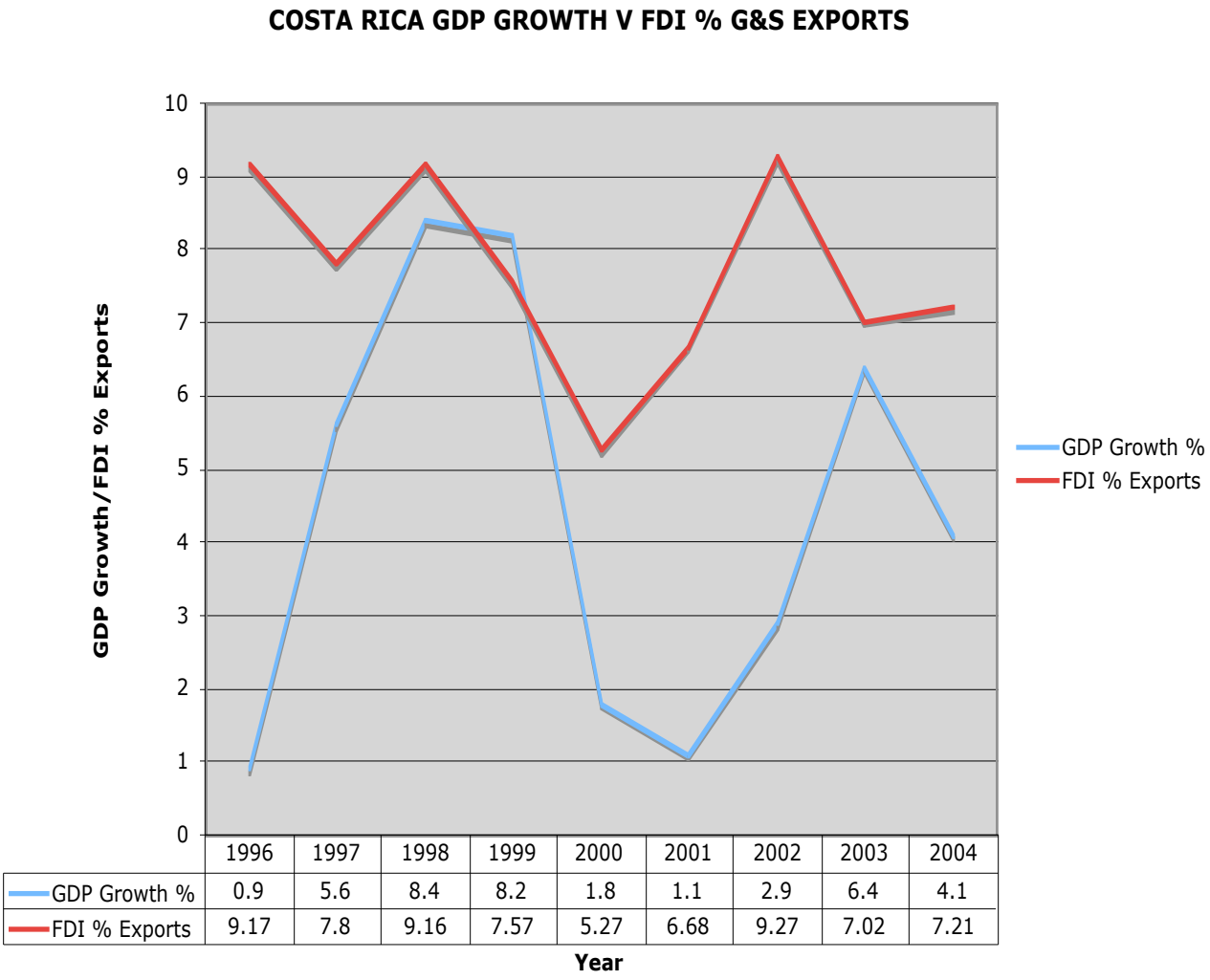
Source: World Bank, World Development Indicators 2006.



	1996	1997	1998	1999	2000	2001	2002	2003	2004
GDP Growth %	7.4	6.6	3.2	-0.8	4.5	3.4	2.2	3.9	6.2
FDI %Exports	24.43	25.38	24.42	43.39	22.71	17.57	9.51	18.96	22.28

Figure 3.3

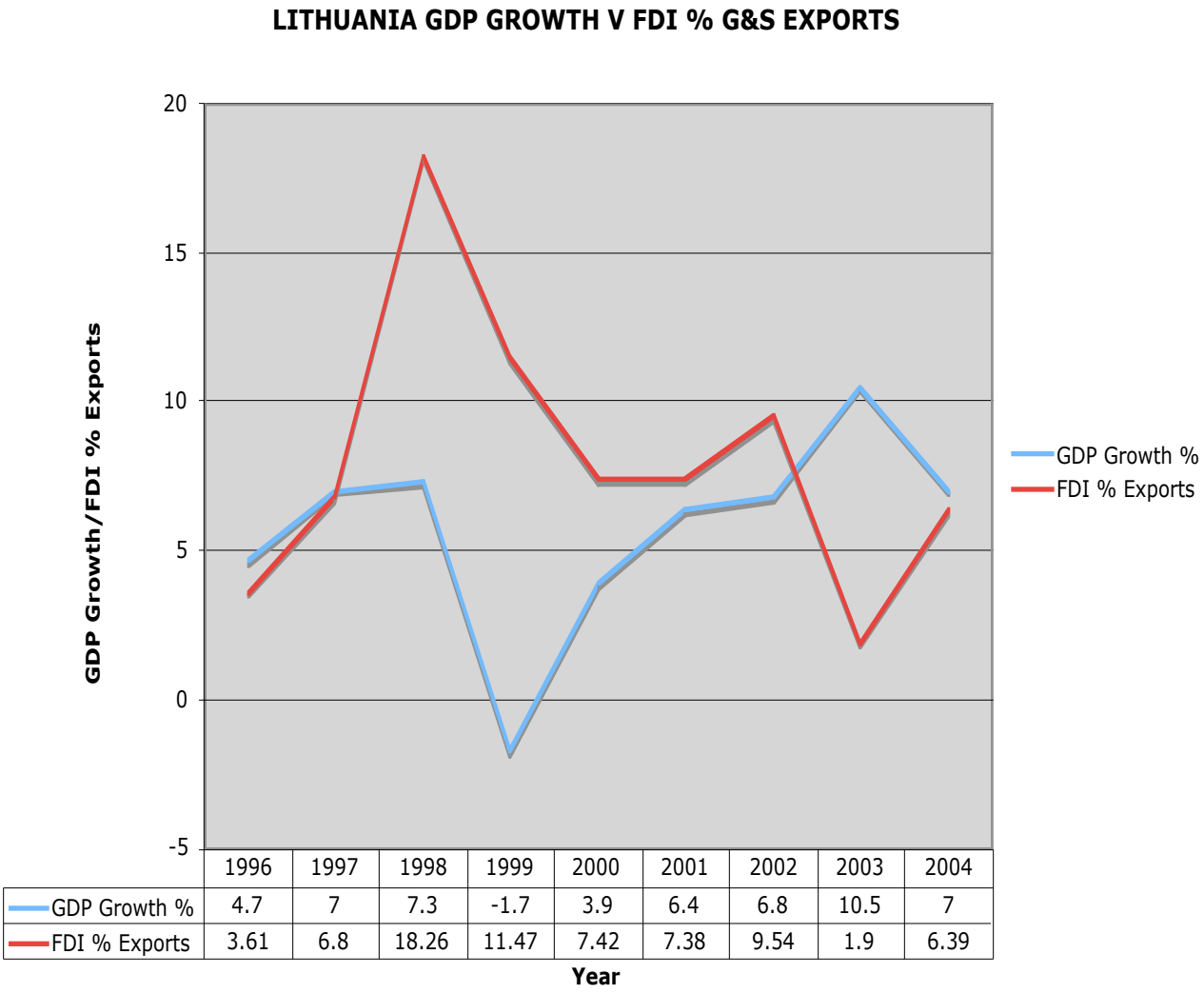
Source: World Bank, World Development Indicators 2006.



	1996	1997	1998	1999	2000	2001	2002	2003	2004
GDP Growth %	0.9	5.6	8.4	8.2	1.8	1.1	2.9	6.4	4.1
FDI % Exports	9.17	7.8	9.16	7.57	5.27	6.68	9.27	7.02	7.21

Figure 3.4

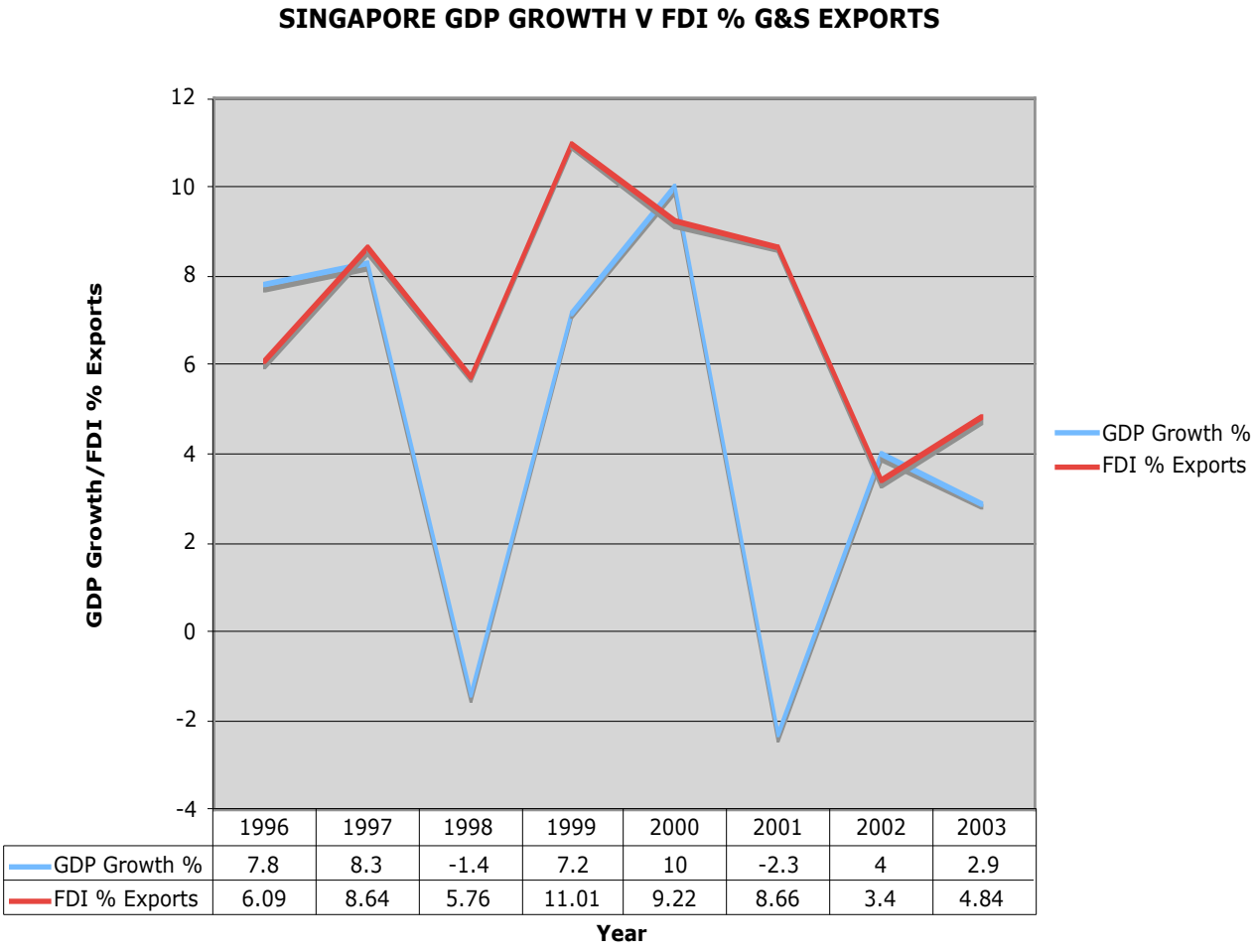
Source: World Bank, World Development Indicators 2006.



	1996	1997	1998	1999	2000	2001	2002	2003	2004
GDP Growth %	4.7	7	7.3	-1.7	3.9	6.4	6.8	10.5	7
FDI % Exports	3.61	6.8	18.26	11.47	7.42	7.38	9.54	1.9	6.39

Figure 3.5

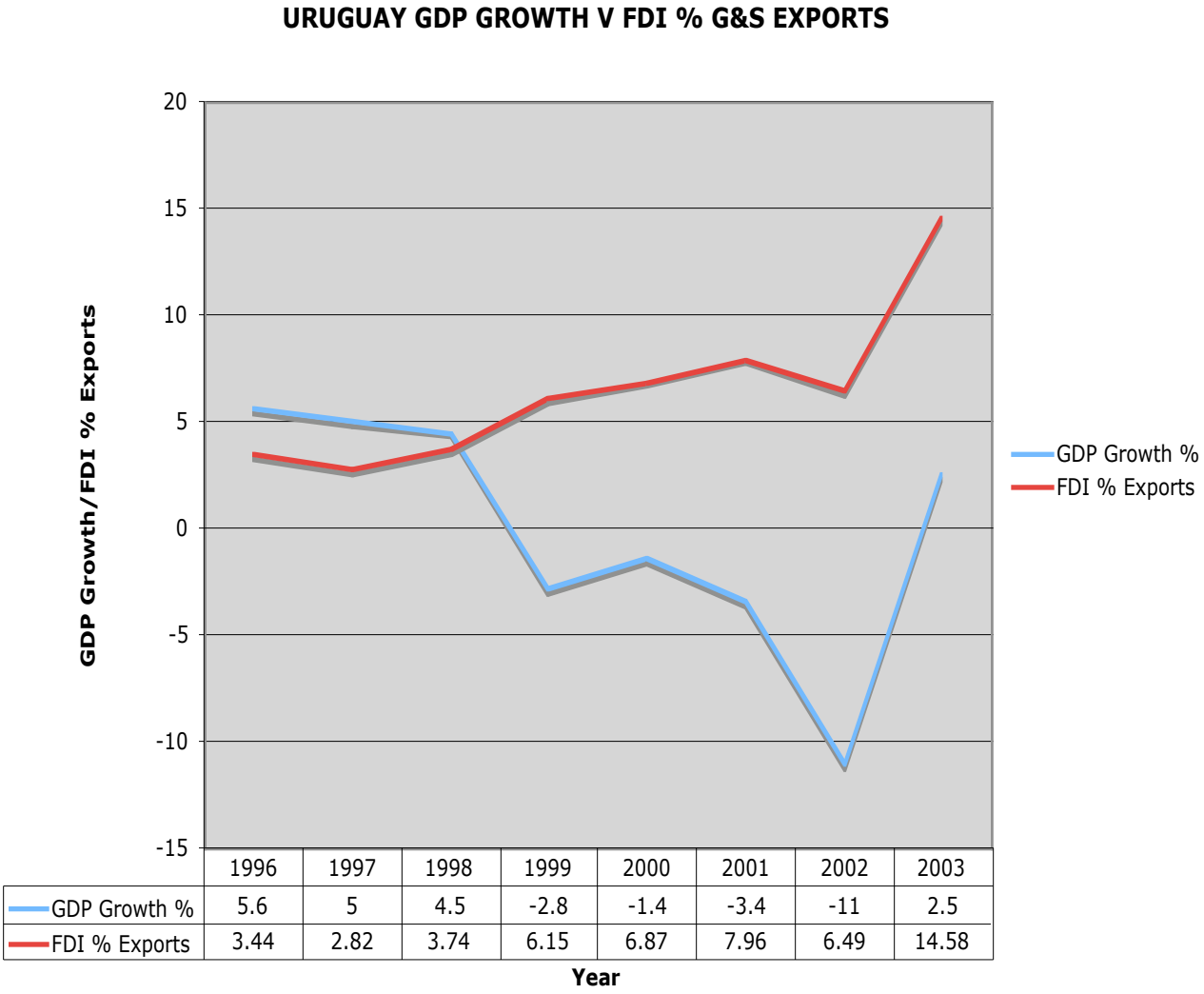
Source: World Bank, World Development Indicators 2006.



	1996	1997	1998	1999	2000	2001	2002	2003
GDP Growth %	7.8	8.3	-1.4	7.2	10	-2.3	4	2.9
FDI % Exports	6.09	8.64	5.76	11.01	9.22	8.66	3.4	4.84

Figure 3.6

Source: World Bank, World Development Indicators 2006.



	1996	1997	1998	1999	2000	2001	2002	2003
GDP Growth %	5.6	5	4.5	-2.8	-1.4	-3.4	-11	2.5
FDI % Exports	3.44	2.82	3.74	6.15	6.87	7.96	6.49	14.58

Table 3.5

GINI Coeff. vs Foreign Direct Inv. % Goods & Services Exports

Country	GINI	FDI %Exports
Chile	53.8	23.19
Costa Rica	49.9	7.68
Lithuania	33.4	8.08
Singapore	42.5	7.2
Uruguay	44.9	6.5

Source: United Nations Development Programme Database 2007.
Source: World Bank, World Development Indicators 2006.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.60887108
R Square	0.37072399
Adjusted R Square	0.16096532
Standard Error	6.50497505
Observations	5

Note: Multiple R value of 0.6088 implies that there is a moderate correlation between the GINI coefficient and FDI % of goods and services.

Note: R square value of .3707 indicates that 37% of the variations in the GINI coefficient can be explained by FDI growth or decline.

The line of best fit is Y = -14.41896 + 0.555656X where X stands for the GINI Index and Y stands for FDI as % of goods and services exports.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	74.7862987	74.78629874	1.76738339	0.27575884
Residual	3	126.944101	42.31470042		
Total	4	201.7304			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	-14.418955	18.9907991	-0.759260049	0.5029062	-74.8561537	46.0182435
X Variable 1	0.55565602	0.41796569	1.329429724	0.27575884	-0.77449736	1.88580939

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	15.4753385	7.71466146	1.369432423
2	13.3082801	-5.62828008	-0.999078088
3	4.13995583	3.94004417	0.699398705
4	9.19642556	-1.99642556	-0.354386244
5	10.53	-4.03	-0.715366797

While the GINI index is a valuable tool in comparing the distribution of wealth in a society, there are cultural nuances and values that impact the index figures. For example, it is common for the GINI index figure to fall slightly as the economy of a country advances. One possible cause for this, is that as an economy advances there is an excess of wealth creation. Hence, the distribution of this excess wealth known in advanced economies is not equally distributed. As a case in point, the United States has a GINI index of 46, while thirty years ago the index was at 42. What this implies is that, the excess wealth generated by increased economic activity is concentrated within a smaller band of the population. Once again, Lithuania as a former Soviet state becomes historically significant in that, of the case countries it has the most equal distribution of wealth. Certainly the communist economic structure of decades will continue to have relevance as this country advances its economy. Conversely, Chile exemplifies the common curse of plentiful natural resources. With the highest GINI index of the case countries, the history of wealth concentration in LDC's holding natural resources is significant in Chile. As a world leader in copper, silver and platinum extraction, Chile has yet to diversify its economy enough to realize a greater income distribution. The situation was compounded by fifteen years of dictatorship that favored the established elite. As is often the case, an elite develops through history and controls the economic resources of a country that has been endowed with natural resources. Venezuela with its vast oil reserves has a GINI index of 48, which is comparatively

high.

The regression results in Table 3.5, while not extraordinary, do show a moderate correlation between foreign direct investment as a percent of goods and services exports and the GINI index. And while the R square figure is quite weak, there remains some margin for speculation that 37 percent of the variation in the GINI index may be attributed to a variation in foreign direct investment. While the evidence is not conclusive, the data presented in Table 3.5 is important for benchmark reasons.

The GINI index values provide insight into cultural as well as socioeconomic expectations and values. The value system of a country will determine its tolerance for inequalities in the distribution of wealth. In European nations for example, high levels of inequality are not tolerated. As such, the GINI coefficients for most western European nations is around 32. Conversely, Chile ranks at 29 for foreign direct investment with inflows of nearly $3 billion, has the world's largest copper deposits and tolerates a much greater level of inequality in wealth distribution. Certain highly capitalistic nations such as the United States also tolerate a higher level of income distribution, albeit, for different reasons than in Chile. The reasons in Chile are historical while in the United States a premium is placed on entrepreneurship and the rewards of a meritocratic society. A high value

is placed upon economic incentive and the returns on risk.

The GINI index as has been explained is a subjective measure in that, it is not necessary that income distribution need to be equal for a country to have an advanced economy. On the contrary, as was aforementioned, industrialized countries such as the United States have a more unequal distribution of income and wealth than some of the case countries in this analysis. Therefore, while it is an important measure, other aspects of development need to be considered. The United Nations has compiled and calculated a list of indicators into what is known as the Human Development Index. The indicators include, but are not limited to; life expectancy at birth, adult literacy rate, school enrollment, percent of population undernourished, water accessibility, poverty index, infant mortality rate and income distribution (GINI Coefficient). These indicators are compiled and categorized into the index (HDI). The broad range of variables forms a balanced and insightful index of socioeconomic economic development. The UN HDI is a significant tool in the methodological instrument of this analysis.

Table 3.6 correlates the impact of GDP per head on the UN HDI. The GDP per head measure for this analysis uses the purchasing power parity (PPP) adjustment. When measuring the development of LDC's, it is generally not appropriate to compare GDP per head figures directly with those of advanced economies. The

reason for this is that LDC's have economies in a less advanced state which significantly alters some costs of living. Therefore, PPP statistics adjust for cost of living differences by replacing normal exchange rates with rates designed to equalize the prices of a standard group of products and services. These are used to obtain PPP estimates of GDP per head. Hence, the GDP per head figures are equalized to reflect the true purchasing power of a monetary unit. For example, one dollar will purchase far less products and services in New York than in San José. Therefore, to have the same standard of living, an individual must earn more in New York than in San José. The PPP adjusts for this type of discrepancy in comparing income levels and living standards. However, as the economies of LDC's become more advanced, the PPP will be revised to reflect the adjustments in the variable group of goods and services measured. In many of the countries of southeast Asia, most notably Singapore, economic development progressed at a very rapid pace. Singapore proceeded from a low middle income country to high income country in about three decades. As such, the PPP measure changed yearly for Singapore. Lithuania, being admitted into the European union may be on a similar course.

Table 3.6

UN Human Development Index vs GDP per Head

Country	UN HDI Rank	GDP / Head
Chile	38	9810
Costa Rica	48	9140
Lithuania	41	11390
Singapore	25	24180
Uruguay	43	7980

Source: United Nations Development Programme Database 2007.
Source: World Bank, World Development Indicators 2006.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.92135465
R Square	0.84889439
Adjusted R Square	0.79852586
Standard Error	3.87425137
Observations	5

Note: Multiple R value of 0.9213 implies that there is a very strong correlation between the UN HDI and GDP per head.

Note: R square value of .8488 indicates that 84.8% of the variations in the UN HDI can be explained by GDP per head.

The line of best fit is Y = 53.9601723 - 0.00119682X where X stands for GDp per head and Y stands for the UN HDI.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	252.970529	252.9705289	16.853664	0.026160902
Residual	3	45.0294711	15.00982368		
Total	4	298			

	Coefficients	*Standard Erro*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	53.9601723	4.03501882	13.37296668	0.0009039	41.11894152	66.801403
GDP per Head	-0.00119681	0.00029153	-4.105321456	0.0261609	-0.00212458	-0.000269

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	42.2194291	-4.21942907	-1.257578963
2	43.0212943	4.97870569	1.483877425
3	40.3284633	0.6715367	0.200148033
4	25.021215	-0.02121503	-0.006323031
5	44.4095983	-1.40959829	-0.420123464

The regression data presented in Table 3.6 illustrates how interconnected the variables of the HDI are to GDP per head. GDP per head adjusted for PPP is a measure of economic efficiency, that is, the efficient and effective use of resources to convert capital resources into capital. The correlation is important for this analysis because the link is strengthened between efficient use of capital and socioeconomic economic development. As countries advance their economies, GDP per head increases and living standards rise. Singapore has attained a GDP per head of $24,180, more than double than that of the other case countries. The HDI rank of Singapore at 25 is 13 places ahead of the next case country, Chile. This data is important because Singapore has a population of 4.3 million, a very small land mass and few natural resources. Human ingenuity is the capital resource that Singapore has developed so well.

As LDC's advance their economies it becomes important the develop trade. Trade is the conduit through which all nations accumulate wealth. LDC's in particular are more dependent on trade for wealth accumulation. The paradox however, is that as the economies of LDC's advance, more imports are demanded and required. Goods that are not produced in LDC's are generally high value, high technology items that can skew the trade balance. These goods are a necessity for LDC's, such as computer and telecommunications equipment as well as vehicles, machinery and air planes. However, when a LDC is focused on primary sector goods, it is difficult to

balance trade. Table 3.7 compares the relationship between the UN HDI and trade balance.

Table 3.7

UN Human Development Index vs Trade Balance

Country	UN HDI Rank	Trade Balance
Chile	38	2.94
Costa Rica	48	-1.93
Lithuania	41	-3.03
Singapore	25	21.64
Uruguay	43	-0.2

NOTE - Trade balance is represented by seven year average 2001 - 2007 (US $ Billions).

Source: United Nations Development Programme Database 2007.
Source: World Trade Organization, Trade Database 2007.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.93937692
R Square	0.882429
Adjusted R Square	0.84323867
Standard Error	4.0301986
Observations	5

Note: Multiple R value of 0.9393 implies that there is a very strong correlation between the UN HDI and the trade balance.

Note: R square value of .8824 indicates that 88.2% of the variations in the UN HDI can be explained by the trade balance.

The line of best fit is Y = 47.0889329 - 1.1078188X where X stands for trade balance and Y stands for the UN HDI.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	365.724218	365.7242178	22.5164969	0.01775422
Residual	3	48.7275022	16.24250074		
Total	4	414.45172			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	47.0889329	9.28173798	5.07328832	0.01478983	17.5503001	76.6275656
Trade Balance	-1.10781879	0.23346314	-4.745155099	0.01775422	-1.85080269	-0.3648349

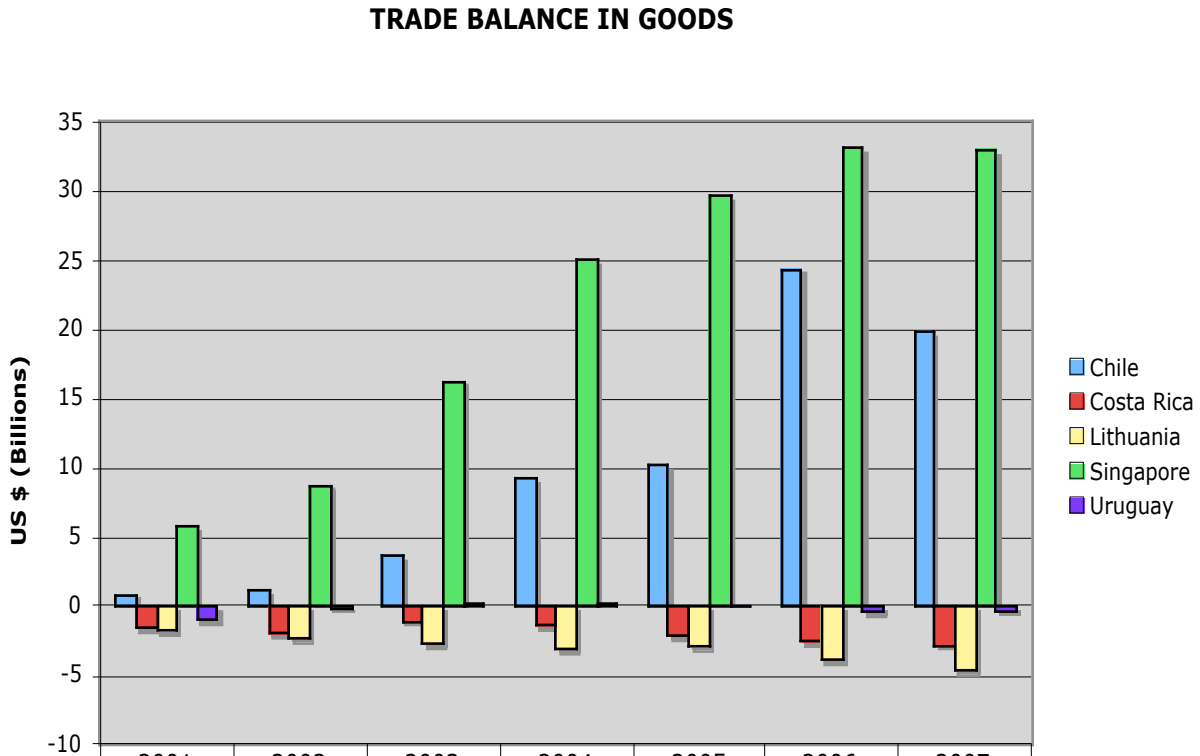
RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	4.99181879	-2.05181879	-0.587870847
2	-6.08636913	4.15636913	1.190849918
3	1.66836242	-4.69836242	-1.346137536
4	19.3934631	2.24653691	0.643659939
5	-0.54727517	0.34727517	0.099498527

A favorable trade balance as indicated by the regression results in Table 3.7 can impact socioeconomic economic development in positive ways. Chile for example, with a relatively unequal distribution of income derives some benefit from a favorable balance of trade. What this implies is that some income generated by trade is reaching society as a whole in the form of infrastructure developments and social programs. Hence, Chile has the second highest HDI rank among the case countries yet has the worst income distribution. These types of paradoxes will continue to exist in LDC's as their economies mature. Singapore, with the most mature economy of the case countries exemplifies a more advanced economy in that it has a GINI index figure comparable with advanced economies as well as GDP per head that is categorized as high income. Furthermore, Singapore has a very favorable trade balance.

Figure 3.7

Source: World Trade Organization, Trade Database 2007.

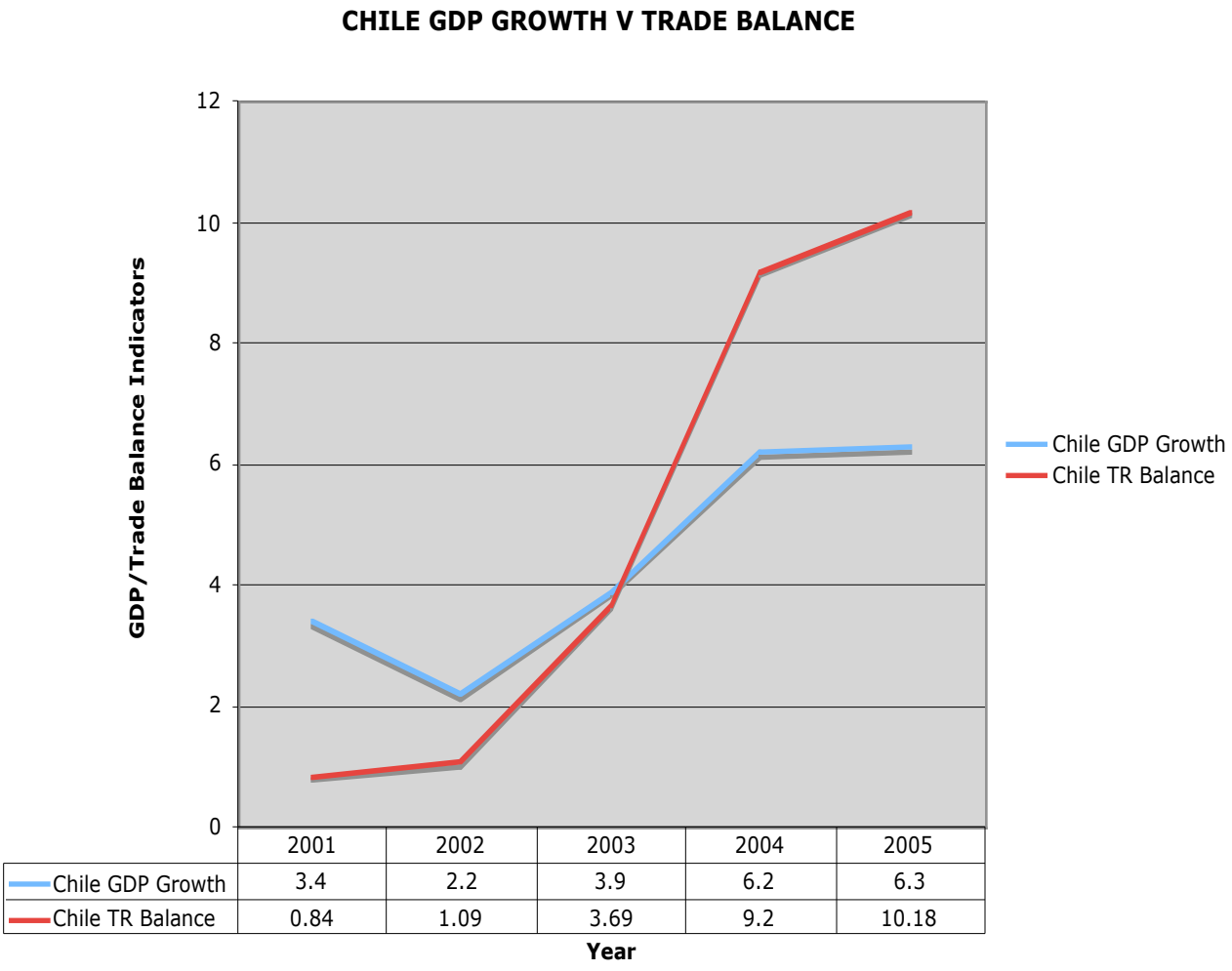


	2001	2002	2003	2004	2005	2006	2007
Chile	0.84	1.09	3.69	9.2	10.18	24.34	19.9
Costa Rica	-1.55	-1.92	-1.09	-1.42	-2.14	-2.6	-2.81
Lithuania	-1.78	-2.29	-2.7	-3.08	-2.9	-3.9	-4.6
Singapore	5.75	8.74	16.25	25.05	29.6	33.1	32.99
Uruguay	-1	-0.1	0.18	0.16	0.03	-0.4	-0.3

Figure 3.8

Source: World Bank, World Development Indicators 2006.

Source: World Trade Organization, Trade Database 2007.



	2001	2002	2003	2004	2005
Chile GDP Growth	3.4	2.2	3.9	6.2	6.3
Chile TR Balance	0.84	1.09	3.69	9.2	10.18

Figure 3.9

Source: World Bank, World Development Indicators 2006.

Source: World Trade Organization, Trade Database 2007.

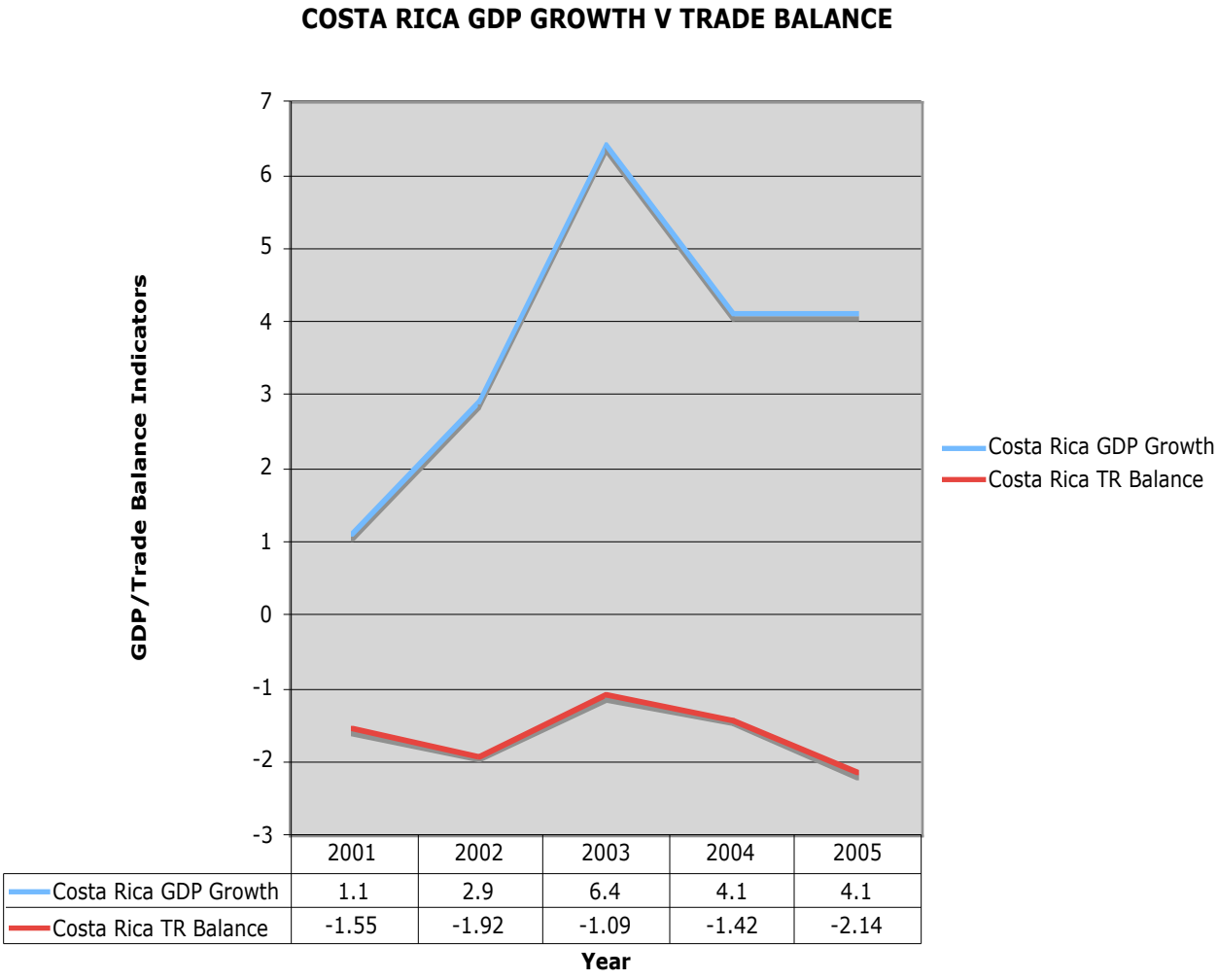
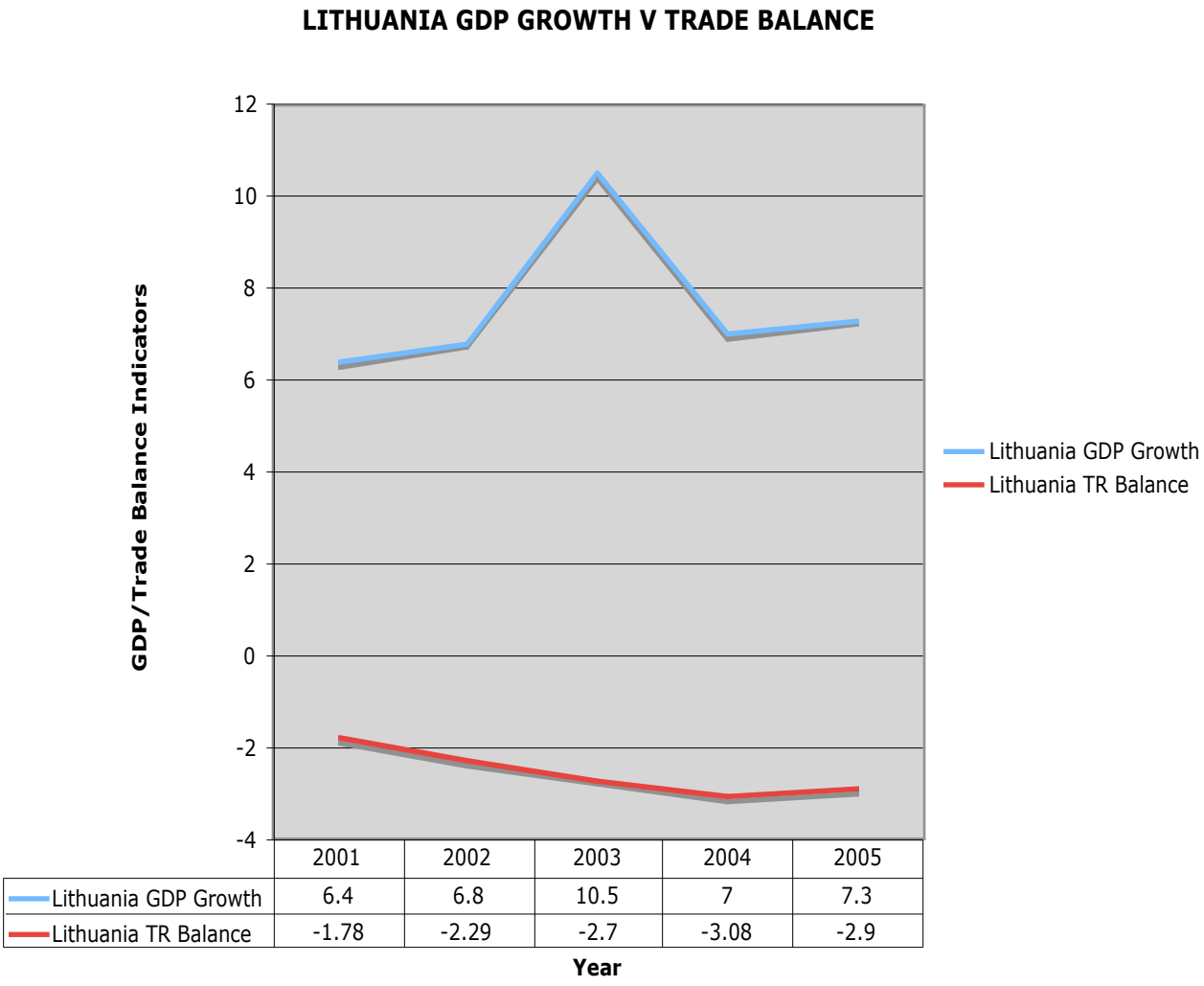


Figure 3.10

Source: World Bank, World Development Indicators 2006.

Source: World Trade Organization, Trade Database 2007.



	2001	2002	2003	2004	2005
Lithuania GDP Growth	6.4	6.8	10.5	7	7.3
Lithuania TR Balance	-1.78	-2.29	-2.7	-3.08	-2.9

Figure 3.11

Source: World Bank, World Development Indicators 2006.

Source: World Trade Organization, Trade Database 2007.

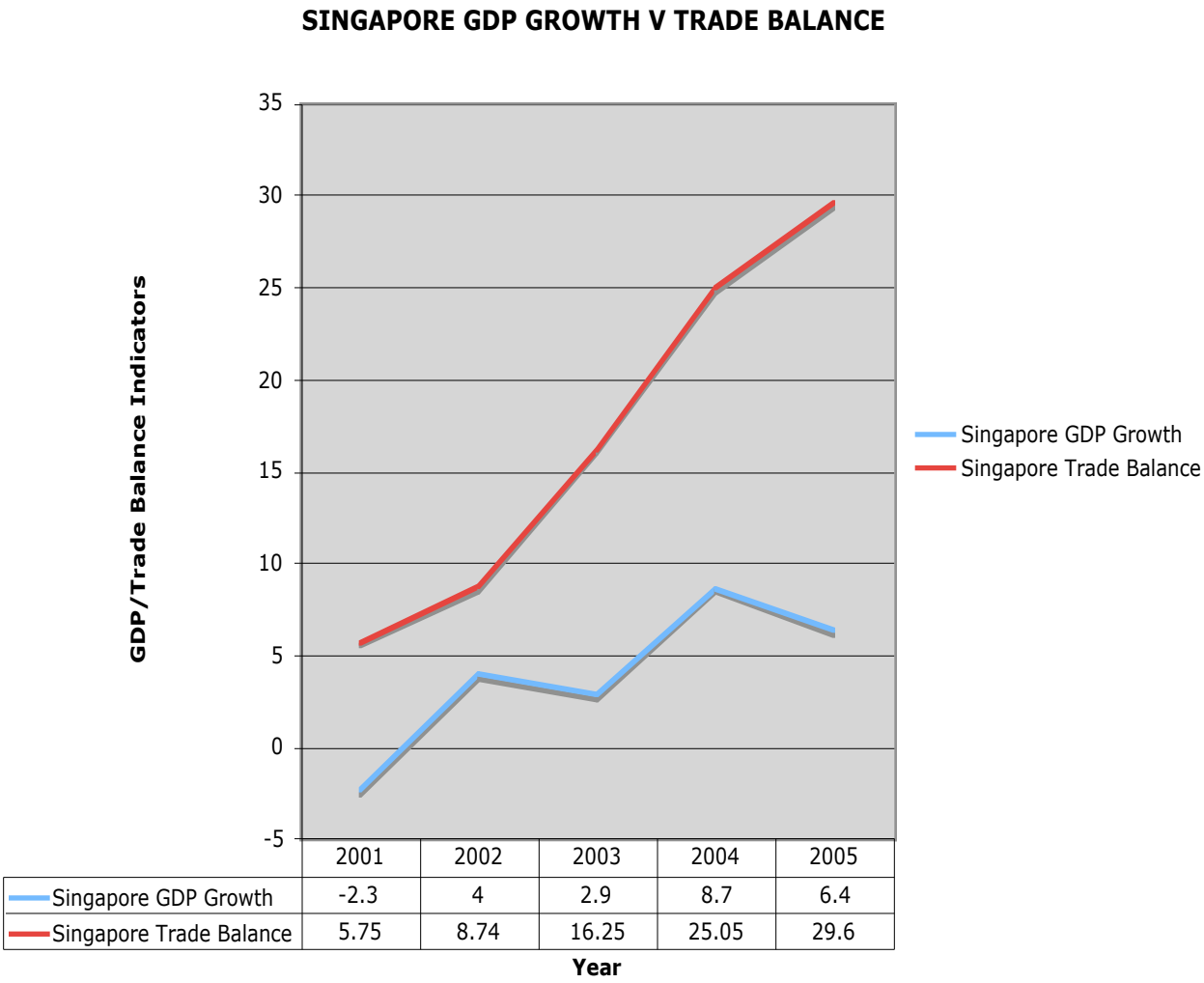


Figure 3.12

Source: World Bank, World Development Indicators 2006.

Source: World Trade Organization, Trade Database 2007.

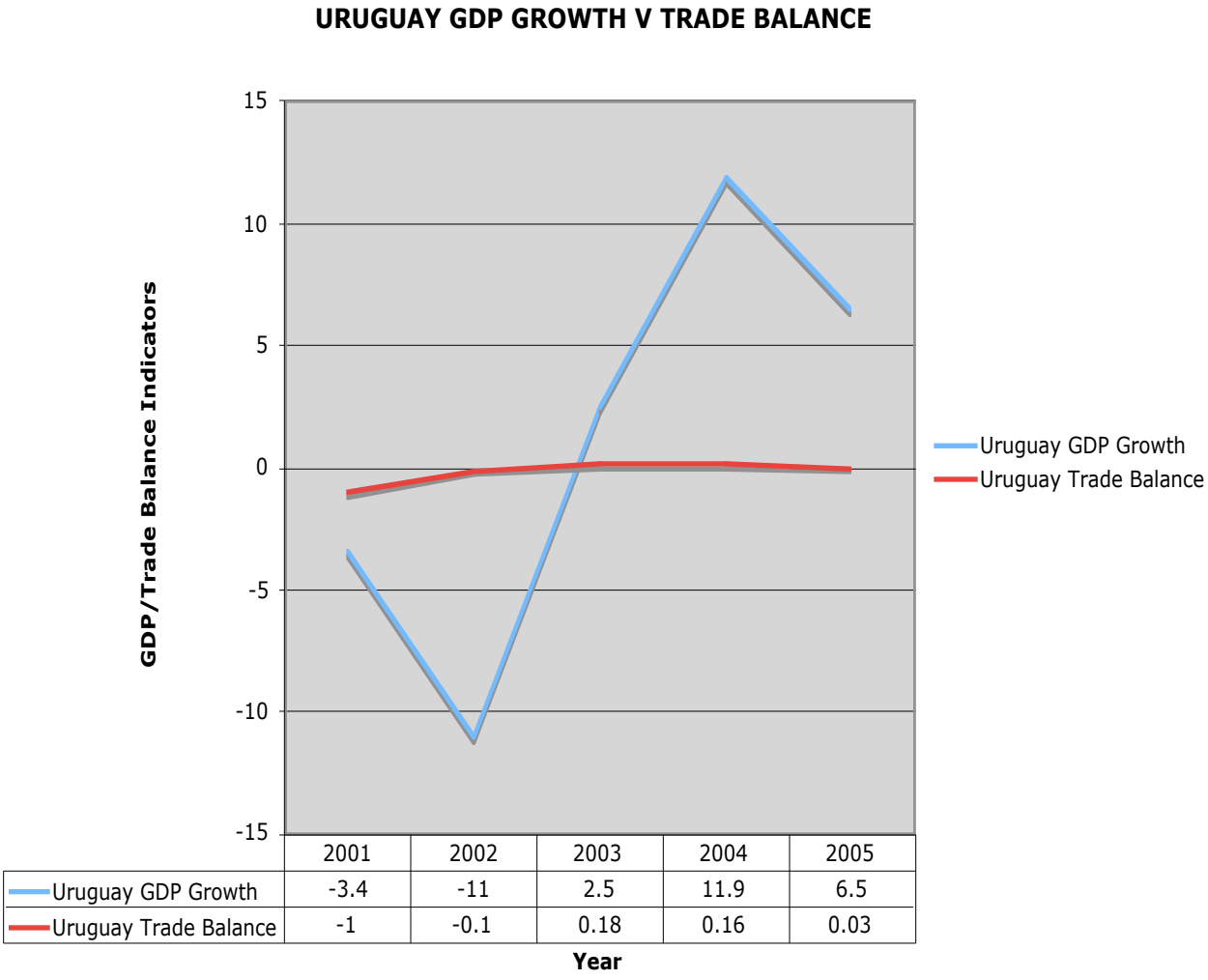


Table 3.8

Trade balance, goods, US$ (billions) (UN DPAD/Link estimates) [code 29936]								
Country or Area Code		2001	2002	2003	2004	2005	2006	2007
152	Chile	0.84	1.09	3.69	9.2	10.18	24.34	19.9
188	Costa Rica	-1.55	-1.92	-1.09	-1.42	-2.14	-2.6	-2.81
440	Lithuania	-1.78	-2.29	-2.7	-3.08	-2.9	-3.9	-4.6
702	Singapore	5.75	8.74	16.25	25.05	29.6	33.1	32.99
858	Uruguay	-1	-0.1	0.18	0.16	0.03	-0.4	-0.3

Source: United Nations, COMTRADE Database 2007.

Table 3.9

United Nations Human Development Index

Highest Ranking Countries

1 Norway

2 Sweden

3 Australia

4 Canada

5 Belgium

6 Netherlands

7 Iceland

8 United States

9 Japan

10 Ireland

Source: United Nations Development Programme Database 2007.

Table 3.10

Highest GDP per Head (PPP)

1 Luxembourg

2 Norway

3 United States

4 Bermuda

5 Switzerland

Source: The Economist Intelligence Unit, World in Figures 2006.

3.7 Trade Related Economic Variable Indicators

The second approach of the instrument development is an examination of the trade characteristics of the case countries. In this connection, it becomes vital for this analysis to ascertain two fundamental aspects of the trade regime for each case country. First, it needs to be determined what type of products are exported, i.e., primary sector or secondary sector. As has been the theme throughout this work, not only is trade important, but what is traded is also an important indication of economic structure of a country. Second, the determination of the trade policy of each case country will be explored. The exploration of the trade policies of the case countries will be done by actions. That is to say, an analysis of tariff rates, trade restrictiveness, world export market share, tariff escalation and trade competitiveness. Hence, the actions of each

case country with respect to trade restrictiveness will be identified. The intention of this phase of the analysis is to establish trends in trade activity concerning comparisons in trade policy, export market share, type of goods traded and trade competitiveness. In turn, these findings will be correlated to the defined economic indicators presented earlier in this chapter.

3.7.1 Case Country Trade Details

In this section the findings and relationships determined are intended to measure comparative and competitive advantages of each case country. The measures are overall as well as in specific industries. The sequence of tables, models and graphs are designed to illustrate the details in trade of each case country. As overall export performance is being evaluated it will then become more apparent, the particular strengths and perhaps weaknesses, of each country.

Figure 3.13

Sorce: United Nations, COMTRADE International Trade Statistics 2001-2005.

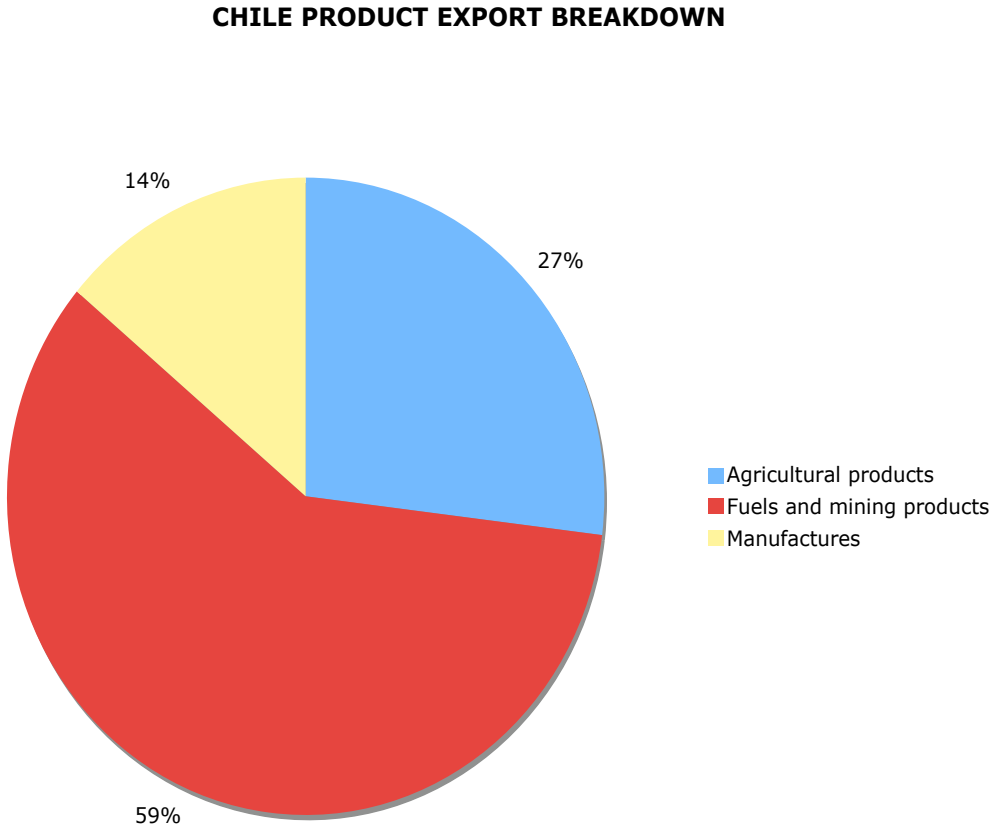


Figure 3.14

Sorce: United Nations, COMTRADE International Trade Statistics 2001-2005.

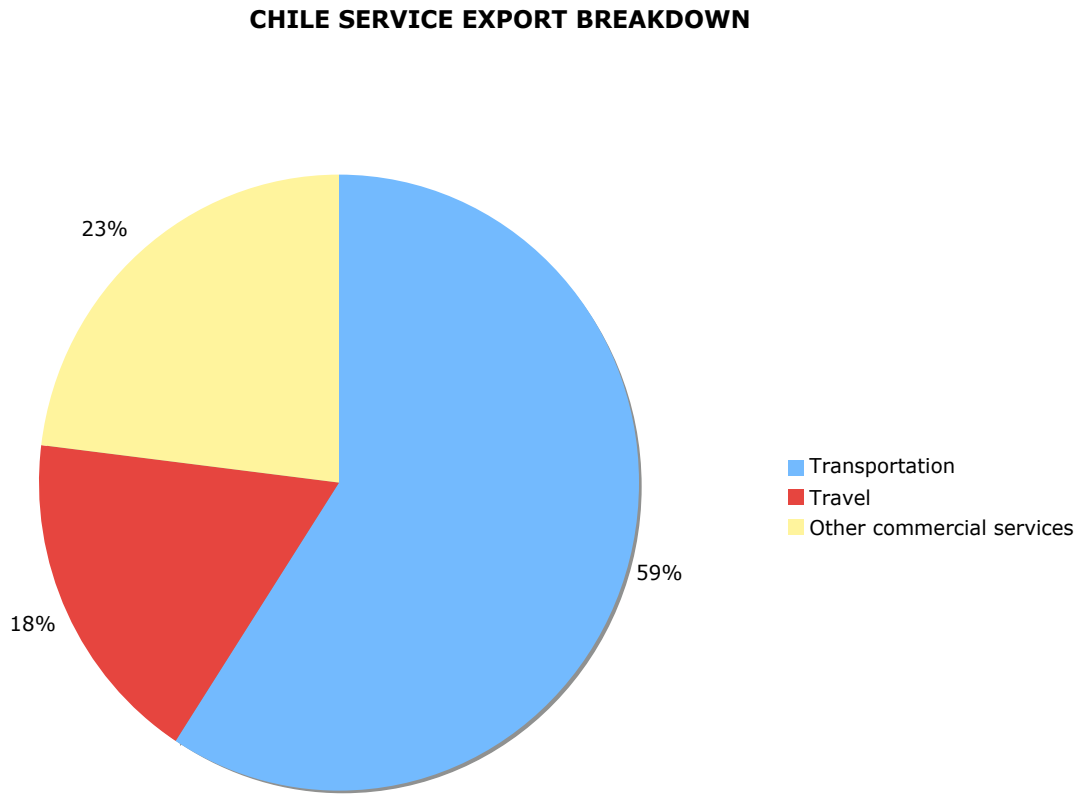


Figure 3.15

Sorce: United Nations, COMTRADE International Trade Statistics 2001-2005.

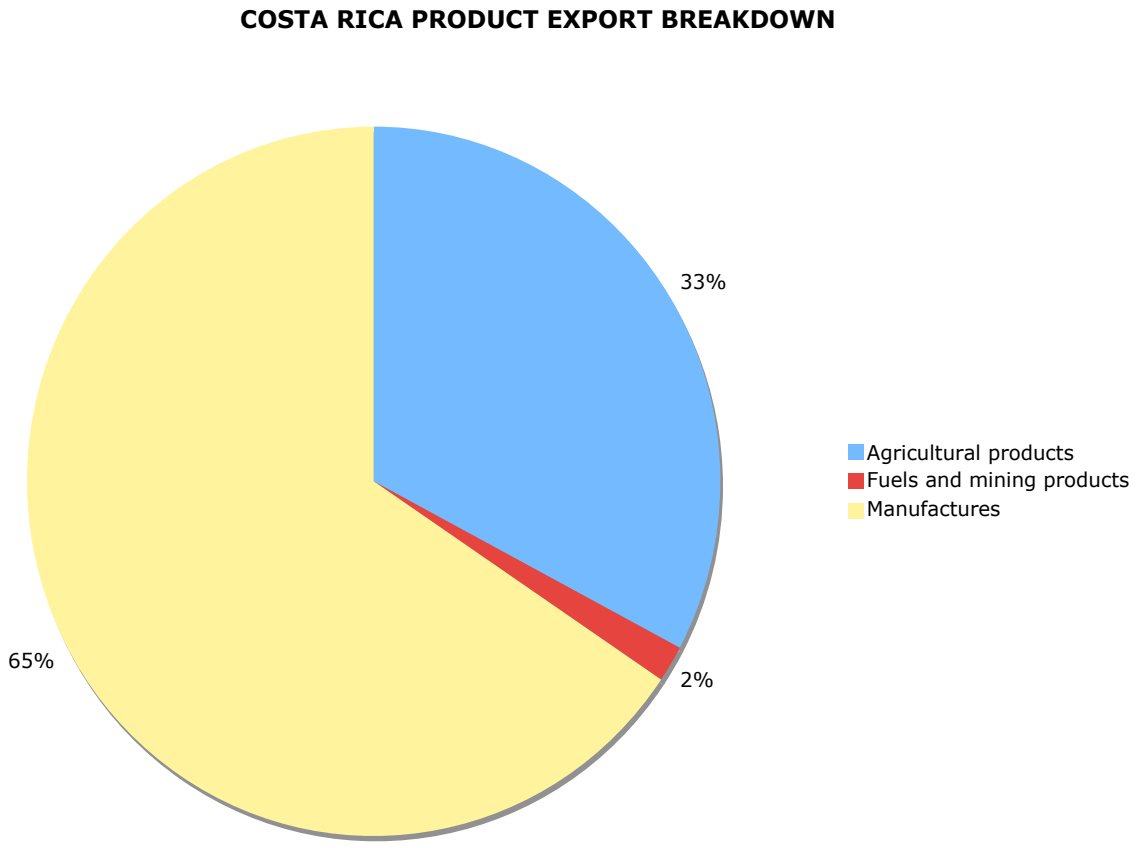


Figure 3.16

Sorce: United Nations, COMTRADE International Trade Statistics 2001-2005.

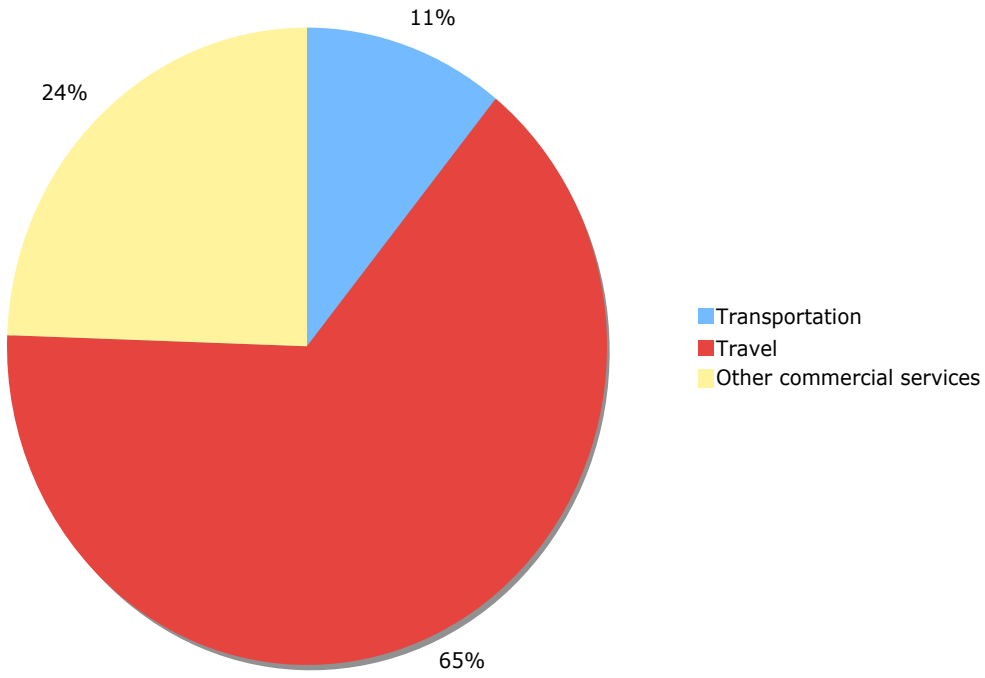


Figure 3.17

Sorce: United Nations, COMTRADE International Trade Statistics 2001-2005.

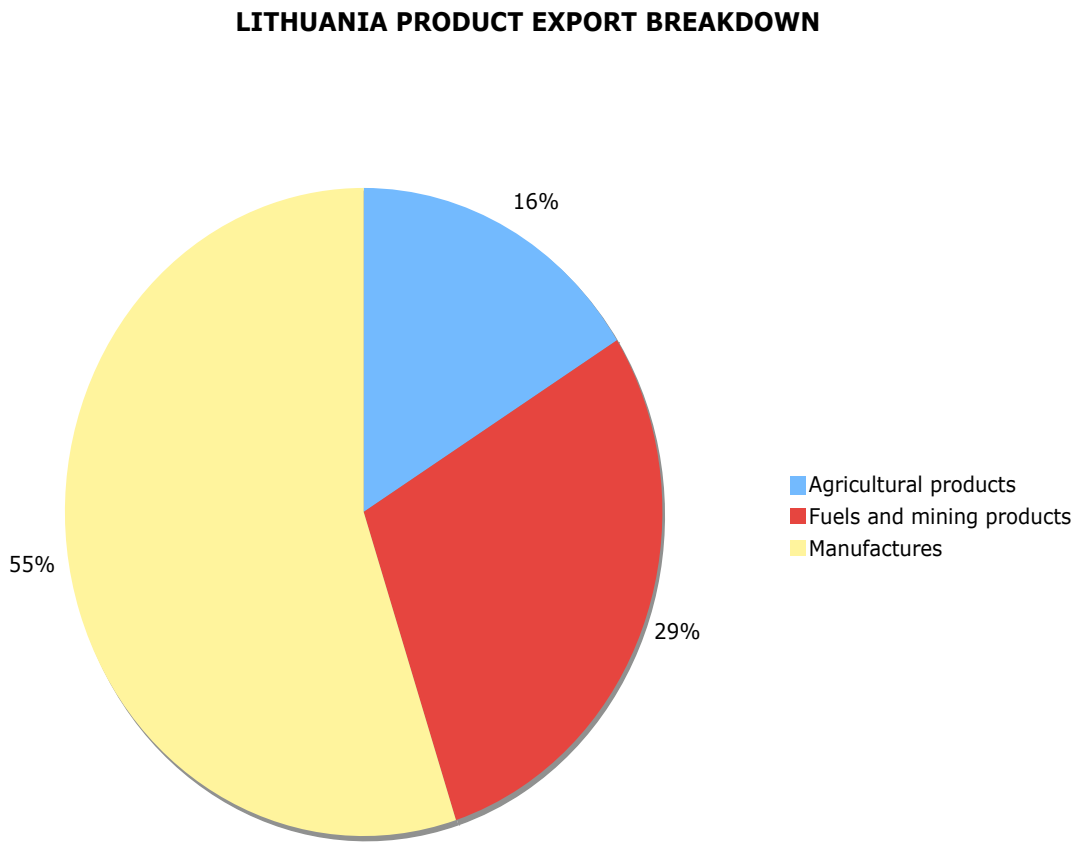


Figure 3.18

Sorce: United Nations, COMTRADE International Trade Statistics 2001-2005.

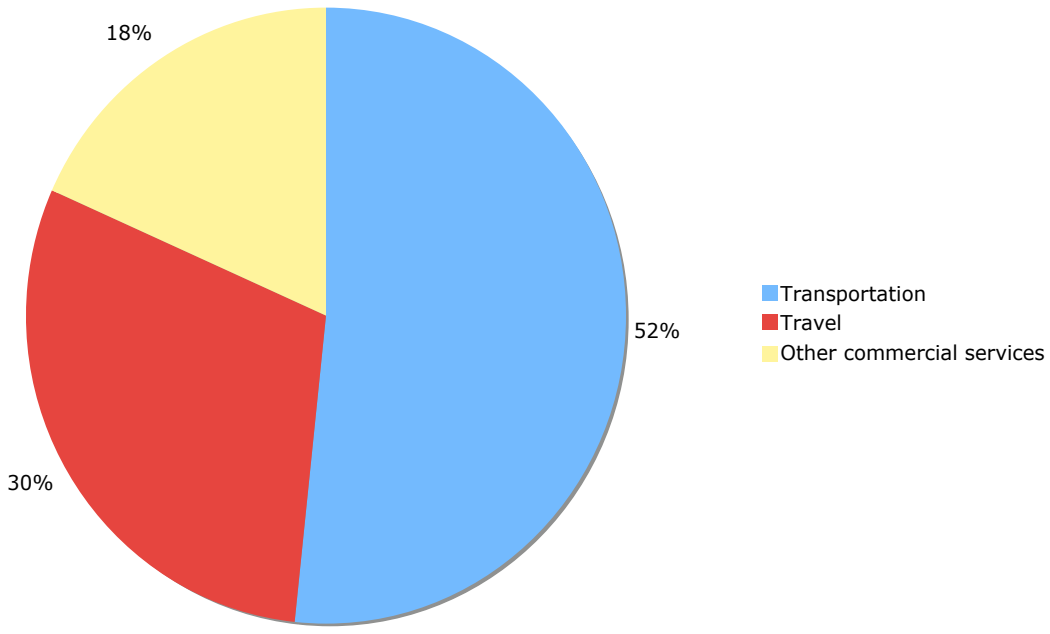


Figure 3.19

Sorce: United Nations, COMTRADE International Trade Statistics 2001-2005.

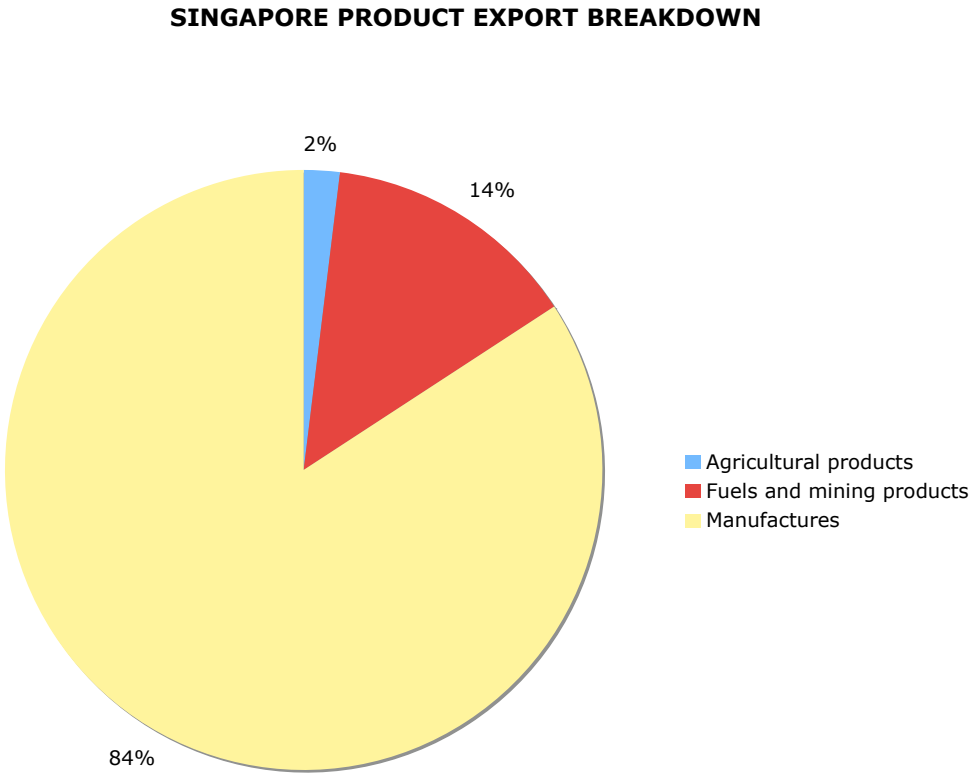


Figure 3.20

Sorce: United Nations, COMTRADE International Trade Statistics 2001-2005.

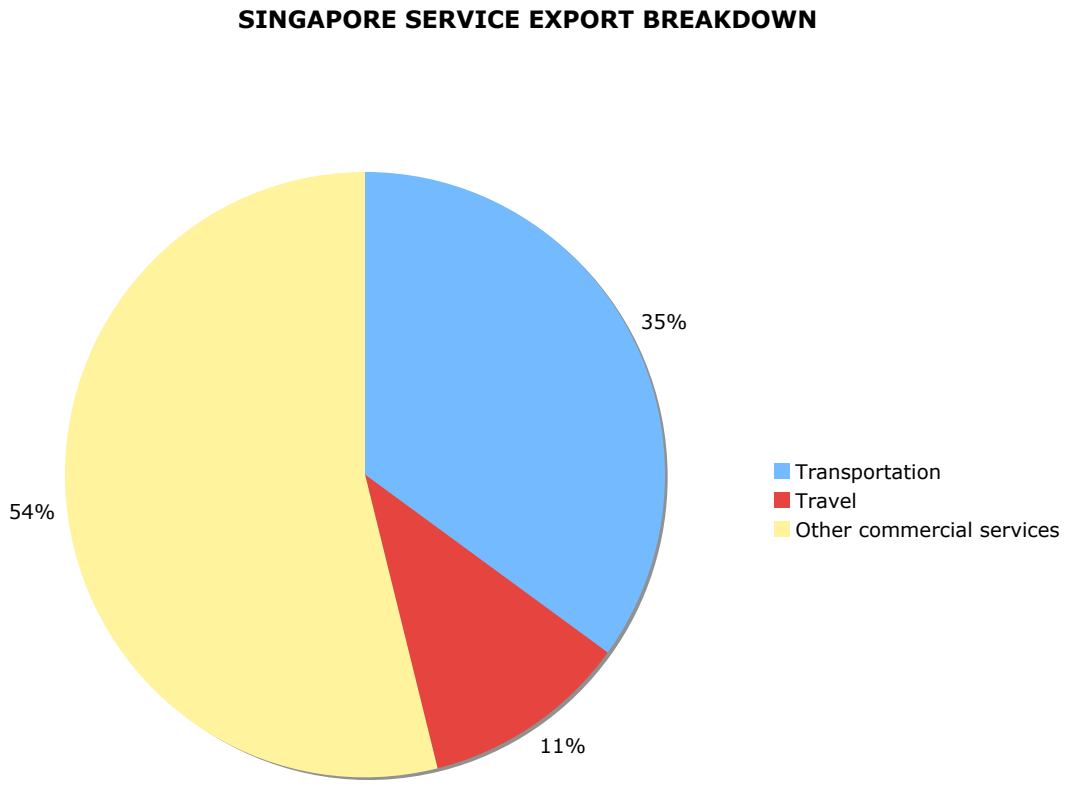


Figure 3.21

Sorce: United Nations, COMTRADE International Trade Statistics 2001-2005.

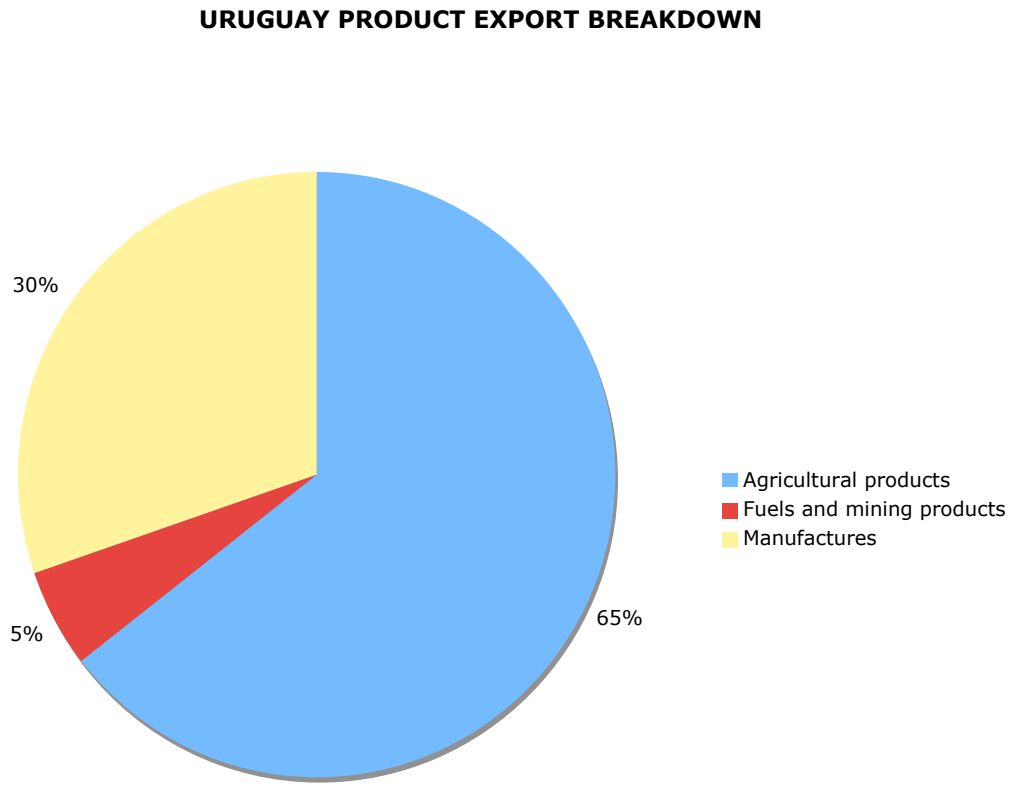
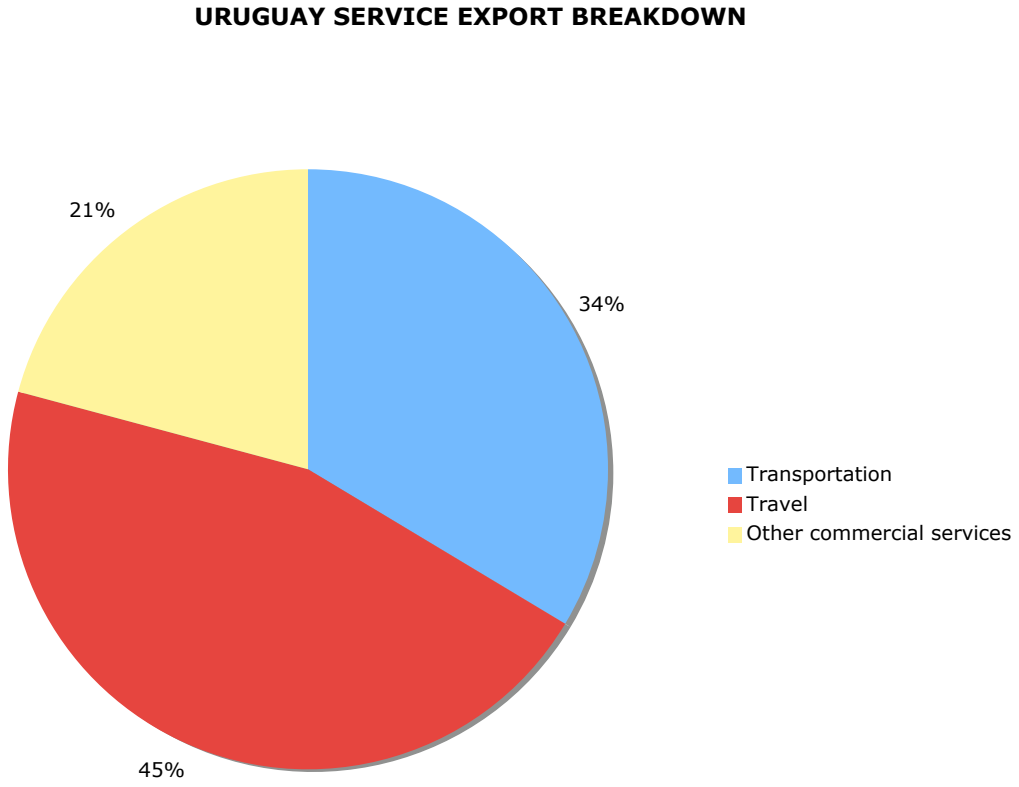


Figure 3.22

Sorce: United Nations, COMTRADE International Trade Statistics 2001-2005.



Figures 3.13 - 3.22 depict the goods and services export breakdowns for each case country. In sum, two of the five case countries have developed a significant manufacturing infrastructure, Costa Rica and Singapore. Much has been said about Singapore with a manufacturing export segment of 84 percent of goods exports, however, Costa Rica has achieved a 65 percent portion of manufacturing to total goods exports. Lithuania ranks third in manufacturing with 55 percent of goods exported being manufactured products. Of the remaining two countries, Chile remains dependent on mineral and ore deposits at 59 percent and agricultural products at 27 percent, while Uruguay depends heavily on agricultural products accounting for 65 percent of goods exports.

On the service exports side, the standouts are again Costa Rica and Singapore. Costa Rica has developed a strong tourism industry while Singapore has excelled in commercial services such as brokerage and finance. Chile and Lithuania have developed a somewhat strong transportation industry because of geographic location and ports. Uruguay has a moderately developed tourism industry accounting for 45 percent of service exports.

Table 3.11

Cross Country Comparative Advantage Tables
Chile

Country	Product Code	Export Value US $ '000 2005
Chile	681 Silver & Platinum	11,590,400
Costa Rica	681 Silver & Platinum	97
Lithuania	681 Silver & Platinum	8
Singapore	681 Silver & Platinum	104,985
Uruguay	681 Silver & Platinum	0
Country	Product Code	Export Value US $ '000 2005
Chile	283 Copper ores & Concentrates	6,067,837
Costa Rica	682 Copper	935
Lithuania	283 Copper ores & Concentrates	93
Singapore	283 Copper ores & Concentrates	1787
Uruguay	682 Copper	151
Country	Product Code	Export Value US $ '000 2005
Chile	287 Ores of Base Metals	2,828,014
Costa Rica	287 Ores of Base Metals	8
Lithuania	287 Ores of Base Metals	631
Singapore	287 Ores of Base Metals	22,300
Uruguay		N/A
Country	Product Code	Export Value US $ '000 2005
Chile	034 Fish - Fresh, Chilled or Frozen	1,972,996
Costa Rica	034 Fish - Fresh, Chilled or Frozen	75,773
Lithuania	034 Fish - Fresh, Chilled or Frozen	87,119
Singapore	034 Fish - Fresh, Chilled or Frozen	234,616
Uruguay	034 Fish - Fresh, Chilled or Frozen	110,759

Source: United Nations, COMTRADE Database 2007.

Table 3.12

Cross Country Comparative Advantage Tables
Costa Rica

Country	Product Code	Export Value US $ '000 2005
Costa Rica	057 Fruit & Nuts	914,374
Chile	057 Fruit & Nuts	1,837,285
Lithuania	057 Fruit & Nuts	39,261
Singapore	057 Fruit & Nuts	78,965
Uruguay	057 Fruit & Nuts	70,457
Country	Product Code	Export Value US $ '000 2005
Costa Rica	872 Medical, Surgical, Dental Instruments & Appliances	501,347
Chile	872 Medical, Surgical, Dental Instruments & Appliances	2,920
Lithuania	872 Medical, Surgical, Dental Instruments & Appliances	41,054
Singapore	872 Medical, Surgical, Dental Instruments & Appliances	1,082,542
Uruguay	872 Medical, Surgical, Dental Instruments & Appliances	5,536
Country	Product Code	Export Value US $ '000 2005
Costa Rica	071 Coffee & Coffee Substitutes	264,604
Chile	071 Coffee & Coffee Substitutes	11,295
Lithuania	071 Coffee & Coffee Substitutes	27,517
Singapore	071 Coffee & Coffee Substitutes	179,294
Uruguay	071 Coffee & Coffee Substitutes	34
Country	Product Code	Export Value US $ '000 2005
Costa Rica	542 Medicaments	232,628
Chile	542 Medicaments	61,872
Lithuania	542 Medicaments	75,387
Singapore	542 Medicaments	1,839,118
Uruguay	542 Medicaments	36,501

Source: United Nations, COMTRADE Database 2007.

Table 3.13

Cross Country Comparative Advantage Tables
Lithuania

Country	Product Code	Export Value US $ '000 2005
Lithuania	821 Furniture - Bedding, Mattresses, Cushions	561,695
Chile	821 Furniture - Bedding, Mattresses, Cushions	62,885
Costa Rica	821 Furniture - Bedding, Mattresses, Cushions	32,555
Singapore	821 Furniture - Bedding, Mattresses, Cushions	149,377
Uruguay	821 Furniture - Bedding, Mattresses, Cushions	49,394
Country	Product Code	Export Value US $ '000 2005
Lithuania	562 Fertilizers - Manufactured	523,895
Chile	562 Fertilizers - Manufactured	140,344
Costa Rica	562 Fertilizers - Manufactured	10,759
Singapore	562 Fertilizers - Manufactured	9,713
Uruguay	562 Fertilizers - Manufactured	10,090
Country	Product Code	Export Value US $ '000 2005
Lithuania	248 Wood - Simply Worked	239,028
Chile	248 Wood - Simply Worked	976,531
Costa Rica	248 Wood - Simply Worked	8,094
Singapore	248 Wood - Simply Worked	89,712
Uruguay	248 Wood - Simply Worked	22,742
Country	Product Code	Export Value US $ '000 2005
Lithuania	793 Ships, Boats & Floating Structures	271,887
Chile	793 Ships, Boats & Floating Structures	65,235
Costa Rica	793 Ships, Boats & Floating Structures	3,676
Singapore	793 Ships, Boats & Floating Structures	1,009,017
Uruguay	793 Ships, Boats & Floating Structures	5,029

Source: United Nations, COMTRADE Database 2007.

Table 3.14

Cross Country Comparative Advantage Tables
Singapore

Country	Product Code	Export Value US $ '000 2005
Singapore	764 Telecommunications Equipment	12,990,760
Chile	764 Telecommunications Equipment	18,121
Costa Rica	764 Telecommunications Equipment	182,711
Lithuania	764 Telecommunications Equipment	113,079
Uruguay	764 Telecommunications Equipment	2,779
Country	Product Code	Export Value US $ '000 2005
Singapore	931 Special Transactions & Commodities Not Classified	8,697,611
Chile	931 Special Transactions & Commodities Not Classified	838,183
Costa Rica	931 Special Transactions & Commodities Not Classified	0
Lithuania	931 Special Transactions & Commodities Not Classified	94,675
Uruguay	931 Special Transactions & Commodities Not Classified	N/A
Country	Product Code	Export Value US $ '000 2005
Singapore	778 Electrical Machinery	4,755,033
Chile	778 Electrical Machinery	8,308
Costa Rica	778 Electrical Machinery	41,654
Lithuania	778 Electrical Machinery	47,137
Uruguay	778 Electrical Machinery	732
Country	Product Code	Export Value US $ '000 2005
Singapore	515 Inorganic Compounds & Heterocyclic Coumpounds	4,747,839
Chile	515 Inorganic Compounds & Heterocyclic Coumpounds	2,600
Costa Rica	515 Inorganic Compounds & Heterocyclic Coumpounds	186
Lithuania	515 Inorganic Compounds & Heterocyclic Coumpounds	1,532
Uruguay	515 Inorganic Compounds & Heterocyclic Coumpounds	891

Source: United Nations, COMTRADE Database 2007.

Table 3.15

Cross Country Comparative Advantage Tables
Uruguay

Country	Product Code	Export Value US $ '000 2005
Uruguay	011 Meat of Bovine Animals - Fresh , Chilled or Frozen	736,017
Chile	011 Meat of Bovine Animals - Fresh , Chilled or Frozen	54,403
Costa Rica	011 Meat of Bovine Animals - Fresh , Chilled or Frozen	32,442
Lithuania	011 Meat of Bovine Animals - Fresh , Chilled or Frozen	50,573
Singapore	011 Meat of Bovine Animals - Fresh , Chilled or Frozen	4,368
Country	Product Code	Export Value US $ '000 2005
Uruguay	611 Leather	243,818
Chile	611 Leather	23,523
Costa Rica	611 Leather	14,093
Lithuania	611 Leather	16,828
Singapore	611 Leather	90,615
Country	Product Code	Export Value US $ '000 2005
Uruguay	042 Rice	199,804
Chile	042 Rice	7
Costa Rica	042 Rice	698
Lithuania	042 Rice	1,290
Singapore	042 Rice	28,811
Country	Product Code	Export Value US $ '000 2005
Uruguay	268 Wool & Other Animal Hair	135,575
Chile	268 Wool & Other Animal Hair	16,101
Costa Rica	268 Wool & Other Animal Hair	N/A
Lithuania	268 Wool & Other Animal Hair	321
Singapore	268 Wool & Other Animal Hair	21

Source: United Nations, COMTRADE Database 2007.

Tables 3.11 - 3.15 illustrate the top exports in goods for the five case countries. The following cells in each product category represent how the other four countries compare. As such, these tables are comparative advantage tables for the top industries in each case country. With few exceptions, the highest exporting industrial product for each country is unsurpassed by the remaining four countries.

Once again, Chile's dependence on primary sector goods, i.e., minerals , mining and agriculture is demonstrated. The figures also represent how dependent Uruguay is on primary sector goods in the form of agricultural products. While it is the implied bias of this analysis that primary sector emphasis is detrimental to socioeconomic economic advancement, that is not to imply that there are no opportunities to capitalize on. The investigative phase of this analysis will concentrate on capital resource identification and development in both the primary and secondary sectors.

For Costa Rica two of the top four exports goods are manufactured, however, one must keep in mind that all of the other manufactured goods in Costa Rica account for 65 percent of total goods exports. Therefore, Costa Rica is not as dependent on coffee and banana/fruit exports as Table 3.12 would suggest. The two manufactures that have excelled in Costa Rica are medical instruments and

pharmaceuticals. These industries have vast potential for future growth along with other medical related fields. The top industry for Costa Rica is actually not listed in the chart, that is, tourism at $1.3 billion. Of the five case countries, tourism dominates the service export segment of Costa Rica. This trend will be explored more in the investigative aspect of the survey.

The top four goods exports for Lithuania and Singapore are manufactures, however, product code 931 is included in goods traded as commodity brokerage and special services for Singapore. Singapore has excelled in high technology manufactures as well as in chemical production and petroleum refining. The Asian Dollar Market is headquartered in Singapore as well as the existence of more than one hundred foreign commercial banks. With respect to Lithuania, this country industrialized rapidly since the 1940's. The chief manufactures are wood and timber related products as well as fertilizers and vessel building. Farming, while still important at 16 percent of exports, has an increasingly less important role in the economy of the country.

Figure 3.23

World Market Share History

Source: World Trade Organization, Trade Database 2007.

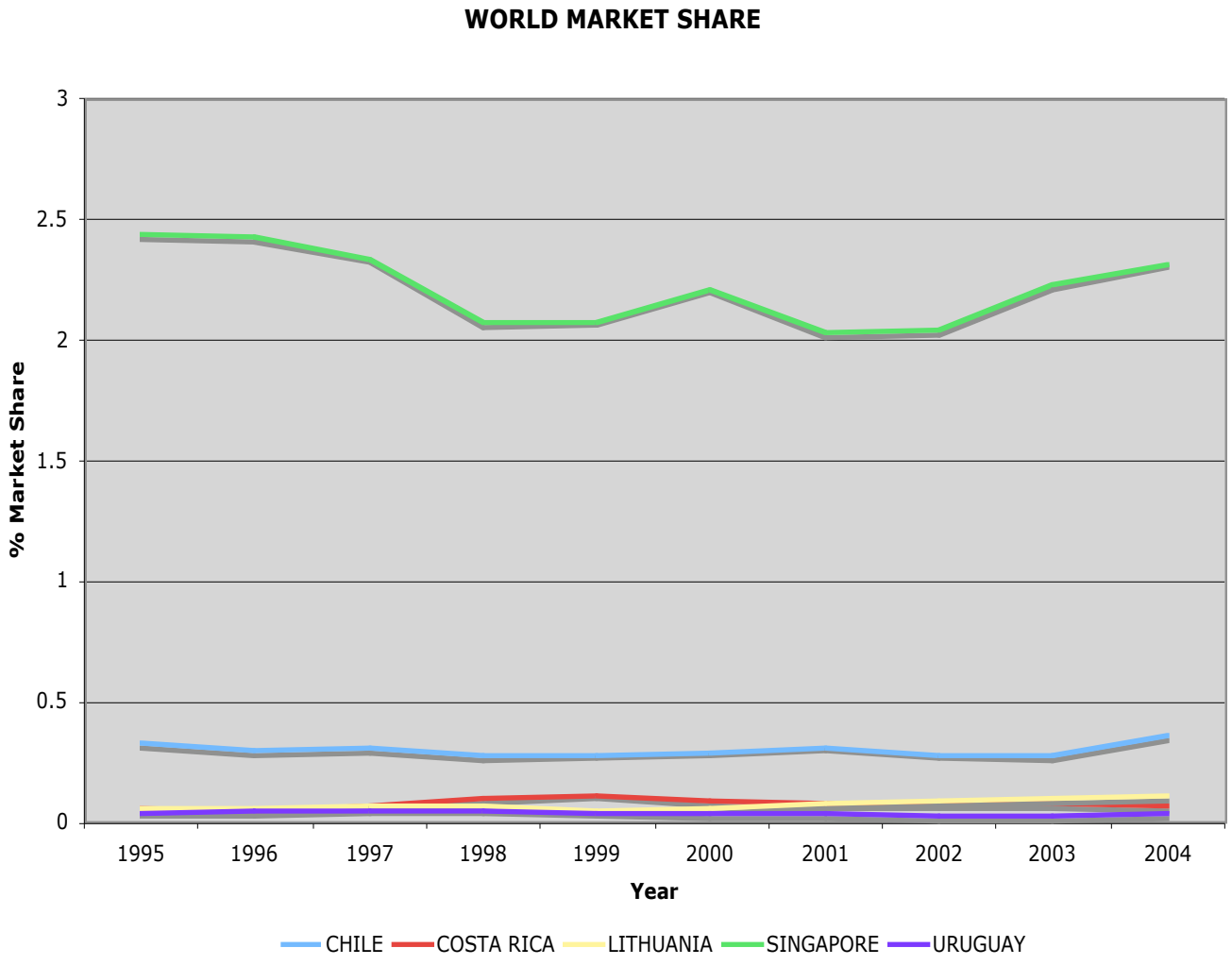


Table 3.16

World Export Market Share (Percent)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
CHILE	0.328	0.299	0.312	0.28	0.283	0.292	0.313	0.284	0.28	0.361
COSTA RICA	0.056	0.054	0.073	0.097	0.114	0.088	0.079	0.081	0.081	0.069
LITHUANIA	0.056	0.065	0.072	0.07	0.054	0.061	0.077	0.089	0.1	0.109
SINGAPORE	2.438	2.425	2.339	2.072	2.08	2.212	2.033	2.042	2.23	2.318
URUGUAY	0.043	0.047	0.051	0.052	0.041	0.037	0.034	0.03	0.031	0.034

Source: World Trade Organization, Trade Database 2007.

An additional aspect of a country's comparative advantage is the measure of market share of world exports. Figure 3.23 and Table 3.16 chart the world export market share of the five case countries. Singapore out stands with more than two percent of world trade while the four others range from one third to one percent. Interestingly, the trend of all five case countries indicates that their respective market shares have remained rather constant over the ten year period. Hence, it may be inferred that the case countries are keeping up with world export activity growth which has averaged at over five percent annually since the year 2000.

3.7.2 Trade Policy Characteristics of the Case Countries

When considering the trade policy characteristics of a country it becomes necessary to use objective tools. It is not within the scope of this instrument to evaluate countervailing duties, antidumping measures or protective quotas. While these trade obstacles are real and significant, the approach of this analysis is more general. The overall trade approach of each case country will be evaluated based based upon complete data. That data of course, will include the measures which are obstacles within them. Therefore, obstacles to trade will be included in the general figures and not broken out for consideration.

In a search for an objective model to evaluate a country's trade approach, The World Bank devised a three component index. The overall index referred to as the Trade Restrictiveness Index (TRI) is designed to measure the effects of trade distortions due to tariffs and duties on the particular economic circumstance of a country. In other words, this measure is designed to accomplish similar goals as the GINI Index accomplished for measuring inequalities in income/wealth distribution. A base line determines trade distortions, import and export, and their effect on the economy of a country.

The second aspect of the index is called the Market Access Overall Trade Restrictiveness Index (MA-OTRI). This is the component of the Trade

Restrictiveness Index that measures the tariffs and duties faced by the export bundle of each country. This component of the index measures market access. Duties and tariffs faced by the exports of each country.

The third aspect of the index is referred to as Overall Trade Restrictiveness Index (OTRI), and measures the consequences of a country's trade policies on its import bundle. All three measures take into account trade distortions such as quotas and countervailing duties.

Table 3.17

Trade Restrictiveness Export vs Trade Restrictiveness Import

Country	TR Export	TR Import
Chile	20	6
Costa Rica	21	8
Lithuania (EU)	25	9
Singapore	9	0
Uruguay	36	10

Source: World Bank Policy Working Paper 3840, 2006.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.90741005
R Square	0.82339299
Adjusted R Square	0.76452399
Standard Error	4.72224291
Observations	5

Note: Multiple R value of 0.9074 implies that there is a very strong correlation between trade restrictiveness on exports (MA) and trade restrictiveness on imports.

Note: R square value of .8233 indicates that 82.3% of the variations in the MA-TRI can be explained by trade restrictiveness on imports.

The line of best fit is Y = 7.53797468 + 2.22151899X where X stands for OTRI and Y stands for MA-TRI.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	311.901266	311.9012658	13.986868	0.0333468
Residual	3	66.8987342	22.29957806		
Total	4	378.8			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	7.53797468	4.45305379	1.692765242	0.1890761	-6.63362991	21.7095793
Trade Res. Import	2.22151899	0.59400457	3.739902204	0.0333468	0.33113135	4.11190662

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	20.8670886	-0.86708861	-0.212023757
2	25.3101266	-4.31012658	-1.05392831
3	27.5316456	-2.53164557	-0.619047466
4	7.53797468	1.46202532	0.357499911
5	29.7531646	6.24683544	1.527499621

Table 3.17 illustrates the close relationship between trade restrictiveness on imports versus trade restrictiveness on exports. Represented is the correlation where trade restrictiveness on imports (OTRI) is the independent variable and trade restrictiveness on exports (MA-TRI) is the dependent variable. The regression results indicate a strong link between the two inferring that countries reciprocate in trade relationships. That is to say, that if a country imposes trade barriers on imports then its exports face similar barriers abroad. As the regression results show, 82 percent of the variations in market access are related to import barriers. While this conclusion seems intuitive, the notion of reciprocity is often ignored by policy makers. Hence, the net gain by export activity is greatly reduced in such a situation.

Table 3.18

Trade Balance vs Applied Tarriffs

Country	Trade Balance	Applied Tarriffs
Chile	2.94	8.86
Costa Rica	-1.93	6.61
Lithuania	-3.03	2.66
Singapore	21.64	0.12
Uruguay	-0.2	13.17

NOTE - Applied tarriff rate is represented by ten year average 1995 - 2004.

NOTE - Trade balance is represented by seven year average 2001 - 2007 (US $ Billions).

Source: World Trade Organization, Trade Database 2007.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.55933362
R Square	0.3128541
Adjusted R Square	0.08380547
Standard Error	9.74318223
Observations	5

Note: Multiple R value of 0.5593 implies that there is a moderate correlation between trade balance and applied tariff rates.

Note: R square value of .3128 indicates that 31.2% of the variations in the trade balance can be explained by applied tariff rates.

The line of best fit is Y = 10.857584 - 1.1097365X where X stands for applied tariffs and Y stands for trade balance.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	129.66292	129.6629199	1.36588503	0.32694191
Residual	3	284.7888	94.92960002		
Total	4	414.45172			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	10.857584	7.3884944	1.469525922	0.23802743	-12.6559027	34.3710708
Applied Tariffs	-1.10973648	0.94953896	-1.168710843	0.32694191	-4.13159324	1.91212028

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	1.02531882	1.91468118	0.226915943
2	3.52222591	-5.45222591	-0.646163444
3	7.90568501	-10.935685	-1.29602845
4	10.7244157	10.9155843	1.293646244
5	-3.75764541	3.55764541	0.421629707

Trade balance is used repeatedly throughout this analysis as well as a variable in table 3.18 as correlated to applied tariff rates of a ten year period. While the correlation is not as strong the comparison is significant. Of the five case countries, only two have experienced an average favorable trade balance over the seven year period through the year 2007. Chile and Singapore have experienced positive trade balances for different reasons, Chile for its abundant natural resources and Singapore for its manufacturing prowess. To be considered, is whether applied tariff rate policies effected their trade balances. In the case of Chile, probably not, because natural resources tend to trump other trade considerations. Countries that have vast natural resources tend to be less influenced by market access because their resources are in demand. Hence, Chile is most probably not as effected by reciprocal tariffs than the other case countries. Proof of this is Chile's higher than average applied tariff rates at over 8 percent. Singapore, with a virtual free trade regime has the greatest trade surplus of all the case countries. Once again, the fact that Singapore imposes no trade barriers on imports does play a significant role in its success. However, it may not explain the whole story. Singapore is unique among the case countries, in that, it is a manufacturing powerhouse. It has converted capital resources such as location, into capital. What is more, the free trade agenda of Singapore has enabled it to solidify its place as on of the top manufacturers in the world.

The remaining three case countries are probably more subject to reciprocity than Chile and Singapore. Costa Rica, Lithuania and Uruguay all are less powerful in relation to Chile and Singapore from a reciprocal point of view. None of the three has large deposits of natural resources nor do they have the manufacturing power. However, these countries have developed a certain sustainability in selected industries.

Table 3.19

Trade Balance vs Trade Restrictiveness Export

Country	Trade Balance	TR Export
Chile	24.34	20
Costa Rica	-2.6	21
Lithuania (EU)	-3.03	25
Singapore	33.1	9
Uruguay	-0.4	36

NOTE - Trade balance data is for the year ending 2006.

NOTE - Trade restrictiveness index was calculated in 2006.

Source: World Bank Policy Working Paper 3840 2006.
Source: World Trade Organization, Trade Database 2007.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.75130697
R Square	0.56446217
Adjusted R Square	0.41928289
Standard Error	13.0638944
Observations	5

Note: Multiple R value of 0.75130697 implies that there is a strong correlation between MA-TRI and trade balance.

Note: R square value of .56446217 indicates that 56.4% of the variations in the trade balance can be explained by the market access TRI.

The line of best fit is Y = 39.6642978 - 1.3235269X where X stands for MA-TRI and Y stands for trade balance.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	663.552872	663.552872	3.88803542	0.14319415
Residual	3	511.996008	170.665336		
Total	4	1175.54888			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	39.6642978	16.0055684	2.478156146	0.0894158	-11.2725643	90.6011599
X Variable 1	-1.32352693	0.67122431	-1.97181019	0.14319415	-3.45966224	0.81260839

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	13.1937592	11.1462408	0.985201644
2	11.8702323	-14.4702323	-1.27900491
3	6.5761246	-9.6061246	-0.849072791
4	27.7525554	5.34744456	0.472653632
5	-7.98267159	7.58267159	0.670222426

Figure 3.24

Trade Restrictiveness By Country

Source: World Bank Policy Paper 3840 2006.

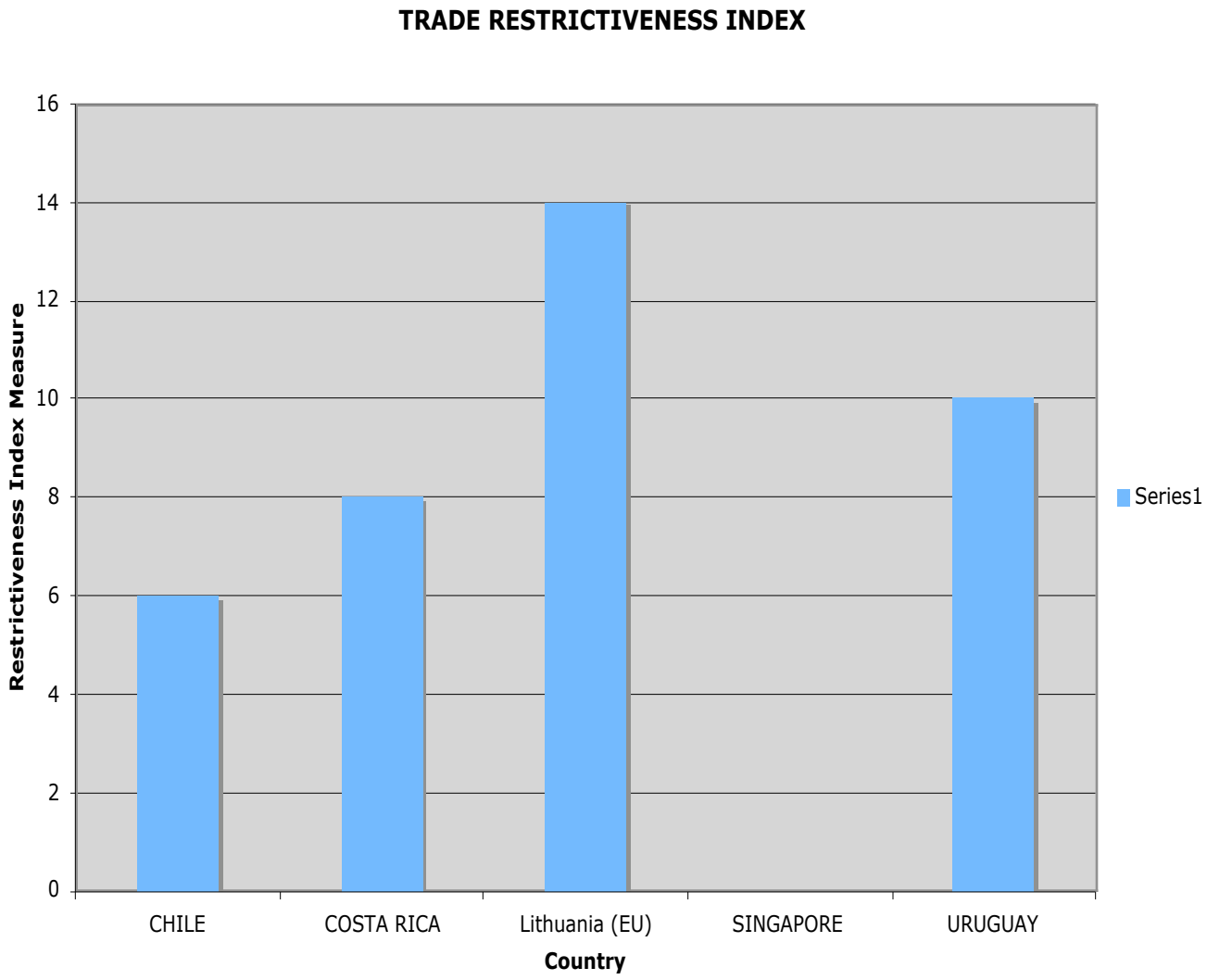


Table 3.20

World Bank Trade Restrictiveness Index

CHILE	6
COSTA RICA	8
Lithuania (EU)	14
SINGAPORE	0
URUGUAY	10

Source: World Bank Policy Working Paper 3840, 2006.

Figure 3.24 and table 3.20 display the World Bank Trade Restrictiveness Index (TRI) values. As can be seen, the figures are similar to the tariff rate trends illustrated earlier. Lithuania, however, has a higher index value than expected

based upon previous applied tariff rates. The reason for this is Lithuania's entry into the European Union in 2005. The applied tariff rate figures were based upon the ten year period 1995 - 2004. As stipulated by the trading block, Lithuania adopted the tariff rates of the EU in 2005/2006. Hence, when figures for Lithuania include EU policy the symbol (EU) is denoted in the table. One can debate how this will effect Lithuania on the basis of world trade versus inter union trade. While Lithuania will gain greatly in trade among EU members, trade outside the EU may suffer as the TRI value suggests.

The other TRI values are to be expected with the exception of Costa Rica. Costa Rica scores perhaps a few points higher than it should based upon its level of industrial trade. Again, the TRI measures the economic detriment based upon distortions in import barriers as well as barriers faced abroad also including any countervailing duties and other retaliatory actions. Figure 3.25 delineates the tariff rate change of the five case countries over a ten year period 1995 -2004. While this period shows a decline for the other four countries, Costa Rica has instituted higher tariffs on imports since the year 2000. Therefore, the TRI reflects this upward trend. It is interesting to contrast the ten year average applied tariff rates in Table 3.18 with the trend line in Figure 3.25. A standout is Chile that has been very aggressive in reducing import tariffs. Uruguay on the other hand has bounced up and down for the ten year period with an average of

over 13 percent.

Figure 3.25

Tariff Rate History

Source: World Trade Organization, Trade Database 2007.

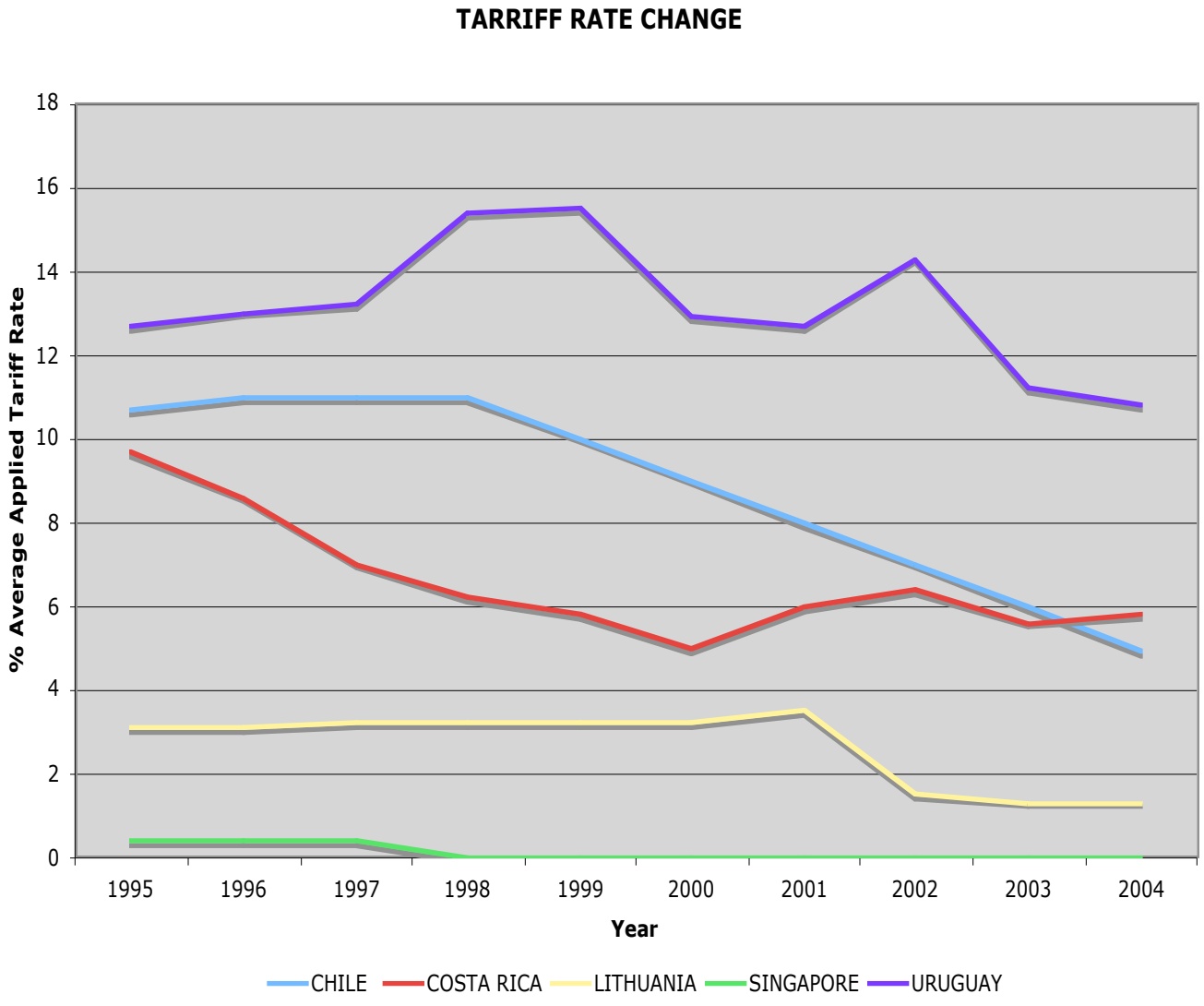


Table 3.21

Chile World Market Share vs Average Applied Tarriff Rates

Year	MKT Share %	Tariff Rate %
1995	0.328	10.7
1996	0.299	11
1997	0.312	11
1998	0.28	11
1999	0.283	10
2000	0.292	9
2001	0.313	8
2002	0.284	7
2003	0.28	6
2004	0.361	4.9

Source: World Trade Organization, Trade Database 2007.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.288574297
R Square	0.083275125
Adjusted R Square	-0.031315484
Standard Error	0.026494079
Observations	10

Note: Multiple R value of 0.288574297 implies that there is a weak correlation between market share and applied tariff rates.

Note: R square value of .0832 indicates that 8.3% of the variations in the market share can be explained by applied tariff rates.

The line of best fit is Y = .332544082 - 0.00331197X where X stands for applied tariffs and Y stands for world export market share.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.00051011	0.00051011	0.726719	0.418737186
Residual	8	0.00561549	0.00070194		
Total	9	0.0061256			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.332544082	0.035427035	9.38673204	1.36E-05	0.250849194	0.41423897
Tariff Rate %	-0.003311973	0.003885113	-0.85247791	0.418737	-0.01227106	0.00564711

RESIDUAL OUTPUT

Observation	*MKT Share %*	*Residuals*
1	0.297105969	0.030894031
2	0.296112377	0.002887623
3	0.296112377	0.015887623
4	0.296112377	-0.016112377
5	0.299424351	-0.016424351
6	0.302736324	-0.010736324
7	0.306048297	0.006951703
8	0.30936027	-0.02536027
9	0.312672243	-0.032672243
10	0.316315414	0.044684586

PROBABILITY OUTPUT

Percentile	*MKT Share %*
5	0.28
15	0.28
25	0.283
35	0.284
45	0.292
55	0.299
65	0.312
75	0.313
85	0.328
95	0.361

Table 3.22

Costa Rica World Market Share vs Average Applied Tariff Rates

Year	MKT Share %	Tariff Rate %
1995	0.056	9.7
1996	0.054	8.6
1997	0.073	7
1998	0.097	6.2
1999	0.114	5.8
2000	0.088	5
2001	0.079	6
2002	0.081	6.4
2003	0.081	5.6
2004	0.069	5.8

Source: World Trade Organization, Trade Database 2007.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.70799348
R Square	0.50125476
Adjusted R Square	0.43891161
Standard Error	0.01350984
Observations	10

Note: Multiple R value of 0.70799348 implies that there is a strong correlation between market share and applied tariff rates.

Note: R square value of .5012 indicates that 50.1% of the variations in the market share can be explained by applied tariff rates.

The line of best fit is Y = 0.13703448 - 0.0087495X where X stands for applied tariffs and Y stands for world export market share.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.00146747	0.001467473	8.0402534	0.02196236
Residual	8	0.00146013	0.000182516		
Total	9	0.0029276			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.13703448	0.02083895	6.575882761	0.0001737	0.08897978	0.18508918
Tariff Rate %	-0.00874954	0.00308568	-2.83553406	0.02196236	-0.01586513	-0.00163396

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	0.05216391	0.00383609	0.3011721
2	0.06178841	-0.00778841	-0.611469387
3	0.07578768	-0.00278768	-0.218861119
4	0.08278731	0.01421269	1.115840707
5	0.08628713	0.02771287	2.175742549
6	0.09328677	-0.00528677	-0.415064909
7	0.08453722	-0.00553722	-0.434728292
8	0.0810374	-3.7404E-05	-0.002936606
9	0.08803704	-0.00703704	-0.552479236
10	0.08628713	-0.01728713	-1.357215807

Table 3.23

Lithuania World Market Share vs Average Applied Tariff Rates

Year	MKT Share %	Tariff Rate %
1995	0.056	3.1
1996	0.065	3.1
1997	0.072	3.2
1998	0.07	3.2
1999	0.054	3.2
2000	0.061	3.2
2001	0.077	3.5
2002	0.089	1.5
2003	0.1	1.3
2004	0.109	1.3

Source: World Trade Organization, Trade Database 2007.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.867429482
R Square	0.752433907
Adjusted R Square	0.721488145
Standard Error	0.009813578
Observations	10

Note: Multiple R value of 0.867429482 implies that there is a very strong correlation between market share and applied tariff rates.

Note: R square value of .7524 indicates that 75.2% of the variations in the market share can be explained by applied tariff rates.

The line of best fit is Y = 0.122927985 - 0.01790526X where X stands for applied tariffs and Y stands for world export market share.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.00234165	0.0023416	24.31460295	0.00114802
Residual	8	0.00077045	9.631E-05		
Total	9	0.0031121			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.122927985	0.010145215	12.116844	1.99119E-06	0.09953308	0.14632289
Tarrif Rate %	-0.017905257	0.003631173	-4.930984	0.001148016	-0.0262788	-0.00953176

RESIDUAL OUTPUT

Observation	*MKT Share %*	*Residuals*
1	0.067421687	-0.011421687
2	0.067421687	-0.002421687
3	0.065631161	0.006368839
4	0.065631161	0.004368839
5	0.065631161	-0.011631161
6	0.065631161	-0.004631161
7	0.060259584	0.016740416
8	0.096070099	-0.007070099
9	0.09965115	0.00034885
10	0.09965115	0.00934885

PROBABILITY OUTPUT

Percentile	*MKT Share %*
5	0.054
15	0.056
25	0.061
35	0.065
45	0.07
55	0.072
65	0.077
75	0.089
85	0.1
95	0.109

Table 3.24

Singapore World Market Share vs Average Applied Tariff Rates

Year	MKT Share %	Tariff Rate %
1995	2.438	0.4
1996	2.425	0.4
1997	2.339	0.4
1998	2.072	0
1999	2.08	0
2000	2.212	0
2001	2.033	0
2002	2.042	0
2003	2.23	0
2004	2.318	0

Source: World Trade Organization, Trade Database 2007.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.79931605
R Square	0.638906148
Adjusted R Square	0.593769416
Standard Error	0.100016665
Observations	10

Note: Multiple R value of 0.79931605 implies that there is a very strong correlation between market share and applied tariff rates.

Note: R square value of .6389 indicates that 63.8% of the variations in the market share can be explained by applied tariff rates.

The line of best fit is Y = 2.141 + 0.649166667X where X stands for applied tariffs and Y stands for world export market share.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.141596233	0.14159623	14.154905	0.005526123
Residual	8	0.080026667	0.01000333		
Total	9	0.2216229			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	2.141	0.037802746	56.636097	1.0485E-11	2.053826711	2.228173289
Tariff Rate %	0.649166667	0.17254514	3.7623005	0.00552612	0.25127686	1.047056473

RESIDUAL OUTPUT

Observation	*MKT Share %*	*Residuals*
1	2.400666667	0.037333333
2	2.400666667	0.024333333
3	2.400666667	-0.061666667
4	2.141	-0.069
5	2.141	-0.061
6	2.141	0.071
7	2.141	-0.108
8	2.141	-0.099
9	2.141	0.089
10	2.141	0.177

PROBABILITY OUTPUT

Percentile	*MKT Share %*
5	2.033
15	2.042
25	2.072
35	2.08
45	2.212
55	2.23
65	2.318
75	2.339
85	2.425
95	2.438

Table 3.25

Uruguay World Market Share vs Average Applied Tariff Rates

Year	MKT Share %	Tariff Rate %
1995	0.043	12.7
1996	0.047	13
1997	0.051	13.2
1998	0.052	15.4
1999	0.041	15.5
2000	0.037	12.9
2001	0.034	12.7
2002	0.03	14.3
2003	0.031	11.2
2004	0.034	10.8

Source: World Trade Organization, Trade Database 2007.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.452931144
R Square	0.205146621
Adjusted R Square	0.105789949
Standard Error	0.0076304
Observations	10

Note: Multiple R value of 0.452931144 implies that there is a moderate correlation between market share and applied tariff rates.

Note: R square value of .2051 indicates that 20.5% of the variations in the market share can be explained by applied tariff rates.

The line of best fit is Y = 0.009016758 + 0.002352562X where X stands for applied tariffs and Y stands for world export market share.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.000120216	0.000120216	2.06474932	0.18867327
Residual	8	0.000465784	5.8223E-05		
Total	9	0.000586			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.009016758	0.021696798	0.415580126	0.68864044	-0.04101615	0.05904966
Tariff Rate %	0.002352562	0.001637221	1.43692356	0.18867327	-0.00142288	0.006128

RESIDUAL OUTPUT

Observation	*MKT Share %*	*Residuals*
1	0.038894296	0.004105704
2	0.039600064	0.007399936
3	0.040070577	0.010929423
4	0.045246213	0.006753787
5	0.04548147	-0.00448147
6	0.039364808	-0.002364808
7	0.038894296	-0.004894296
8	0.042658395	-0.012658395
9	0.035365453	-0.004365453
10	0.034424428	-0.000424428

PROBABILITY OUTPUT

Percentile	*MKT Share %*
5	0.03
15	0.031
25	0.034
35	0.034
45	0.037
55	0.041
65	0.043
75	0.047
85	0.051
95	0.052

Tables 3.21 - 3.25 relate applied tariff rates with world export market share. As in most of the regression results, there is a split in the outcomes. Chile and Uruguay show very little statistical significance between import tariffs and world export market share. Perhaps, as has been discussed previously, reliance on primary sector economic activity, i.e., natural resources and agriculture, influences the reciprocal nature of trade. Certainly in the case of Chile, copper and platinum deposits enable it to be in a power position. That is, other countries will purchase these minerals without regard to the import trade policy of Chile. Another factor is that copper and platinum price fluctuations will alter Chile's share of world exports. Recent high prices for these minerals certainly will effect the figures.

As for Uruguay, the emphasis on agriculture with a small import possibility, this country is overlooked in terms of international trade. Again, other countries will purchase the agricultural products based on price without regard to Uruguay's high import tariff rates because of the limited market possibilities of the country.

The regression results for Costa Rica, Lithuania and SIngapore indicate a much closer connection between tariff rates and world export market share. Reciprocity in trade may be the explanation for this. Nations with a higher degree of industrial output are certainly more dependent on market access because of competition. By

chance, natural resources are not evenly distributed among countries, manufacturing however, is more distributed creating a competitive situation. Therefore, market access is critical.

Table 3.26

Most Trade Dependent Countries

Trade as % of GDP

1	Aruba	117.9
2	Liberia	89.3
3	Malaysia	88.8
4	Singapore	78.4
5	Bahrain	76.6

Source: The Economist Intelligence Unit, World in Figures 2006.

Figure 3.26

Source: World Trade Organization, Trade Database 2007.

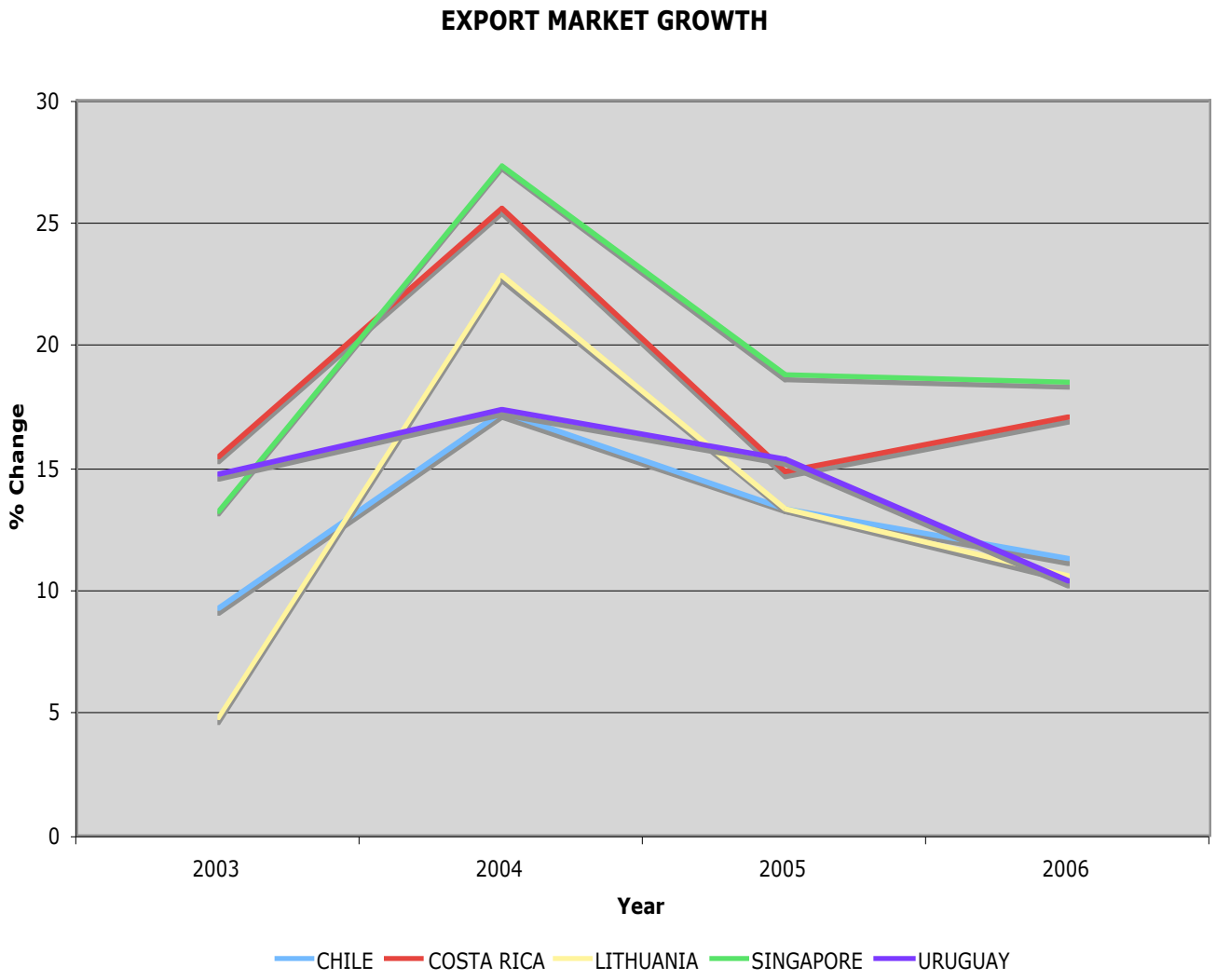


Table 3.27

GDP Growth vs Trade Restrictiveness Export (Ommitting Lithuania)

Country	GDP Growth	TR Export
Chile	4.29	20
Costa Rica	4.35	21
Singapore	5.16	9
Uruguay	1.74	36

NOTE - GDP growth is represented by ten year average 1996 - 2005.

NOTE - Trade restrictiveness index was calculated in 2006.

Source: World Bank, World Development Indicators 2006.
Source: World Bank Policy Working Paper 3840 2006.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.96971049
R Square	0.94033843
Adjusted R Square	0.91050764
Standard Error	0.4439471
Observations	4

Note: Multiple R value of 0.96971049 implies that there is a very strong correlation between MA-TRI and GDP growth.

Note: R square value of .9403 indicates that 94% of the variations in GDP can be explained by the market access TRI.

The line of best fit is Y = 6.6747561 - 0.1297561X where X stands for MA-TRI and Y stands for GDP growth.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	6.21272195	6.21272195	31.5224147	0.03028951
Residual	2	0.39417805	0.19708902		
Total	3	6.6069			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	6.6747561	0.54421287	12.2649728	0.00658207	4.33319709	9.01631511
MA-TRI	-0.1297561	0.02311096	-5.61448258	0.03028951	-0.22919454	-0.03031765

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*
1	4.07963415	0.21036585
2	3.94987805	0.40012195
3	5.50695122	-0.34695122
4	2.00353659	-0.26353659

Table 3.28

GDP Growth vs Trade Restrictiveness Export (Including Lithuania)

Country	GDP Growth	TR Export
Chile	4.29	20
Costa Rica	4.35	21
Lithuania (EU)	5.76	25
Singapore	5.16	9
Uruguay	1.74	36

NOTE - GDP growth is represented by ten year average 1996 - 2005.

NOTE - Trade restrictiveness index was calculated in 2006.

Source: World Bank, World Development Indicators 2006.
Source: World Bank Policy Working Paper 3840 2006.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.71367211
R Square	0.50932789
Adjusted R Square	0.34577052
Standard Error	1.24121404
Observations	5

Note: Multiple R value of 0.71367211 implies that there is a strong correlation between MA-TRI and GDP growth.

Note: R square value of .5093 indicates that 50.9% of the variations in GDP can be explained by the market access TRI.

The line of best fit is Y = 6.75837909 - 0.1125396X where X stands for MA-TRI and Y stands for GDP growth.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	4.79756309	4.79756309	3.11406256	0.17580685
Residual	3	4.62183691	1.5406123		
Total	4	9.4194			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	6.75837909	1.52070552	4.4442392	0.02118786	1.91881542	11.5979428
MA-TRI	-0.1125396	0.06377371	-1.76467067	0.17580685	-0.31549601	0.09041682

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*andard Residuals*
1	4.50758712	-0.21758712	-0.20242114
2	4.39504752	-0.04504752	-0.04190767
3	3.94488912	1.81511088	1.68859635
4	5.7455227	-0.5855227	-0.54471135
5	2.70695354	-0.96695354	-0.89955619

Market access and GDP growth are correlated in Tables 3.27 and 3.28. Table 3.27 omits Lithuania for reasons explained previously relating to EU entry. As can be seen, the regression results are very strong with a high level of statistical significance. In this connection, it may be inferred that a higher level market access will lead to GDP growth. As for Lithuania, the GDP growth figure is a ten year average while the MA-TRI value was calculated as a EU member. Therefore, Table 3.28 illustrates a much lower statistical significance between market access and GDP growth.

Table 3.29

UN Human Development Index v Trade Restrictiveness Index (Omitting Lithuania)

Country	UN HDI Rank	TRI
Chile	38	6
Costa Rica	48	8
Singapore	25	0
Uruguay	43	10

Source: United Nations Development Programme Database 2007.
Source: World Bank World Policy Working Paper 3840 2006.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.92120054
R Square	0.84861043
Adjusted R Square	0.77291565
Standard Error	4.70941307
Observations	4

Note: Multiple R value of 0.92120054 implies that there is a very strong correlation between TRI and the UN HDI.

Note: R square value of .8486 indicates that 84.8% of the variations in the UN HDI can be explained by the TRI.

The line of best fit is Y = 25.8571429 + 2.10714286X where X stands for TRI and Y stands for UN HDI.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	248.642857	248.6428571	11.2109501	0.07879946
Residual	2	44.3571429	22.17857143		
Total	3	293			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	25.8571429	4.44997707	5.810623842	0.02836384	6.71043687	45.0038488
TRI	2.10714286	0.62932179	3.348275688	0.07879946	-0.60061027	4.81489598

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	38.5	-0.5	-0.130031583
2	42.7142857	5.28571429	1.374619591
3	25.8571429	-0.85714286	-0.222911285
4	46.9285714	-3.92857143	-1.021676723

Table 3.30

UN Human Development Index v Trade Restrictiveness Index (Including Lithuania)

Country	UN HDI Rank	TRI
Chile	38	6
Costa Rica	48	8
Lithuania (EU)	41	14
Singapore	25	0
Uruguay	43	10

Source: United Nations Development Programme Database 2007.
Source: World Bank World Policy Working Paper 3840 2006.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.74972031
R Square	0.56208054
Adjusted R Square	0.41610738
Standard Error	6.59545298
Observations	5

Note: Multiple R value of 0.74972031 implies that there is a strong correlation between TRI and the UN HDI.

Note: R square value of .5620 indicates that 56.2% of the variations in the UN HDI can be explained by the TRI.

The line of best fit is Y = 29.5 + 1.25X where X stands for TRI and Y stands for UN HDI.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	167.5	167.5	3.85057471	0.14452922
Residual	3	130.5	43.5		
Total	4	298			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	29.5	5.66904398	5.203699262	0.0137915	11.4585719	47.5414281
TRI	1.25	0.63701145	1.962288132	0.14452922	-0.77725472	3.27725472

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	37	1	0.175075244
2	39.5	8.5	1.488139572
3	47	-6	-1.050451463
4	29.5	-4.5	-0.787838597
5	42	1	0.175075244

In Tables 3.29 and 3.30 the Trade Restrictiveness Index is related to the United Nations Human Development Index. Certainly an interesting juxtaposition given that these two indexes measure very relevant aspects of socioeconomic economic development. The correlation for the group were very strong discounting Lithuania, which for aforementioned reasons alters the equation. Lithuania has received a high TRI value as a EU member while receiving a favorable UN HDI value for human development. For purposes related to this analysis it would be interesting to reevaluate Lithuania in five years to determine EU membership benefit. As for the four other case countries, the connections are robust with an apparent congruency between a favorable TRI value and a high level of development in the UN HDI.

Table 3.31

Unemployment Rate vs Trade Restrictiveness Index

Country	Unemp. Rate %	TRI
Chile	7.33	6
Costa Rica	6.04	8
Lithuania (EU)	14.56	14
Singapore	3.95	0
Uruguay	13.44	10

NOTE - Unemployment rate is represented by nine year average 1996 - 2004.

Source: United Nations Development Programme Database 2007.
Source: World Bank World Policy Working Paper 3840 2006.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.8882722
R Square	0.7890275
Adjusted R Square	0.71870333
Standard Error	2.4828606
Observations	5

Note: Multiple R value of 0.8882722 implies that there is a very strong correlation between TRI and unemployment rates.

Note: R square value of .7890 indicates that 78.9% of the variations in unemployment rates can be explained by the TRI.

The line of best fit is Y = 2.95932836 + 0.80324627X where X stands for TRI and Y stands for unemployment rates.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	69.1659297	69.1659297	11.2198628	0.04407173
Residual	3	18.4937903	6.164596766		
Total	4	87.65972			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	2.95932836	2.13411361	1.386677985	0.25961699	-3.83237361	9.75103033
TRI	0.80324627	0.23980318	3.349606359	0.04407173	0.04008551	1.56640702

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	7.77880597	-0.44880597	-0.20872557
2	9.38529851	-3.34529851	-1.55579334
3	14.2047761	0.35522388	0.165203478
4	2.95932836	0.99067164	0.460730287
5	10.991791	2.44820896	1.138585145

One of the basic measures of economic health of a country is unemployment. Table 3.31 is a measure of unemployment against the Trade Restrictiveness Index. The correlation is firm and statistically significant. In this model the connections are startling, Singapore with a TRI value of 0 has the lowest unemployment while Lithuania with a TRI value of 14 has the highest unemployment. The remaining three countries fall within the range in perfect order corresponding to the TRI value.

Table 3.32

GDP per Head vs Trade Restriveness Import

Country	GDP / Head	TR Import
Chile	9810	6
Costa Rica	9140	8
Lithuania (EU)	11390	9
Singapore	24180	0
Uruguay	7980	10

NOTE - Trade restrictiveness index was calculated in 2006.

NOTE - GDP per head for year ending 2006 $PPP (US $). ($PPP = purchasing power parity).

Source: World Bank, World Development Indicators 2006.
Source: World Bank Policy Working Paper 3840 2006.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.92958432
R Square	0.86412701
Adjusted R Square	0.81883601
Standard Error	2828.22742
Observations	5

Note: Multiple R value of 0.92958432 implies that there is a very strong correlation between OTRI and GDP per head.

Note: R square value of .8641 indicates that 86.4% of the variations in GDP per head can be explained by the OTRI.

The line of best fit is Y = 22756.1076 - 1553.9557X where X stands for OTRI and Y stands for GDP per head.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	152613989	152613988.9	19.0794427	0.02219202
Residual	3	23996611.1	7998870.359		
Total	4	176610600			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	22756.1076	2667.00572	8.532455479	0.00338205	14268.5051	31243.7101
Trade Rest. Import	-1553.9557	355.758913	-4.368002144	0.02219202	-2686.13934	-421.772057

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	13432.3734	-3622.37342	-1.478932175
2	10324.462	-1184.46203	-0.483588741
3	8770.50633	2619.49367	1.069479324
4	22756.1076	1423.89241	0.581342686
5	7216.55063	763.449367	0.311698906

The last table in the sequence, Table 3.32 is a comparison of the trade restrictiveness on imports (OTRI) and GDP per head. Statistically significant and apparently effectual, this model determines that a country's import trade distortions will effect GDP as measure per head (PPP). Not only does a country risk loosing a reciprocal trade relationship in an inclined tariff situation, it also damages its own economy. While outside of the realm of this work, one can ponder the self inflicted damage of high import tariffs on the home economy. Certainly the OTRI has provided this analysis with some insight into this type of economic damage.

3.8 Identification of Capital Resources

The third aspect of the instrument development is connected with the identification of capital resources. This phase will concentrate on research of the case countries with respect to geography, natural resources, human resources and any tangible as well as non tangible consideration that may be deemed a capital resource. In this connection, the process will be highly exploratory in nature. That is to say, while much of what is presented will be obvious, some will be speculative. It is the speculative material that is generally of interest in the consideration of capital resource identification and development.

3.8.1 Commonalities

Among the five case countries there are many common traits. There are the commonalities put forth in section 1.4 earlier in this analysis. Moreover, there are mutual conditions that all the case countries have shared as capital resources. To be sure, this compilation will not be exhaustive, rather, an indication of capital resource identification and development.

Throughout history access to waterways, and more importantly deep water ports has been a crucial aspect of development. With regard to the five case countries, all have salt water ports. The location of these ports has been a determinate for success. Singapore, has developed one of the largest ports in the world because it is located on a major shipping route. Lithuania as well has had some shipping and ship building success due to ports on the Baltic. Perhaps a future advantage in shipping will come to Costa Rica as it operates ports in both the Atlantic and Pacific Oceans. Both of these ports are within a short distance to the Panama canal and North America. Proposals to build a super port in Limon that would act as a reload and distribution center for shipping through the canal could be an expansion of the capital resource of having a port in a strategic location. Chile and Uruguay do not have strategic port locations, however, their locations are accessible to Asia and North America via the Pacific.

Some of the other commonalities include a certain amount of agriculture, are free societies and have achieved varying amounts of development. Perhaps, however, the unique qualities of the five case countries is what creates the capital resources latent with possibilities.

Table 3.33

Resource Inventory Matrix

Country	Tangible Resources	Intangible Resources
Chile	Copper	Tradition of social reform
	Platinum	History lacking plantation economy
	Silver	
	Nitrates	
	Long coast line w/fjords	
	Multiple climates	
	Rich soil	
	Pacific coast	
	Forest land	
	Large population	
	Fast current rivers	
Costa Rica	Tropical varied climate	Egalitarian tradition
	Fast current rivers	History lacking plantation economy
	Proximity to North America	Educated population
	Atlantic coast	Developed financial infrastructure
	Pacific coast	Stable political situation
	Abundance of flora and fauna	No military
		Universal education system
Lithuania	Forest land	Stable political situation
	Baltic coast	Dynamic culture
	Proximity to Western Europe	
	Developed industrial infrastructure	
Singapore	Developed industrial infrastructure	Educated population
	Proximity to Asia and Indian Ocean	Developed financial infrastructure
	Small population	Culture of innovation
		Free market economic policies
		Former British colony
Uruguay	Temperate climate	History lacking plantation economy
	Proximity to Argentina and Brazil	
	South Atlantic coast	

3.8.2 Unique Attributes

All countries in the world have unique attributes, whether they be geographic, natural, mineral or human. It has been through history that these unique attributes contribute to the socioeconomic economic well being of countries. The historical trend continues today, with the exception that the unique attributes that may become capital resources, are less obvious. Let us draw for example, some unique attributes of each case country that either have been developed as a capital resource or a latent capital resource. In the case of the latter, speculation may come into scope.

To this point Chile has been analyzed quite well. However, besides its rich mineral and ore deposits, Chile has begun to capitalize on two other aspects of its geography. First, the country has thousands of miles of coast line with inlets referred to as fjords. Much of these fjords are located in the southern cold water areas. Chile has realized that these fjords are natural fish farms. Hence Chile has become a world leader in Salmon production. Not only has Chile been able to develop natural fisheries off shore, it has recognized and developed one of the largest fish farming projects in the world.

The second resource that Chile has been able to successfully harness is forest reserves. First, Chile was harvesting natural forest land, then it realized that a

certain type of fast growth pine tree, radiata pine, would do well in certain climates in the country. At the same time the United States was experiencing a construction boom, and pine boards and millwork made from pine was in high demand. Chile capitalized, and the result is that the majority of pine finish lumber and millwork products are being supplied by Chile. Once again, natural resources were not being exploited, rather, Chile developed one of the world's largest reforestation projects for radiata pine.

Of all the case countries, Costa Rica is perhaps the most unique for several reasons. First, it may be considered that what a country may possess is a resource as well as what a country lacks. In the case of Costa Rica, a military is what it lacks. As a result, the country has been able to invest heavily in the education system and medical care for its citizenry. This is a well developed capital resource brought about in part by a wise lack of investment in arms. In this way Costa Rica has developed a highly educated broad class of people that have promoted socioeconomic economic development in various fields.

One of these fields is medical tourism. Costa Rica receives many travelers from the United States who arrive in the country not to vacation, but to receive dental implants and cosmetic surgery. The comparative advantage in these fields for Costa Rica is high quality doctors at a lower cost. In the United States, doctors are

burdened with malpractice insurance premiums that must be passed on to the patient. Since dental work and cosmetic surgery are not covered by most insurance plans, people historically either pay the cost or elect not to have the procedure performed. Until recently there were no other options, now a third option has emerged; to travel to another country that has high quality care and lower cost. Costa Rica has excelled in this realm because of high education.

Another creative development has arrived not from development, but from a lack thereof. That is, the evolution of eco tourism. We know that Costa Rica has developed a strong tourist industry based on a tropical climate, proximity to North America and welcoming people. However, the eco segment has developed is response to a growing world wide interest in the ecology. In ecological terms, Costa Rica has probably more to offer than most other countries. Therefore, minimally invasive techniques have been used to build lodges and trails to preserve the natural habitat for visitors to enjoy and appreciate.

Another aspect of Costa Rica's abundant flora and fauna, is scientific research. Scientists and researchers come from around the world to study the ecology in Costa Rica to hopefully find the cure for cancer or the answers to some of science's other pressing questions.

The people of Lithuania have been tested over the centuries creating a dynamic and resilient population. After numerous Russian and Soviet occupations, Lithuania has emerged intact with its language and culture in place. While Soviet dominance has had its drawbacks, Lithuania was able to develop an industrial infrastructure using Soviet resources and technology. Today Lithuania has enjoyed a higher level of industrial output and socioeconomic economic development because of its historical relationship with Russia. As a recent entrant into the European Union, Lithuania will have opportunities to further realize and develop capital resources other than timber and agriculture. The people of this country are a capital resource in themselves.

The story of Singapore is remarkable. To emerge from colonial status and reach by many accounts, full economic and social development in forty years time is certainly a triumph. Once again, the story of resources may be one of lacking for Singapore on many counts.

Singapore lacks territory. The smallest of the case countries and one of the smallest countries in the world from a land perspective, Singapore also has a small population certainly by Asian nation standards. However, Singapore used these apparently lacking attributes and converted them into capital resources. First, Singapore was able to adapt quickly with a small population to the changing world of

post World War II industrial demands. Second, the lack of land and mineral or energy deposits forced Singapore to be innovative. The small population was able to focus and capitalize in many industrial pursuits long before any other Asian nation. Singapore may certainly be considered a catalyst for the Asian explosion in economic development. The third invisible resource Singapore developed upon was being a former British colony. Historically, former British colonies have performed well; Australia, Canada, Hong Kong and the United States are the most obvious examples of this. In the case of Singapore, the British built the original port on the island, and by most accounts, the British established the trade routes. Hence, Singapore became a strategic port up to this day.

Of the case countries, Uruguay probably has the most work to do in discovering capital resources. With a good climate for animal based agriculture and a location between two large South American economies, Uruguay needs to create more of a niche. Historically, Uruguay has been blessed with the lack of a plantation economy that generally forever ends the possibility of an equitable distribution of wealth. Therefore, an invisible capital resource is an egalitarian society that may be on the way to meritocracy.

Table 3.34
Product Group Increases

Largest increases in export product groups of $50M or greater.				
Product Group	**2001 US $ '000**	**2005 US $ '000**	**Increase US $ '000**	**% Increase**
Chile				
682 Copper	4,816,198	11,590,400	6,774,202	1.40654558
287 Ores of Base Metals	195,216	2,828,014	2,632,798	13.4865892
283 Copper Ores	2,162,792	6,067,837	3,905,045	1.80555735
034 Fish - Fresh, Chilled or Frozen	1,259,284	1,972,996	713,712	0.56676016
Costa Rica				
764 Telecommunications Equipment	20,819	182,711	161,892	7.776166
872 Medical, Surgical, Dental Instruments	273,905	501,347	227,442	0.83036819
625 Rubber Tires & Inner Tubes	34,001	109,333	75,332	2.21558189
773 Equip. for Distributing Elecricity	39,168	85,356	46,188	1.17922794
Lithuania				
011 Meat of Bovine Animals	4,685	50,573	45,888	9.79466382
024 Cheese & Curd	86,428	171,674	85,246	0.98632388
034 Fish - Fresh, Chilled or Frozen	28,807	87,119	58,312	2.02423022
037 Fish - Crustaceans, Molluscs	26,230	90,774	64,544	2.46069386
248 Wood - Simply Worked	110,261	239,028	128,767	1.16783813
635 Wood Manufactures	46,503	145,511	99,008	2.12906694
699 Manufactures of Base Metal	29,111	113,699	84,588	2.90570575
Singapore				
112 Alcoholic Beverages	327,879	707,409	379,530	1.15753067
282 Ferrous Scrap Remelting	87,349	206,595	119,246	1.36516732
511 Hydrocarbons & Derivatives	336,961	2,173,883	1,836,922	5.451438
514 Nitrogen-Function Compounds	440,352	2,417,077	1,976,725	4.48896565
667 Pearls Unworked or Worked	203,866	1,682,309	1,478,443	7.2520332
673 Flat-Rolled Products of Iron or Steel	36,457	296,042	259,585	7.12030611
Uruguay				
011 Meat of Bovine Animals	208,255	736,017	527,762	2.53421046
022 Milk & Cream	66,533	128,001	61,468	0.92387236
222 Oil-Seeds & Oleaninous Fruits	5,433	134,816	129,383	23.8142831
246 Wood In Chips or Particles	664	62,290	61,626	92.810241
893 Articles of Plastics	23,829	84,377	60,548	2.54093751
Source: United Nations, COMTRADE Database 2007.				

Table 3.34 illustrates top growth industries by percentage, in the five case countries. For Chile the top growth industries with the exception of fish production, are also the overall industries. The growth is due to increases in commodity prices not increased production. As for the other countries, most of the fastest growth industries are newly developed or newly emphasized. For development reasons this is important that mature industries do well, but that other industries are encouraged.

Table 3.35

Theoretical Expectations / Regression Results Matrix

Variable Correlation	Theoretical Result Expected	Regression Result
Unemployment v GDP Growth	Very Strong	Very Strong 98.4%
GINI Coeff. V FDI Goods & Services Exports	Very Strong	Moderate 37%
UN HDI v GDP per Head	Very Strong	Very Strong 84.8%
UN HDI v Trade Balance	Very Strong	Very Strong 88.2%
TR Import v TR Export	Very Strong	Very Strong 82.3%
Trade Balance v Applied Tarriffs	Very Strong	Moderate 31.2%
Trade Balance v TR Export	Very Strong	Strong 56.4%
GDP Growth v TR Export	Very Strong	Very Strong 94%
UN HDI v Trade Restrictiveness Index	Very Strong	Very Strong 84.8%
Unemployment Rate v Trade Restrictiveness Index	Very Strong	Very Strong 78.9%
GDP per Head v TR Import	Very Strong	Very Strong 86.4%

Table 3.35 illustrates the congruence between the theoretically expected

correlative outcomes and those determined by regression analysis. Nine of the eleven theoretically expected results were on target. Of the remaining three, explanations have been provided. Therefore, the regression results typically support the theoretical expectations.

CHAPTER 4

Conclusions & Recommendations

4.1 Broad Aspect Conclusions

The five case countries presented performed well under analysis. Their similarities added credibility to the analysis while their differences provided a sound understanding of the situation at hand. Three countries being located in Latin America, one in Europe and one in Asia offered a good balance in historical background, geography and culture. From an individual aspect, each country became a microcosm of world trade. Each one with its own successes and weaknesses. From Singapore's rapid development with scant resources and nothing more than a small island to operate on; to Costa Rica's decision to operate a nation without a military and use those resources to develop world class education and medical care systems; the stories are creative, innovative and illustrative of what humanity can achieve.

These five case countries are making their own way each in a different manner. That too, is illustrative of our individuality as humans and groups of humans. But one factor remains the same, that humans depend on each other and have achieved great things through cooperation.

- The growth in gross domestic product of the case countries has a direct impact on socioeconomic conditions.

Perhaps the most important socioeconomic indicator is employment. Employment is the basic building block of an economy. A near full employment situation is the target for well functioning market based economies. While full employment is probably not achievable, an unemployment rate of five percent or less is considered healthy. For nearly all available workers to have employment is a desirable state for modern economies. In this analysis, the correlation between employment levels and gross domestic product growth has proven to be strong. While this measure seems to be intuitive, there are intricacies that may escape the casual glance.

First, gross domestic product measure takes into account the entirety of economic activity. It could be the case that GDP growth may be concentrated in a few particular industries having little impact on employment figures. This may be particularly true in industries that are not labor intensive. In this situation an industry may drive GDP figures without significantly impacting employment numbers. Moreover, the recent surge in commodities prices will certainly reflect higher GDP growth in countries that produce oil, gas, copper, aluminum, etc., while not impacting employment figures in any appreciable way. Interestingly, these situations are absent in the five case countries. The unemployment data for the

case countries illustrates a strong correlative trend between GDP growth and unemployment. With the exception of Chile, the case countries are not economically driven by commodity prices.

The GDP versus unemployment data from the year 2007 forward may tell a different story than the period studied 1996-2005. The point, is that within the time period analyzed, the case countries displayed GDP growth that resulted in adding jobs to the economy. The importance of this observation is that GDP growth in developing economies needs to provide a socioeconomic benefit; in this case contributing jobs to the economy. The relevance of this conclusion is that the case countries have, in fact, decreased the unemployment rate corresponding to GDP growth.

As was explained in the text, Lithuania skewed this data for a reason other than those exceptions illustrated above. In the case of Lithuania, the transition from a command economy to a market economy has been challenging. The situation is similar in other former Soviet states such as Latvia, Estonia and Poland, all of which have experienced strong GDP growth rates in the past decade but have also experienced unemployment rates well over 10 percent. These countries have an established industrial and agricultural output without a domestic market. Hence, these countries have done well as exporters of manufactures but have not

developed a national domestic market to fill in gaps in employment. A domestic market in goods and services would create employment opportunities. The situation, however, has led to population loss for Lithuania, Latvia, Estonia and Poland over the last decade. Situations such as this illustrate have GDP growth alone does not necessarily provide a socioeconomic benefit. As for the other four case countries, a socioeconomic benefit has been realized in GDP growth, i.e., lower unemployment.

- Foreign direct investment in the production of goods and services exports has improved living standards in the case countries.

Foreign direct investment provides excellent insight into economic activity, particularly because it is not relegated to developing economies. In fact, of the top five recipients of foreign investment inflows, four are advanced economies. Therefore, this measure is relevant to all economies. In this analysis, FDI as a percent of goods and services exports was correlated to the GINI coefficient. The concept is that this type of investment builds an industrial infrastructure.

While the correlation between FDI and the GINI coefficient in this analysis is moderate for reasons such as inequality tolerance and development structure. Chile, for example, is a significant recipient of FDI in relation to mineral extraction. The living standards in Chile are not, however, significantly effected by this fact

due to the employment characteristics of the mining industry. Hence, the most industrialized case countries, i.e., Lithuania and Singapore, have GINI coefficients that reflect greater income distribution. Therefore, it is the conclusion of this work, that FDI in the realm of manufactures for export, provide higher wage jobs, therefore, increasing living standards in the case countries and perhaps as a rule.

- Economic efficiency leads to higher living standards in a country.

The measure of economic efficiency indicates how well a nation utilizes capital resources and capital in general. Economic output in relation to GDP per person measures how effectively resources are utilized. On the other side of the equation is the United Nations Human Development Index. The correlation between these two variables has proven to be very strong, indicating that a more efficient use of capital leads to higher living standards. While this conclusion in itself is generally accepted, as applied to the case countries reaffirms an economic principle.

Once again, the more industrialized nations, i.e., Lithuania and Singapore, enjoyed the highest GDP per head and good UN HDI rankings. Interestingly, Singapore posted GDP per head figures more than double Lithuania, the next highest of the case countries. By many standards, Singapore is no longer considered a developing economy.

With regard to Chile, the conclusion is that the higher GDP per head figures relate to primary sector production in mining. However, Chile scored poorly in income distribution, yet ranked highly in the UN HDI. One may conclude, that Chile allocates resources for social programs such as education, infrastructure and health care, while tolerating a more unequal income distribution than the other case countries. In fact, as a percent of GDP, Chile spends more on health care and education than Singapore. Inasmuch, Chile has achieved a strong UN HDI ranking which takes into account many factors of social and economic well being.

Costa Rica ranked the lowest in the UN HDI among the case countries, which is an enigma. While Costa Rica has respectable GDP per head figures, a socialized medical care system and a socialized education system, something must be skewing the numbers. Perhaps the influx of Nicaraguans are being counted in the figures. Certainly, if this were the case, the impact would be significant with regard to poverty, education and health care. While it is not the objective of this analysis to scrutinize data sources, this work must conclude without further question, that the UN HDI ranking figures for Costa Rica must contain a heterogeneous aspect such as the one million Nicaraguans living inside the country.

- A positive trade balance in a country leads to higher living standards.

As the hypothesis of this work suggests, trade is a vital aspect of improving living

standards in a country. The results correlating the UN HDI with trade balance figures of the case countries has provided the conclusion that increased trade will lead to higher living standards as defined by the United Nations. A strong relationship between the trade balance and the UN HDI illustrates the connection between trade and wealth generation. Capital resource exploitation and efficient allocation leads to the potential for trade. The case countries that have seized the opportunity to trade, have, as a nation accumulated excess wealth.

Singapore, once again, is a model of development through trade. Chile, while concentrating on primary sector industries, has experienced increased living standards. The remaining three case countries all have experienced a deficit in trade balance. Often times in the development curve of a country, a negative trade balance is experienced due to industrialization. That is to say, that much of the infrastructure and machinery needed to develop an industrial base are imported. During this period of industrialization, a trade deficit is common. In the case of Costa Rica and Lithuania, infrastructure development is most likely the cause of the trade deficit. These two countries are building industrial and services capacity at a healthy rate, therefore the rate of imports slightly outpaces the value of exports. Uruguay, however, probably experiences a trade deficit due to a reliance on agricultural commodity trade. Uruguay does not seem to be seriously building industrial capacity to the extent of the other case countries.

- A positive trade balance leads to GDP growth.

Charting the data for trade balance versus GDP growth indicates that there is a relationship between these two variables, particularly in the cases of Singapore and Chile, that post a trade surplus. As for Costa Rica and Lithuania, the data lines at times are repellent, i.e., travel in opposite directions. Once again this may be explained by infrastructure development.

From 2001 through 2004, Lithuania experienced a growing trade deficit while showing GDP growth for the same time period. This phenomenon may be explained by the assumption that the trade deficit was indicative of industrial capacity building, therefore, growth in industrial output added to GDP. The trend lines for Costa Rica diverge only in the years 2001 and 2002, however the same explanation may be attributed. While imports grew for these countries, their economies grew as did exports.

- Comparative advantage is gained by either of two means: natural resources or human resources.

In the selection of the case countries, special attention was given to the resource aspect of comparative advantage. The original assumption that resource development and allocation play a key role in economic development and living standards may be concluded as true. Comparative advantage for the case

countries has been achieved in large part by the application of this principle and has eluded some by the lack thereof.

The affirmative aspect of this conclusion is confirmed by the experiences of Chile and Singapore. Chile has gained a comparative economic advantage by exploiting natural resources. As we have seen, this approach has limitations, albeit, it is a model that has served many countries well in the realm of wealth accumulation. Singapore represents the opposite approach. Singapore has achieved a comparative advantage by developing and allocating human resources in a very efficient and defined manner. Singapore was left without a choice, in that, it possesses virtually no natural resources. Costa Rica and Lithuania are in the developmental stage in that human resource capacity is being established. While these two countries have some natural resources, the scale and scope certainly would not be sufficient for any sustainable development regime. Uruguay appears to be content with limited industrial capacity and a reliance on agriculture. This approach actually engages neither, natural nor human resource allocation. While agriculture is human resource intensive, it does not qualify for an efficient human resource allocation for the purposes of this analysis. Uruguay employs a very traditional approach to the allocation of resources. While this approach may seem without risks in the short term, the long term risks include trends such as an erosion of living standards, declining GDP per head, and an erosion of wage growth.

- Countries that have gained comparative advantage through primary sector production, i.e., natural resources, tend to lag in comparative advantage in secondary sector production.

The case country Chile, is the conclusive illustration of this determination. Of the case countries, as a percent of exports, Chile posts the lowest number for manufactures by far, at 14 percent. Mining products account for 59 percent of export activity while agriculture accounts for 27 percent. It is obvious that Chile is heavily reliant on earth based activities. The next closest is Uruguay with 30 percent of its exports falling into the industrial category and 65 percent accounted for by agriculture. Again, an earth based economy with reduced secondary sector activity.

This observation is not to be taken as a value judgment in stating preference for secondary sector activities over primary ones. The observation is that the case countries tend to focus on a single sector, with noticeably less emphasis on other sectors. Singapore is recently developing activity in the tertiary sector, i.e., services. Costa Rica, has done well in the tertiary sector with travel and tourism services as well as in the secondary sector of industrial output. However, as a generality, the case countries economic activities are heavily concentrated in a single sector.

- Countries tend to gravitate to the path of least resistance in relation to comparative advantage.

In relation to the previous observation, it may be concluded that a nation concentrates in that industrial sector or particular industry that presents itself. That is to say, that a path of least resistance is followed in relation to economic activity. In the obvious case of Chile, metals are present, particularly copper, hence extraction becomes the dominant activity. Singapore, with little land and few natural resources, capitalized on shipping routes and building a superior industrial base. Costa Rica with its educated workforce is building a promising medical and pharmaceutical industry as well as electronics and general manufacturing. Moreover, Costa Rica is hosting a variety of biotech research in the remote rain and cloud forests. Lithuania, is expanding the industrial capacity that was established during the Soviet era. With regard to natural resources, Lithuania has a healthy timber and fishing industry. Uruguay follows its traditional economic activities of agriculture, particularly meat production and the resulting bi-products, i.e., leather and wool.

The conclusion is that many countries do not choose economic activities, the activities choose the country. That is to say, that whatever activity is obvious, that is what is developed. Certainly, this approach has worked well in past years of economic and social development, however, the present and future are

competitive, and in order to compete, creativity must be employed. Of the case countries, Costa Rica and Singapore have illustrated to most imagination with regard to economic activities engaged in. These two countries have developed industrial and service capacity that was not apparent or obvious. Singapore has met the challenges of global competition and Costa Rica is on a sure course. The observation then, is for a country to choose an arena in which to compete based upon core competencies and capabilities.

- Countries that lack geographical or natural resources tend to excel in secondary sector production.

This conclusion is derived from the previous observation, in that countries that have no obvious choices in economic activity, make their choices. Perhaps the most successful example of this is Japan. A country with little in the way of resources, chose a direction and developed a world class industrial base. Of the case countries, Singapore most resembles this model. However, Costa Rica and to some degree, Lithuania, are examples of the same model. While Costa Rica and Lithuania have the obvious choices of coffee and banana production or fishing and forestry, respectively, they have chosen not to rely on these traditional modes of economic activity. Singapore, had no other choice but to concentrate on secondary sector activities and has benefitted greatly.

Hence, the conclusion that countries that are forced to choose their modes of economic activity, tend to excel in secondary sector as well as tertiary sector activities is well established by illustration as well as in the analysis of the five case countries presented. Outside of the case countries analyzed, the examples are numerous; Taiwan, Hong Kong, Luxembourg, Belgium, Denmark, Holland, Switzerland, Sweden and Norway are some examples of economically successful countries that have made choices of economic activity in the secondary and tertiary sectors due to the lack of the obvious, i.e., geographical and natural resources.

- Capital resource allocation tends to rely on tangible resources first then on intangible resources.

Following the previous three conclusions, this observation logically follows. That is, that countries tend to concentrate capital resource allocation on tangible resources, i.e., natural and geographic. Once again, this is a natural tendency that is not to be judged as wrong. However, the numerical data presented indicates that primary economic activities tend to provide less overall well being to society than engaging in secondary economic activities. With this said, it is the history of human social and economic development to concentrate on the tangible aspects of economic activity. It is the more recent developments of the third industrial revolution that have emphasized the trend and importance of intangible resources.

Obviously those countries with a lack of tangible resources participated or even led the revolution marked by the modern knowledge economy.

- Capital creation accelerates at a higher rate in countries engaged in secondary sector production.

The differentiation between primary and secondary (and presumably tertiary) sector activities is the value added component. Primary sector activities are focused on commodities. Inherent in commodities is their standardization and exchangeability. That is to say, that there lacks the value added component inherent in manufactured and engineered products. With this in mind, primary sector products are subject to market prices. As such, countries that focus on mining and agriculture are locked into market prices for their products to a greater extent than countries that have developed a significant secondary and tertiary infrastructures. Moreover, the inherent aspect of secondary and tertiary products is innovation. Innovation allows for differentiation among products within the same category. Products that are differentiated generally command a higher price due to the perceived value of the added innovation. Commodity products generally do not enjoy the value added aspect of pricing.

Invention is the ultimate aspect of secondary and tertiary markets, commanding the highest price the market will pay. Hence, innovation and invention are the two

aspects of secondary and tertiary markets that lead to an acceleration of capital creation. The GDP per head figures of this analysis indicate that the conclusion that capital creation is accelerated in countries that have engaged in secondary sector activities.

- The case countries that have concentrated capital resources in knowledge intensive ventures have produced greater economic efficiency.

The evidence of this conclusion comes in the form of GDP per head versus economic sector activity. The three case countries that do not rely on tangible resources, i.e., Costa Rica, Lithuania and Singapore, have strong GDP per head figures. If one were to eliminate the mining aspect from the economy of Chile, it would look similar to Uruguay. Hence, the conclusion is that the knowledge intensive ventures of the secondary and tertiary sectors have a greater pay back and product a greater effect on GDP per head.

- The trade balance of a country is effected by the tariffs it applies to imports and tariffs faced by exports.

The balance of trade of the case countries showed a tendency to be effected by tariffs applied to imports as well as tariffs faced by goods exported. The natural tendency towards reciprocity is evidenced by this conclusion. The countries that

levied the highest import duties also faced duties when exporting abroad. The visible exception is Chile, posting a trade surplus while levying rather high tariffs on imports. The possible explanation is that when sought after commodities are concerned, reciprocity is overlooked. Copper being the sought after commodity in the case of Chile. Other than this exception, the tendency to reciprocate in terms of tariff rates and market access seems to be intact. This reciprocity has a direct impact on trade balance.

- The world market share of products and services of a country are related to applied tariff rates.

The observation with regard to world market share for the products of a country is directly related to the concept of reciprocity in tariff rates and market access. The issue of reciprocity has become of growing concern with regard to developing economies engaged in the primary sector, most typically, agriculture. The Doha Round of trade talks has been stagnated over this issue for several years. The disagreement centers on industrialized countries that protect agricultural concerns either by imposing duties on imported goods or by providing subsidies to farmers. In particular the United States and the European Union cite examples of subsidies on the part of developing countries for the reason for their actions.

There may be basis to this claim, however, the subsidies of developing countries

could never match those of industrialized countries. In any case, there is an inherent disadvantage to economically advanced nations protecting their food production activities. The barriers to market entry limit developing countries ability to increase market share in primary sector activities. The resulting frustration often times leads to countervailing or punitive duties on the part of developing countries. Escalation can lead to a trade war that benefits neither party.

- GDP growth is impacted by market access.

Market access in terms of tariffs faced by goods exported is the measure in which GDP growth was correlated. The conclusion is that the economies of the case countries benefitted by increased market access. The market access referred to is in terms of tariffs faced when exporting abroad. The basic premise is that trade has become a necessary condition for economic growth in any country. Domestic production and demand are limited, especially in developing economies. Therefore, the real growth opportunities lie in export markets. Once wealth is generated by export activities, local economies prosper. Hence, developing economies are truly reliant upon export market access for GDP growth.

- In countries that promote trade aperture, higher living standards are achieved.

The measure of commitment to trade aperture is this case is the Trade Restrictiveness Index, while the UN HDI measures living standards. This conclusion is based upon strong regression results for this correlation. The assumption is that trade aperture promotion leads to increased market access which in turn initiates GDP growth. The notion is that increased trade activity is central to the string of conclusions being stated. A commitment to trade aperture most often leads to increased market access which leads to more favorable trade balances.

- In countries that promote trade aperture, lower unemployment rates are experienced.

This conclusion relates the measure of commitment to trade aperture, i.e., Trade Restrictiveness Index to unemployment figures in the case countries. Employment is perhaps the most critical aspect of the economy of any country. This key factor includes societal as well as economic implications and is of tremendous importance. In terms of this observation, the correlation between trade aperture and unemployment is strong. Intuitively, the string of conclusions would provide explanation in that, a commitment to trade aperture leads to market access, increased trade and therefore, GDP growth. More economic activity will absorb more employable people, thus leading to the result. Moreover, the increased economic activity created by trade will also generate a stimulated domestic economy therefore creating even more employment opportunities.

Generally speaking, unemployment rates above 5 percent are unhealthy. Of the case countries, Singapore posted the only nine year unemployment average below 5 percent. There again, Singapore has the greatest commitment to trade aperture. Lithuania, with the highest nine year average in unemployment, is still in transition from a command economy. Furthermore, its recent inclusion in the EU may not help unemployment, as trade aperture between the EU and the world seems to be a low priority.

- Trade aperture leads to greater economic efficiency.

This observation is based upon tariffs levied on imports in relation to economic efficiency in terms of GDP per head. The correlation is strong, with two possible explanations. First, restrictiveness on imports will certainly stifle economic activity. Second, tariffs on imports result most often, in tariffs faced by exports. For both of these reasons, trade restrictions on imports are not congruent with economic growth and economic efficiency.

- The case countries that are heavy on intangible resources have faired better economically than those that have relied on tangible resources.

Intangible resources in the form of knowledge, innovation and imagination are superior to tangible resources for two primary reasons. First, Intangible resources

are inexhaustible. That is to say, that their nature is infinite. The only requisites are human beings and a stable environment. Second, Intangible resources are value added and much less influenced by pricing by market forces. The market for ideas and knowledge is much more fluid and subjective. Hence, there are greater opportunities for capital creation and wealth generation.

- Trade policy dependence tends to rely on the tangibility factor of resources.

This observation is connected to the sector in which a country typically generates its economic output. Typically, primary sector products in agriculture are the most subject to import duties. As was aforementioned, the current situation of the Doha round of trade talks is hostage to this disagreement. Therefore, worldwide trade policy is seemingly hinging on agricultural products. Where intangible resources are concerned, the trade policy issue is much less tenuous. There again, intangible resources and the products derived thereof, are in large part differentiated. In this way, the perception of competition is muted by the nuances of innovation. Conversely, cotton is interchangeable, as is corn, wheat, sugar, etc. Moreover, the concept of food dependence is frightening to people. Where possible, people prefer to produce food domestically however inefficient that endeavor may be.

The conclusion then, is that the dependence on trade aperture from a policy point of view is perceptually more challenging where primary sector products are concerned. Agricultural products are the most subjugated category of traded goods when tariffs are concerned.

- Creative capital resource allocation positively influences economic growth and living standards.

The creative allocation of capital resources is key to developing comparative advantages. Therefore, the allocation of capital resources is the foundation for economic development. The wasteful allocation of capital resources leads to economic decline. It is an urge that must be curbed, that is, the insistence on allocating resources to traditional industries that may not be in the interest of the economy. generally, the market will determine the most efficient allocation of resources. For example, the United States ought not to invest capital resources in the production of shoes when it could invest in the production of jet engines. Typically, the allocation of resources and investment would determine that shoe production would not be a viable venture and ought to be done by a country that could product shoes more efficiently. However, on numerous occasions, the government of the United States as well as other countries has determined that an industry is vital the the country. This is the urge that must be curbed. It is not the corn of the government or individuals, as to what industries should operate in

any particular country. It is a market mechanism. The creative allocation of capital resources will product the greatest gain when the market decides.

With that said, the case countries provide the information and experiences to evaluate this claim. Singapore began its industrial activity four decades ago producing low technology items. It developed its knowledge base, skill sets, innovation abilities and allocated capital resources to the highest level achievable given its capabilities and competencies. Today, Singapore produces high tech items in electronics and chemicals. It has also become a force in services such as shipping, finance, and commodity trading.

Costa Rica is allocating its resources in the realms of electronics production and medical instruments as well as services. New allocations are being made in the exciting field of aerospace with the projects initiated by Franklin Chang.

Chile has allocated capital resources in mining and agriculture which has helped develop a growing domestic economy.

Lithuania continues to allocate its resources in the direction of industry and manufacturing particularly in the realm of machinery.

Uruguay has committed its resources to agriculture and meat production and the bi-products leather and wool.

The point, is that comparative advantage is gained through the proper allocation of capital resources. Proper meaning, in areas of efficiency, capability and most importantly creatively.

4.2 General Recommendations

- Promote trade aperture.

Of the recommendations, the most important is listed first. It is the most important because without the market access created from trade aperture, everything else becomes nearly irrelevant. Trade aperture must be a priority for the governments of the five case countries (excluding Singapore which has eliminated all trade barriers).

The promotion of trade aperture is a challenging task in most all countries, developed and developing alike. The reason for this is twofold. First is ignorance of how basic economics functions. Second is political fear mongering designed for personal and political gain.

With regard to the first dissent, it is paramount that citizens become informed of

the facts regarding trade and economic development. One manner in which to achieve this would be through fair, balanced and objective journalistic efforts. All too often media outlets are skewed in favor of a position. The result is one sided reporting or even the reporting of false or exaggerated information. Media outlets need to held accountable for objectivity and accuracy of reporting. Another means to providing information would be through the school system. Governments should become involved in this aspect with regard to economics courses taught to children from perhaps the age 14. These courses would teach the basic principles of economic theory as well as the benefits and detriments of trade. Once again, objectivity and and accuracy would be key. With regard to the second part of this recommendation, within a short period of time, let us say 10 years, there would be a large contingent of informed citizens regarding economic and trade issues.

As for the second quandary, this issue is far more complicated due to the nature of power, money and influence. Politicians have been destroying potential economic advances and efficiencies for decades. This is true to a varying extent in most countries. While the reasons for this are somewhat out of the scope of this analysis, it may be concluded that in general, politicians are beholden to certain business interests. These obligations leads to policies that have been destructive to trade aperture. The policies are sold to the public on the basis of national interest or job protection. Politicians make compelling arguments that often times

strike at the emotional or physiological aspects in the lives of the citizenry. However, eloquent and compelling the rationalization may be, politicians are serving the interests of certain industries or companies and not that of the general economy or of the citizens. The solution is not to change the political process, but to inform the citizens. Hence, the first part of this recommendation is the solution. Media outlets need to become responsible for real information dissemination. And if governments are unwilling to introduce economics into the educational system, then private citizens must organize to help inform the public. An informed citizenry will not be fooled be political deception.

In sum of this recommendation, once the political system senses the optimism for trade aperture and the opportunities it provides, then favorable policy will follow. The political system operates much like the market system. The consumer (citizens) may force producers (government) to respond to requests. If the government resists the request, then it may be replaced. The producers (government) may only force their products (policy) upon the market (citizens) for a finite period of time. Eventually the competitive forces will provide alternatives. Certainly, all of the case countries are democratic and may provide the citizens with alternatives in the way of choice. Hence, if the government is not willing to promote trade aperture, then the citizens must apply pressure to do so.

- **Determine core capabilities.**

Determining core capabilities is similar to a young person choosing a career. One must search and find skills to develop. There exists however, an advantage gap between wealthy youths and poor youths. Similar to poor youths, poor countries have not had the luxury to choose their means of production. the means of production are automatic in the form of primary sector activity. Similarly, poor countries just like poor youths, must work harder and be more creative to change their direction.

The analogy is provided to the realize the macro and micro aspect of development. Nations are comprised of individuals. hence, the development aspect is similar. Just as less advantaged people must compete in a society of others, some of which are more advantaged; countries must compete in a world that contains countries with certain advantages. The point is though, that all people and all countries have certain capabilities and latent resources. It is the creativity of the human mind to discover and unlock the potential in these latent capital resources. It is true that some countries may need to be more creative or work harder, but all countries may find a niche. Singapore was included in the five case countries for particularly this reason. This country has overcome obstacles and become highly proficient in its areas of expertise. The recommendation for all countries is to continually work to discover and develop core capabilities.

- **Attract foreign direct investment.**

Foreign direct investment is critical for economic development. No country, even developed ones, have enough resources to fuel economic expansion. As the text indicates, four of the five top recipients of foreign direct investment are industrialized countries. Therefore, the recommendation for the case countries is to develop a system to attract more foreign direct investment. Determine what attracts foreign investors and hone in on those attributes. Moreover, it may be advantageous to concentrate on particular activities that compliment core capabilities.

- **Create avenues for business investment.**

In addition to foreign direct investment, the case countries need to develop avenues for business investment. Many inventions and innovations come from start up companies and entrepreneurs. These individuals need cash to develop their ideas. Credit needs to be made available to innovative people. The avenue of venture capital has worked well in developed economies. Similar modes of business investment need to become more widespread in developing countries.

- **Shift focus to intangible capital resources.**

While tangible resources, namely natural resources, will always have an economic

value, economic development needs to focus on the intangible capital resources latent in secondary and tertiary activities. The knowledge based third industrial revolution has made it possible for countries with no tangible resources to compete on a global scale. This is a remarkable development. Given advancements in communications technology, the economic playing field is more level than any time in human history. What this means, is that all individuals in all nations have the ability to connect to the global marketplace, participate and compete. innovations and inventions can come from anywhere in the fields of engineering, science, medicine and technology. Knowledge is the driver of economic activity and it knows no national boundaries. The recommendation to the case countries is to concentrate focus on the intangible capital resources presented by knowledge, creativity, innovation and invention.

- **Develop human capital resources.**

Following the previous recommendation, it is advisable to concentrate on the human element in capital resources. Primarily knowledge acquisition is the driver for innovation and creativity. Therefore, a special effort must be made by the case countries to increase educational capacity. An additional focus must be made in the areas of science and technology. Humans posses the ability to discover new untapped capital resources. The productive energy locked in capital assets can only be released through the creative thought process and ingenuity of humans.

Asset value is not a given, it must be created by the ability of humans to envision a productive use for the asset.

- Seek disequilibriums world wide.

Disequilibriums are represented by the development of innovations and inventions. New untapped markets are discovered or invented. Marketers refer to this as market niches. While niches are representative of essentially markets within markets, real disequilibriums are achieved through innovation and invention. The cell phone for example, created an entirely new industry. The disequilibrium in that industry at the beginning was enormous, as the innovators could command disproportionate prices for their products and services due to its exclusivity.

Innovation and invention have always created wealth at a higher rate than activities in established democratized industries. Therefore, the recommendation for the case countries is to develop a creative and innovative culture in order to discover and create market disequilibriums world wide.

-Promote and seek sustainable development.

Activities that place a strain on the ecology and environment of a country may have a short longevity. Such activities are generally land based and/or extractive in nature. Sustainable development includes efforts to use resources wisely.

Capital resources must be used efficiently and effectively to produce the most beneficial of economic outcomes. Sustainable practices are sensible economic practices as well.

- **Promote and respect fair trade.**

While the concept of fair trade was not directly handled in the analysis, the assumption is that free trade presupposes fair trade. That is to say, that the principles of free trade incorporate the principles of fair trade. The elimination of subsidies, tariffs and quotas end the distortions of trade related barriers. Fair trade however, includes these principles and extends to include working conditions and issues of sustainability. Child labor and forced labor as well as labor without acceptable safety procedures are not acceptable in fair trade principles. With regard to sustainability, relaxed environmental standards and noncompliance with acceptable international pollution limits are also not in accordance with fair trade principles. While fair trade recognizes the legitimacy of comparative advantage, it does not legitimize practices that are unethical in order to achieve said advantage.

- **Develop relationships with expatriate population.**

Individuals living outside of their home country are an excellent source of new ideas and possible ventures. These individuals who reside in other countries generally are willing and anxious to help promote trade with their country of origin. This is

particularly true concerning people who are from LDC's and reside in countries with advanced economies. It has often been a concern that the United States siphons the best talent from the world. This phenomenon has come to be referred to as the "brain drain" in developing countries as they loose their best people to U.S. companies and research institutions. While this phenomenon may continue, it would be wise for the home country of these expatriates to keep in contact. Perhaps a program that would encourage the joint venture between two countries could be established. At very least, expatriates should be tapped for knowledge and experience, these people are generally very willing to help improve conditions in their country of origin.

4.3 Particular Recommendations

- Chile

Chile has been blessed with a number of natural resources including mineral deposits. The recommendation for Chile is to transition from primary sector economic activities to secondary and tertiary activities. Given the wealth generated from mining activities as well as the world wide market networks established by the trading of copper, Chile has a unique opportunity to transition to the next level without as much effort.

Typically countries possessing natural resources behave as Chile does, i.e., to rely

on the primary sector at the expense of higher development. The unique situation is that Chile can use its position as a springboard to other industries. This analysis understands that Chile is not completely neglecting economic development opportunities, however, the fact remains that 86 percent of Chile's exports are accounted for by mining and agricultural products. Chile has been mining for decades, therefore opportunities to expand have been squandered. Recent expansions into salmon fisheries and timber plantations are commendable, however, they are primary sector production means.

- Costa Rica

Costa Rica has made excellent progress in the past decades. The commitment of resources to education and medical care are especially noteworthy as is the abolishment of the military in the middle of the last century. Costa Rica understands the concept of resource allocation. However, the scarcity of resources hinders development. Costa Rica needs to develop a means in which to attract more foreign direct investment in the areas of research, science and technology. The nation ought to exhibit its strengths to international investors to gain interest. With its success in education, Costa Rica finds itself perhaps with more educated citizens than the market can absorb. Costa Rica could establish itself as the Latin American research center for a variety of industries including pharmaceuticals, aerospace and technology. To accomplish this, Costa Rica must

aggressively seek investment and cooperation with foreign corporations.

Moreover, the country needs to continue to increase its commitment to education. Obviously the educational system has worked well in producing an educated workforce. However, one may never be satisfied, the world continues to develop and Costa Rica needs to have citizens superior in knowledge and skills.

Costa Rica has firmly established its activities in the secondary and tertiary sectors. This accomplishment has benefitted the country with a significantly higher GDP per head than most countries in the region. A further recommendation in this relation which connects to the need of more investment, is of domestic ownership of the means of production. In the tourism sector for example, most all of the large hotels are owned by foreign firms. Certainly the ownership of this type of enterprise is not out of the reach of domestic firms, given sufficient access to capital. Therefore the recommendation is to concentrate efforts on the domestic ownership of the means of production. With an increased ownership, profits remain in the country and are reinvested creating a cycle of economic development.

With regard to trade, Costa Rica must promote free trade. Having said this, not all trade deals are beneficial. Each trade offer must be analyzed on its own merits. However, Costa Rica must realize that it does not compete with anyone in the

primary sector. Of export activity, Costa Rican manufacturing accounts for 65 percent of the total volume. Therefore, Costa Rica needs to consider itself a manufacturing based economy, as such, it has the ability to establish the value added component to products. The value of reciprocity in trade agreements far outweighs the value gained by protectionism, especially where protection is unwarranted.

The final recommendation for Costa Rica is to create a culture of creativity and aggressiveness. What this means, is that, in the modern economic landscape, the power of small players is significant. Individuals in small and developing countries no longer need to be subservient to the interests of the large players. In other words, initiative is the order of the day. investors will not simply come and make offers nor will production firms. Costa Rica must take the initiative and seek the investment and promote the deals for economic advancement. Those who take the initiative will find success. This is a recommendation for individuals as well as for the country. The infrastructure is in place and improving, the human resources are certainly not lacking, therefore it is the responsibility of Costa Ricans not to be passed over in considerations for economic opportunities. Franklin Chang is certainly doing his part in the establishment of an aerospace research center in the realm of plasma research. Certainly there are other fields to be explored.

- Lithuania

Lithuania has two distinct advantages. Those being, an industrial infrastructure built during the Soviet era, and proximity to Western Europe including EU membership. The recommendation is to build on these two circumstances. Lithuania's economy operates primarily in the secondary sector except for the notable timber industry. Foreign investment is needed to build on production capacity and venture into new product areas. Shipbuilding is an industry that Lithuania ought to concentrate on. With other major ship yards in the EU, Lithuania could enter a joint venture in the production of certain components.

Inclusion in the EU holds numerous opportunities for Lithuania. Among them is the ability to raise capital from follow member countries. Most importantly though, is market access. Western Europe is looking to the east for less expensive manufacturing centers. Lithuania is positioned ideally to fill that need. Moreover, the EU with approximately 300 million residents is a market ripe with opportunities. Neighboring Russia with its vast supply of natural gas and oil is a great benefit in that fuel is close. The recommendation for Lithuania is to keep on track with regard to infrastructure development and industrial commitment. Focus on investment and domestic markets are also key for Lithuania to expand and develop.

- Singapore

Without a doubt, Singapore is the least in need of recommendations of the five case countries. Having said that, possible recommendations would include advancements in high technology and science related product groups. Moreover, a continued concentration on innovation and invention rather than solely on manufacturing would allow the creation and capitalization on market disequilibriums. Singapore ranks fifteenth in world in research and development expenditure as a percent of GDP, and it ranks forth in the world in patents in force per 100, 000 residents.

A continued effort to expand in commercial services and finance will establish Singapore in the tertiary sector thus adding diversity to its economic base. Diversity is what Singapore may need to concentrate on with the growing competition in manufacturing coming from China, South Korea and even Vietnam.

- Uruguay

Uruguay needs to decide if it wants to engage trade aperture. If so, then a transition into industry and services would be beneficial for economic growth. Uruguay has concentrated its economic capital resources on primary sector activities. As such, Uruguay has posted the highest unemployment rate figures, the lowest GDP growth figures and the most trade adverse scores of the five case

countries. The combination of primary sector reliance with trade aversion has been very detrimental to economic stability and growth in Uruguay. The recommendation for Uruguay is twofold. First, the country must commit to some sort of secondary sector activity. in so doing, a strategy including core capability identification must be implemented. Second, Uruguay needs to engage the world in free trade. Agriculturally, it has much to offer. Primary sector trade can always lead to other activity, aiding in the development of and industrial infrastructure. The export activity of Uruguay currently posts a 30 percent segment for manufactures. This number certainly may be built upon. Trade with neighbors such as Argentina and Brazil ought to be of high priority. Uruguay needs to engage the world and seek opportunities. the benefit of managing a low population country is that responsiveness and agility are superior to high population countries. Therefore, the focus on opportunities becomes of national interest. In this way, smaller countries have distinct advantages in certain areas in the modern economic world.

4.4 A Call To Action

The implications of this analysis are obvious, as are the recommendations. Trade aperture must become the norm of future international trade. Cooperation between governments must improve. While cooperation among individuals has achieved great things and created world markets, governments have acted unscrupulously in distorting trade benefits and trade relationships. It is no secret

that trade aperture results in job displacement and economic reallocation. However, a small amount of initial pain will save a tremendous amount of pain later on. The United States acted to protect the steel industry for decades. The final result was the ultimate failure of the U.S. steel industry after billions of dollars had been wasted in subsidies, tariffs, quotas and embargoes. This type of behavior continues today in most countries around the world. The natural order of human behavior can not be stopped. Comparative advantage is the natural outcome of specialization of labor and resource allocation. These notions are not evil, nor is the market mechanism of capitalism. Human nature has evolved and will continue to evolve. Trade aperture is an eventual requirement of evolution. The sooner governments act to reduce trade barriers, the sooner humanity can continue with its natural right to create.

End Notes

[1] In 2007 Toyota surpassed General Motors as the largest auto manufacturer in the world.

[2] Lester Thurow, Building Wealth (New York: Harper, 1999) 18-22. The effective and efficient allocation of capital, in particular, in the direction of developing new technology, according to Thurow is the predominant way in which substantial wealth is generated. When efficiencies are applied the economic outcome is a temporary disequilibrium in profit to investment ratios. The facilitators of the change and greater efficiency are the ones who profit.

[3] Lester Thurow, Building Wealth (New York: Harper, 1999) 25. The specialization of activity allowed by intensive agriculture marked one of the greatest societal shifts in the history of humanity. Agriculture on a large scale enabled more food to be produced which less workers. In turn those not laboring in agriculture were able to pursue advances in science, art, medicine and engineering. The outcome has been extraordinary.

[4] Lester Thurow, Building Wealth (New York: Harper, 1999) 20-22. Often times new technology creates efficiencies, however they are not economically

feasible. At times the new technology never becomes dominant, in other cases it takes a period of time. In the global economy of present, it is often seen that manual labor of developing countries can be employed at a far lesser cost than an automated process. That is to say, that it certainly may be true that it is less expensive to had sew garments in Pakistan and ship the product to the United States, than to produce the same garment in the United States more efficiently by the use of automated machinery.

[5] Richard Longworth, Global Squeeze (Chicago: Contemporary, 1998) 115-120. The economic outcome of such a social phenomenon is the loss of creativity and thus the inability to find new ways to mobilize capital resources.

[6] Lester Thurow, Building Wealth (New York: Harper, 1999) 99-105. Social benefits such as education benefit not only the individual, but the employer and the nation as a whole. The connection between economic efficiencies and many other aspects of social living are quite interdependent.

[7] Hernando DeSoto, The Mystery of Capital (New York: Basic, 2000) 143-152. Once again, the interconnection between economic progress and social living become evident. The emergence of a formal property system and a legal network to support it, is seen as vital to economic growth and stability.

[8] John Naisbitt, Global Paradox (New York: Avon, 1994) 46-52. The creation of capital is of course preceded by the identification of capital assets.

[9] John Naisbitt, Global Paradox (New York: Avon, 1994) 43. The unity of markets, that is to say that humans have common needs and desires. Markets respond to these factors and know no geographic or political boundaries. In this sense, market desires will always be satisfied.

[10] The Washington Consensus was the name given to the ten point list for a reform agenda prescribed to LDC's in general, and Latin American economies in particular authored by John Williamson formerly of the IMF. The list included privatization of state-owned industries, deregulation, reductions of trade barriers, fiscal and monetary prudence and foreign investment.

[11] Amitava Krishna Dutt and Kenneth P. Jameson, eds., New Directions in Development Economics. (England: Edward Elgar Publishing, 1992) 3-15. A distinction in models of development economics focused on the agents being rational maximizers and the reasonable functioning of markets.

[12] John Black, Oxford Dictionary of Economics (New York: Oxford, 1997) 181. Typically federal reserve banks of nations manipulate exchange rates in attempt to create favorable situations for the local economy. It may be argued however, that such manipulation interferes with the mechanisms of the market and create long term negative consequences.

[13] George Soros, Open Society (New York: Public Affairs, 2000) 172-178. Valuable currencies tend to be collected to add stability to a particular national economy.

[14] Most of these plants have been located in Alabama, to the extent that the city of Birmingham is been referred to as "Detroit South."

Bibliography

Altschiller, Donald. Free Trade Versus Protectionism. New York: H.W. Wilson Company, 1988.

"Argentina's economy: Down and almost out, in Buenos Aires." The Economist November 3, 2001.

Bastos, Paul and Manuel Cabral. "The Dynamics of International Trade Patterns." Review of International Economics 143.3 (2007): 391-415.

Black, John. Oxford Dictionary of Economics. New York: Oxford University Press, 1997.

Boliños, Tomás, Adam Bennett and Eduardo Borensztein. Monetary Policy in Dollarized Economies. Washington DC: International Monetary Fund, 1999.

Cohen, Benjamin J. The Geography of Money. Ithaca, NY: Cornell University, 1998.

Coronado C., Harold. Globalización e Integración Empresarial. Ulacit:

"Antología Curso Monográfico 2001."

DeRooy, Jacob. Economic Literacy. New York: Three Rivers Press, 1995.

DeSoto, Hernando. The Mystery of Capital. New York: Basic Books, 2000.

Dutt, Amitava Krishna and Kenneth P. Jameson eds. New Directions in Development Economics. England: Edward Elgar Publishing, 1992.

"Economic Focus: Dollar Mad?" The Economist October 27, 2001.

Economist Intelligence Unit, World in Figures 2006. London: Profile Books LTD., 2006.

Eichengreen, Barry. Globalizing Capital. Princeton: Princeton University, 1996.

Friedman, Thomas. The Lexus and the Olive Tree. New York: Farrar, Straus and Giroux, 2000.

Fry, Maxwell J. Money, Interest and Banking in Economic Development.

Baltimore: Johns Hopkins University, 1988.

Ghatak, Subrata. Monetary Economics in Developing Countries. New York: St. Martin's Press, 1995.

Gilbert, Emily and Eric Helleiner eds. Nation-States and Money. New York: Routledge, 1999.

Goldsmith, Edward and Jerry Mander eds. The Case Against the Global Economy. San Francisco: Sierra Club Books, 1996.

Hutton, Will and Anthony Giddens eds. Global Capitalism. New York: The New Press, 2000.

International Monetary Fund.org. 2007. World Economic Outlook Database 2007. 6 September 2007 <http://www.imf.org/external/ns/>.

Isard, Peter. Exchange Rate Economics. Cambridge: Cambridge University, 1995.

Kee, Hiau Looi, Alessandro Nicita and Marcelo Olarreaga. “Estimatimg trade

restrictiveness indices." World Bank Policy Working Paper 3840, The World Bank, 2006.

Krauss, Melvyn. How Nations Grow Rich. New York: Oxford University Press, 1997.

Lang, Tim and Colin Hines. The New Protectionism. New York: The New Press, 1993.

Longworth, Richard. Global Squeeze. Chicago: Contemporary Books, 1998.

Lusztig, Michael. Risking Free Trade. Pittsburg: University of Pittsburg Press, 1996.

Mundell, Robert. Monetary Theory: Inflation, Interest and Growth in the World Economy. Pacific Palisades, CA: Goodyear Publishing, 1971.

Naisbitt, John. Global Paradox. New York: Avon Books, 1994.

Ohmea, Kenichi. "Putting Global Logic First." Harvard Business Review. February 1995.

Oxley, Alan. The Challenge of Free Trade. New York: St Martin Press,1990.

Pentecost, Eric J. Exchange Rate Dynamics. Hants, England: Elgar Publishing, 1993.

Proudman, James and Stephen Redding. "Evolving Patterns of International Trade." Review of International Economics 8.3 August (2000): 373-396.

Rawls, John. A Theory of Justice. Cambridge: Harvard University Press, 1981.

Redding, S. "Specialization Dynamics." Journal of International Economics. 58.1 (2002): 299-334.

Rodrik, Dani. Has Globalization Gone Too Far? Washington, D.C. Institute for International Economics, 1997.

Sforza, Michelle and Lori Wallach. The WTO, Five Years of Reasons to Resist Corporate Globalization. New York: Seven Stories Press,1999.

Soros, George. Open Society. New York: Public Affairs, 2000.

Stiglitz, Joseph E. Globalization and Its Discontents. New York: WW Norton, 2002.

Stiglitz, Joseph E. ed. The Economic Role of the State. Oxford: Basil Blackwell LTD, 1989.

Thurow, Lester. Building Wealth. New York: Harper, 1999.

"Time to deal on trade." The Economist October 6, 2001.

United Nations.org. 2007. COMTRADE International Trade Statistics 2001-2005. 18 August 2007 <http://comtrade.un.org/db/>.

United Nations.org. 2007. United Nations Development Programme Database 2007. 18 August 2007 <http://undp.org/en/statistics/>.

United Nations.org. 2007. United Nations Human Development Index 2006. 18 August 2007 <http://hdrstats.undp.org/indicators/>.

"Wanted: a new regional agenda for economic growth." The Economist April 26, 2003.

Wessels, Walter J. Economics. New York: Barrons, 2000.

Williamson, John. The Failure of World Monetary Reform 1971-74. New York: New York University Press, 1977.

World Bank.org. 2007. World Bank Development Indicators 2006. 15 August 2007 <http://web.worldbank.org/WEBSITE/EXTERNAL/DATASTATISTICS/>.

World Trade Organization.org. 2007. Trade Database 2007. 15 August 2007 <http://wto.org/english/res_e/statis/its2007/>.

Yotopoulos, Pan. Exchange Rate Parity for Trade and Development. Cambridge: Cambridge University, 1996.

Appendix A

World Bank: Trade Competitiveness Brief 2007

Trade and Competitiveness Brief

Chile

www.worldbank.org/globaloutlook

	Average 1980-90	Average 1990-2000	2003	2004	2005	2006 (e)
Trade performance						
Current US$ billions, unless indicated otherwise						
Exports, goods and services	6.5	17.7	27.0	38.7	48.2	67.0
Imports, goods and services	6.4	17.5	23.9	30.3	38.7	44.9
Balance on goods and services trade	0.1	0.2	3.1	8.5	9.5	22.1
Current Account Balance	-1.5	-1.7	-1.0	1.6	0.7	5.2
as share of GDP (percent)	-6.5	-2.6	-1.3	1.7	0.6	3.8
Annual percent change						
Exports, goods and services	5.5	8.4	17.9	43.4	24.6	38.9
Export price, expressed in US$	2.6	8.9	12.5	25.4	27.9	16.1
Imports, goods and services	-0.6	-0.8	10.7	28.2	17.4	33.9
Import price, expressed in US$	0.9	-1.6	2.5	7.2	6.2	7.5
Trade integration[1]						
Share of world's exports (percent)[2]	0.2	0.3	0.3	0.35	0.38	0.45
Share of LAC exports	..	..	5.8	6.07	6.60	6.44
LAC: Latin America & Caribbean						
Trade competitiveness						
Annual percent change, unless indicated otherwise						
World exports goods & services (current US$)	6.9	6.7	15.9	20.8	15.8	14.8
Chile's export-market growth (3)	..	..	9.3	17.3	13.4	11.3
Chile exports	5.5	8.4	17.9	43.4	24.6	38.9
World export price (expressed in US$)	..	..	9.3	9.0	7.7	4.2
Competitors' export price[4]	..	..	4.3	5.7	6.6	4.4
Chile export price	-0.6	-0.8	10.7	28.2	17.4	33.9
World exports goods & services (constant US$)	4.6	7.0	6.0	10.9	7.6	10.2
Chile's export-market growth (3)	..	9.3	4.8	11.0	6.4	6.6
Chile exports	6.1	9.3	6.5	11.8	6.1	3.7
Exchange rate (against US$)	154.2	415.8	691.4	609.5	559.9	581.8
Annual percent change (in US$)	-18.6	-5.5	-0.4	13.4	8.9	-3.8

Main Markets

Top-5 sources (2000)		Top-5 markets (2000) $bn	
United States	$3.27	United States	$3.01
Argentina	$2.67	Japan	$2.55
Brazil	$1.33	United Kingdom	$1.06
China	$0.95	Brazil	$0.97
Japan	$0.70	China	$0.90

Prospects for the Global Economy
Global Development Finance 2007

Trade and Competitiveness Brief

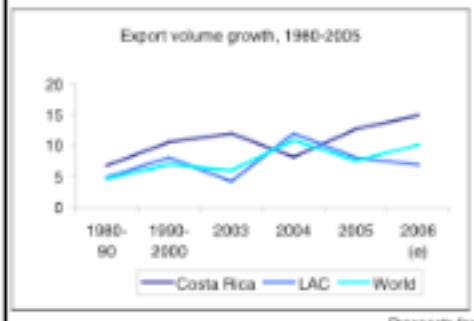
Costa Rica

www.worldbank.org/globaloutlook

	Average 1980-90	Average 1990-2000	2003	2004	2005	2006 (e)
Trade performance						
Current US$ billions, unless indicated otherwise						
Exports, goods and services	1.5	4.7	8.2	8.6	10.0	12.4
Imports, goods and services	1.7	4.9	8.5	9.2	10.8	12.9
Balance on goods and services trade	-0.2	-0.2	-0.3	-0.6	-0.8	-0.5
Current Account Balance	-0.4	-0.4	-0.9	-0.8	-1.0	-1.1
as share of GDP (percent)	-7.9	-3.9	-5.0	-4.3	-4.8	-4.7
Annual percent change						
Exports, goods and services	5.7	13.2	14.5	5.2	16.4	23.5
Export price, expressed in US$	4.2	10.5	6.0	8.0	17.3	19.4
Imports, goods and services	-0.9	2.4	2.2	-2.7	3.3	7.5
Import price, expressed in US$	-0.3	1.9	5.1	-1.0	4.2	5.7
Trade integration[1]						
Share of world's exports (percent)[2]	0.1	0.1	0.1	0.08	0.08	0.08
Share of LAC exports	..	..	2.1	1.84	1.84	1.84
LAC: Latin America & Caribbean						
Trade competitiveness						
Annual percent change, unless indicated otherwise						
World exports goods & services (current US$)	6.9	6.7	15.9	20.8	15.8	14.8
Costa Rica's export-market growth (3)	..	..	15.5	25.6	14.9	17.1
Costa Rica exports	5.7	13.2	14.5	5.2	16.4	23.5
World export price (expressed in US$)	..	..	9.3	9.0	7.7	4.2
Competitors' export price[4]	..	..	6.7	9.2	7.9	7.3
Costa Rica export price	-0.9	2.4	2.2	-2.7	3.3	7.5
World exports goods & services (constant US$)	4.6	7.0	6.0	10.9	7.6	10.2
Costa Rica's export-market growth (3)	..	7.9	8.3	15.0	6.6	9.1
Costa Rica exports	6.8	10.6	12.0	8.2	12.7	14.9
Exchange rate (against US$)	51.9	192.6	398.7	457.9	474.3	494.2
Annual percent change (in US$)	-21.1	-11.4	-9.7	-9.0	-7.7	-4.0

Main Markets

Top-5 sources (2000)		Top-5 markets (2000) $bn	
United States	$3.10	United States	$2.85
Mexico	$0.39	Netherlands	$0.39
Venezuela	$0.34	United Kingdom	$0.30
Japan	$0.21	Guatemala	$0.19
Spain	$0.14	Nicaragua	$0.18



Prospects for the Global Economy
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Trade and Competitiveness Brief

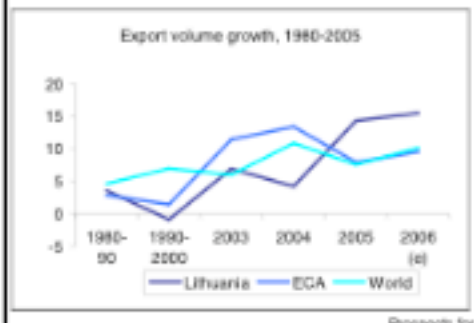
Lithuania

www.worldbank.org/globaloutlook

	Average 1980-90	Average 1990-2000	2003	2004	2005	2006 (e)
Trade performance						
Current US$ billions, unless indicated otherwise						
Exports, goods and services	..	4.5	9.5	11.7	15.0	18.7
Imports, goods and services	..	5.1	10.6	13.3	16.8	21.2
Balance on goods and services trade	..	-0.6	-1.1	-1.6	-1.8	-2.5
Current Account Balance	0.0	-0.5	-1.3	-1.7	-1.8	-3.4
as share of GDP (percent)	..	-5.3	-6.9	-7.7	-7.2	-11.5
Annual percent change						
Exports, goods and services	..	-3.1	27.7	23.3	27.7	24.9
Export price, expressed in US$	..	-3.3	28.3	25.7	25.9	26.4
Imports, goods and services	..	-2.2	19.4	18.3	11.7	8.2
Import price, expressed in US$	..	-1.3	16.3	9.5	8.6	7.6
Trade integration[1]						
Share of world's exports (percent)[2]	..	0.1	0.1	0.11	0.12	0.13
Share of ECA exports	..	1.9	1.9	1.87	1.97	1.97
ECA: Europe and Central Asia						
Trade competitiveness						
Annual percent change, unless indicated otherwise						
World exports goods & services (current US$)	6.9	6.7	15.9	20.8	15.8	14.8
Lithuania's export-market growth (3)	..	..	4.8	22.9	13.4	16.6
Lithuania exports	..	-3.1	27.7	23.3	27.7	24.9
World export price (expressed in US$)	..	..	9.3	9.0	7.7	4.2
Competitors' export price[4]	..	..	0.6	2.0	5.0	3.2
Lithuania export price	..	-2.2	19.4	18.3	11.7	8.2
World exports goods & services (constant US$)	4.6	7.0	6.0	10.9	7.6	10.2
Lithuania's export-market growth (3)	..	8.8	4.3	20.5	8.0	7.2
Lithuania exports	3.6	-0.9	6.9	4.2	14.3	15.5
Exchange rate (against US$)	..	2.5	3.1	2.8	2.8	2.8
Annual percent change (in US$)	..	-45.1	20.3	10.1	0.4	0.7

Main Markets

Top-5 sources (2006)		Top-5 markets (2006) $bn	
Russian Federation	$1.46	Latvia	$0.57
Germany	$0.93	Germany	$0.55
Poland	$0.34	United Kingdom	$0.30
United Kingdom	$0.23	Russian Federation	$0.27
Denmark	$0.23	Poland	$0.21



Prospects for the Global Economy
Global Development Finance 2007

Trade and Competitiveness Brief

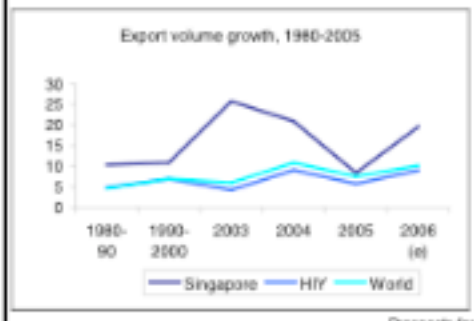
Singapore

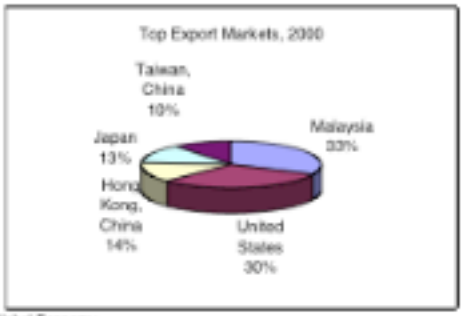
www.worldbank.org/globaloutlook

	Average 1980-90	Average 1990-2000	2003	2004	2005	2006 (e)
Trade performance						
Current US$ billions, unless indicated otherwise						
Exports, goods and services	39.4	131.5	198.2	247.7	280.0	352.2
Imports, goods and services	39.4	122.3	172.1	218.1	244.3	313.5
Balance on goods and services trade	0.0	9.2	26.1	29.7	35.7	38.8
Current Account Balance	0.3	10.5	22.3	26.3	33.1	34.2
as share of GDP (percent)	-1.0	14.0	24.0	24.5	28.5	26.1
Annual percent change						
Exports, goods and services	10.7	9.8	16.4	25.0	13.0	25.8
Export price, expressed in US$	10.1	9.0	10.8	25.7	12.0	28.3
Imports, goods and services	0.3	-1.0	-7.4	3.3	4.3	5.2
Import price, expressed in US$	0.5	-1.7	-9.2	2.6	5.5	6.2
Trade integration[1]						
Share of world's exports (percent)[2]	1.5	2.2	2.2	2.23	2.18	2.39
Share of HIY exports	1.8	2.7	2.5	2.62	2.66	2.92
..						
Trade competitiveness						
Annual percent change, unless indicated otherwise						
World exports goods & services (current US$)	6.9	6.7	15.9	20.8	15.8	14.8
Singapore's export-market growth (3)	..	..	13.3	27.4	18.8	18.5
Singapore exports	10.7	9.8	16.4	25.0	13.0	25.8
World export price (expressed in US$)	..	..	9.3	9.0	7.7	4.2
Competitors' export price[4]	..	..	6.9	8.2	6.8	6.7
Singapore export price	0.3	-1.0	-7.4	3.3	4.3	5.2
World exports goods & services (constant US$)	4.6	7.0	6.0	10.9	7.6	10.2
Singapore's export-market growth (3)	..	-2.7	6.0	17.7	11.3	11.1
Singapore exports	10.3	10.9	25.8	20.9	8.4	18.6
Exchange rate (against US$)	2.1	1.6	1.7	1.7	1.7	1.6
Annual percent change (in US$)	1.7	0.5	2.9	3.0	1.5	4.8

Main Markets

Top-5 sources (2000)		Top-5 markets (2000) $bn	
Japan	$25.15	Malaysia	$25.03
Malaysia	$22.03	United States	$23.89
United States	$20.27	Hong Kong, China	$10.84
China	$7.12	Japan	$10.40
Taiwan, China	$5.97	Taiwan, China	$8.23





Prospects for the Global Economy
Global Development Finance 2007

Trade and Competitiveness Brief

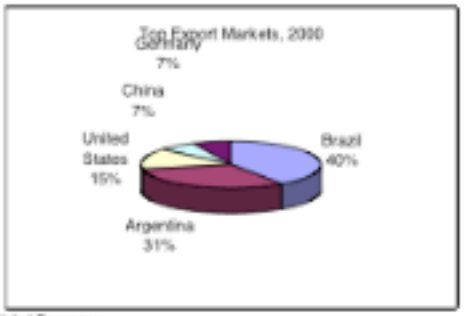
Uruguay

www.worldbank.org/globaloutlook

	Average 1980-90	Average 1990-2000	2003	2004	2005	2006 (e)
Trade performance						
Current US$ billions, unless indicated otherwise						
Exports, goods and services	1.6	3.4	2.9	4.1	5.1	6.1
Imports, goods and services	1.5	3.4	2.7	3.8	4.5	5.4
Balance on goods and services trade	0.1	0.0	0.2	0.3	0.6	0.7
Current Account Balance	-0.1	-0.2	-0.1	0.0	0.0	-0.3
as share of GDP (percent)	-1.5	-1.2	-0.5	0.3	0.0	-1.6
Annual percent change						
Exports, goods and services	4.7	6.2	8.2	40.0	25.0	19.6
Export price, expressed in US$	-1.2	9.9	11.9	37.2	18.6	20.9
Imports, goods and services	0.3	0.7	3.8	9.7	7.0	12.4
Import price, expressed in US$	-0.4	0.1	5.8	8.5	9.0	7.9
Trade integration[1]						
Share of world's exports (percent)[2]	0.1	0.1	0.0	0.04	0.04	0.04
Share of LAC exports	..	..	0.7	0.76	0.76	0.78
LAC: Latin America & Caribbean						
Trade competitiveness						
Annual percent change, unless indicated otherwise						
World exports goods & services (current US$)	6.9	6.7	15.9	20.8	15.8	14.8
Uruguay's export-market growth (3)	..	..	14.8	17.4	15.4	16.4
Uruguay exports	4.7	6.2	8.2	40.0	25.0	19.6
World export price (expressed in US$)	..	..	9.3	9.0	7.7	4.2
Competitors' export price[4]	..	..	9.3	8.6	8.1	3.5
Uruguay export price	0.3	0.7	3.8	9.7	7.0	12.4
World exports goods & services (constant US$)	4.6	7.0	6.0	10.9	7.6	10.2
Uruguay's export-market growth (3)	..	-37.6	6.0	8.1	6.8	6.6
Uruguay exports	4.3	5.4	4.2	27.6	16.8	6.4
Exchange rate (against US$)	0.2	6.7	28.2	28.7	28.2	28.6
Annual percent change (in US$)	-37.9	-20.6	-24.6	-1.7	9.3	-1.2

Main Markets

Top-5 sources (2000)		Top-5 markets (2000) $bn	
Argentina	$0.84	Brazil	$0.53
Brazil	$0.67	Argentina	$0.41
United States	$0.34	United States	$0.19
Venezuela	$0.15	China	$0.09
France	$0.10	Germany	$0.09



Prospects for the Global Economy
Global Development Finance 2007

Appendix B

World Trade Organization: Country Data Statistics

Chile

BASIC INDICATORS

Population (thousands, 2005)	16 295
GDP (million current US$, 2005)	115 250
GDP (million current PPP US$, 2005)	205 884
Current account balance (million US$, 2005)	703
Trade per capita (US$, 2003-2005)	4 208
Trade to GDP ratio (2003-2005)	71.7

Rank in world trade, 2005	Exports	Imports
Merchandise	45	47
Commercial services	47	46
Merchandise excluding intra-EU trade	31	30
Commercial serv. excl. intra-EU trade	30	29

		Annual percentage change		
	2005	1995-2005	2004	2005
Real GDP (1995=100)	152	4	6	6
Exports of goods and services (volume, 1995=100)	203	7	12	6
Imports of goods and services (volume, 1995=100)	223	8	18	20

TRADE POLICY

WTO accession date	1 January 1995
Trade Policy Review date	2, 4 December 2003
Tariff binding coverage (%)	100

MFN tariffs	Final bound	Applied 2006
Simple average of *ad-valorem* duties		
All goods	25.1	6.0
Agricultural goods (AOA)	26.0	6.0
Non-agricultural goods	25.0	6.0
Non *ad-valorem* duties (% of total tariff lines)	0.0	0.0

MFN duty free imports (%, 2005):	
in agricultural goods (AOA)	0.3
in non-agricultural goods	0.2
Contribution to WTO budget (%, 2007)	0.296
Import duties collected:	
in total tax revenue	...
to total merchandise imports	...
Number of:	
Goods RTAs - services EIAs notified to WTO	11 - 8
GATS services sectors with commitments	42
Dispute rulings (complainant - defendant)	2 - 3
Notifications outstanding (CRN)	9
Number of contingency measures in force:	
Anti-dumping (30 June 2006)	...
Countervailing duties (30 June 2006)	...
Safeguards (23 October 2006)	1

MERCHANDISE TRADE

	Value	*Annual percentage change*		
	2005	1995-2005	2004	2005
Merchandise *exports*, f.o.b. (million US$)	40 574	10	49	26
Merchandise *imports*, c.i.f. (million US$)	32 637	7	29	31

	2005		2005
Share in world total exports	0.39	**Share in world total imports**	0.30
Breakdown in economy's total exports		**Breakdown in economy's total imports**	
By main commodity group (ITS)		By main commodity group (ITS)	
Agricultural products	24.9	Agricultural products	6.6
Fuels and mining products	54.6	Fuels and mining products	23.3
Manufactures	12.7	Manufactures	61.6
By main destination		By main origin	
1. European Union (25)	23.5	1. European Union (25)	16.9
2. United States	16.2	2. Argentina	16.1
3. Japan	11.8	3. United States	15.8
4. China	11.4	4. Brazil	12.7
5. Korea, Republic of	5.7	5. China	8.5

COMMERCIAL SERVICES TRADE

	Value	*Annual percentage change*		
	2005	1995-2005	2004	2005
Commercial services *exports* (million US$)	7 077	8	22	18
Commercial services *imports* (million US$)	7 591	8	20	15

	2005		2005
Share in world total exports	0.29	**Share in world total imports**	0.32
Breakdown in economy's total exports		**Breakdown in economy's total imports**	
By principal services item		By principal services item	
Transportation	59.3	Transportation	54.2
Travel	17.7	Travel	13.9
Other commercial services	23.0	Other commercial services	31.9

INDUSTRIAL PROPERTY

	Total	Residents	Non-residents	PCT residents	PCT non-residents
Patents granted, national office, 2005	311	19	292	...	...
Patents granted, regional office	-	-	-	-	-
	Total	Residents	Non-residents	Non-residents direct	Non-residents Madrid
Trademarks registered, 1996	20 522	13 516	7 006	7 006	...

Costa Rica

BASIC INDICATORS

Population (thousands, 2005)	4 327
GDP (million current US$, 2005)	19 432
GDP (million current PPP US$, 2005)	43 207
Current account balance (million US$, 2005)	- 959
Trade per capita (US$, 2003-2005)	4 294
Trade to GDP ratio (2003-2005)	98.9

Rank in world trade, 2005	Exports	Imports
Merchandise	80	77
Commercial services	69	90
Merchandise excluding intra-EU trade	59	56
Commercial serv. excl. intra-EU trade	47	67

		Annual percentage change		
	2005	1995-2005	2004	2005
Real GDP (1995=100)	153	4	4	4
Exports of goods and services (volume, 1995=100)	213	8	7	7
Imports of goods and services (volume, 1995=100)	192	7	8	13

TRADE POLICY

WTO accession date	1 January 1995
Trade Policy Review date	9, 11 May 2001
Tariff binding coverage (%)	100

MFN tariffs	Final bound	Applied 2005
Simple average of *ad-valorem* duties		
All goods	42.8	5.9
Agricultural goods (AOA)	42.5	12.3
Non-agricultural goods	42.9	4.9
Non *ad-valorem* duties (% of total tariff lines)	0.0	0.0

MFN duty free imports (%, 2004):	
in agricultural goods (AOA)	35.1
in non-agricultural goods	66.2
Contribution to WTO budget (%, 2007)	0.092
Import duties collected (%, 2003-2005)**:**	
in total tax revenue	6.0
to total merchandise imports	1.8
Number of:	
Goods RTAs - services EIAs notified to WTO	4 - 2
GATS services sectors with commitments	20
Dispute rulings (complainant - defendant)	1 - 0
Notifications outstanding (CRN)	36
Number of contingency measures in force:	
Anti-dumping (30 June 2006)	0
Countervailing duties (30 June 2006)	1
Safeguards (23 October 2006)	0

MERCHANDISE TRADE

	Value	*Annual percentage change*		
	2005	1995-2005	2004	2005
Merchandise *exports*, f.o.b. (million US$)	7 026	7	3	12
Merchandise *imports*, c.i.f. (million US$)	9 824	9	8	19

	2005		2005
Share in world total exports	0.07	**Share in world total imports**	0.09
Breakdown in economy's total exports		**Breakdown in economy's total imports**	
By main commodity group (ITS)		By main commodity group (ITS)	
Agricultural products	32.8	Agricultural products	7.0
Fuels and mining products	1.6	Fuels and mining products	11.3
Manufactures	65.5	Manufactures	81.7
By main destination		By main origin	
1. United States	42.8	1. United States	41.1
2. European Union (25)	17.0	2. European Union (25)	13.0
3. Hong Kong, China	6.8	3. Japan	5.8
4. Guatemala	4.0	4. Bolivarian Rep. of Venezuela	5.0
5. Nicaragua	3.8	5. Mexico	4.7

COMMERCIAL SERVICES TRADE

	Value	*Annual percentage change*		
	2005	1995-2005	2004	2005
Commercial services *exports* (million US$)	2 579	10	11	17
Commercial services *imports* (million US$)	1 496	5	11	9

	2005		2005
Share in world total exports	0.11	**Share in world total imports**	0.06
Breakdown in economy's total exports		**Breakdown in economy's total imports**	
By principal services item		By principal services item	
Transportation	10.9	Transportation	42.3
Travel	64.6	Travel	31.5
Other commercial services	24.5	Other commercial services	26.2

INDUSTRIAL PROPERTY

	Total	Residents	Non-residents	PCT residents	PCT non-residents
Patents granted, national office	...	...	...	...	...
Patents granted, regional office	-	-	-	-	-
	Total	**Residents**	**Non-residents**	**Non-residents direct**	**Non-residents Madrid**
Trademarks registered	...	...	...	...	...

Costa Rica

BASIC INDICATORS

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Import duties collected (%, 2003-2005)**:**	
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to total merchandise imports	1.8
Number of:	
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GATS services sectors with commitments	20
Dispute rulings (complainant - defendant)	1 - 0
Notifications outstanding (CRN)	36
Number of contingency measures in force:	
Anti-dumping (30 June 2006)	0
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MERCHANDISE TRADE

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Agricultural products	32.8	Agricultural products	7.0
Fuels and mining products	1.6	Fuels and mining products	11.3
Manufactures	65.5	Manufactures	81.7
By main destination		By main origin	
1. United States	42.8	1. United States	41.1
2. European Union (25)	17.0	2. European Union (25)	13.0
3. Hong Kong, China	6.8	3. Japan	5.8
4. Guatemala	4.0	4. Bolivarian Rep. of Venezuela	5.0
5. Nicaragua	3.8	5. Mexico	4.7

COMMERCIAL SERVICES TRADE

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Commercial services *imports* (million US$)	1 496	5	11	9

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Patents granted, regional office	-	-	-	-	-
	Total	**Residents**	**Non-residents**	**Non-residents direct**	**Non-residents Madrid**
Trademarks registered	...	...	...	...	...

Singapore

BASIC INDICATORS

Population (thousands, 2005)	4 351
GDP (million current US$, 2005)	116 764
GDP (million current PPP US$, 2005)	130 200
Current account balance (million US$, 2005)	33 212
Trade per capita (US$, 2003-2005)	107 007
Trade to GDP ratio (2003-2005)	431.8

Rank in world trade, 2005	Exports	Imports
Merchandise	14	15
Commercial services	16	13
Merchandise excluding intra-EU trade	9	9
Commercial serv. excl. intra-EU trade	8	7

		Annual percentage change		
	2005	1995-2005	2004	2005
Real GDP (1995=100)	164	5	9	6
Exports of goods and services (volume, 1995=100)	...	...	...	...
Imports of goods and services (volume, 1995=100)	...	...	...	...

TRADE POLICY

WTO accession date	1 January 1995
Trade Policy Review date	14, 16 June 2004
Tariff binding coverage (%)	69.2

MFN tariffs	Final bound	Applied 2006
Simple average of *ad-valorem* duties		
All goods	10.4	0.0
Agricultural goods (AOA)	27.6	0.2
Non-agricultural goods	6.3	0.0
Non *ad-valorem* duties (% of total tariff lines)	0.5	0.0

MFN duty free imports (%, 2005):	
in agricultural goods (AOA)	98.6
in non-agricultural goods	100.0
Contribution to WTO budget (%, 2007)	2.100
Import duties collected (%, 2002-2004)**:**	
in total tax revenue	1.1
to total merchandise imports	0.1
Number of:	
Goods RTAs - services EIAs notified to WTO	10 - 7
GATS services sectors with commitments	67
Dispute rulings (complainant - defendant)	0 - 0
Notifications outstanding (CRN)	7
Number of contingency measures in force:	
Anti-dumping (30 June 2006)	...
Countervailing duties (30 June 2006)	...
Safeguards (23 October 2006)	0

MERCHANDISE TRADE

	Value	*Annual percentage change*		
	2005	1995-2005	2004	2005
Merchandise *exports*, f.o.b. (million US$) a	229 620	...	24	16
Merchandise *imports*, c.i.f. (million US$) a	200 030	...	27	15

	2005		2005
Share in world total exports	2.19	**Share in world total imports**	1.85
Breakdown in economy's total exports		**Breakdown in economy's total imports**	
By main commodity group (ITS)		By main commodity group (ITS)	
Agricultural products	2.0	Agricultural products	3.2
Fuels and mining products	13.3	Fuels and mining products	19.3
Manufactures	80.6	Manufactures	76.1
By main destination		By main origin	
1. Malaysia	13.2	1. Malaysia	13.7
2. European Union (25)	12.1	2. United States	11.7
3. United States	10.4	3. European Union (25)	11.5
4. Indonesia	9.6	4. China	10.3
5. Hong Kong, China	9.4	5. Japan	9.6

COMMERCIAL SERVICES TRADE

	Value	*Annual percentage change*		
	2005	1995-2005	2004	2005
Commercial services *exports* (million US$)	51 200	7	29	10
Commercial services *imports* (million US$)	54 076	10	26	9

	2005		2005
Share in world total exports	2.09	**Share in world total imports**	2.28
Breakdown in economy's total exports		**Breakdown in economy's total imports**	
By principal services item		By principal services item	
Transportation	35.0	Transportation	36.8
Travel	11.2	Travel	18.2
Other commercial services	53.8	Other commercial services	45.0

INDUSTRIAL PROPERTY

	Total	Residents	Non-residents	PCT residents	PCT non-residents
Patents granted, national office, 2005	7 530	417	1 598	138	5 377
Patents granted, regional office	-	-	-	-	-
	Total	Residents	Non-residents	Non-residents direct	Non-residents Madrid
Trademarks registered, 2005	26 398	...	26 398	21 688	4 710

Uruguay

BASIC INDICATORS

Population (thousands, 2005)	3 463
GDP (million current US$, 2005)	16 792
GDP (million current PPP US$, 2005)	35 185
Current account balance (million US$, 2005)	28
Trade per capita (US$, 2003-2005)	2 273
Trade to GDP ratio (2003-2005)	56.9

Rank in world trade, 2005	Exports	Imports
Merchandise	98	104
Commercial services	90	112
Merchandise excluding intra-EU trade	76	81
Commercial serv. excl. intra-EU trade	66	88

		Annual percentage change		
	2005	1995-2005	2004	2005
Real GDP (1995=100)	117	2	12	7
Exports of goods and services (volume, 1995=100) a	128	3	23	...
Imports of goods and services (volume, 1995=100) a	113	1	30	...

TRADE POLICY

WTO accession date	1 January 1995
Trade Policy Review date	17, 19 May 2006
Tariff binding coverage (%)	100

MFN tariffs	Final bound	Applied 2006
Simple average of *ad-valorem* duties		
All goods	31.6	10.6
Agricultural goods (AOA)	33.9	10.0
Non-agricultural goods	31.2	10.7
Non *ad-valorem* duties (% of total tariff lines)	0.0	0.0

MFN duty free imports (%, 2004):	
in agricultural goods (AOA)	22.3
in non-agricultural goods	44.6
Contribution to WTO budget (%, 2007)	0.039
Import duties collected (%, 2003-2005):	
in total tax revenue	6.8
to total merchandise imports	5.6
Number of:	
Goods RTAs - services EIAs notified to WTO	3 - 1
GATS services sectors with commitments	30
Dispute rulings (complainant - defendant)	0 - 0
Notifications outstanding (CRN)	21
Number of contingency measures in force:	
Anti-dumping (30 June 2006)	...
Countervailing duties (30 June 2006)	...
Safeguards (23 October 2006)	0

MERCHANDISE TRADE

	Value	*Annual percentage change*		
	2005	1995-2005	2004	2005
Merchandise *exports*, f.o.b. (million US$)	3 405	5	33	16
Merchandise *imports*, c.i.f. (million US$)	3 879	3	42	25

	2005		2005
Share in world total exports	0.03	**Share in world total imports**	0.04
Breakdown in economy's total exports		**Breakdown in economy's total imports**	
By main commodity group (ITS)		By main commodity group (ITS)	
Agricultural products	62.5	Agricultural products	11.2
Fuels and mining products	5.1	Fuels and mining products	25.9
Manufactures	29.4	Manufactures	62.9
By main destination		By main origin	
1. United States	23.2	1. Brazil	21.3
2. European Union (25)	17.6	2. Argentina	20.3
3. Brazil	13.5	3. European Union (25)	10.7
4. Argentina	7.8	4. Russian Federation	8.0
5. Mexico	4.1	5. United States	6.7

COMMERCIAL SERVICES TRADE

	Value	*Annual percentage change*		
	2005	1995-2005	2004	2005
Commercial services *exports* (million US$)	1 309	0	45	16
Commercial services *imports* (million US$)	888	1	24	19

	2005		2005
Share in world total exports	0.05	**Share in world total imports**	0.04
Breakdown in economy's total exports		**Breakdown in economy's total imports**	
By principal services item		By principal services item	
Transportation	33.7	Transportation	46.9
Travel	45.4	Travel	28.3
Other commercial services	20.9	Other commercial services	24.7

INDUSTRIAL PROPERTY

	Total	Residents	Non-residents	PCT residents	PCT non-residents
Patents granted, national office, 2004	86	4	82	...	...
Patents granted, regional office	-	-	-	-	-
	Total	Residents	Non-residents	Non-residents direct	Non-residents Madrid
Trademarks registered, 2005	6 375	3 021	3 354	3 354	...

Technical notes

BASIC INDICATORS

Trade per capita is estimated as an economy's total trade of goods and commercial services (exports + imports, balance of payments basis) divided by the population. It is calculated on the basis of data for the three latest years available.

Trade to GDP ratio is estimated as an economy's total trade of goods and commercial services (exports + imports, balance of payments basis) divided by GDP, on the basis of data for the three latest years available. GDP is measured in nominal terms and with market exchange rates.

Real GDP, exports and imports of goods and services (national accounts based), refer to data at constant prices or volume figures based on 1995.

Ranks in world trade of merchandise and commercial services are defined first referring to European Union (EU (25)) members as individual traders and second referring to the EU (25) as one trader (i.e. excluding individual EU (25) members).

TRADE POLICY

The Trade Policy Review date indicates the date of the latest policy review for the economy considered.

The tariff binding coverage corresponds to the number of the Harmonized System (HS) subheadings containing at least one bound tariff line divided by the respective total number of HS subheadings of the corresponding version of the HS nomenclature.

For MFN bound tariffs, the simple average of *ad-valorem* (*AV*) duties refers to the simple average of *AV* and calculable *ad-valorem equivalent (AVE)* of final bound HS 6-digit duties. For MFN applied tariffs it refers to the simple average of *AV* and calculable *AVE* of MFN applied HS 6-digit duties.

The non AV duties as a percentage of total tariff lines refer to the share of HS six-digit subheadings subject to non *AV* duties. When only part of the HS six-digit subheading is subject to non *AV* duties the percentage share of these tariff lines is used.

Agricultural goods according to the AOA (WTO Agreement on Agriculture) definition refer to HS chapters 1 to 24 (excluding fish and fish products) and a number of manufactured agricultural products (for further information see "The Legal Texts, The Results of the Uruguay Round of Multilateral Negotiations", WTO). This definition does not correspond to the definition of agricultural products presented in the breakdown of merchandise trade by main commodity group (see below).

Import duties collected in total tax revenue and import duties collected to total merchandise imports are estimated in general on the basis of data for the three latest years available.

The number of GATS services sectors with commitments has been established by the WTO Secretariat on the basis of available information and in the light of the Services Sectoral Classification List (MTN.GNS/W/120). The total number of sub-sectors is in the order of 160. In the absence of a GATS schedule for the EU (25), the total number of services sub-sectors listed in the statistical profiles of the individual EC-12 members and of the EU (25) is that of the existing European Communities (EC) schedule.

For EU (25) members the number of dispute rulings refers to the EC figure which also includes rulings concerning EU (15) which were established prior to 1 May 2004.

For EU (25) members the number of notifications outstanding (NO) refers to the sum of NO of the EC and of the individual economy.

The number of contingency measures in force is based on information made available to relevant committees (annual reports G\L\791, G\L\795 and G\L\798). Please note that there is no obligation on WTO Members to notify the expiry or termination of safeguard measures.

MERCHANDISE TRADE (customs-based statistics)

The share in world total exports and imports of merchandise for individual economies is calculated using world trade including intra-EU (25) trade. For the EU (25) as one trading reporter the share is calculated on the basis of world trade excluding intra-EU (25) trade.

Breakdown by main commodity group according to the ITS (WTO International Trade Statistics) definitions: *Agricultural products* refer to food (SITC Rev. 3 sections 0, 1, 4 and division 22) and raw materials (SITC Rev. 3 divisions 21, 23, 24, 25 and 26). It differs from the Agricultural goods AOA definition (see above) *Fuels and mining products* include ores and other minerals; fuels and non-ferrous metals. *Manufactures* refer to iron and steel, chemicals, other semi-manufactures, machinery and transport equipment, textiles, clothing and other consumer goods. Please note that due to the products not classified in the three main product groups, the sum of shares may not add up to a 100.

Breakdown by main destination and origin: EU (25) members are grouped as one trading partner. Shares for unspecified destinations/origins are presented when at least one of the shares is greater than the share of the fifth main destination/origin. Re-imports are also included.

COMMERCIAL SERVICES (balance of payments based statistics)

The share in world total exports and imports of commercial services for individual economies is calculated using world trade including intra-EU (25) trade. For the EU (25) as one trading reporter the share is calculated on the basis of world trade excluding intra-EU (25) trade.

Breakdown by principal services items: Other commercial services refer to communication, construction, insurance, financial, computer, information, other business, and cultural and recreational services, and royalties and license fees.

INDUSTRIAL PROPERTY

Data refer to the annual number of patents granted to (including those based on PCT international applications) and trademark registrations effected (including designations under the Madrid Agreement or Protocol) in the name of residents and non-residents of the considered economy.

Annual average percentage changes are calculated using a geometric average. EU (25) refers to the EU members as of May 2004, including EC-12 members (Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain and United Kingdom) and Austria, Cyprus, Czech Republic, Estonia, Finland, Hungary, Latvia, Lithuania, Malta, Poland, Slovak Republic, Slovenia and Sweden. The Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu is referred to as Taipei, Chinese in the tables. Tables include information for the period 1995 - latest available year.

Symbols and abbreviations:

...	Not available or not reported
-	Not applicable
AOA	WTO Agreement on Agriculture
GATS	General Agreement on Trade in Services
GDP	Gross Domestic Product
ITS	WTO International Trade Statistics
MFN	Most Favoured Nation

Appendix C

World Trade Organization: Tariff Data Statistics

Table 1: Trends in Average Applied Tariff Rates in Developing and Industrial Countries, 1981-2005 (Unweighted in %)

Code	Country/Group	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	est. 2005
2	Chile	11.0	11.0	11.0	10.7	11.0	11.0	11.0	10.0	9.0	8.0	7.0	6.0	4.9	4.9
2	Costa Rica	15.0	11.7	11.2	9.7	8.6	7.0	6.2	5.8	5.0	6.0	6.4	5.6	5.8	6.5
2	Lithuania			3.1	3.1		3.2				3.5	1.5	1.3		
2	Uruguay	18.2	17.0	14.7	12.7	13.0	13.2	15.4	15.5	12.9	12.7	14.3	11.2	10.8	9.5
3	Singapore	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Memo: average														
1 to 2	Developing Co (142)														
1	Low Income (56)														
2	Middle Income (86)														
3	High Inc. Non-OECD (14)														
4	High Income OECDs (10)														

Notes: All tariff rates are based on unweighted averages for all goods in ad valorem rates, or applied rates, or MFN rates whichever data is available in a longer period.
Tariff data is primarily based on UNCTAD TRAINS database and then used WTO IDB data for gap filling if possible. Data in 1980s is taken from other sources (see be
** Tariff data in these countries came from IMF Global Monitoring Tariff file in 2004 which might include other duties or charges.
Country codes are based on the classifications by income in WDI 2006, where 1 = low income, 2 = middle income, 3 = high incone non-OECDs, and 4 = high income

Sources: UNCTAD TRAINS database (through WITS); WTO IDB database (through WITS); WTO IDB CD ROMs, various years and Trade Policy Review -- Country Reports in various issues, 1990-2005; UNCTAD Handbook of Trade Control Measures of Developing Countries -- Supplement 1987 and Directory of Import Regimes 1994; World Bank Trade Policy Reform in Developing Countries since 1985, WB Discussion Paper #267, 1994 and World Development Indicators, 1998-2006; The Uruguay Round: Statistics on Tariffs Concessions Given and Received, 1996; OECD Indicators of Tariff and Non-Tariff Trade Barriers, 1996 and 2000; and IMF Global Monitoring Tariff data file 2004.

Table 3: Tariff Escalation in Developing and Industrial Countries in Recent Years (unweighted average in %)								
			Agricultural Product (HS 01-24)			Industrial Product (HS 25-97)		
Code	Country	Year	Primary	Semi-Proc	Finished	Raw	Semi-Proc	Fully Proc
2	Chile	2003	6.0	6.0	6.0	6.0	6.0	5.9
2	Costa Rica	2004	9.8	10.8	19.4	5.0	4.3	6.5
2	Lithuania	2002	6.8	16.9	17.0	0.0	1.8	3.0
2	Uruguay	2002	7.6	13.0	14.2	8.6	10.3	12.7
3	Singapore	2004	0.0	0.0	0.0	0.0	0.0	0.0
	Memo: Average							
1-2	Developing Countries (100)							
1	Low Income (35)							
2	Middle Income (65)							
3	High Inc. Non-OECDs (12)							
4	High Income OECDs (10)							
Notes: /a Tariff escalation of industrial products is based on all goods.								
/b Include specific tariffs.								
Sources: WTO CD ROM 2005 and WTO Trade Policy Review, various issues, 1995-2005.								

Chile

Part A.1 Tariffs and imports: Summary and duty ranges

Summary		Total	Ag	Non-Ag	WTO member since		1995
Simple average final bound		25.1	26.0	25.0	Binding coverage:	Total	100
Simple average MFN applied	2006	6.0	6.0	6.0		Non-Ag	100
Trade weighted average	2005	6.0	6.0	6.0	Ag: Tariff quotas (in %)		0.1
Imports in billion US$	2005	26.0	1.8	24.2	Ag: Special safeguards (in %)		0

Frequency distribution		Duty-free	0 <= 5	5 <= 10	10 <= 15	15 <= 25	25 <= 50	50 <= 100	> 100	NAV
		Tariff lines and import values (in %)								in %
Agricultural products										
Final bound		0	0	0	0	90.1	9.3	0.6	0	0
MFN applied	2006	0.6	0	99.4	0	0	0	0	0	0
Imports	2005	0.3	0	99.7	0	0	0	0	0	0
Non-agricultural products										
Final bound		0.0	0.0	0	0.0	100.0	0	0	0	0
MFN applied	2006	0.3	0	99.7	0	0	0	0	0	0
Imports	2005	0.2	0	99.8	0	0	0	0	0	0

Part A.2 Tariffs and imports by product groups

Product groups	Final bound duties				MFN applied duties			Imports	
	AVG	Duty-free	Max	Binding	AVG	Duty-free	Max	Share	Duty-free
		in %		in %		in %		in %	in %
Animal products	25.0	0	25	100	5.7	4.3	6	1.4	1.3
Dairy products	29.2	0	32	100	6.0	0	6	0.3	0
Fruit, vegetables, plants	25.0	0	25	100	6.0	0	6	0.5	0
Coffee, tea	25.0	0	25	100	6.0	0	6	0.4	0
Cereals & preparations	25.2	0	32	100	6.0	0	6	1.3	0
Oilseeds, fats & oils	29.1	0	32	100	6.0	0	6	1.6	0
Sugars and confectionery	43.3	0	98	100	6.0	0	6	0.4	0
Beverages & tobacco	25.0	0	25	100	6.0	0	6	0.3	0
Cotton	25.0	0	25	100	6.0	0	6	0.1	0
Other agricultural products	25.0	0	25	100	6.0	0	6	0.7	0
Fish & fish products	25.0	0	25	100	6.0	0	6	0.3	0
Minerals & metals	25.0	0.1	25	100	6.0	0	6	15.2	0
Petroleum	25.0	0	25	100	6.0	0	6	20.3	0
Chemicals	25.0	0	25	100	6.0	0	6	10.8	0
Wood, paper, etc.	25.0	0	25	100	6.0	0.5	6	2.6	0.1
Textiles	25.0	0	25	100	6.0	0	6	2.3	0
Clothing	25.0	0	25	100	6.0	0	6	2.8	0
Leather, footwear, etc.	25.0	0	25	100	6.0	0	6	2.7	0
Non-electrical machinery	25.0	0	25	100	6.0	0.2	6	12.1	0
Electrical machinery	25.0	0	25	100	6.0	0	6	7.4	0
Transport equipment	24.9	0	25	100	5.5	8.9	6	12.7	1.7
Manufactures, n.e.s.	25.0	0	25	100	6.0	0.2	6	3.9	0.0

Part B Exports to major trading partners and duties faced

Major markets	Bilateral imports		Diversification		MFN AVG of traded TL		Pref. margin	Duty-free imports	
		in million US$	95% trade in no. of HS 2-digit	HS 6-digit	Simple	Weighted	Weighted	TL in %	Value in %
European Communities	2005	9,515	38	109	10.4	2.7	1.3	51.3	84.1
United States	2005	7,227	33	96	4.6	1.1	0.7	92.9	73.7
Japan	2005	5,118	17	44	14.4	4.8	0.1	38.7	74.5
China	2005	4,992	6	11	7.9	1.4	0.0	21.9	47.3
Korea, Republic of	2005	2,279	9	18	11.7	4.3	1.6	65.5	58.6

Costa Rica

Part A.1 Tariffs and imports: Summary and duty ranges

Summary		Total	Ag	Non-Ag	WTO member since		1995
Simple average final bound		42.8	42.5	42.9	Binding coverage:	Total	100
Simple average MFN applied	2005	5.9	12.3	4.9		Non-Ag	100
Trade weighted average	2004	4.3	10.6	3.7	Ag: Tariff quotas (in %)		9.9
Imports in billion US$	2004	8.0	0.7	7.3	Ag: Special safeguards (in %)		10.0

Frequency distribution		Duty-free	0 <= 5	5 <= 10	10 <= 15	15 <= 25	25 <= 50	50 <= 100	> 100	NAV
		Tariff lines and import values (in %)								in %
Agricultural products										
Final bound		0	7.6	2.1	1.3	3.9	81.1	3.0	1.0	0
MFN applied	2005	24.8	14.8	13.7	37.9	0	6.2	2.1	0.4	0
Imports	2004	35.1	8.4	12.5	35.2	0	7.6	1.2	0.0	0
Non-agricultural products										
Final bound		2.9	0.4	0.2	0.1	3.5	91.9	1.0	0	0
MFN applied	2005	55.1	10.9	15.3	18.7	0	0	0	0	0
Imports	2004	66.2	9.4	8.5	16.0	0	0	0	0	0

Part A.2 Tariffs and imports by product groups

Product groups	Final bound duties				MFN applied duties			Imports	
	AVG	Duty-free	Max	Binding	AVG	Duty-free	Max	Share	Duty-free
		in %		in %		in %		in %	in %
Animal products	57.0	0	233	100	21.8	14.0	150	0.2	25.0
Dairy products	84.8	0	95	100	49.6	7.5	65	0.2	9.2
Fruit, vegetables, plants	42.1	0	45	100	11.7	21.4	45	1.4	12.7
Coffee, tea	46.0	0	50	100	13.4	2.1	15	0.2	1.3
Cereals & preparations	40.5	0	95	100	10.9	23.7	65	3.9	38.2
Oilseeds, fats & oils	27.6	0	45	100	6.6	21.2	30	1.3	79.0
Sugars and confectionery	45.0	0	45	100	20.0	27.1	45	0.3	12.4
Beverages & tobacco	45.9	0	60	100	13.5	7.9	40	0.7	8.0
Cotton	45.0	0	45	100	0.0	100.0	0	0.0	100.0
Other agricultural products	36.2	0	45	100	4.3	47.9	15	0.6	38.4
Fish & fish products	46.1	0	60	100	9.1	21.2	15	0.4	65.4
Minerals & metals	42.8	0.1	60	100	3.3	66.6	15	11.2	66.0
Petroleum	44.3	0	45	100	8.0	40.8	15	8.7	62.2
Chemicals	43.7	0.1	55	100	1.8	80.5	15	15.9	58.9
Wood, paper, etc.	43.0	0	55	100	6.4	43.8	15	5.6	58.6
Textiles	45.1	0	70	100	8.4	12.6	15	3.1	16.8
Clothing	45.0	0	45	100	14.9	0.6	15	2.2	0.3
Leather, footwear, etc.	45.7	0	70	100	7.7	23.1	15	2.6	17.7
Non-electrical machinery	41.0	6.3	50	100	1.2	89.7	15	10.3	88.5
Electrical machinery	34.2	22.6	45	100	2.3	78.7	15	21.4	91.2
Transport equipment	51.5	0	100	100	5.2	54.3	15	5.5	35.2
Manufactures, n.e.s.	40.5	8.0	45	100	6.6	43.0	15	4.5	70.7

Part B Exports to major trading partners and duties faced

Major markets	Bilateral imports		Diversification		MFN AVG of traded TL		Pref. margin	Duty-free imports	
		in million US$	95% trade in no. of HS 2-digit	95% trade in no. of HS 6-digit	Simple	Weighted	Weighted	TL in %	Value in %
European Communities	2005	3,769	10	20	8.8	16.6	1.5	82.8	85.7
United States	2005	3,215	37	126	4.5	3.9	2.0	86.7	85.8
China	2005	922	1	5	5.5	0.1	0.0	45.1	98.5
Mexico	2005	879	20	39	12.4	4.1	0.0	18.5	76.8
Guatemala	2004	320	49	244	6.7	8.4	8.4	100.0	100.0

Singapore

Part A.1 Tariffs and imports: Summary and duty ranges

Summary		Total	Ag	Non-Ag	WTO member since		1995
Simple average final bound		10.4	27.6	6.3	Binding coverage:	Total	69.2
Simple average MFN applied	2006	0.0	0.2	0.0		Non-Ag	64.5
Trade weighted average	2005	0.0	1.3	0.0	Ag: Tariff quotas (in %)		0
Imports in billion US$	2005	198.3	5.3	193.0	Ag: Special safeguards (in %)		0

Frequency distribution		Duty-free	0 <= 5	5 <= 10	10 <= 15	15 <= 25	25 <= 50	50 <= 100	> 100	NAV
		Tariff lines and import values (in %)								in %
Agricultural products										
Final bound		3.5	0	92.8	0	0	0.0	0.4	3.3	3.7
MFN applied	2006	99.8	0	0	0	0	0	0.1	0.1	0.2
Imports	2005	98.6	0	0	0	0	0	0.6	0.7	1.4
Non-agricultural products										
Final bound		17.7	0	46.8	0	0	0	0	0	0
MFN applied	2006	100.0	0	0	0	0	0	0	0	0
Imports	2005	100.0	0	0	0	0	0	0	0	0

Part A.2 Tariffs and imports by product groups

Product groups	Final bound duties				MFN applied duties			Imports	
	AVG	Duty-free	Max	Binding	AVG	Duty-free	Max	Share	Duty-free
		in %		in %		in %		in %	in %
Animal products	9.1	8.6	10	100	0.0	100.0	0	0.3	100.0
Dairy products	7.0	30.0	10	100	0.0	100.0	0	0.2	100.0
Fruit, vegetables, plants	9.6	3.9	10	100	0.0	100.0	0	0.4	100.0
Coffee, tea	10.0	0	10	100	0.0	100.0	0	0.2	100.0
Cereals & preparations	11.7	3.3	*837*	100	0.0	100.0	0	0.4	100.0
Oilseeds, fats & oils	10.0	0	10	100	0.0	100.0	0	0.2	100.0
Sugars and confectionery	10.0	0	10	100	0.0	100.0	0	0.1	100.0
Beverages & tobacco	312.5	0	*> 1000*	100	3.0	96.9	*125*	0.7	94.8
Cotton	10.0	0	10	100	0.0	100.0	0	0.0	100.0
Other agricultural products	9.3	0.7	10	100	0.0	100.0	0	0.2	100.0
Fish & fish products	10.0	0.5	10	100	0.0	100.0	0	0.4	100.0
Minerals & metals	5.7	40.7	10	44.9	0.0	100.0	0	7.5	100.0
Petroleum	-	-	-	0	0.0	100.0	0	17.8	100.0
Chemicals	5.1	18.8	10	96.8	0.0	100.0	0	6.9	100.0
Wood, paper, etc.	3.0	70.3	10	96.4	0.0	100.0	0	1.1	100.0
Textiles	9.9	0.3	10	63.4	0.0	100.0	0	0.7	100.0
Clothing	10.0	0	10	100	0.0	100.0	0	1.0	100.0
Leather, footwear, etc.	10.0	0	10	21.2	0.0	100.0	0	0.9	100.0
Non-electrical machinery	6.3	36.9	10	64.0	0.0	100.0	0	17.8	100.0
Electrical machinery	5.4	45.9	10	60.3	0.0	100.0	0	33.4	100.0
Transport equipment	6.0	40.0	10	12.3	0.0	100.0	0	4.2	100.0
Manufactures, n.e.s.	3.1	68.2	10	32.2	0.0	100.0	0	5.7	100.0

Part B Exports to major trading partners and duties faced

Major markets	Bilateral imports		Diversification		MFN AVG of traded TL		Pref. margin	Duty-free imports	
		in million US$	95% trade in no. of HS 2-digit	95% trade in no. of HS 6-digit	Simple	Weighted	Weighted	TL in %	Value in %
European Communities	2005	21,755	32	209	4.8	2.3	0.0	18.8	60.9
Hong Kong, China	2005	17,412	36	224	0.0	0.0	0.0	100.0	100.0
China	2005	16,458	30	263	8.7	3.7	0.0	11.7	52.1
Malaysia	2004	11,482	57	476	11.4	3.2	1.7	52.5	82.6
United States	2005	11,079	20	107	3.4	0.7	0.6	85.4	95.8

Uruguay

Part A.1 Tariffs and imports: Summary and duty ranges

Summary		Total	Ag	Non-Ag	WTO member since		1995
Simple average final bound		31.6	33.9	31.2	Binding coverage:	Total	100
Simple average MFN applied	2006	10.6	10.0	10.7		Non-Ag	100
Trade weighted average	2004	7.6	11.3	7.2	Ag: Tariff quotas (in %)		0
Imports in billion US$	2004	3.0	0.3	2.6	Ag: Special safeguards (in %)		0.3

Frequency distribution		Duty-free	0 <= 5	5 <= 10	10 <= 15	15 <= 25	25 <= 50	50 <= 100	> 100	NAV
		Tariff lines and import values (in %)								in %
Agricultural products										
Final bound		0	0	0.7	3.1	8.0	83.7	4.4	0	0
MFN applied	2006	8.1	7.3	55.1	14.4	14.5	0.6	0.1	0	0
Imports	2004	22.3	7.7	31.7	9.2	23.1	5.6	0.4	0	0
Non-agricultural products										
Final bound		0	0	0.0	1.5	24.3	74.1	0	0	0
MFN applied	2006	16.1	17.2	10.7	16.9	39.1	0	0	0	0
Imports	2004	44.6	9.1	11.2	9.2	26.0	0	0	0	0

Part A.2 Tariffs and imports by product groups

Product groups	Final bound duties				MFN applied duties			Imports	
	AVG	Duty-free	Max	Binding	AVG	Duty-free	Max	Share	Duty-free
		in %		in %		in %		in %	in %
Animal products	36.3	0	55	100	8.9	4.7	16	0.6	2.7
Dairy products	43.9	0	55	100	15.1	0	16	0.1	0
Fruit, vegetables, plants	33.2	0	55	100	9.6	6.1	55	1.1	7.8
Coffee, tea	34.1	0	35	100	11.5	14.6	20	1.1	8.8
Cereals & preparations	36.9	0	55	100	11.4	13.6	20	2.2	25.8
Oilseeds, fats & oils	34.2	0	35	100	8.2	11.7	25	1.4	38.6
Sugars and confectionery	30.0	0	35	100	21.3	0	35	0.9	0
Beverages & tobacco	31.1	0	35	100	16.6	4.6	20	1.1	37.8
Cotton	35.0	0	35	100	6.0	6.7	8	0.0	57.6
Other agricultural products	31.4	0	35	100	7.4	10.0	14	2.6	27.7
Fish & fish products	35.0	0	35	100	10.1	6.0	16	0.6	0.3
Minerals & metals	33.3	0	35	100	9.6	10.3	20	11.0	29.3
Petroleum	35.0	0	35	100	0.3	93.0	6	22.7	98.7
Chemicals	21.6	0	35	100	7.8	5.3	18	18.3	35.4
Wood, paper, etc.	29.1	0	35	100	9.9	11.5	18	4.2	27.0
Textiles	34.4	0	35	100	16.5	2.3	20	3.4	12.3
Clothing	35.0	0	35	100	20.0	0	20	1.2	0
Leather, footwear, etc.	33.7	0	35	100	13.9	2.5	20	5.3	12.7
Non-electrical machinery	33.4	0	35	100	3.4	64.1	20	8.8	43.3
Electrical machinery	33.8	0	35	100	11.2	22.1	20	4.7	6.1
Transport equipment	32.8	0	35	100	8.6	39.1	23	6.0	10.8
Manufactures, n.e.s.	33.8	0	35	100	13.6	20.5	20	2.7	20.3

Part B Exports to major trading partners and duties faced

Major markets	Bilateral imports		Diversification		MFN AVG of traded TL		Pref. margin	Duty-free imports	
		in million US$	95% trade in no. of HS 2-digit	HS 6-digit	Simple	Weighted	Weighted	TL in %	Value in %
European Communities	2005	731	49	151	12.5	19.7	1.3	29.6	39.1
United States	2005	679	20	40	6.1	15.5	0.2	58.8	36.0
Argentina	2005	558	76	555	10.4	9.8	9.8	99.9	100.0
Brazil	2005	510	56	179	11.0	13.0	12.9	99.6	99.9
Mexico	2005	261	33	65	14.2	22.6	22.5	94.7	99.3

Technical Notes on Country Pages

Only duties and imports recorded under HS Chapters 01-97 are taken into account. National tariff lines that do not follow the standard HS nomenclature at the level of HS six-digit subheadings, either in HS1996 or HS2002, were discarded and not taken into account. All calculations are based on the complete standard nomenclature. In Parts A.1 and A.2, all simple averages are based on pre-aggregated HS six-digit averages. Pre-aggregation means that duties at the tariff line level are first averaged to HS six-digit subheadings. Subsequent calculations are based on these pre-aggregated averages.

Part A.1 **Tariffs and imports: Summary and duty ranges**

Summary

Row titles	***Description or method of calculation***
Simple average final bound	Simple average of final bound duties excluding unbound tariff lines
Simple average MFN applied	Simple average of MFN applied duties
Trade weighted average	HS six-digit MFN tariff averages weighted with HS six-digit import flows
Imports in billion US$	Imports in billion US$
Binding coverage	Share of HS six-digit subheadings containing at least one bound tariff line. The percentage share is also presented separately for non-agricultural (Non-AG) tariff lines. Full binding coverage is indicated by 100 without further decimals. If some tariff lines are unbound but the result still rounds to 100 this is reflected by maintaining one decimal, i.e. 100.0.
Ag: Tariff quotas (in %)	Per cent of HS six-digit subheadings in the schedule of agricultural concession covered by tariff quotas. Partial coverage is taken into account on a pro rata basis.
Ag: Special safeguards (in %)	Per cent of HS six-digit subheadings in the schedule of agricultural concessions with at least one tariff line subject to Special Safeguards (SSG). Partial coverage is taken into account on a pro rata basis.

Frequency distribution by duty ranges

The shares by duty ranges in the frequency distribution are based on the pro rata shares of tariff line level duties in the standard HS six-digit subheadings. For example, if there are two tariff lines in one HS six-digit subheading, one with a duty of 10 and one with a duty of 20, then half of the HS six-digit subheading is allocated to the 5-10 range and the other half to the 15-25 range. The frequency distribution includes AVEs whenever those were calculated. The percentages by duty ranges add up to 100 per cent for MFN applied duties unless there are non-computable AVEs or missing tariff lines for which no separate category was allocated. For bound duties, the duty ranges add up to the percentage of the binding coverage unless there are non-computable AVEs or missing tariff lines. Please note that the use of different nomenclatures for bound and MFN applied duties affects the comparability of bound and MFN applied duty shares by frequency ranges.

When trade is available at the tariff line level, imports are allocated on a tariff line basis to the respective duty ranges. Otherwise, HS six-digit imports are allocated on a pro rata basis to duty ranges, e.g. if there are two tariff lines in one HS six-digit subheading, one with a duty of 10 and one with a duty of 20 then half of the HS six-digit imports are allocated to the 5-10 range and the other half to the 15-25 range.

Share of HS six-digit subheadings subject to non-ad valorem duties. When only part of the HS six-digit subheading is subject to non-ad valorem duties, the percentage share of these tariff lines is used.

Part A.2 **Tariffs and imports by product groups**

Column heading	*Description or method of calculation*	
Final bound duties	AVG	Simple average of final bound duties excluding unbound tariff lines
	Duty-free in %	Share of duty-free HS six-digit subheadings in the total number of subheadings in the product group. Partially duty-free subheadings are taken into account on a pro rata basis.
	Max	Highest ad valorem duty or calculated AVE within the product group
	Binding in %	Share of HS six-digit subheadings containing at least one bound tariff line. Full binding coverage is indicated by 100 without further decimals. If some tariff lines are unbound but the result still rounds to 100 this is reflected by maintaining one decimal, i.e. 100.0.
MFN applied duties	AVG	Simple average of MFN applied duties
	Duty-free in %	Share of duty-free HS six-digit subheadings in the total number of subheadings in the product group. Partially duty-free subheadings are taken into account on a pro rata basis.
	Max	Highest ad valorem duty or calculated AVE within the product group
Imports	Share in %	Share of imports falling under product group
	Duty-free in %	Share of MFN duty-free imports falling under product group in total imports in that product group. Partially duty-free subheadings are taken into account on a pro rata basis if tariff line imports are not available.

Part B **Exports to major trading partners and duties faced**

Column heading	*Description or method of calculation*	
Bilateral imports	in million US$	Total imports of major partner countries
Diversification: 95 % trade in no. of	HS 2-digit	Number of HS Chapters with trade flows after exclusion of 5 per cent of smallest bilateral tariff line trade flows.
	HS 6-digit	Number of HS six-digit subheadings with trade flows after exclusion of 5 per cent of smallest bilateral tariff line trade flows.
MFN AVG of traded TL	Simple	Simple average of MFN duties based only on tariff lines with imports
	Weighted	Trade-weighted average MFN duty
Pref. margin	Weighted	Trade-weighted average difference between the MFN duty and the most advantageous preferential duty. Tariff lines where either MFN or preferential duties cannot be expressed in ad valorem terms have been excluded.
Duty-free imports	TL in %	Duty-free tariff lines in per cent of all traded tariff lines; includes duty-free preferential treatment. Partially duty-free subheadings are taken into account on a pro rata basis if tariff line imports are not available.
	Value in %	Share of duty-free trade in per cent of all bilateral trade flows; includes duty-free preferential treatment. Partially duty-free subheadings are taken into account on a pro rata basis if tariff line imports are not available.

Definition of product groups used in part A.2

Product Group	*MTN* *(see note 1 below)*	*Harmonized System Nomenclature 2002*
Agricultural products (Ag)		
Animal products	17	Ch. 01, Ch. 02, 1601-02.
Dairy products	21	0401-06.
Fruits, vegetables, plants	12	Ch. 07, Ch. 08, 1105-06, 2001-08.
	19	0601-03, 1211, Ch. 13, Ch. 14.
Coffee, tea	13	0901-03, Ch. 18 (except 1802), 2101.
Cereals and preparations	x15	0407-10, 1101-04, 1107-09, Ch. 19, 2102-06, 2209.
	16	Ch. 10.
Oilseeds, fats & oils	18	1201-08, Ch. 15 (except 1504), 2304-06, 3823.
Sugars and confectionary	14	Ch. 17.
Beverages and tobacco	20	2009, 2201-08.
	22	Ch. 24.
Cotton	x23	5201-5203
Other agricultural products	x15	0904-10
	x23	Ch.05 (except 0509), 0604, 1209-10, 1212-14, 1802, 230110, 2302-03, 2307- 09, 290543-45, 3301, 3501-05, 380910, 382460, 4101-03, 4301, 5001- 03, 5101-03, 5301-02.
Non-agricultural products (Non-Ag)		
Fish and fish products	11	Ch. 03, 0509, 1504, 1603-05, 230120.
Minerals and metals	4	2601-17, 2620, Ch. 72-76 (except 7321-22), Ch. 78-83 (except 8304-05).
	9	Ch. 25, 2618-19, 2621, 2701-04, 2706- 08, 2711-15, Ch.31, 3403, Ch. 68-71 (except 6807, 701911-19, 701940-59), 911310-20.
Petroleum	97	2709-10.
Chemicals *(see note 2 below)*	5	2705, Ch. 28-30 (except 290543-45 and 300590), Ch. 32- 33 (except 3301 and 330620) , Ch. 34 (except 3403, 3406), 3506-07, 3601-04 and Ch. 37-39 (except 380910, 3823, 382460 and 392112-13, 392190).
Wood, paper, etc.	1	Ch.44, 45, 47, Ch. 48 (except 4815), Ch.49, 9401-04 (except 940490).
Textiles	x2	300590, 330620, 392112-13, 392190, 420212, 420222, 420232, 420292, Ch. 50-60 (except 5001-03, 5101-03, 5201-03, 5301- 02), Ch. 63, 640520, 640610, 640699, 6501-05, 6601, 701911-19, 701940-59, 870821, 8804, 911390, 940490, 950291, 961210.
Clothing	x2	Ch. 61-62.
Leather, footwear, etc.	3	Ch. 40, Ch. 41 (except 4101-4103), 4201-05 (except 420212, 420222, 420232, 420292), 4302-04, Ch. 64 (except 640520, 640610, 640699), 9605.
Non-electrical machinery	7	7321-22, Ch. 84 (except 846721-29), 8608, 8709.
Electrical machinery	8	846721-29, Ch. 85(except 8519-24).
Transport equipment	6	Ch. 86 (except 8608), 8701-08 (except 870821), 8711-14, 8716, 8801-03, Ch. 89.
Manufactures, not elsewhere specified	10	2716, 3406, 3605-06, 4206, Ch. 46, 4815, 6506-07, 6602-03, Ch. 67, 6807, 8304-05, 8519-24, 8710, 8715, 8805, Ch. 90-93 (except 9113), 9405-06 and Ch. 95-97 (except 950291, 9605 and 961210).

1. Multilateral Trade Negotiations (MTN) categories were first defined in the Tokyo Round and adapted for the Harmonized System in the Uruguay Round. The product group breakdown in this publication deviates slightly from the previous definition, which was based on the HS 1992 nomenclature.

2. The part of HS subheading 330210 which relates to products originally classified as agricultural has not been taken into account in the Chemicals product group.

Abbreviations used

AVG	Average
Ag	Agricultural products
AVE	*Ad valorem* equivalent
HS	Harmonized System (nomenclature)
Max	Maximum duty
MFN	Most favoured nation
NAV	Non-*ad valorem* duty
Non-Ag	Non agricultural products
TL	Tariff line
UV	Unit value

Notations used

-	Not applicable
0	= 0 (not rounded)
0.0	> 0 and < 0.05
Blank	Bound or applied duties and/or imports are not available at all for a given country or customs territory
Italics	Maxima, based on AVE estimates are printed in italics; this also applies in cases when the *ad valorem* part of a compound or mixed duty as ceiling or floor.
US$	United States dollar

Appendix D

World Trade Organization: World Trade In Review 2005

I. World trade in 2005 - Overview

Table I.1

Growth in the volume of world merchandise exports and production, 2000-05

(Annual percentage change)

	2000-05	2003	2004	2005
World merchandise exports	4.5	5.0	9.5	6.0
Agricultural products	3.5	3.5	3.5	5.5
Fuels and mining products	2.5	6.0	5.5	2.5
Manufactures	5.0	5.0	11.0	7.0
World merchandise production	2.0	4.5	4.0	2.5
Agriculture	2.0	2.5	4.0	0.5
Mining	2.0	3.5	4.0	1.0
Manufacturing	2.5	5.0	4.0	3.5
World GDP	2.5	2.5	4.0	3.5

Note: See the Technical Notes for the estimation of world aggregates of merchandise exports, production and GDP.

Table I.2

Growth in the volume of world merchandise trade by selected region, 2000-05

(Annual percentage change)

Exports				Imports		
2000-05	2004	2005		2000-05	2004	2005
4.5	9.5	6.0	World	5.0	10.5	6.0
1.5	8.0	6.0	North America	4.0	10.5	6.0
7.0	13.0	8.5	South and Central America	4.5	19.0	14.0
3.5	7.0	3.5	Europe	3.0	7.0	3.5
3.0	7.0	3.5	European Union (25)	2.5	6.5	3.0
8.5	13.0	4.5	Commonwealth of Independent States (CIS)	15.5	16.0	18.0
8.5	14.5	10.0	Asia	8.0	14.5	7.5
2.5	10.5	0.5	Japan	3.5	7.0	2.5
6.5	14.5	7.5	Six East Asian traders	4.5	14.0	5.0

Table I.3

Growth in the value of world merchandise trade by region, 2005

(Billion dollars and percentage)

Exports					Imports			
Value	Annual percentage change				Value	Annual percentage change		
2005	2000-05	2004	2005		2005	2000-05	2004	2005
10159	10	22	13	World	10511	10	22	13
1478	4	14	12	North America	2285	6	16	14
355	13	30	25	South and Central America	298	8	28	23
4372	11	20	8	Europe	4543	10	20	9
4001	10	19	7	European Union (25)	4135	10	20	9
340	18	36	28	Commonwealth of Independent States (CIS)	216	22	31	25
244	18	35	33	Russian Federation	125	23	28	29
298	15	30	29	Africa	249	14	29	19
538	15	32	35	Middle East	322	14	31	17
2779	11	25	16	Asia	2599	12	27	16
762	25	35	28	China	660	24	36	18
565	4	20	5	Japan	515	6	19	13
983	9	24	12	Six East Asian traders	905	8	27	14

Note: It should be mentioned at the outset that there are breaks in the continuity of the figures at the country and regional levels. These breaks are indicated in Appendix Tables A6 and A7. Explanations of significant breaks are given in the Technical Notes.

Table I.4

Growth in the value of world trade in commercial services by region, 2005

(Billion dollars and percentage)

Exports					Imports			
Value	Annual percentage change				Value	Annual percentage change		
2005	2000-05	2004	2005		2005	2000-05	2004	2005
2415	10	20	10	World	2345	10	19	10
422	5	13	10	North America	306	6	15	9
68	8	16	19	South and Central America	70	5	15	21
1245	12	19	8	Europe	1120	11	17	8
1121	12	19	8	European Union (25)	1018	11	16	7
42	20	29	20	Commonwealth of Independent States (CIS)	62	21	28	19
57	13	20	12	Africa	69	13	19	21
55	11	14	13	Middle East	85	12	20	18
525	11	28	14	Asia	573	9	24	12
108	8	25	14	Japan	133	3	21	2
74	20	34	19	China	83	18	31	16
216	8	20	9	Six East Asian traders	215	8	21	12

Note: It should be mentioned at the outset that there are numerous breaks in the continuity of the figures at the country and regional levels due to frequent revisions to the trade in services data. See the Technical Notes.

Table I.5

Leading exporters and importers in world merchandise trade, 2005

(Billion dollars and percentage)

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	Germany	969.9	9.3	7	1	United States	1732.4	16.1	14
2	United States	904.4	8.7	10	2	Germany	773.8	7.2	8
3	China	762.0	7.3	28	3	China	660.0	6.1	18
4	Japan	594.9	5.7	5	4	Japan	514.9	4.8	13
5	France	460.2	4.4	2	5	United Kingdom	510.2	4.7	8
6	Netherlands	402.4	3.9	13	6	France	497.9	4.6	6
7	United Kingdom	382.8	3.7	10	7	Italy	379.8	3.5	7
8	Italy	367.2	3.5	4	8	Netherlands	358.1	3.3	12
9	Canada	359.4	3.4	14	9	Canada	319.7	3.0	15
10	Belgium	334.1	3.2	9	10	Belgium	318.7	3.0	12
11	Hong Kong, China	292.1	2.8	10	11	Hong Kong, China	300.2	2.8	10
	domestic exports	20.1	0.2	0		retained imports a	28.1	0.3	3
	re-exports	272.1	2.6	11					
12	Korea, Republic of	284.4	2.7	12	12	Spain	278.8	2.6	8
13	Russian Federation	243.8	2.3	33	13	Korea, Republic of	261.2	2.4	16
14	Singapore	229.6	2.2	16	14	Mexico	231.7	2.1	12
	domestic exports	124.5	1.2	17	15	Singapore	200.8	1.9	15
	re-exports	105.1	1.0	14		retained imports a	94.9	0.9	16
15	Mexico	213.7	2.0	14					
16	Taipei, Chinese	197.8	1.9	8	16	Taipei, Chinese	182.6	1.7	8
17	Spain	187.2	1.8	2	17	India	134.8	1.3	39
18	Saudi Arabia c	181.4	1.7	44	18	Switzerland	126.5	1.2	9
19	Malaysia	140.9	1.4	11	19	Austria	126.2	1.2	5
20	Switzerland	130.9	1.3	7	20	Russian Federation b	125.3	1.2	29
21	Sweden	130.1	1.2	6	21	Australia b	125.3	1.2	15
22	Austria	124.0	1.2	5	22	Thailand	118.2	1.1	25
23	Brazil	118.3	1.1	23	23	Turkey	116.6	1.1	19
24	United Arab Emirates	115.5	1.1	27	24	Malaysia	114.6	1.1	9
25	Thailand	110.1	1.1	14	25	Sweden	111.2	1.0	11
26	Ireland	109.9	1.1	5	26	Poland	101.0	0.9	13
27	Australia	105.8	1.0	22	27	United Arab Emirates c	80.7	0.7	12
28	Norway	103.8	1.0	26	28	Brazil	77.6	0.7	17
29	India	95.1	0.9	26	29	Czech Republic b	76.7	0.7	10
30	Poland	89.3	0.9	19	30	Denmark	76.0	0.7	12
31	Indonesia	86.2	0.8	22	31	Indonesia	69.5	0.6	27
32	Denmark	85.1	0.8	10	32	Ireland	68.0	0.6	10
33	Czech Republic	78.2	0.8	13	33	Hungary	66.0	0.6	9
34	Turkey	73.4	0.7	16	34	South Africa b	62.3	0.6	13
35	Finland	66.0	0.6	7	35	Portugal	61.1	0.6	11
36	Hungary	62.1	0.6	12	36	Saudi Arabia	59.4	0.6	33
37	Iran, Islamic Rep. of	56.1	0.5	35	37	Finland	59.0	0.5	15
38	Bolivarian Rep. of Venezuela	55.5	0.5	43	38	Norway	55.5	0.5	14
39	South Africa	51.9	0.5	13	39	Greece	54.0	0.5	2
40	Algeria	46.0	0.4	47	40	Philippines	42.4	0.4	8
41	Kuwait	45.0	0.4	57	41	Israel c	42.1	0.4	10
42	Israel	42.7	0.4	10	42	Romania	40.5	0.4	24
43	Nigeria	42.3	0.4	36	43	Viet Nam	36.5	0.3	17
44	Philippines	41.3	0.4	4	44	Ukraine	36.1	0.3	25
45	Chile	40.6	0.4	26	45	Iran, Islamic Rep. of	35.9	0.3	12
46	Argentina	40.0	0.4	16	46	Slovak Republic b	35.3	0.3	20
47	Portugal	38.1	0.4	7	47	Chile	32.5	0.3	31
48	Ukraine	34.3	0.3	5	48	Argentina	28.7	0.3	28
49	Slovak Republic	32.0	0.3	16	49	New Zealand	26.2	0.2	13
50	Viet Nam	31.6	0.3	23	50	Pakistan	25.3	0.2	41
	Total of above d	9789.4	93.8	-		Total of above d	9978.8	92.5	-
	World d	10431.0	100.0	13		World d	10788.8	100.0	13

a Retained imports are defined as imports less re-exports. See the Technical Notes.
b Imports are valued f.o.b.
c Secretariat estimates.
d Includes significant re-exports or imports for re-export.
Note: For annual data 1995-05, see Appendix Tables A6 and A7.

Table I.6

Leading exporters and importers in world merchandise trade (excluding intra-EU (25) trade), 2005

(Billion dollars and percentage)

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	Extra-EU (25) exports	1328.3	17.1	10	1	United States	1732.4	21.4	14
2	United States	904.4	11.7	10	2	Extra-EU (25) imports	1462.5	18.0	14
3	China	762.0	9.8	28	3	China	660.0	8.1	18
4	Japan	594.9	7.7	5	4	Japan	516.9	6.3	13
5	Canada	358.4	4.6	14	5	Canada	319.7	3.9	15
6	Hong Kong, China	292.1	3.8	10	6	Hong Kong, China	300.2	3.7	11
	domestic exports	20.1	0.3	0		retained imports a	28.1	0.3	3
	re-exports	272.1	3.5	11					
7	Korea, Republic of	284.4	3.7	12	7	Korea, Republic of	261.2	3.2	16
8	Russian Federation	243.6	3.1	33	8	Mexico	231.7	2.9	12
9	Singapore	229.6	3.0	16	9	Singapore	200.0	2.5	15
	domestic exports	124.5	1.6	17		retained imports a	94.9	1.2	16
	re-exports	105.1	1.4	14					
10	Mexico	213.7	2.8	14	10	Taipei, Chinese	182.6	2.3	8
11	Taipei, Chinese	197.8	2.5	8	11	India	134.8	1.7	38
12	Saudi Arabia c	181.4	2.3	44	12	Switzerland	126.5	1.6	9
13	Malaysia	148.9	1.8	11	15	Russian Federation b	125.5	1.5	29
14	Switzerland	138.9	1.7	7	14	Australia b	125.3	1.5	15
15	Brazil	118.3	1.5	23	16	Thailand	118.2	1.5	25
16	United Arab Emirates	115.5	1.5	27	16	Turkey	116.6	1.4	19
17	Thailand	110.1	1.4	14	17	Malaysia	114.6	1.4	8
18	Australia	105.8	1.4	22	18	United Arab Emirates c	83.7	1.0	12
19	Norway	101.8	1.3	26	19	Brazil	77.6	1.0	17
20	India	95.1	1.2	26	20	Indonesia	69.5	0.9	27
21	Indonesia	86.2	1.1	22	21	South Africa b	62.3	0.8	13
22	Turkey	73.4	0.9	16	22	Saudi Arabia	59.4	0.7	33
23	Iran, Islamic Rep. of	56.3	0.7	35	23	Norway	55.5	0.7	14
24	Bolivarian Rep. of Venezuela	55.5	0.7	43	24	Philippines	47.4	0.6	8
25	South Africa	51.8	0.7	13	25	Israel c	47.1	0.6	18
26	Algeria	46.0	0.6	47	26	Romania	40.5	0.5	24
27	Kuwait	45.0	0.6	57	27	Viet Nam	36.5	0.5	17
28	Israel	42.7	0.6	10	28	Ukraine	36.1	0.4	25
29	Nigeria	42.3	0.5	36	29	Iran, Islamic Rep. of	35.9	0.4	12
30	Philippines	41.3	0.5	4	30	Chile	32.5	0.4	31
31	Chile	40.6	0.5	26	31	Argentina	28.7	0.4	28
32	Argentina	40.3	0.5	16	32	New Zealand	26.2	0.3	13
33	Ukraine	34.3	0.4	5	33	Pakistan	25.3	0.3	41
34	Viet Nam	31.6	0.4	23	34	Bolivarian Rep. of Venezuela	24.2	0.3	44
35	Libyan Arab Jamahiriya	30.1	0.4	46	35	Iraq c	23.4	0.3	10
36	Kazakhstan	27.8	0.4	39	36	Colombia	21.2	0.3	27
37	Romania	27.7	0.4	18	37	Algeria	20.4	0.3	12
38	Qatar	25.8	0.3	58	38	Morocco	20.3	0.3	14
39	Iraq c	24.1	0.3	35	39	Egypt	19.8	0.2	54
40	Angola c	23.4	0.3	74	40	Croatia	18.5	0.2	12
41	New Zealand	21.7	0.3	7	41	Bulgaria	18.2	0.2	26
42	Colombia	21.1	0.3	30	42	Kazakhstan	17.4	0.2	38
43	Oman	18.7	0.2	40	43	Nigeria c	17.1	0.2	22
44	Peru	17.2	0.2	36	44	Belarus	16.7	0.2	1
45	Belarus	16.0	0.2	16	45	Kuwait	16.3	0.2	29
46	Pakistan	15.9	0.2	19	46	Bangladesh	13.8	0.2	15
47	Bulgaria	11.7	0.2	18	47	Tunisia	13.2	0.2	3
48	Egypt	10.7	0.1	39	48	Peru	12.5	0.2	24
49	Morocco	10.6	0.1	7	49	Serbia and Montenegro c	11.6	0.1	-1
50	Tunisia	10.5	0.1	8	50	Jordan	10.5	0.1	28
	Total of above d	7112.1	96.8	.		Total of above d	7783.2	96.0	.
	World (excl. intra-EU (25)) d	7758.0	100.0	16		World (excl. intra-EU (25)) d	8110.0	100.0	15

a Retained imports are defined as imports less re-exports. See the Technical Notes.
b Imports are valued f.o.b.
c Secretariat estimates.
d Includes significant re-exports or imports for re-export.
Note: For annual data 1995-05, see Appendix Tables A6 and A7.

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Table I.7

Leading exporters and importers in world trade in commercial services, 2005

(Billion dollars and percentage)

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	United States	354.0	14.7	10	1	United States	281.2	12.0	9
2	United Kingdom	188.7	7.8	2	2	Germany	201.4	8.6	4
3	Germany	148.5	6.2	10	3	United Kingdom	154.1	6.6	6
4	France	115.0	4.8	6	4	Japan	132.6	5.6	2
5	Japan	107.9	4.5	14	5	France	104.9	4.5	8
6	Italy	93.5	3.9	13	6	Italy	92.4	3.9	15
7	Spain	82.7	3.4	9	7	China	83.2	3.5	18
8	Netherlands	76.7	3.2	7	8	Netherlands	70.9	3.0	3
9	China	73.9	3.1	19	9	Ireland	66.1	2.8	3
10	Hong Kong, China	62.2	2.6	13	10	Spain	65.2	2.8	11
11	India	56.1	2.3	..	11	Canada	64.2	2.7	10
12	Ireland	53.3	2.2	2	12	Korea, Republic of	57.7	2.5	17
13	Belgium	53.3	2.2	5	13	India	52.2	2.2	..
14	Austria	52.6	2.2	9	14	Belgium	50.3	2.1	4
15	Canada	52.2	2.2	9	15	Austria	48.5	2.1	5
16	Singapore	45.1	1.9	10	16	Singapore	44.0	1.9	9
17	Switzerland	44.0	1.8	7	17	Russian Federation	38.5	1.6	18
18	Korea, Republic of	43.9	1.8	8	18	Denmark	36.0	1.5	..
19	Sweden	42.8	1.8	12	19	Sweden	35.0	1.5	6
20	Denmark	41.2	1.7	..	20	Hong Kong, China	32.4	1.4	5
21	Luxembourg	40.0	1.7	21	21	Taipei, Chinese	31.4	1.3	5
22	Greece	34.1	1.4	3	22	Australia	28.9	1.2	9
23	Norway	28.5	1.2	12	23	Thailand	27.5	1.2	20
24	Australia	27.7	1.1	8	24	Norway	27.2	1.2	19
25	Taipei, Chinese	25.6	1.1	6	25	Switzerland	25.2	1.1	6
26	Turkey	25.6	1.1	13	26	Luxembourg	24.8	1.1	20
27	Russian Federation	24.3	1.0	21	27	Indonesia a	23.2	1.0	..
28	Thailand	20.5	0.8	8	28	Brazil	22.3	0.9	18
29	Malaysia	19.0	0.8	14	29	Malaysia	21.6	0.9	15
30	Israel	16.8	0.7	12	30	Mexico	20.9	0.9	9
31	Poland	16.1	0.7	20	31	United Arab Emirates a	16.2	0.7	..
32	Mexico	16.0	0.7	15	32	Greece	14.3	0.6	5
33	Egypt	15.0	0.6	6	33	Saudi Arabia	14.2	0.6	29
34	Portugal	14.9	0.6	2	34	Poland	14.0	0.6	14
35	Brazil	14.9	0.6	28	35	Israel	13.4	0.6	6
36	Hungary	12.3	0.5	15	36	Finland	12.8	0.5	6
37	Czech Republic	10.7	0.4	11	37	Hungary	11.6	0.5	11
38	Lebanon a	10.3	0.4	..	38	South Africa	11.5	0.5	15
39	Croatia a	10.3	0.4	..	39	Turkey	10.7	0.5	16
40	Finland	10.1	0.4	3	40	Portugal	9.9	0.4	4
	Total of above	2190.0	90.7	.		Total of above	2090.0	89.1	.
	World	2415.0	100.0	10		World	2345.0	100.0	10

a Secretariat estimate.

Note: Figures for a number of countries and territories have been estimated by the Secretariat. Annual percentage changes and rankings are affected by continuity breaks in the series for a large number of economies, and by limitations in cross-country comparability. See the Technical Notes. For annual data 1990-05, see Appendix Tables A8 and A9.

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Table I.8

Leading exporters and importers in world trade in commercial services (excluding intra-EU (25) trade), 2005

(Billion dollars and percentage)

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	Extra-EU (25) exports	488.3	27.1	9	1	Extra-EU (25) imports	422.4	24.4	8
2	United States	354.0	14.7	10	2	United States	281.2	12.0	9
3	Japan	107.9	4.5	14	3	Japan	132.6	5.6	2
4	China	73.9	3.1	19	4	China	83.2	3.5	16
5	Hong Kong, China	62.2	2.6	13	5	Canada	64.2	2.7	10
6	India	56.1	2.3	...	6	Korea, Republic of	57.7	2.5	17
7	Canada	52.2	2.2	9	7	India	52.2	2.2	...
8	Singapore	45.1	1.9	10	8	Singapore	44.0	1.9	9
9	Switzerland	44.0	1.8	7	9	Russian Federation	38.5	1.6	18
10	Korea, Republic of	43.9	1.8	8	10	Hong Kong, China	32.4	1.4	5
11	Norway	28.5	1.2	12	11	Taipei, Chinese	31.4	1.3	5
12	Australia	27.7	1.1	8	12	Australia	28.9	1.2	9
13	Taipei, Chinese	25.6	1.1	0	13	Thailand	27.5	1.2	20
14	Turkey	25.6	1.1	13	14	Norway	27.2	1.2	19
15	Russian Federation	24.3	1.0	21	15	Switzerland	25.2	1.1	6
16	Thailand	23.5	0.8	8	16	Indonesia a	23.2	1.0	...
17	Malaysia	19.0	0.8	14	17	Brazil	22.3	0.9	38
18	Israel	16.8	0.7	12	18	Malaysia	21.6	0.9	15
19	Mexico	16.0	0.7	15	19	Mexico	20.9	0.9	9
20	Egypt	15.0	0.6	6	20	United Arab Emirates a	16.2	0.7	...
21	Brazil	14.9	0.6	28	21	Saudi Arabia	14.2	0.6	29
22	Lebanon a	10.3	0.4	...	22	Israel	13.4	0.6	6
23	Croatia a	10.3	0.4	...	23	South Africa	11.5	0.5	15
24	South Africa	10.0	0.4	14	24	Turkey	10.7	0.5	16
25	Ukraine	8.9	0.4	19	25	Egypt	9.5	0.4	27
26	Macao, China a	8.8	0.4	...	26	Iran, Islamic Rep. of a	8.2	0.4	...
27	New Zealand	8.2	0.3	7	27	New Zealand	7.8	0.3	14
28	Morocco	7.6	0.3	20	28	Argentina	7.6	0.3	15
29	Indonesia a	7.5	0.3	...	29	Chile	7.6	0.3	15
30	Chile	7.1	0.3	18	30	Lebanon a	7.6	0.3	...
31	Argentina	6.1	0.3	20	31	Kuwait	7.4	0.3	21
32	Cuba a	6.1	0.3	...	32	Kazakhstan	7.3	0.3	48
33	Saudi Arabia	5.9	0.2	1	33	Pakistan	7.2	0.3	41
34	Iran, Islamic Rep. of a	5.3	0.2	...	34	Ukraine	7.0	0.3	13
35	Romania	4.9	0.2	37	35	Nigeria	6.1	0.3	23
36	Philippines	4.5	0.2	10	36	Angola a	5.8	0.2	...
37	Viet Nam a	4.4	0.2	...	37	Philippines	5.8	0.2	9
38	Bulgaria	4.2	0.2	7	38	Romania	5.3	0.2	40
39	Nigeria	4.2	0.2	25	39	Viet Nam a	5.3	0.2	...
40	Dominican Republic	3.8	0.2	11	40	Bolivarian Rep. of Venezuela	5.3	0.2	23
	Total of above	1680.3	94.8	.		Total of above	1618.0	93.2	.
	World	1775.0	100.0	12		World	1738.0	100.0	12

a Secretariat estimate.

Note: Figures for a number of countries and territories have been estimated by the Secretariat. Annual percentage changes and rankings are affected by continuity breaks in the series for a large number of economies, and by limitations in cross-country comparability. See the Technical Notes. For annual data 1995-05, see Appendix Tables A8 and A9.

Table I.9

Share of goods and commercial services in the total trade of selected regions and economies, 2005

(Billion dollars and percentage, based on balance of payments data)

	Exports			Imports		
	Value	Share		Value	Share	
	Total	Goods	Commercial services	Total	Goods	Commercial services
World	12698	81.0	19.0	12613	81.4	18.6
North America	1909	77.9	22.1	2586	85.8	14.2
Canada	427	87.8	12.2	385	83.3	16.7
Mexico	250	93.0	7.0	249	91.4	8.6
United States	1252	71.7	28.3	1959	85.6	14.4
South and Central America	434	84.3	15.7	358	80.3	19.7
Argentina	46	86.7	13.3	35	78.2	21.8
Bolivarian Rep. of Venezuela	57	97.8	2.2	29	82.0	18.0
Brazil	118	88.8	11.2	96	76.7	23.3
Chile	48	85.1	14.9	38	80.0	20.0
Colombia	24	89.3	10.7	25	81.1	18.9
Europe	5402	77.3	22.7	5383	79.2	20.8
Austria	170	68.0	31.0	163	70.1	29.9
Belgium	321	83.4	16.6	313	82.9	16.1
Czech Republic	89	87.9	12.1	86	88.6	11.4
Denmark	124	66.8	33.2	111	67.4	32.6
Finland	75	86.6	13.4	68	81.2	18.8
France	554	79.3	20.7	576	81.8	18.2
Germany	1121	86.7	13.3	985	79.5	20.5
Ireland	156	65.9	34.1	131	49.7	50.3
Italy	465	79.9	20.1	464	80.1	19.9
Netherlands	418	81.7	18.3	368	80.7	19.3
Norway	133	78.6	21.4	81	66.6	33.4
Poland	112	85.6	14.4	113	87.5	12.5
Spain	287	67.7	32.3	345	81.1	18.9
Sweden	178	75.9	24.1	150	76.7	23.3
Switzerland	190	76.9	23.1	166	84.9	15.1
Turkey	102	75.1	24.9	120	91.1	8.9
United Kingdom	571	66.9	33.1	655	76.5	23.5
Commonwealth of Independent States (CIS)	389	89.2	10.8	281	77.8	22.2
Azerbaijan	8	92.5	7.5	7	62.4	37.6
Belarus	18	88.7	11.3	18	93.3	6.7
Kazakhstan	30	93.3	6.7	25	71.0	29.0
Russian Federation	268	90.9	9.1	164	76.5	23.5
Ukraine	68	79.7	20.3	43	83.9	16.1
Africa	340	83.3	16.7	311	77.7	22.3
Egypt	43	51.9	48.1	43	71.5	28.5
Morocco	18	58.4	41.6	23	85.8	14.2
Nigeria	57	88.7	11.3	19	67.7	32.3
South Africa	65	84.5	15.5	68	83.0	17.0
Tunisia	14	74.3	25.7	14	86.1	13.9
Asia	3551	85.2	14.8	3312	82.7	17.3
Australia	134	79.4	20.6	149	80.6	19.4
China	836	91.2	8.8	711	88.3	11.7
Hong Kong, China a	352	82.3	17.7	330	90.2	9.8
India	153	63.3	36.7	187	72.1	27.9
Indonesia b	94	90.3	8.0	87	73.4	26.6
Japan	676	84.3	16.0	607	78.2	21.8
Korea, Republic of	333	86.8	13.2	313	81.6	18.4
Malaysia	161	88.2	11.8	130	83.4	16.6
Philippines	49	90.3	10.0	54	89.2	10.8
Singapore a	273	83.5	16.5	236	81.4	18.6
Taipei, Chinese	224	88.6	11.4	212	85.2	14.8
Thailand	130	84.2	15.8	134	79.4	20.6
Viet Nam	35	87.4	12.6	39	86.5	13.7
Memorandum item:						
European Union (25)	4978	77.5	22.5	4890	78.8	21.2

a Trade in goods includes significant re-exports or imports for re-exports.
b Secretariat estimates.
Note: Trade in goods is derived from balance of payments statistics and does not correspond to the merchandise trade statistics given elsewhere in this report. It is likely that for most economies trade in commercial services is understated. See the Technical Notes.

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Table I.10

Merchandise trade of selected regional integration arrangements, 2005

(Billion dollars and percentage)

	Value	Share in total exports/imports				Annual percentage change		
	2005	1990	1995	2000	2005	2000-05	2004	2005
European Union (25)								
Total exports	4001	.	..	100.0	100.0	10	19	7
Intra-exports	2673	.	..	67.5	66.8	10	19	6
Extra-exports	1328	.	..	32.5	33.2	11	21	10
Total imports	4135	.	..	100.0	100.0	10	20	9
Intra-imports	2673	.	..	64.1	64.6	10	19	6
Extra-imports	1463	.	..	35.9	35.4	10	21	14
NAFTA								
Total exports	1427	100.0	100.0	100.0	100.0	4	14	12
Intra-exports	824	42.6	46.0	55.6	55.8	4	13	11
Extra-exports	654	57.4	54.0	44.4	44.2	4	16	12
Total imports a	2268	100.0	100.0	100.0	100.0	6	16	14
Intra-imports	782	34.4	37.7	39.6	34.5	3	12	11
Extra-imports	1486	65.6	62.3	60.4	65.5	8	19	15
ASEAN								
Total exports	653	100.0	100.0	100.0	100.0	9	23	15
Intra-exports	162	28.1	25.5	24.0	24.9	9	21	15
Extra-exports	491	71.9	74.5	76.0	75.1	8	19	15
Total imports	594	100.0	100.0	100.0	100.0	9	35	16
Intra-imports	144	16.2	18.8	23.5	24.3	10	24	20
Extra-imports	450	83.8	81.2	76.5	75.7	9	35	15
MERCOSUR								
Total exports	153	100.0	100.0	100.0	100.0	14	28	21
Intra-exports	21	8.9	20.5	21.0	12.9	4	35	23
Extra-exports	132	91.1	79.5	79.0	87.1	16	27	20
Total imports	114	100.0	100.0	100.0	100.0	5	38	20
Intra-imports	22	14.5	18.1	19.7	19.7	5	34	25
Extra-imports	91	85.5	81.9	80.3	80.3	5	40	17
Andean Community								
Total exports	51	100.0	100.0	100.0	100.0	14	29	32
Intra-exports	4	4.0	8.6	7.7	8.7	17	15	33
Extra-exports	47	96.0	91.4	92.3	91.3	14	31	32
Total imports	46	100.0	100.0	100.0	100.0	14	21	26
Intra-imports	5	5.1	6.7	8.8	10.2	17	23	20
Extra-imports	42	94.9	93.3	91.2	89.8	13	21	26

a Imports of Canada and Mexico are valued f.o.b.

Note: The figures are not fully adjusted for differences in the way members of the arrangements in this table record their merchandise trade. For annual data 1995-05, see Appendix Table A2.

Chart I.1

Merchandise trade of selected regional integration arrangements, 1990-05

(Billion dollars)

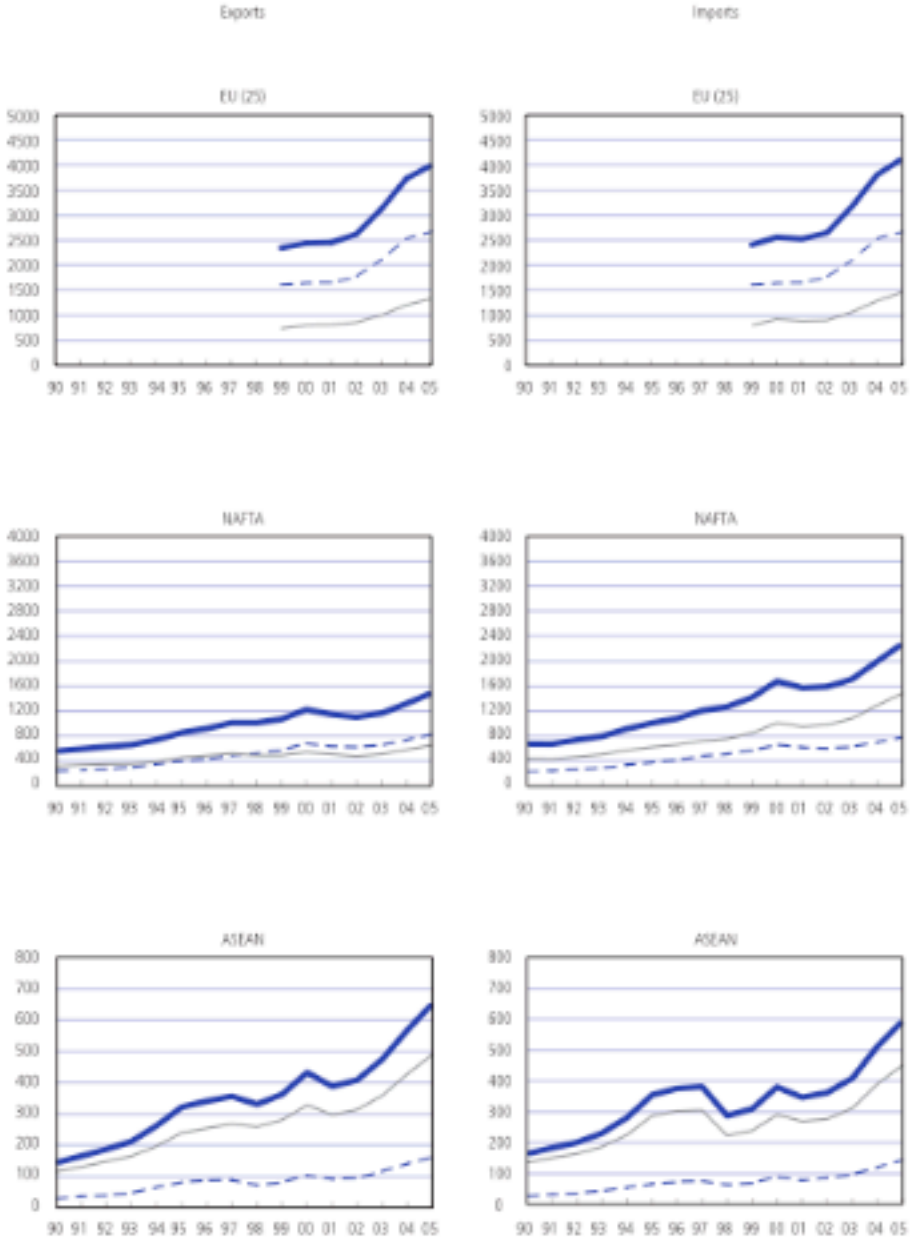


Chart I.1 (continued)

Merchandise trade of selected regional integration arrangements, 1990-05

(Billion dollars)

II. Selected long-term trends

Chart II.1

World merchandise trade and production by major product group, 1950-05

(Average annual percentage change in volume terms)

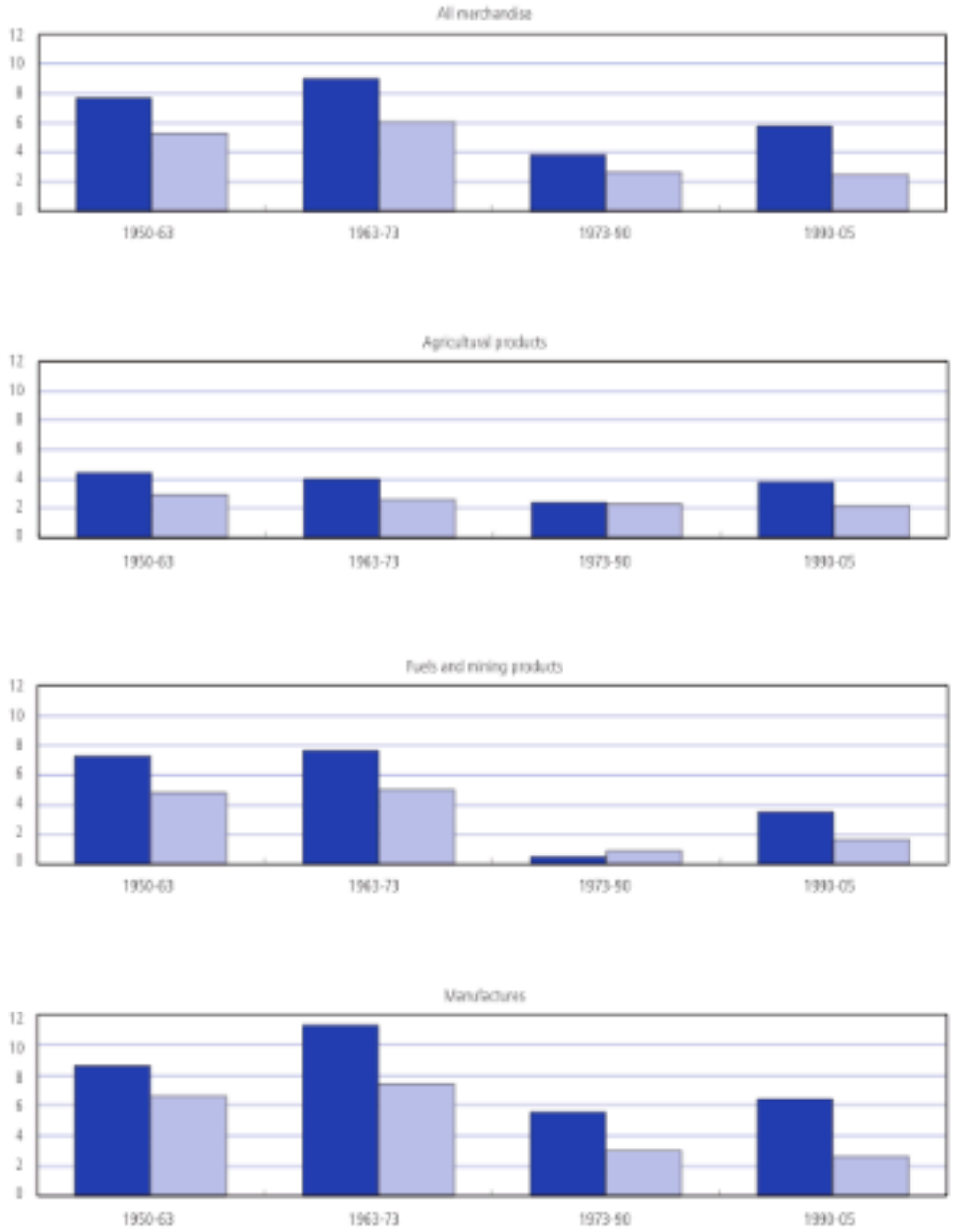
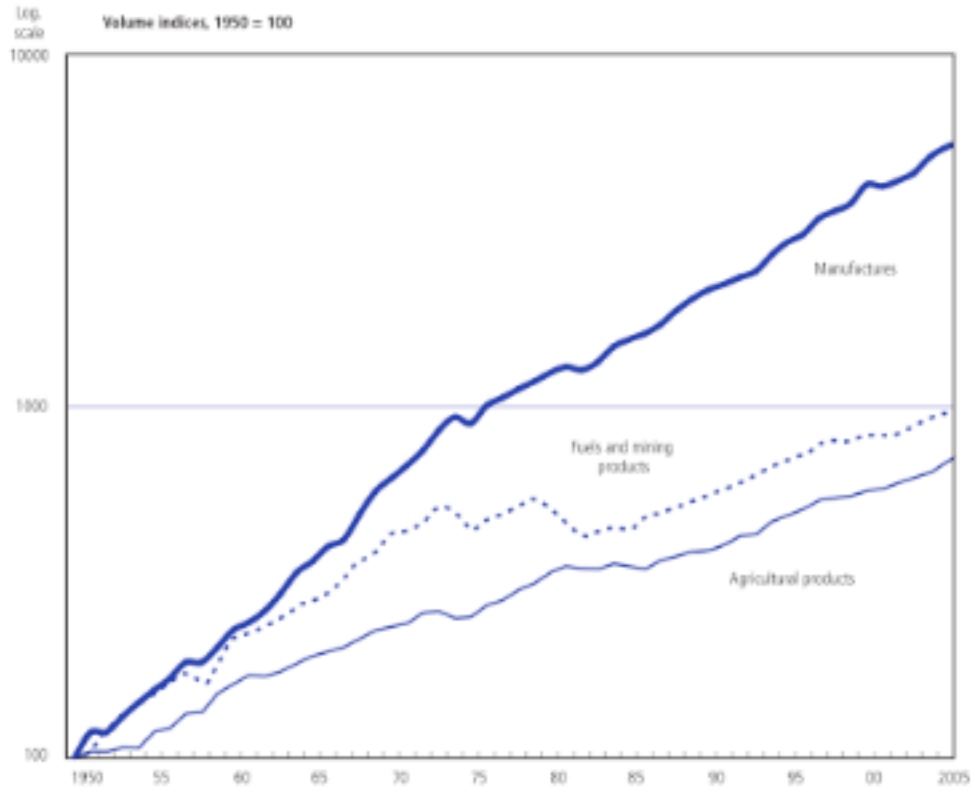


Chart II.2

World merchandise trade by major product group, 1950-05



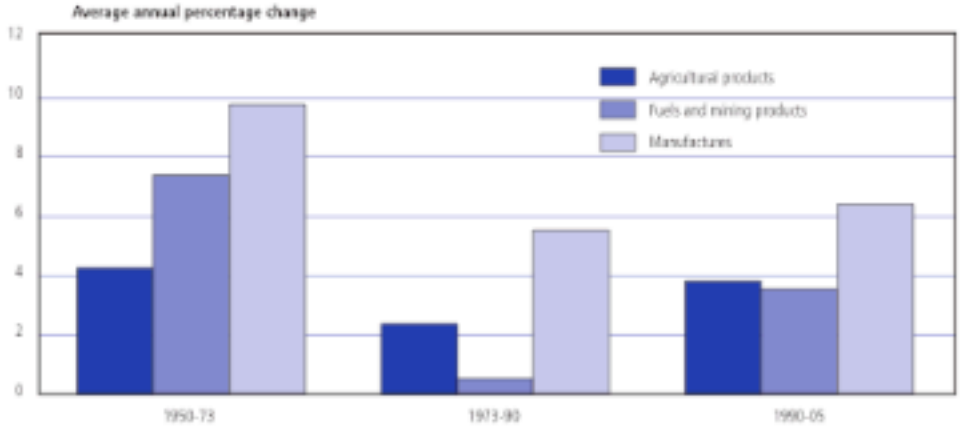


Table II.1

World merchandise exports, production and gross domestic product, 1950-05

(Annual percentage change)

	Value				Volume								
	Exports				Exports				Production				World GDP
	Total a	Agricultural products	Fuels and mining products	Manufactures	Total a	Agricultural products	Fuels and mining products	Manufactures	Total	Agriculture	Mining	Manufacturing	
1950-63	7.4	3.7	8.5	10.1	7.7	4.5	7.2	8.6	5.2	2.9	4.8	6.6	4.7
1964	11.8	6.9	11.8	15.0	10.9	5.4	8.8	14.9	9.1	0.8	8.6	10.0	7.2
1965	8.3	4.3	7.1	10.9	6.6	5.1	3.2	7.4	5.6	0.0	3.9	9.1	4.1
1966	9.2	4.1	9.8	10.8	7.7	3.7	6.2	10.3	6.6	3.4	5.1	8.3	6.5
1967	5.2	-0.2	5.7	7.1	5.7	2.4	10.3	4.7	4.9	3.3	2.4	5.1	3.7
1968	11.0	4.1	14.2	14.9	10.8	5.7	12.0	17.9	5.9	2.2	7.1	7.3	5.9
1969	14.2	6.9	9.2	16.5	12.2	5.4	6.0	16.5	5.6	0.0	2.2	8.0	6.7
1970	14.6	10.6	13.6	15.4	8.7	3.1	12.4	8.7	5.3	5.1	7.5	5.3	5.1
1971	11.7	7.4	11.3	13.7	7.0	2.0	1.0	9.3	5.0	2.0	4.0	5.0	4.4
1972	18.3	20.3	14.1	19.4	8.4	6.9	6.9	10.1	4.8	0.0	2.9	6.7	5.6
1973	38.4	45.5	47.4	34.1	12.1	8.9	10.2	14.2	8.2	4.9	6.5	9.8	6.9
1974	46.9	21.7	122.9	21.3	5.4	-4.5	-1.7	8.8	2.5	1.9	1.8	3.3	2.1
1975	4.3	1.0	-4.0	8.8	-7.3	1.0	-12.0	-4.0	-1.6	3.6	-6.0	-3.9	1.4
1976	15.1	10.3	16.3	12.8	11.8	7.5	6.8	12.6	6.7	0.9	8.3	8.2	5.1
1977	18.7	13.5	10.6	14.7	4.2	3.5	2.7	5.0	3.9	2.6	3.4	4.5	4.2
1978	15.8	13.3	3.7	21.6	4.7	6.8	5.3	5.9	4.5	3.4	0.8	5.1	4.6
1979	27.0	24.4	47.0	21.3	5.2	4.8	5.9	5.0	3.6	0.8	8.9	4.1	4.0
1980	22.6	13.8	41.8	15.9	2.9	6.8	-6.3	5.9	-0.7	0.9	-2.6	0.7	2.9
1981	-1.2	-1.9	-3.2	-0.7	-0.6	5.0	-0.9	4.0	0.1	3.6	-7.9	0.2	2.0
1982	-6.4	-7.5	-10.6	-3.6	-2.2	-2.0	-5.8	-2.1	-1.0	3.2	-6.9	-1.4	0.8
1983	-2.0	-1.4	-6.0	0.5	2.7	0.2	-0.9	5.1	2.2	0.1	-0.9	3.1	2.9
1984	5.9	5.3	-0.9	8.1	8.5	2.8	4.8	10.8	6.5	5.3	3.8	7.2	4.6
1985	0.3	-5.7	-3.2	3.8	2.6	-1.2	-1.2	4.8	2.8	2.4	-1.1	3.4	3.5
1986	9.4	11.1	-23.8	20.3	4.0	-1.7	9.1	4.1	2.8	1.8	3.0	3.1	3.4
1987	17.5	14.9	11.0	19.7	5.5	5.6	1.7	6.3	3.5	1.0	1.3	4.4	3.7
1988	13.7	13.1	0.9	16.1	8.5	2.7	5.6	9.5	4.9	1.7	5.3	5.7	4.5
1989	7.8	4.3	15.5	6.9	6.4	3.1	4.4	7.8	3.5	3.4	4.3	3.4	3.8
1990	12.9	4.7	15.3	14.7	3.8	1.0	3.2	6.1	1.3	2.5	1.0	1.0	2.5
1991	1.5	0.8	-6.2	3.3	3.7	3.3	3.4	3.6	-0.4	0.4	-0.5	-0.6	0.8
1992	6.7	7.1	-0.9	8.0	4.8	6.0	4.4	4.7	0.1	2.3	0.8	-0.5	1.1
1993	-0.2	-4.1	-3.5	0.0	4.2	1.0	3.7	4.1	-0.1	0.6	2.0	-0.6	0.9
1994	13.6	15.8	5.1	15.6	9.2	8.7	6.8	11.1	2.8	2.9	1.6	2.9	3.2
1995	19.3	17.3	10.5	20.0	7.3	4.4	4.1	9.3	4.6	2.1	2.2	5.5	3.3
1996	4.6	2.9	13.6	3.5	5.1	4.4	3.4	5.3	3.5	4.3	2.7	3.5	3.3
1997	8.4	-1.3	2.7	4.6	10.0	5.7	7.4	11.0	4.9	2.4	3.3	5.7	3.4
1998	-1.2	-4.7	-20.5	2.3	4.8	1.7	2.9	4.8	2.2	1.6	1.1	2.4	2.1
1999	3.9	-3.7	15.6	3.3	4.6	1.0	-0.5	5.1	3.1	3.3	-1.3	3.6	2.9
2000	12.8	0.9	47.9	10.1	10.4	3.6	4.5	13.0	5.3	1.9	3.7	6.3	3.8
2001	-4.1	0.1	-9.3	-3.8	-0.6	1.5	-0.7	-1.2	-0.8	1.5	-0.1	-1.4	1.5
2002	4.8	6.1	-0.5	5.4	3.5	3.7	0.6	4.3	1.3	1.8	0.1	1.4	1.9
2003	16.9	16.3	24.1	15.8	5.2	3.4	5.8	5.1	4.3	2.7	3.6	4.8	2.7
2004	21.6	15.3	33.1	20.5	9.5	3.7	5.5	10.9	3.9	4.2	4.2	3.8	3.9
2005	13.4	8.1	36.2	9.9	6.0	5.6	2.4	6.9	2.6	0.5	1.2	3.3	3.3

a Includes unspecified products.

Note: See the Technical Notes for the estimation of world aggregates of merchandise exports, production and GDP.

Table II.2

World merchandise exports by region and selected economy, 1948, 1953, 1963, 1973, 1983, 1993, 2003 and 2005

(Billion dollars and percentage)

	1948	1953	1963	1973	1983	1993	2003	2005
				Value				
World	58.0	84.0	157.0	579.0	1838.0	3675.0	7369.0	10159.0
				Share				
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
North America	28.3	26.9	19.9	17.3	16.8	18.0	15.8	14.5
United States	21.7	18.8	14.9	12.3	11.2	12.6	9.8	8.9
Canada	5.5	5.2	4.1	4.3	4.2	4.0	3.7	3.5
Mexico	1.0	0.7	0.6	0.4	1.4	1.4	2.2	2.1
South and Central America	12.3	10.5	7.0	4.7	4.4	3.0	3.0	3.5
Brazil	2.0	1.8	0.9	1.1	1.2	1.0	1.0	1.2
Argentina	2.8	1.3	0.8	0.6	0.4	0.4	0.4	0.4
Europe	31.5	34.9	41.4	45.4	43.5	45.4	46.0	43.0
Germany a	1.4	5.5	9.8	12.5	9.2	10.3	10.2	9.5
France	3.5	4.8	5.1	6.1	5.2	6.0	5.3	4.5
United Kingdom	11.4	9.0	7.6	5.2	5.0	4.9	4.1	3.8
Italy	1.8	1.8	3.2	3.8	4.0	4.6	4.1	3.6
Commonwealth of Independent States (CIS) b	-	-	-	-	-	1.5	2.6	3.3
Africa	7.3	6.5	5.7	4.8	4.5	2.5	2.4	2.9
South Africa c	2.8	1.7	1.5	1.0	1.0	0.7	0.5	0.5
Middle East	2.8	2.7	3.2	4.1	6.8	3.5	4.1	5.3
Asia	13.8	18.1	12.4	16.9	19.1	26.1	26.1	27.4
China	0.9	1.2	1.3	1.0	1.2	2.5	5.9	7.5
Japan	0.4	1.5	3.5	6.4	8.0	9.9	6.4	5.9
India	2.2	1.3	1.0	0.5	0.5	0.6	0.8	0.9
Australia and New Zealand	3.7	3.2	2.4	2.1	1.4	1.5	1.2	1.3
Six East Asian traders	3.8	2.7	2.4	3.4	5.8	9.7	9.6	9.7
Memorandum item:								
EU d	-	-	27.5	38.6	30.4	36.1	42.4	39.4
USSR, former	2.2	3.5	4.6	3.7	5.0	-	-	-
GATT/WTO Members e	60.4	68.7	72.8	81.8	76.5	89.5	94.3	94.4

a Figures refer to the Fed. Rep. of Germany from 1948 through 1993.
b Figures are significantly affected by changes in the country composition of the region and major adjustment in trade conversion factors between 1993 and 1993.
c Beginning with 1998, figures refer to South Africa only and no longer to the Southern African Customs Union.
d Figures refer to the EEC(6) in 1963, EC(9) in 1973, EC(10) in 1983, EU(12) in 1993, EU(15) in 2003 and EU(25) in 2005.
e Membership as of the year stated.
Note: Between 1973 and 1983 and between 1993 and 2003 export and import shares were significantly influenced by oil price developments.

Table II.3

World merchandise imports by region and selected economy, 1948, 1953, 1963, 1973, 1983, 1993, 2003 and 2005

(Billion dollars and percentage)

	1948	1953	1963	1973	1983	1993	2003	2005
				Value				
World	66.0	84.0	163.0	589.0	1882.0	3769.0	7647.0	10511.0
				Share				
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
North America	23.6	20.7	16.2	17.3	18.5	21.5	22.6	21.7
United States	13.0	13.0	11.4	12.3	14.3	16.0	17.0	16.5
Canada	4.2	5.6	3.7	4.0	3.4	3.7	3.2	3.0
Mexico	1.8	1.7	0.8	0.7	0.7	1.8	2.3	2.2
South and Central America	10.6	9.3	6.8	5.1	3.8	3.3	2.5	2.8
Brazil	1.7	1.6	0.8	1.2	0.8	0.7	0.7	0.7
Argentina	2.4	0.9	0.6	0.4	0.2	0.4	0.2	0.3
Europe	40.4	39.4	45.4	47.4	44.2	44.8	45.1	43.2
Germany a	2.1	4.5	11.0	8.7	8.1	9.1	7.9	7.4
United Kingdom	12.7	11.1	6.7	8.3	5.3	5.6	5.1	4.9
France	5.2	5.0	6.4	5.4	5.6	5.8	5.2	4.7
Italy	2.3	2.9	4.8	4.6	4.2	3.9	3.9	3.6
Commonwealth of Independent States (CIS) b	.	.	.	.	.	1.2	1.7	2.1
Africa	7.6	7.0	5.5	4.0	4.6	2.6	2.1	2.4
South Africa c	2.2	1.5	1.1	0.9	0.8	0.5	0.5	0.6
Middle East	1.7	2.0	2.3	2.8	6.2	3.4	2.7	3.1
Asia	14.2	15.1	14.2	15.1	18.5	23.3	25.1	24.7
China	1.0	2.0	4.1	6.5	1.1	2.8	5.4	6.3
Japan	1.1	1.7	0.9	0.9	6.7	6.4	5.3	4.9
India	3.1	1.4	1.5	0.3	0.7	0.6	0.9	1.3
Australia and New Zealand	2.6	2.4	2.3	1.6	1.4	1.5	1.4	1.4
Six East Asian traders	3.0	3.4	3.1	3.7	6.1	9.0	8.2	8.6
Memorandum item:								
EU d	.	.	29.0	39.3	31.3	34.3	41.6	39.3
USSR, former	1.8	3.3	4.3	3.6	4.3	.	.	.
GATT/WTO Members e	52.9	66.0	74.2	86.1	83.9	88.7	96.1	96.1

a Figures refer to the Fed. Rep. of Germany from 1948 through 1983.
b Figures are significantly affected by changes in the country composition of the region and major adjustment in trade conversion factors between 1983 and 1993.
c Beginning with 1998, figures refer to South Africa only and no longer to the Southern African Customs Union.
d Figures refer to the EEC(6) in 1963, EC(9) in 1973, EC(10) in 1983, EU(12) in 1993, EU(15) in 2003 and EU(25) in 2005.
e Membership as of the year stated.
Note: Between 1973 and 1983 and between 1993 and 2003 export and import shares were significantly influenced by oil price developments.

Table II.4

Merchandise trade of the United States by region and by product, 1963, 1973, 1983, 1993, 2003 and 2005

(Billion dollars and percentage)

	Exports						Imports					
	1963	1973	1983	1993	2003	2005	1963	1973	1983	1993	2003	2005
						Value						
World	22.9	72.4	205.6	464.8	723.6	904.3	17.1	70.3	269.9	603.2	1305.1	1732.3
						Share						
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
North America	21.2	26.4	25.4	30.6	36.9	36.7	25.7	28.6	26.1	25.6	28.2	28.8
South and Central America	11.6	9.5	7.9	7.9	7.1	7.9	20.1	10.3	9.5	6.1	6.4	7.5
Europe	29.7	28.8	26.8	24.9	23.3	22.7	27.5	27.6	21.1	28.1	21.7	20.0
European Union (25)	..	..	..	..	21.3	20.6	..	..	..	..	20.0	18.3
Other Europe	..	..	..	..	2.0	2.1	..	..	..	..	1.7	1.7
Commonwealth of Independent States (CIS)	..	..	..	0.8	0.5	0.6	..	..	..	0.4	0.8	1.1
Russian Federation	..	..	..	0.6	0.3	0.4	..	..	..	0.3	0.7	0.9
Africa	4.3	3.1	3.7	2.0	1.5	1.7	4.7	4.3	5.6	2.6	2.6	3.9
South Africa	1.2	1.0	1.0	0.5	0.4	0.4	1.5	0.5	0.8	0.3	0.4	0.3
Other Africa	3.1	2.1	2.7	1.5	1.1	1.3	3.2	3.8	4.8	2.3	2.2	3.6
Middle East	2.4	3.0	6.5	3.6	2.7	3.5	1.8	2.4	2.8	2.7	3.4	3.8
Asia	30.6	33.3	26.0	30.1	27.9	26.8	19.6	26.1	34.5	42.5	37.1	36.8
Japan	7.5	11.4	10.1	10.3	7.2	6.1	8.8	13.8	16.1	18.3	9.3	8.2
China	0.9	0.9	1.4	1.9	3.9	4.6	0.6	0.1	0.9	5.6	12.5	15.0
Six East Asian traders	3.9	5.6	9.2	13.4	12.2	11.5	2.9	7.3	12.2	14.4	10.6	9.4
Other Asia	10.1	6.3	5.3	4.5	4.6	4.5	7.9	4.8	5.3	4.1	4.6	4.3
Total merchandise	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agricultural products	29.8	28.7	21.6	13.3	10.5	9.1	33.3	18.3	10.3	7.3	5.9	5.5
Food	21.5	20.2	17.3	10.1	8.1	6.8	23.3	13.6	7.8	5.3	4.7	4.2
Fish	0.1	0.4	0.4	0.7	0.5	0.5	2.3	2.8	1.4	1.8	0.9	0.7
Other food products	21.4	22.8	16.8	9.4	7.6	6.4	21.0	11.8	6.4	4.3	3.8	3.5
Raw materials	6.3	5.5	4.3	3.2	2.5	2.3	10.0	4.7	2.5	2.0	1.3	1.3
Fuels and mining products	8.1	6.0	7.6	4.1	5.9	5.6	22.9	18.6	26.4	12.1	14.2	19.4
Ores and other minerals	2.2	2.1	1.9	1.0	1.0	1.4	6.1	2.4	1.3	0.7	0.4	0.5
Fuels	4.1	2.3	4.7	2.1	1.9	2.9	11.6	12.8	22.3	9.8	12.5	17.2
Non-ferrous metals	1.7	1.5	1.1	1.0	0.9	1.2	5.3	3.5	2.8	1.5	1.3	1.7
Manufactures	61.4	62.8	66.8	76.6	81.4	81.0	40.5	60.5	60.5	77.1	75.9	71.5
Iron and steel	2.3	1.8	0.8	0.8	0.9	1.3	3.8	4.3	2.7	1.8	1.1	1.8
Chemicals	8.4	8.1	9.9	9.9	13.0	13.3	3.3	11.1	4.2	5.1	8.0	7.6
Pharmaceuticals	1.2	0.9	1.3	1.3	2.7	2.9	0.3	0.2	0.4	0.7	2.4	2.3
Other chemicals	7.4	7.2	8.6	8.6	10.4	10.4	3.0	10.9	3.7	4.4	5.5	5.3
Other semi-manufactures	5.6	5.2	4.9	5.3	6.0	6.0	10.9	8.8	6.9	6.8	7.0	6.9
Machinery and transport equipment	35.9	43.0	42.7	48.4	48.6	48.0	10.8	31.1	33.0	44.0	40.9	38.3
Office and telecom equipment	4.2	6.2	10.8	14.1	15.6	13.9	2.3	6.3	8.9	15.3	13.8	13.5
EDP and office equipment	..	..	5.7	6.7	5.7	5.2	..	..	2.6	7.3	6.3	5.8
Telecommunications equipment	..	..	1.8	3.1	3.3	3.4	..	..	4.3	4.6	5.6	6.1
Integrated circuits	..	..	2.3	4.3	6.6	5.3	..	..	2.0	3.5	2.0	1.5
Transport equipment	13.3	18.6	16.7	18.0	16.6	16.7	4.7	17.9	16.4	17.2	16.5	14.1
Automotive products	7.5	11.0	8.4	9.6	9.6	9.5	3.5	15.2	14.4	14.9	13.9	11.9
Other transport equipment	5.7	7.6	8.3	8.4	7.0	7.2	1.1	2.7	1.9	2.3	2.6	2.3
Other machinery	18.4	15.3	15.3	16.3	16.4	17.4	3.8	6.8	7.7	11.5	10.6	10.7
Power generating machinery	0.6	0.5	2.6	2.6	2.9	3.2	0.1	0.1	0.7	1.5	1.3	1.2
Non-electrical machinery	14.2	11.0	9.3	9.0	8.5	9.3	2.8	4.4	4.3	5.9	5.1	5.4
Electrical machinery	3.6	3.8	3.4	4.8	5.0	4.9	1.0	2.3	2.6	4.2	4.2	4.0
Textiles	2.1	1.8	1.2	1.3	1.5	1.4	4.0	2.2	1.2	1.5	1.4	1.3
Clothing	0.4	0.4	0.5	1.1	0.8	0.6	2.2	3.1	3.9	5.9	5.5	4.6
Other manufactures	6.5	5.4	6.8	9.9	10.6	10.6	5.4	7.5	8.6	12.1	12.1	11.1
Personal and household goods	..	..	..	0.8	0.7	0.7	..	..	..	3.5	3.7	3.4
Scientific and controlling instruments	..	..	..	3.4	4.3	4.3	..	..	..	1.4	1.8	1.8
Miscellaneous manufactures	..	..	..	5.7	5.6	5.6	..	..	..	7.2	6.5	5.9

Table II.5

Merchandise trade of Europe by region and by product, 2001-05

(Billion dollars and percentage)

	Total Exports					Imports				
	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005
					Value					
World	2654.6	2839.4	3386.5	4050.9	4371.9	2732.4	2876.1	3461.6	4160.9	4542.7
					Share					
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Intra-Europe	72.7	68.1	73.8	73.8	73.2	70.2	66.9	72.0	71.8	70.3
European Union (15)	66.8	62.8	67.8	67.5	66.7	65.1	61.9	66.6	66.2	64.5
Other Europe	5.8	5.3	6.0	6.3	6.5	5.2	4.9	5.4	5.6	5.8
Inter-regional trade	25.5	24.4	25.1	25.1	25.9	29.7	26.7	26.9	27.2	28.7
North America	10.4	9.7	9.5	9.1	9.1	8.4	7.6	6.3	5.8	5.7
South and Central America	1.7	1.6	1.3	1.3	1.3	1.7	1.6	1.7	1.8	1.8
Commonwealth of Independent States (CIS)	1.3	1.5	1.9	2.2	2.5	2.7	2.6	2.9	3.3	4.0
Russian Federation	0.8	1.0	1.3	1.5	1.7	2.2	2.1	2.3	2.6	3.1
Africa	2.4	2.3	2.4	2.4	2.6	2.9	2.8	2.8	2.7	3.0
North Africa	1.2	1.2	1.2	1.2	0.9	1.4	1.3	1.4	1.4	1.1
Sub-Saharan Africa	1.2	1.1	1.3	1.2	1.6	1.5	1.5	1.4	1.3	1.9
South Africa	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Other Sub-Saharan Africa	0.8	0.7	0.8	0.7	1.1	1.0	1.0	0.9	0.8	1.4
Middle East	2.2	2.3	2.5	2.6	2.8	1.9	1.5	1.5	1.6	2.0
Asia	7.5	7.0	7.5	7.6	7.6	12.1	10.7	11.8	12.0	12.2
Japan	1.7	1.6	1.5	1.5	1.4	3.3	2.7	2.5	2.4	2.2
China	0.9	1.0	1.4	1.5	1.6	2.7	2.7	3.7	4.1	4.6
Australia and New Zealand	0.7	0.6	0.7	0.7	0.7	0.4	0.4	0.4	0.4	0.4
Six East Asian traders	3.0	2.9	2.7	2.7	2.3	4.0	3.8	3.8	3.8	2.6
Other Asia	1.2	0.9	1.1	1.2	1.7	1.7	1.1	1.4	1.4	2.5
Total merchandise	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agricultural products	9.2	8.7	9.6	9.2	9.1	9.9	9.4	10.3	9.7	9.5
Food	7.6	7.3	8.0	7.7	7.6	7.7	7.6	8.4	8.0	7.7
Fish	0.6	0.6	0.6	0.6	0.6	0.8	0.8	0.8	0.7	0.7
Other Food products	7.0	6.7	7.4	7.1	7.0	7.0	6.8	7.6	7.2	7.0
Raw materials	1.6	1.4	1.5	1.5	1.5	2.1	1.8	1.9	1.8	1.7
Fuels and mining products	7.7	6.8	7.2	7.7	9.3	12.1	11.0	11.4	12.2	15.1
Ores and other minerals	0.7	0.6	0.7	0.9	0.9	1.3	1.1	1.2	1.4	1.4
Fuels	5.1	4.5	4.9	5.1	6.5	8.7	7.8	8.4	8.8	11.6
Non-ferrous metals	1.9	1.7	1.6	1.7	1.8	2.2	2.0	1.8	2.0	2.0
Manufactures	80.8	75.9	80.9	80.8	79.7	77.1	72.3	75.9	75.7	73.7
Iron and steel	2.7	2.4	2.7	3.3	3.5	2.5	2.2	2.5	3.1	3.1
Chemicals	12.9	12.7	14.9	14.9	15.2	10.9	10.8	12.6	12.6	12.8
Pharmaceuticals	3.1	3.6	4.9	5.0	5.0	2.4	2.9	4.0	4.0	3.9
Other chemicals	9.8	9.1	9.9	9.9	10.2	8.5	8.0	8.6	8.7	8.9
Other semi-manufactures	8.8	8.2	8.7	8.7	8.5	8.1	7.7	8.0	7.9	7.7
Machinery and transport equipment	41.6	39.2	40.3	40.1	39.2	40.7	37.4	37.9	37.7	36.1
Office and telecom equipment	10.8	9.5	8.4	8.3	8.5	13.3	11.5	10.3	10.4	10.4
EDP and office equipment	4.3	3.8	3.5	3.4	3.3	5.9	5.1	4.7	4.7	4.6
Telecommunications equipment	4.3	3.8	3.4	3.4	3.7	4.5	4.0	3.7	3.9	4.2
Integrated circuits	2.2	1.9	1.5	1.6	1.4	2.8	2.4	1.8	1.8	1.6
Transport equipment	15.7	15.3	16.5	15.8	16.0	14.4	13.8	15.4	15.1	14.1
Automotive products	10.9	10.5	12.1	12.0	11.4	9.7	9.2	10.6	10.5	9.8
Other transport equipment	4.8	4.8	4.8	4.7	4.6	4.7	4.5	4.8	4.6	4.3
Other machinery	15.1	14.4	15.0	15.0	14.7	13.1	12.2	12.3	12.2	11.7
Textiles	2.3	2.2	2.1	2.0	1.8	2.3	2.1	2.1	1.9	1.7
Clothing	2.4	2.3	2.6	2.4	2.4	3.2	3.1	3.3	3.2	3.1
Other manufactures	9.3	8.9	9.6	9.4	9.2	9.3	8.9	9.5	9.2	9.1
Personal and household goods	2.2	2.1	2.2	2.1	2.0	2.2	2.1	2.3	2.3	2.2
Scientific and controlling instruments	1.9	1.9	2.1	2.1	2.0	1.8	1.8	1.8	1.8	1.7
Miscellaneous manufactures	5.2	5.0	5.3	5.2	5.2	5.3	5.0	5.3	5.1	5.1

Table II.6

Merchandise trade of Japan by region and by product, 1963, 1973, 1983, 1993, 2003 and 2005

(Billion dollars and percentage)

	Exports						Imports					
	1963	1973	1983	1993	2003	2005	1963	1973	1983	1993	2003	2005
						Value						
World	5.5	36.9	147.0	362.2	471.8	594.9	6.7	38.3	126.4	241.6	382.9	514.9
						Share						
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
North America	30.7	29.2	32.4	32.2	27.3	25.5	37.6	33.2	24.6	26.9	18.1	14.9
South and Central America	5.3	5.2	2.3	3.3	1.4	1.6	6.4	4.4	3.5	2.8	2.0	2.4
Europe	13.3	17.9	15.8	18.3	17.0	15.7	10.0	10.6	8.8	15.5	14.5	12.7
European Union (25)	..	..	..	16.9	16.0	14.7	..	..	..	..	13.1	11.4
Other Europe	..	..	..	1.4	0.9	1.0	..	..	..	..	1.5	1.3
Commonwealth of Independent States (CIS)	-	-	-	0.5	0.5	0.9	-	-	-	1.2	1.2	1.3
Russian Federation	-	-	-	0.4	0.4	0.8	-	-	-	1.1	1.1	1.2
Africa	6.3	4.1	3.6	2.3	1.0	1.2	3.9	4.5	2.6	1.6	1.7	1.9
South Africa	1.5	1.6	1.2	0.6	0.4	0.6	1.9	1.5	1.3	0.8	0.9	1.1
Other Africa	4.8	2.4	2.4	1.5	0.6	0.6	2.0	3.1	1.2	0.8	0.7	0.8
Middle East	3.2	4.1	10.8	3.3	2.7	2.8	11.2	12.5	26.5	11.3	13.4	17.0
Asia	34.9	31.6	31.0	40.1	49.0	51.0	28.2	34.5	32.6	40.3	49.1	49.8
China a	1.1	2.8	3.3	4.8	15.4	16.5	1.1	2.5	4.0	8.5	19.7	21.1
Six East Asian traders	15.8	18.0	17.8	28.3	29.0	30.2	8.4	8.8	9.7	17.0	16.6	15.7
Australia and New Zealand	3.7	3.9	3.6	2.5	2.5	2.5	8.5	10.2	6.0	5.8	4.5	5.2
Other Asia	14.2	6.9	6.3	4.6	1.8	1.8	10.3	12.9	12.9	9.1	8.4	7.8
Total merchandise	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agricultural products	8.8	4.1	1.8	1.0	1.0	1.0	44.5	36.0	21.7	24.6	15.3	12.8
Food	5.9	3.4	1.0	0.6	0.5	0.5	20.8	18.9	13.5	17.3	12.2	10.4
Fish	3.7	1.4	0.5	0.2	0.2	0.2	0.5	2.6	3.1	5.8	3.3	2.7
Other food products	2.2	0.9	0.6	0.4	0.3	0.3	20.2	16.3	10.5	11.6	9.0	7.7
Raw materials	3.0	1.7	0.7	0.5	0.5	0.5	23.7	17.1	7.1	7.3	2.9	2.4
Fuels and mining products	1.2	1.2	1.5	1.4	1.7	2.5	32.9	37.8	55.9	26.8	26.1	31.9
Ores and other minerals	0.1	0.1	0.2	0.1	0.4	0.6	13.0	11.6	5.9	3.6	2.7	3.5
Fuels	0.3	0.3	0.3	0.5	0.3	0.7	18.0	21.8	46.7	20.4	21.2	25.8
Non-ferrous metals	0.8	0.8	1.0	0.7	0.9	1.1	1.9	4.3	3.2	2.7	2.2	2.5
Manufactures	88.8	90.7	95.6	95.5	93.0	91.9	22.4	25.6	21.5	46.1	57.1	53.7
Iron and steel	12.9	14.4	8.7	4.3	3.8	4.6	1.3	0.6	1.1	1.7	0.9	1.4
Chemicals	5.8	5.8	4.6	5.6	8.3	8.8	5.5	4.9	5.5	7.3	7.7	7.3
Pharmaceuticals	0.5	0.3	0.2	0.4	0.7	0.8	0.8	0.9	1.0	1.6	1.6	1.6
Other chemicals	5.3	5.5	4.4	5.1	7.6	8.3	4.9	3.9	4.6	5.7	6.1	5.8
Other semi-manufactures	11.7	7.0	6.3	4.4	4.3	4.9	1.2	0.9	2.1	4.9	4.8	4.1
Machinery and transport equipment	27.4	51.7	63.8	71.8	66.8	64.1	12.0	8.3	7.0	16.9	27.6	25.7
Office and telecom equipment	6.8	12.7	18.4	23.3	19.1	16.5	2.1	2.1	1.9	6.8	14.2	13.0
EDP and office equipment	..	..	4.8	5.1	5.1	4.1	..	..	0.8	2.9	6.3	5.4
Telecommunications equipment	..	..	11.1	8.1	6.5	5.7	..	..	0.4	1.8	5.4	5.5
Integrated circuits	..	..	2.5	6.1	7.5	6.7	..	..	0.7	2.2	4.5	6.1
Transport equipment	12.2	26.1	28.6	28.3	27.3	26.2	2.4	1.8	2.1	4.5	4.7	4.1
Automotive products	3.4	12.0	20.9	22.1	21.8	20.6	0.5	0.6	0.5	2.7	2.9	2.6
Other transport equipment	8.7	14.1	7.7	6.2	5.6	5.6	1.9	1.2	1.6	1.8	1.8	1.5
Other machinery	8.4	12.9	16.8	20.1	20.4	21.4	7.5	4.4	3.0	5.6	8.7	8.6
Power generating machinery	0.2	0.5	1.3	1.5	1.2	1.5	0.9	0.5	0.6	0.8	1.2	1.1
Non-electrical machinery	4.6	8.1	10.3	12.4	12.6	13.4	5.4	2.8	1.6	2.7	3.4	3.6
Electrical machinery	3.6	4.3	5.1	6.4	6.6	6.5	1.3	1.2	0.9	2.1	4.1	2.9
Textiles	16.8	6.6	3.6	1.9	1.4	1.2	0.6	3.0	1.2	1.6	1.3	1.1
Clothing	3.9	1.0	0.4	0.2	0.1	0.1	0.1	1.5	1.2	5.2	5.1	4.4
Other manufactures	10.3	6.5	8.1	7.7	8.4	8.7	1.7	3.6	3.3	8.5	10.2	9.6
Personal and household goods	1.7	0.4	0.2	0.2	0.1	0.2	0.0	0.4	0.6	2.4	2.7	2.4
Scientific and controlling instruments	3.1	3.7	1.4	2.1	3.1	3.3	1.0	1.0	0.8	1.5	2.5	2.5
Miscellaneous manufactures	5.5	2.4	6.5	5.4	5.1	5.3	0.6	2.1	1.9	4.6	5.0	4.7

a Includes significant shipments recorded as exports to Hong Kong, China with China as final destination.

III. Trade by region

1. Overview

Chart III.1

Value of world merchandise trade by region, 1998-05

(Annual percentage change in value)

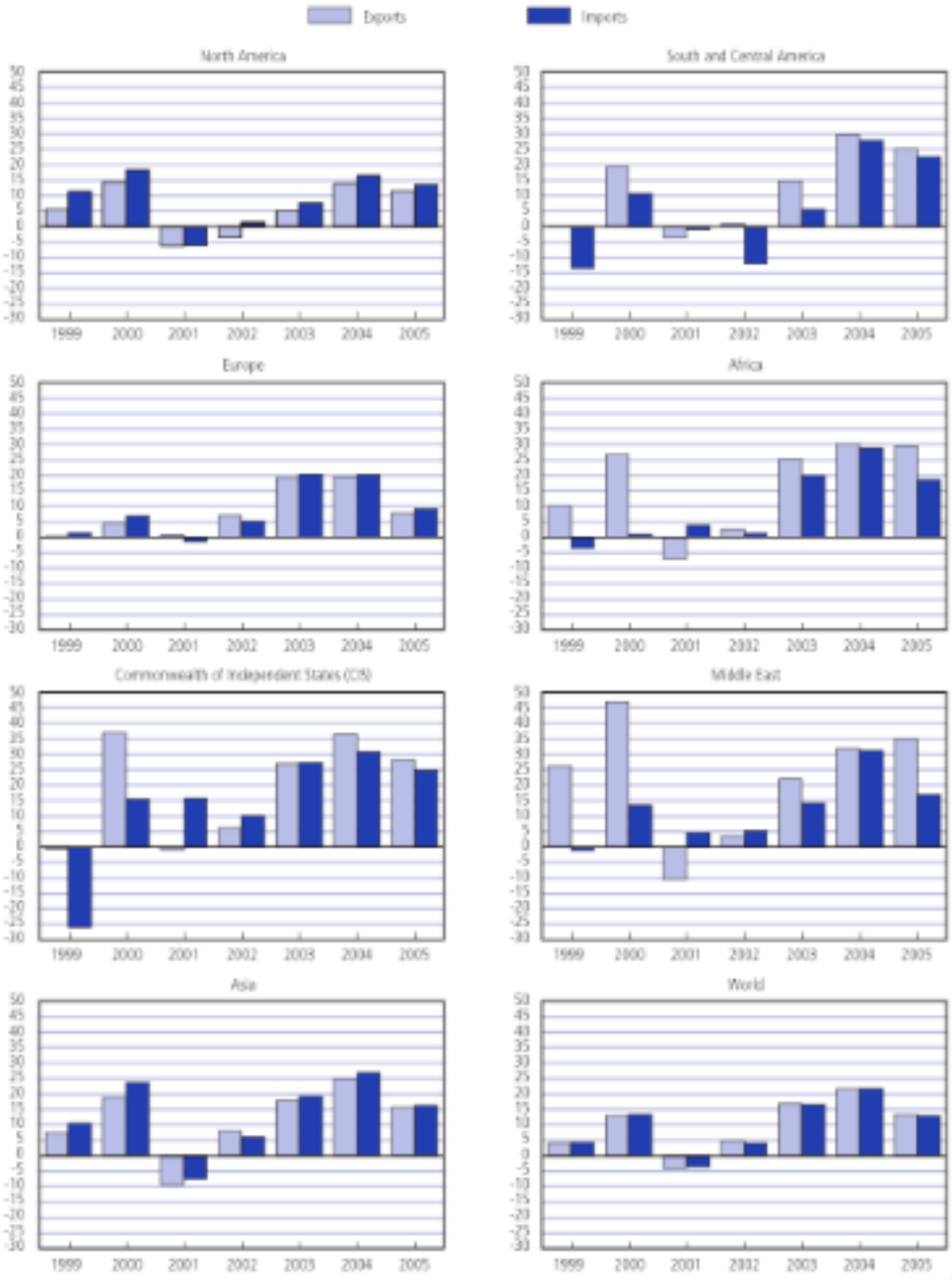


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Chart III.2

Volume of world merchandise trade by selected region, 1998-05

(Annual percentage change)

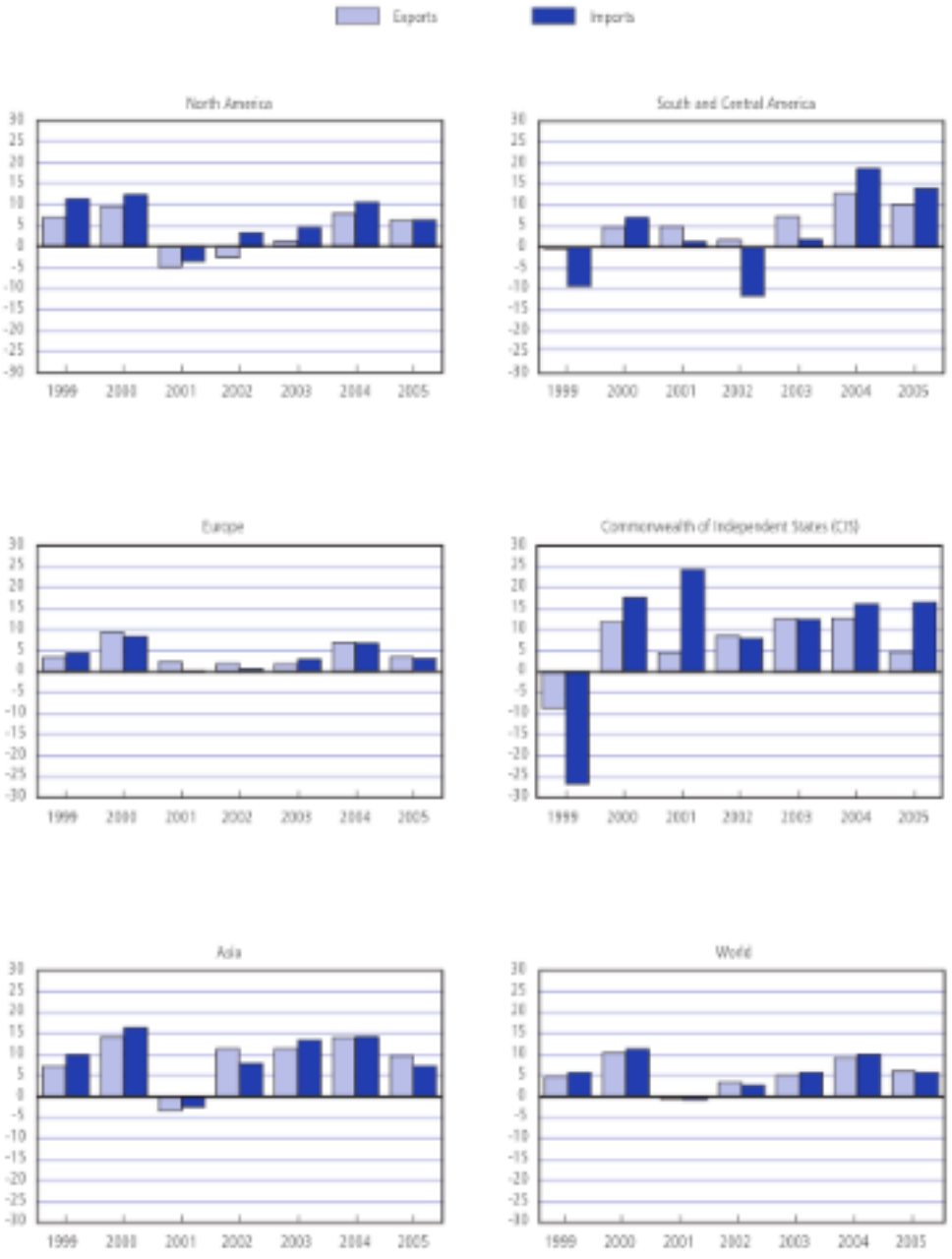

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Table III.1

World merchandise exports by region, 2005

(Billion dollars and percentage)

	Value	Share			Annual percentage change			
	2005	1990	2000	2005	2000-05	2003	2004	2005
World	10159	100.0	100.0	100.0	10	17	22	13
North America	1478	16.6	19.5	14.5	4	5	14	12
United States	904	11.6	12.5	8.9	3	5	13	10
Canada	359	3.8	4.4	3.5	5	8	16	14
Mexico	214	1.2	2.7	2.1	5	3	14	14
South and Central America	355	3.1	3.1	3.5	13	15	30	25
Brazil	118	0.9	0.9	1.2	17	21	32	23
Argentina	40	0.4	0.4	0.4	9	15	17	16
Europe	4372	49.6	42.0	43.0	11	19	20	8
European Union (25)	4001	-	38.8	39.4	10	18	18	7
Commonwealth of Independent States (CIS)	340	1.7	2.3	3.3	18	27	36	28
Russian Federation	244	-	1.7	2.4	18	27	35	33
Africa	298	3.1	2.4	2.9	15	25	30	29
South Africa	52	0.7	0.5	0.5	12	23	26	13
Middle East	538	4.1	4.3	5.3	15	22	32	35
Asia	2719	21.8	26.4	27.4	11	18	25	16
China	762	1.8	4.0	7.5	25	35	35	28
Japan	595	8.5	7.6	5.9	4	13	20	5
India	95	0.5	0.7	0.9	18	16	32	26
Six East Asian traders	983	7.8	10.4	9.7	8	15	24	12
Memorandum items:								
WTO Members (149)	9590	95.6	95.8	94.4	10	17	21	13
ASEAN	653	4.2	6.9	6.4	9	17	23	15
MERCOSUR	160	1.4	1.3	1.6	14	19	28	21

Table III.2

World merchandise imports by region, 2005

(Billion dollars and percentage)

	Value	Share			Annual percentage change			
	2005	1990	2000	2005	2000-05	2003	2004	2005
World	10511	100.0	100.0	100.0	10	17	22	13
North America	2285	19.6	25.8	21.7	6	8	16	14
United States	1732	14.8	19.2	16.5	7	9	17	14
Canada	320	3.5	3.7	3.0	5	8	14	15
Mexico	233	1.2	2.8	2.2	5	1	15	12
South and Central America	238	2.5	3.2	2.8	8	6	28	23
Brazil	78	0.6	0.9	0.7	6	2	31	17
Argentina	29	0.1	0.4	0.3	3	54	62	28
Europe	4548	50.1	42.4	43.2	10	20	20	9
European Union (25)	4135	-	39.1	39.3	10	20	20	9
Commonwealth of Independent States (CIS)	216	1.9	1.2	2.1	22	27	31	25
Russian Federation	125	-	0.7	1.2	23	25	28	29
Africa	249	2.8	2.0	2.4	14	20	29	19
South Africa	62	0.5	0.5	0.6	16	36	39	13
Middle East	322	2.9	2.6	3.1	14	14	31	17
Asia	2539	20.3	22.9	24.7	12	19	27	16
China	660	1.5	3.4	6.3	24	40	36	18
Japan	515	6.7	5.8	4.9	6	14	19	13
India	135	0.7	0.8	1.3	21	26	37	20
Six East Asian traders	905	8.0	9.4	8.6	8	12	27	14
Memorandum items:								
WTO Members (149)	10099	95.4	97.3	96.1	10	16	21	13
ASEAN	594	4.6	5.8	5.7	9	12	25	16
MERCOSUR	114	0.8	1.4	1.1	5	11	38	20

Table II.3

Intra- and inter-regional merchandise trade, 2005

(Billion dollars and percentage)

Origin \ Destination	North America	South and Central America	Europe	Commonwealth of Independent States (CIS)	Africa	Middle East	Asia	World
Value								
North America	824	87	238	7	18	34	270	1478
South and Central America	118	86	68	6	10	6	48	355
Europe	398	58	3201	108	112	122	332	4372
Commonwealth of Independent States (CIS)	19	7	178	62	5	11	43	340
Africa	63	8	128	1	26	5	49	298
Middle East	66	3	87	3	15	54	281	508
Asia	608	51	498	37	54	89	1424	2779
World	2095	301	4398	224	240	321	2448	10159
Share of inter-regional trade flows in each region's total merchandise exports								
North America	55.8	5.9	16.1	0.5	1.2	2.3	18.3	100.0
South and Central America	33.2	24.5	19.1	1.8	2.7	1.8	13.6	100.0
Europe	9.1	1.3	73.2	2.5	2.6	2.8	7.6	100.0
Commonwealth of Independent States (CIS)	5.7	2.0	52.3	18.1	1.4	3.1	11.8	100.0
Africa	21.2	2.8	42.9	0.3	8.9	1.7	16.5	100.0
Middle East	12.3	0.6	16.1	0.6	2.9	10.1	52.2	100.0
Asia	21.9	1.9	17.9	1.3	1.9	3.2	51.2	100.0
World	20.6	3.0	43.3	2.2	2.4	3.2	24.0	100.0
Share of regional trade flows in world merchandise exports								
North America	8.1	0.9	2.3	0.1	0.2	0.3	2.7	14.5
South and Central America	1.2	0.8	0.7	0.1	0.1	0.1	0.5	3.5
Europe	3.9	0.6	31.5	1.1	1.1	1.2	3.3	43.0
Commonwealth of Independent States (CIS)	0.2	0.1	1.8	0.6	0.0	0.1	0.4	3.3
Africa	0.6	0.1	1.3	0.0	0.3	0.1	0.5	2.9
Middle East	0.7	0.0	0.9	0.0	0.2	0.5	2.8	5.0
Asia	6.0	0.5	4.9	0.4	0.5	0.9	14.0	27.4
World	20.6	3.0	43.3	2.2	2.4	3.2	24.0	100.0

Chart II.3

World trade in commercial services by selected region, 1998-05

(Annual percentage change in value)

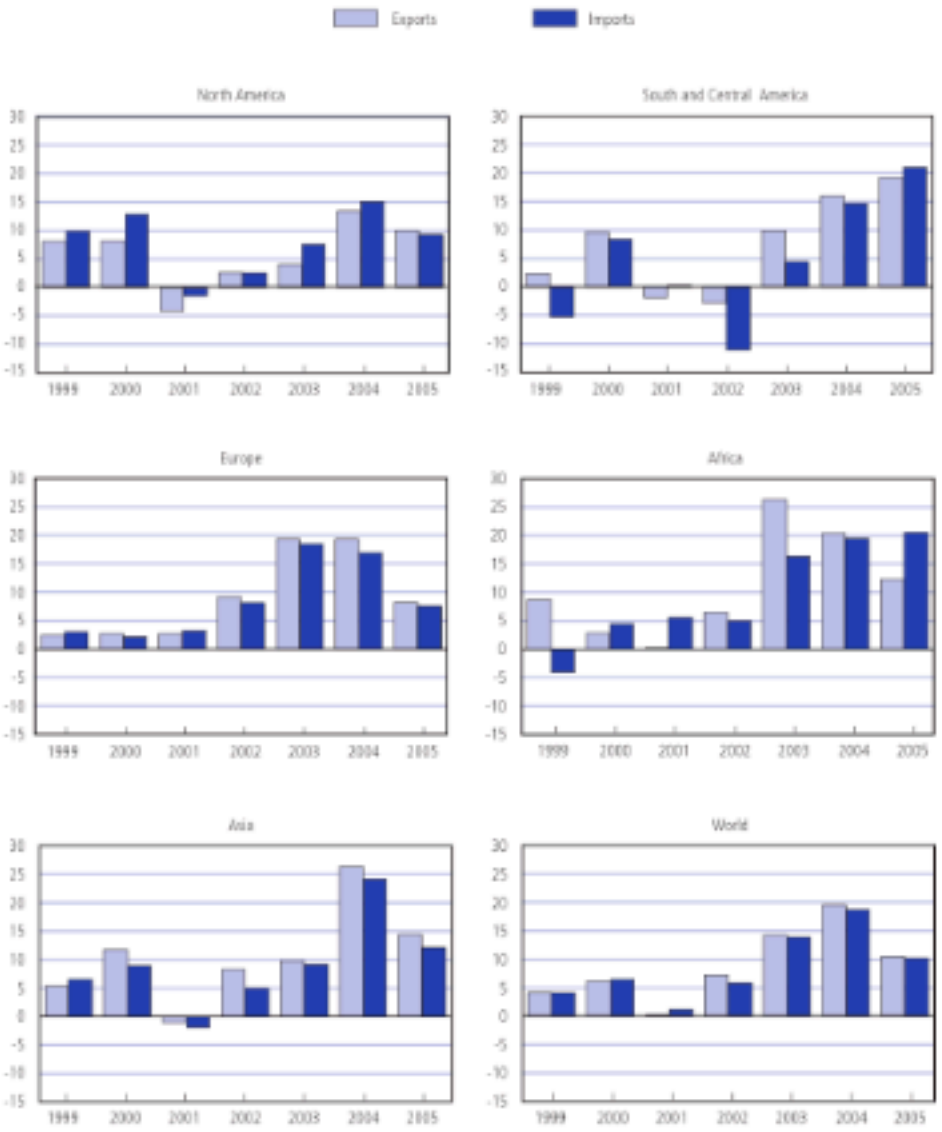

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Table II.4

World exports of commercial services by region, 2005

(Billion dollars and percentage)

	Value	Share			Annual percentage change			
	2005	1990	1995	2000	2000-05	2003	2004	2005
World	2415	100.0	100.0	100.0	10	14	20	10
North America	622	20.3	19.7	22.2	5	4	13	10
United States	354	17.0	16.8	18.7	5	4	14	10
South and Central America	68	2.9	2.9	3.2	8	10	16	19
Brazil	15	0.5	0.5	0.6	11	9	21	28
Europe	1245	.	50.4	48.4	12	19	18	8
European Union (25)	1121	.	..	43.3	12	19	19	8
United Kingdom	189	6.9	6.5	7.9	10	15	23	2
Germany	149	8.5	6.2	5.3	15	20	17	18
France	115	8.5	7.0	5.4	7	13	11	8
Italy	94	6.2	5.2	3.8	11	19	17	13
Commonwealth of Independent States (CIS)	42	.	..	1.2	20	16	29	28
Russian Federation	24	.	0.9	0.6	21	20	25	21
Africa	57	2.4	2.2	2.1	13	26	20	12
Egypt	15	0.6	0.7	0.6	9	19	58	6
South Africa	10	0.4	0.4	0.3	15	69	14	14
Middle East	55	..	..	2.2	11	27	14	13
Israel	17	0.6	0.7	1.0	5	12	19	12
Asia	525	16.8	21.8	20.8	11	10	26	14
Japan a	138	..	5.8	4.9	8	8	25	14
China	74	0.7	1.6	2.0	20	18	34	19
Hong Kong, China	62	2.3	2.9	2.7	9	4	18	13
India	56	0.6	0.6	1.1	..	21	..	..
Singapore	45	1.6	2.3	2.0	9	12	19	10
Korea, Republic of	44	1.2	1.9	2.0	8	16	28	8
Australia	28	1.2	1.3	1.2	8	18	19	8
Taipei, Chinese	26	0.9	1.3	1.3	5	7	11	8
Thailand	20	0.8	1.2	0.9	8	3	21	8
Malaysia	19	0.5	1.0	0.9	7	-9	24	14
Macao, China b	9	0.2	0.3	0.2	..	18	44	..

a Secretariat estimates for exports prior to 2003 are based on the same methodology applied by the Bank of Japan. See the Technical Notes.
b Secretariat estimates.

Table II.5

World imports of commercial services by region, 2005

(Billion dollars and percentage)

	Value	Share			Annual percentage change			
	2005	1990	1995	2000	2000-05	2003	2004	2005
World	2345	100.0	100.0	100.0	10	14	19	10
North America	366	16.5	14.5	18.2	6	8	15	9
United States	281	11.9	10.8	14.1	6	6	16	9
South and Central America	73	3.0	3.8	3.7	5	-4	15	21
Brazil	22	0.8	1.1	1.1	7	6	12	58
Europe	1129	.	46.7	45.7	11	18	17	8
European Union (25)	1088	.	43.5	42.6	11	19	16	7
Germany	201	10.1	10.9	9.2	8	19	15	4
United Kingdom	154	5.4	5.2	6.5	10	13	20	6
France	105	6.1	5.4	4.1	12	20	19	8
Italy	92	5.7	4.5	3.7	11	20	10	15
Commonwealth of Independent States (CIS)	62	.	..	1.6	21	17	28	19
Russian Federation	38	.	1.7	1.1	19	16	23	18
Africa	69	3.2	2.9	2.5	13	16	19	21
South Africa	12	0.4	0.5	0.4	15	52	26	15
Egypt	9	0.4	0.4	0.5	6	0	24	27
Middle East	85	..	..	3.3	12	19	20	18
Saudi Arabia	14	1.5	0.7	0.7	5	11	39	29
Asia	573	21.8	27.3	25.0	9	9	24	12
Japan	133	10.3	10.1	7.7	3	3	21	2
China	83	0.5	2.1	2.4	18	19	31	16
Korea, Republic of	58	1.2	2.1	2.2	12	11	24	17
India	52	0.7	0.8	1.3	...	23	...	...
Singapore	44	1.0	1.7	1.9	9	13	23	9
Hong Kong, China	32	1.3	1.7	1.7	6	1	19	5
Taipei, Chinese	21	1.7	1.9	1.7	4	4	20	5
Australia	29	1.6	1.4	1.2	10	18	26	9
Thailand	27	0.8	1.6	1.0	12	9	27	20
Indonesia a	23	0.7	1.1	1.0	...	2	...	...
Malaysia	22	0.7	1.2	1.1	5	7	8	15

a Secretariat estimate.

Trade by region

Table III.6

Exports of commercial services of selected economies by selected partners, 2005

(Percentage)

	World	United States	EU (25)	Japan	Other economies
World	100	12	38	5	45
United States	100	-	35	12	53
European Union (25)	100	31	-	5	64
Japan	100	27	24	-	49
Other economies	100	7	19	5	70

Note: Excluding intra-EU (25) trade.

Table III.7

Imports of commercial services of selected economies by selected partners, 2005

(Percentage)

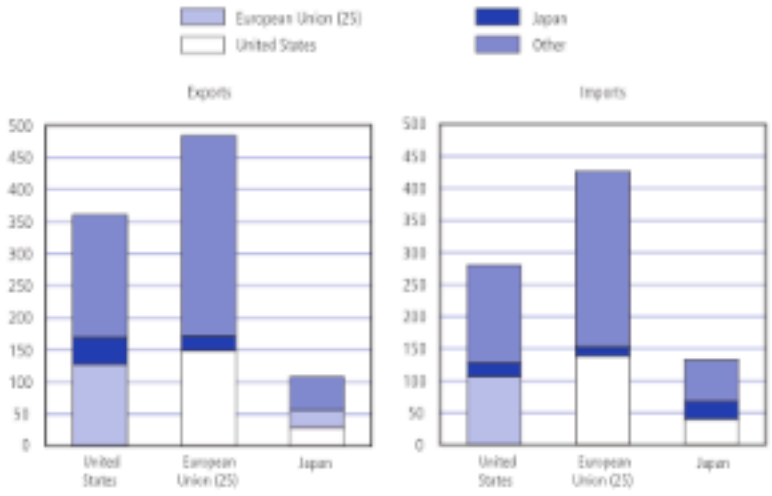
	World	United States	EU (25)	Japan	Other economies
World	100	15	21	5	59
United States	100	-	38	8	54
European Union (25)	100	32	-	3	64
Japan	100	30	21	-	49
Other economies	100	12	23	5	60

Note: Excluding intra-EU (25) trade.

Chart III.4

Trade in commercial services of selected economies by selected partners, 2005

(Billion dollars)



Note: Excluding intra-EU trade.

II. Selected long-term trends

Chart II.1

World merchandise trade and production by major product group, 1950-05

(Average annual percentage change in volume terms)

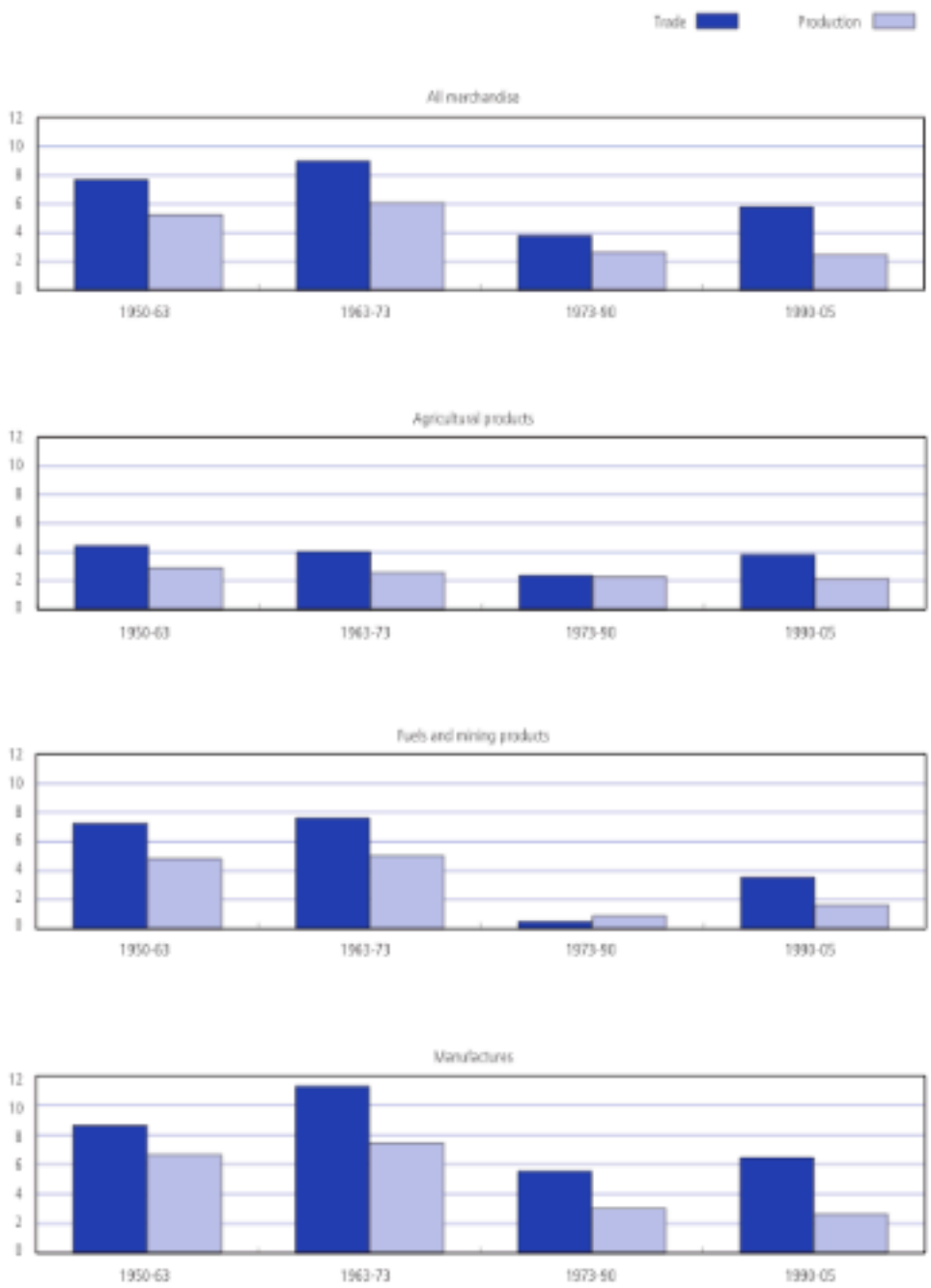
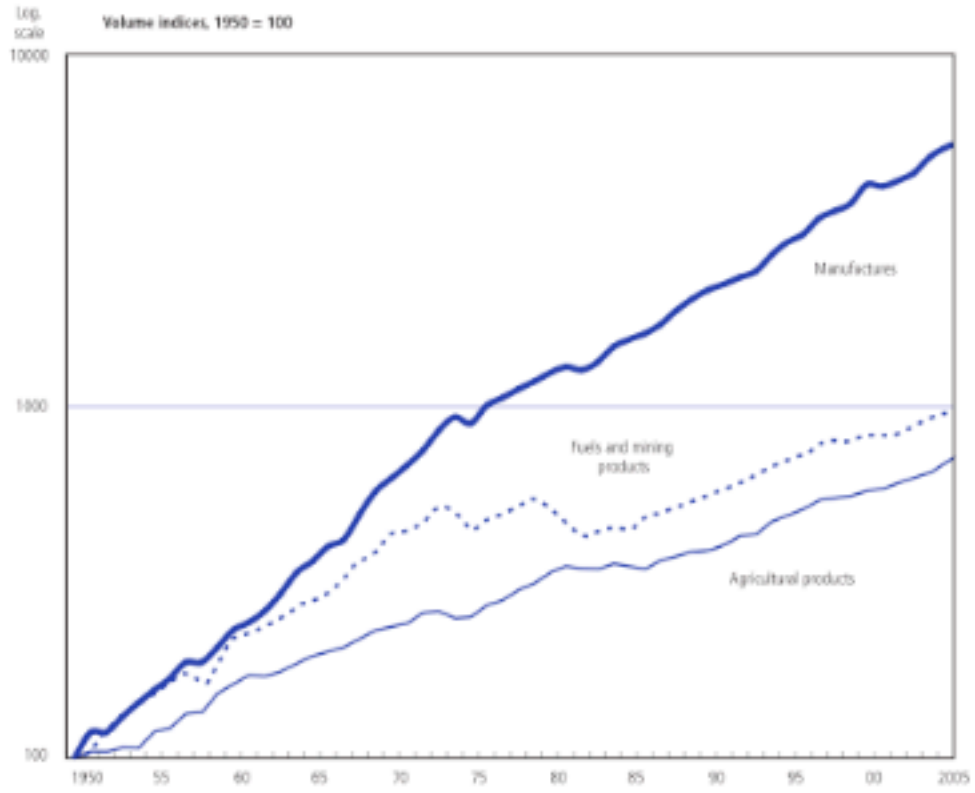


Chart II.2

World merchandise trade by major product group, 1950-05



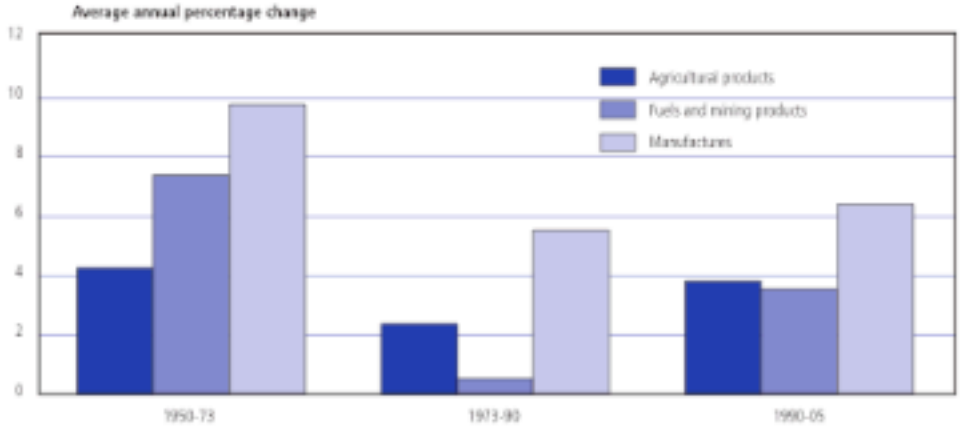


Table II.1

World merchandise exports, production and gross domestic product, 1950-05

(Annual percentage change)

	Value	Volume							
	Exports	Exports				Production				World GDP
	Total a	Agricultural products	Fuels and mining products	Manufactures	Total a	Agricultural products	Fuels and mining products	Manufactures	Total	Agriculture	Mining	Manufacturing	
1950-63	7.4	3.7	8.5	10.1	7.7	4.5	7.2	8.6	5.2	2.9	4.8	6.6	4.7
1964	11.8	6.9	11.8	15.0	10.9	5.4	8.8	14.9	9.1	4.8	8.6	10.0	7.2
1965	8.3	4.3	7.1	10.9	6.6	5.1	3.2	7.4	5.6	0.0	3.9	9.1	4.1
1966	9.2	4.1	9.8	10.8	7.7	3.7	6.2	10.3	6.6	3.4	5.1	8.3	6.5
1967	5.2	-0.2	5.7	7.1	5.7	2.4	10.3	4.7	4.9	3.3	2.4	5.1	3.7
1968	11.0	4.1	14.2	14.9	10.8	5.7	12.0	17.9	5.9	2.2	7.1	7.3	5.9
1969	14.2	6.9	9.2	16.5	12.2	5.4	6.0	16.5	5.6	0.0	2.2	8.0	6.7
1970	14.6	10.6	13.6	15.4	8.7	3.1	12.4	8.7	5.3	5.1	7.5	5.3	5.1
1971	11.7	7.4	11.3	13.7	7.0	2.0	1.0	9.3	5.0	2.0	4.0	5.0	4.4
1972	18.3	20.3	14.1	19.4	8.4	6.9	6.9	10.1	4.8	0.0	2.9	6.7	5.6
1973	38.4	45.5	47.4	34.1	12.1	8.9	10.2	14.2	8.2	4.9	6.5	9.8	6.9
1974	46.9	21.7	122.9	21.3	5.4	-4.5	-1.7	8.8	2.5	1.9	1.8	3.3	2.1
1975	4.3	1.0	-4.0	8.8	-7.3	1.0	-12.0	-4.0	-1.6	3.6	-6.0	-3.9	1.4
1976	15.1	10.3	16.3	12.8	11.8	7.5	6.8	12.6	6.7	0.9	8.3	8.2	5.1
1977	18.7	13.5	10.6	14.7	4.2	3.5	2.7	5.0	3.9	2.6	3.4	4.5	4.2
1978	15.8	13.3	3.7	21.6	4.7	6.8	5.3	5.9	4.5	3.4	0.8	5.1	4.6
1979	27.0	24.4	47.0	21.3	5.2	4.8	5.9	5.0	3.6	0.8	8.9	4.1	4.0
1980	22.6	13.8	41.8	15.9	2.9	6.8	-6.3	5.9	-0.7	0.9	-2.6	0.7	2.9
1981	-1.2	-1.9	-3.2	-0.7	-0.6	5.0	-0.9	4.0	0.1	3.6	-7.9	0.2	2.0
1982	-6.4	-7.5	-10.6	-3.6	-2.2	-2.0	-5.8	-2.1	-1.0	3.2	-6.9	-1.4	0.8
1983	-2.0	-1.4	-6.0	0.5	2.7	0.2	-0.9	5.1	2.2	0.1	-0.9	3.1	2.9
1984	5.9	5.3	-0.9	8.1	8.5	2.8	4.8	10.8	6.5	5.3	3.8	7.2	4.6
1985	0.3	-5.7	-3.2	3.8	2.6	-1.2	-1.2	4.8	2.8	2.4	-1.1	3.4	3.5
1986	9.4	11.1	-23.8	20.3	4.0	-1.7	9.1	4.1	2.8	1.8	3.0	3.1	3.4
1987	17.5	14.9	11.0	19.7	5.5	5.6	1.7	6.3	3.5	1.0	1.3	4.4	3.7
1988	13.7	13.1	0.9	16.1	8.5	2.7	5.6	9.5	4.9	1.7	5.3	5.7	4.5
1989	7.8	4.3	15.5	6.9	6.4	3.1	4.4	7.8	3.5	3.4	4.3	3.4	3.8
1990	12.9	4.7	15.3	14.7	3.8	1.0	3.2	6.1	1.3	2.5	1.0	1.0	2.5
1991	1.5	0.8	-6.2	3.3	3.7	3.3	3.4	3.6	-0.4	0.4	-0.5	-0.6	0.8
1992	6.7	7.1	-0.9	8.0	4.8	6.0	4.4	4.7	0.1	2.3	0.8	-0.5	1.1
1993	-0.2	-4.1	-3.5	0.0	4.2	1.0	3.7	4.1	-0.1	0.6	2.0	-0.6	0.9
1994	13.6	15.8	5.1	15.6	9.2	8.7	6.8	11.1	2.8	2.9	1.6	2.9	3.2
1995	19.3	17.3	10.5	20.0	7.3	4.4	4.1	9.3	4.6	2.1	2.2	5.5	2.3
1996	4.6	2.9	13.6	3.5	5.1	4.4	3.4	5.3	3.5	4.3	2.7	3.5	3.3
1997	3.4	-1.3	2.7	4.6	10.0	5.7	7.4	11.0	4.9	2.4	3.3	5.7	3.4
1998	-1.2	-4.7	-20.5	2.3	4.8	1.7	2.9	4.8	2.2	1.6	1.1	2.4	2.1
1999	3.9	-3.7	15.6	3.3	4.6	1.0	-0.5	5.1	3.1	3.3	-1.3	3.6	2.9
2000	12.8	0.9	47.9	10.1	10.4	3.6	4.5	13.0	5.3	1.9	3.7	6.3	3.8
2001	-4.1	0.1	-9.3	-3.8	-0.6	1.5	-0.7	-1.2	-0.8	1.5	-0.1	-1.4	1.5
2002	4.8	6.1	-0.5	5.4	3.5	3.7	0.6	4.3	1.3	1.8	0.1	1.4	1.9
2003	16.9	16.3	24.1	15.8	5.2	3.4	5.8	5.1	4.3	2.7	3.6	4.8	2.7
2004	21.6	15.3	33.1	20.5	9.5	3.7	5.5	10.9	3.9	4.2	4.2	3.8	3.9
2005	13.4	8.1	36.2	9.9	6.0	5.6	2.4	6.9	2.6	0.5	1.2	3.3	3.3

a Includes unspecified products.

Note: See the Technical Notes for the estimation of world aggregates of merchandise exports, production and GDP.

Table II.2

World merchandise exports by region and selected economy, 1948, 1953, 1963, 1973, 1983, 1993, 2003 and 2005

(Billion dollars and percentage)

	1948	1953	1963	1973	1983	1993	2003	2005
				Value				
World	58.0	84.0	157.0	579.0	1838.0	3675.0	7369.0	10159.0
				Share				
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
North America	28.3	26.9	19.9	17.3	16.8	18.0	15.8	14.5
United States	21.7	18.8	14.9	12.3	11.2	12.6	9.8	8.9
Canada	5.5	5.2	4.1	4.3	4.2	4.0	3.7	3.5
Mexico	1.0	0.7	0.6	0.4	1.4	1.4	2.2	2.1
South and Central America	12.3	10.5	7.0	4.7	4.4	3.0	3.0	3.5
Brazil	2.0	1.8	0.9	1.1	1.2	1.0	1.0	1.2
Argentina	2.8	1.3	0.8	0.6	0.4	0.4	0.4	0.4
Europe	31.5	34.9	41.4	45.4	43.5	45.4	46.0	43.0
Germany a	1.4	5.5	9.8	12.5	9.2	10.3	10.2	9.5
France	3.5	4.8	5.1	6.1	5.2	6.0	5.3	4.5
United Kingdom	11.4	9.0	7.6	5.2	5.0	4.9	4.1	3.8
Italy	1.9	1.8	3.2	3.8	4.0	4.6	4.1	3.6
Commonwealth of Independent States (CIS) b	-	-	-	-	-	1.5	2.6	3.3
Africa	7.3	6.5	5.7	4.8	4.5	2.5	2.4	2.9
South Africa c	2.8	1.7	1.5	1.0	1.0	0.7	0.5	0.5
Middle East	2.0	2.7	3.2	4.1	6.8	3.5	4.1	5.3
Asia	13.6	13.1	12.4	14.9	19.1	26.1	26.1	27.4
China	0.9	1.2	1.3	1.0	1.2	2.5	5.9	7.5
Japan	0.4	1.5	3.5	6.4	8.0	9.9	6.4	5.9
India	2.2	1.3	1.0	0.5	0.5	0.6	0.8	0.9
Australia and New Zealand	3.7	3.2	2.4	2.1	1.4	1.5	1.2	1.3
Six East Asian traders	3.0	2.7	2.4	3.4	5.8	9.7	9.6	9.7
Memorandum item:								
EU d	-	-	27.5	38.6	30.4	36.1	42.4	39.4
USSR, former	2.2	3.5	4.6	3.7	5.0	-	-	-
GATT/WTO Members e	60.4	68.7	72.8	81.8	76.5	89.5	94.3	94.4

a Figures refer to the Fed. Rep. of Germany from 1948 through 1993.
b Figures are significantly affected by changes in the country composition of the region and major adjustment in trade conversion factors between 1993 and 1993.
c Beginning with 1998, figures refer to South Africa only and no longer to the Southern African Customs Union.
d Figures refer to the EEC(6) in 1963, EC(9) in 1973, EC(10) in 1983, EU(12) in 1993, EU(15) in 2003 and EU(25) in 2005.
e Membership as of the year stated.
Note: Between 1973 and 1983 and between 1993 and 2003 export and import shares were significantly influenced by oil price developments.

Table II.3

World merchandise imports by region and selected economy, 1948, 1953, 1963, 1973, 1983, 1993, 2003 and 2005

(Billion dollars and percentage)

	1948	1953	1963	1973	1983	1993	2003	2005
				Value				
World	66.0	84.0	163.0	589.0	1882.0	3769.0	7647.0	10511.0
				Share				
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
North America	23.6	20.7	16.2	17.3	18.5	21.5	22.6	21.7
United States	13.0	13.0	11.4	12.3	14.3	16.0	17.0	16.5
Canada	4.2	5.6	3.7	4.0	3.4	3.7	3.2	3.0
Mexico	1.8	1.7	0.8	0.7	0.7	1.8	2.3	2.2
South and Central America	10.6	9.3	6.8	5.1	3.8	3.3	2.5	2.8
Brazil	1.7	1.6	0.9	1.2	0.9	0.7	0.7	0.7
Argentina	2.4	0.9	0.6	0.4	0.2	0.4	0.2	0.3
Europe	40.4	39.4	45.4	47.4	44.2	44.8	45.3	43.2
Germany a	2.1	4.5	11.0	8.7	8.1	9.1	7.9	7.4
United Kingdom	12.7	11.1	6.7	6.3	5.3	5.6	5.1	4.9
France	5.2	5.0	6.4	5.4	5.6	5.8	5.2	4.7
Italy	2.3	2.9	4.8	4.6	4.2	3.9	3.9	3.6
Commonwealth of Independent States (CIS) b	.	.	.	.	.	1.2	1.7	2.1
Africa	7.6	7.0	5.5	4.0	4.6	2.6	2.1	2.4
South Africa c	2.2	1.5	1.1	0.9	0.8	0.5	0.5	0.6
Middle East	1.7	2.0	2.3	2.8	6.2	3.4	2.7	3.1
Asia	14.2	15.1	14.2	15.1	18.5	23.3	25.1	24.7
China	1.0	2.0	4.1	6.5	1.1	2.8	5.4	6.3
Japan	1.1	1.7	0.9	0.9	6.7	6.4	5.3	4.9
India	3.1	1.4	1.5	0.3	0.7	0.6	0.9	1.3
Australia and New Zealand	2.6	2.4	2.3	1.6	1.4	1.5	1.4	1.4
Six East Asian traders	3.3	3.4	3.1	3.7	6.1	9.9	8.2	8.6
Memorandum item:								
EU d	.	.	29.0	39.3	31.3	34.3	41.6	39.3
USSR, former	1.8	3.3	4.3	3.6	4.3	.	.	.
GATT/WTO Members e	52.9	66.0	74.2	86.1	83.9	88.7	96.1	96.1

a Figures refer to the Fed. Rep. of Germany from 1948 through 1983.
b Figures are significantly affected by changes in the country composition of the region and major adjustment in trade conversion factors between 1983 and 1993.
c Beginning with 1998, figures refer to South Africa only and no longer to the Southern African Customs Union.
d Figures refer to the EEC(6) in 1963, EC(9) in 1973, EC(10) in 1983, EU(12) in 1993, EU(15) in 2003 and EU(25) in 2005.
e Membership as of the year stated.
Note: Between 1973 and 1983 and between 1993 and 2003 export and import shares were significantly influenced by oil price developments.

Table II.4

Merchandise trade of the United States by region and by product, 1963, 1973, 1983, 1993, 2003 and 2005

(Billion dollars and percentage)

	Exports						Imports					
	1963	1973	1983	1993	2003	2005	1963	1973	1983	1993	2003	2005
						Value						
World	22.9	72.4	205.6	464.8	723.6	904.3	17.1	70.3	269.9	603.2	1305.1	1732.3
						Share						
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
North America	21.2	26.4	25.4	30.6	36.9	36.7	25.7	28.6	26.1	25.6	28.2	28.8
South and Central America	11.6	9.5	7.9	7.9	7.1	7.9	20.1	10.3	9.5	6.1	6.4	7.5
Europe	29.7	28.8	26.8	24.9	23.3	22.7	27.5	27.6	21.1	28.1	21.7	20.0
European Union (25)	..	..	..	..	21.3	20.6	..	..	..	..	20.0	18.3
Other Europe	..	..	..	..	2.0	2.1	..	..	..	..	1.7	1.7
Commonwealth of Independent States (CIS)	..	..	..	0.8	0.5	0.6	..	..	..	0.4	0.8	1.1
Russian Federation	..	..	..	0.6	0.3	0.4	..	..	..	0.3	0.7	0.9
Africa	4.3	3.1	3.7	2.0	1.5	1.7	4.7	4.3	5.6	2.6	2.6	3.9
South Africa	1.2	1.0	1.0	0.5	0.4	0.4	1.5	0.5	0.8	0.3	0.4	0.3
Other Africa	3.1	2.1	2.7	1.5	1.1	1.3	3.2	3.8	4.8	2.3	2.2	3.6
Middle East	2.4	3.0	6.5	3.6	2.7	3.5	1.8	2.4	2.8	2.7	3.4	3.8
Asia	30.6	33.3	26.0	30.1	27.9	26.8	19.6	26.1	34.5	42.5	37.1	36.8
Japan	7.5	11.4	10.1	10.3	7.2	6.1	8.8	13.8	16.1	18.3	9.3	8.2
China	0.9	0.9	1.4	1.9	3.9	4.6	0.6	0.1	0.9	5.6	12.5	15.0
Six East Asian traders	3.9	5.6	9.2	13.4	12.2	11.5	2.9	7.3	12.2	14.4	10.6	9.4
Other Asia	10.1	6.3	5.3	4.5	4.6	4.5	7.9	4.8	5.3	4.1	4.6	4.3
Total merchandise	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agricultural products	29.8	28.7	21.6	13.3	10.5	9.1	33.3	18.3	10.3	7.3	5.9	5.5
Food	21.5	20.2	17.3	10.1	8.1	6.8	23.3	13.6	7.8	5.3	4.7	4.2
Fish	0.1	0.4	0.4	0.7	0.5	0.5	2.3	2.8	1.4	1.8	0.9	0.7
Other food products	21.4	22.8	16.8	9.4	7.6	6.4	21.0	11.8	6.4	4.3	3.8	3.5
Raw materials	6.3	5.5	4.3	3.2	2.5	2.3	10.0	4.7	2.5	2.0	1.3	1.3
Fuels and mining products	8.1	6.0	7.6	4.1	5.9	5.6	22.9	18.6	26.4	12.1	14.2	19.4
Ores and other minerals	2.2	2.1	1.9	1.0	1.0	1.4	6.1	2.4	1.3	0.7	0.4	0.5
Fuels	4.1	2.3	4.7	2.1	1.9	2.9	11.6	12.8	22.3	9.8	12.5	17.2
Non-ferrous metals	1.7	1.5	1.1	1.0	0.9	1.2	5.3	3.5	2.8	1.5	1.3	1.7
Manufactures	61.4	62.8	66.8	76.6	81.4	81.0	40.5	60.5	60.5	77.1	75.9	71.5
Iron and steel	2.3	1.8	0.8	0.8	0.9	1.3	3.8	4.3	2.7	1.8	1.1	1.8
Chemicals	8.4	8.1	9.9	9.9	13.0	13.3	3.3	11.3	4.2	5.1	8.0	7.6
Pharmaceuticals	1.2	0.9	1.3	1.3	2.7	2.9	0.3	0.2	0.4	0.7	2.4	2.3
Other chemicals	7.4	7.2	8.6	8.6	10.4	10.4	3.0	10.9	3.7	4.4	5.5	5.3
Other semi-manufactures	5.6	5.2	4.9	5.3	6.0	6.0	10.9	8.8	6.9	6.8	7.0	6.9
Machinery and transport equipment	35.9	43.0	42.7	48.4	48.6	48.0	10.8	31.1	33.0	44.0	40.9	38.3
Office and telecom equipment	4.2	6.2	10.8	14.1	15.6	13.9	2.3	6.3	8.9	15.3	13.8	13.5
EDP and office equipment	..	..	5.7	6.7	5.7	5.2	..	..	2.6	7.3	6.3	5.8
Telecommunications equipment	..	..	1.8	3.1	3.3	3.4	..	..	4.3	4.6	5.6	6.1
Integrated circuits	..	..	2.3	4.3	6.6	5.3	..	..	2.0	3.5	2.0	1.5
Transport equipment	13.3	18.6	16.7	18.0	16.6	16.7	4.7	17.9	16.4	17.2	16.5	14.1
Automotive products	7.5	11.0	8.4	9.6	9.6	9.5	3.5	15.2	14.4	14.9	13.9	11.9
Other transport equipment	5.7	7.6	8.3	8.4	7.0	7.2	1.1	2.7	1.9	2.3	2.6	2.3
Other machinery	18.4	15.3	15.3	16.3	16.4	17.4	3.8	6.8	7.7	11.5	10.6	10.7
Power generating machinery	0.6	0.5	2.6	2.6	2.9	3.2	0.1	0.1	0.7	1.5	1.3	1.2
Non-electrical machinery	14.2	11.0	9.3	9.0	8.5	9.3	2.8	4.4	4.3	5.9	5.1	5.4
Electrical machinery	3.6	3.8	3.4	4.8	5.0	4.9	1.0	2.3	2.6	4.2	4.2	4.0
Textiles	2.1	1.8	1.2	1.3	1.5	1.4	4.0	2.2	1.2	1.5	1.4	1.3
Clothing	0.4	0.4	0.5	1.1	0.8	0.6	2.2	3.1	3.9	5.9	5.5	4.6
Other manufactures	6.5	5.4	6.8	9.9	10.6	10.6	5.4	7.5	8.6	12.1	12.1	11.1
Personal and household goods	..	..	..	0.8	0.7	0.7	..	..	..	3.5	3.7	3.4
Scientific and controlling instruments	..	..	..	3.4	4.3	4.3	..	..	..	1.4	1.8	1.8
Miscellaneous manufactures	..	..	..	5.7	5.6	5.6	..	..	..	7.2	6.5	5.9

Table II.5

Merchandise trade of Europe by region and by product, 2001-05

(Billion dollars and percentage)

	Total Exports					Imports				
	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005
					Value					
World	2654.6	2839.4	3386.5	4050.9	4371.9	2732.4	2876.1	3461.6	4160.9	4542.7
					Share					
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Intra-Europe	72.7	68.1	73.8	73.8	73.2	70.2	66.9	72.0	71.8	70.3
European Union (25)	66.8	62.8	67.8	67.5	66.7	65.1	61.9	66.6	66.2	64.5
Other Europe	5.8	5.3	6.0	6.3	6.5	5.2	4.9	5.4	5.6	5.8
Inter-regional trade	25.5	24.4	25.1	25.1	25.9	29.7	26.7	26.9	27.2	28.7
North America	10.4	9.7	9.5	9.1	9.1	8.4	7.6	6.3	5.8	5.7
South and Central America	1.7	1.6	1.3	1.3	1.3	1.7	1.6	1.7	1.8	1.8
Commonwealth of Independent States (CIS)	1.3	1.5	1.8	2.2	2.5	2.7	2.6	2.9	3.3	4.0
Russian Federation	0.8	1.0	1.3	1.5	1.7	2.2	2.1	2.3	2.6	3.1
Africa	2.4	2.3	2.4	2.4	2.6	2.9	2.8	2.8	2.7	3.0
North Africa	1.2	1.2	1.2	1.2	0.9	1.4	1.2	1.4	1.4	1.1
Sub-Saharan Africa	1.2	1.1	1.3	1.2	1.6	1.5	1.5	1.4	1.3	1.9
South Africa	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Other Sub-Saharan Africa	0.8	0.7	0.8	0.7	1.1	1.0	1.0	0.9	0.8	1.4
Middle East	2.2	2.3	2.5	2.6	2.8	1.9	1.5	1.5	1.6	2.0
Asia	7.5	7.0	7.5	7.6	7.6	12.1	10.7	11.8	12.0	12.2
Japan	1.7	1.6	1.5	1.5	1.4	3.3	2.7	2.5	2.4	2.2
China	0.9	1.0	1.4	1.5	1.6	2.7	2.7	3.7	4.1	4.6
Australia and New Zealand	0.7	0.6	0.7	0.7	0.7	0.4	0.4	0.4	0.4	0.4
Six East Asian traders	3.0	2.9	2.7	2.7	2.3	4.0	3.8	3.8	3.8	2.6
Other Asia	1.2	0.9	1.1	1.2	1.7	1.7	1.1	1.4	1.4	2.5
Total merchandise	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agricultural products	9.2	8.7	9.6	9.2	9.1	9.9	9.4	10.3	9.7	9.5
Food	7.6	7.3	8.0	7.7	7.6	7.7	7.6	8.4	8.0	7.7
Fish	0.6	0.6	0.6	0.6	0.6	0.8	0.8	0.8	0.7	0.7
Other food products	7.0	6.7	7.4	7.1	7.0	7.0	6.8	7.6	7.2	7.0
Raw materials	1.6	1.4	1.5	1.5	1.5	2.1	1.8	1.9	1.8	1.7
Fuels and mining products	7.7	6.8	7.2	7.7	9.3	12.1	11.0	11.4	12.2	15.1
Ores and other minerals	0.7	0.6	0.7	0.9	0.9	1.3	1.1	1.2	1.4	1.4
Fuels	5.1	4.5	4.9	5.1	6.5	8.7	7.8	8.4	8.8	11.6
Non-ferrous metals	1.9	1.7	1.6	1.7	1.8	2.2	2.0	1.8	2.0	2.0
Manufactures	80.8	75.9	80.9	80.8	79.7	77.1	72.3	75.9	75.7	73.7
Iron and steel	2.7	2.4	2.7	3.3	3.5	2.5	2.2	2.5	3.1	3.1
Chemicals	12.9	12.7	14.9	14.9	15.2	10.9	10.8	12.6	12.6	12.8
Pharmaceuticals	3.1	3.6	4.9	5.0	5.0	2.4	2.9	4.0	4.0	3.9
Other chemicals	9.8	9.1	9.9	9.9	10.2	8.5	8.0	8.6	8.7	8.9
Other semi-manufactures	8.8	8.2	8.7	8.7	8.5	8.1	7.7	8.0	7.9	7.7
Machinery and transport equipment	41.6	39.2	40.3	40.1	39.2	40.7	37.4	37.9	37.7	36.1
Office and telecom equipment	10.8	9.5	8.4	8.3	8.5	13.3	11.5	10.3	10.4	10.4
EDP and office equipment	4.3	3.8	3.5	3.4	3.3	5.9	5.1	4.7	4.7	4.6
Telecommunications equipment	4.3	3.8	3.4	3.4	3.7	4.5	4.0	3.7	3.9	4.3
Integrated circuits	2.2	1.9	1.5	1.6	1.4	2.8	2.4	1.8	1.8	1.6
Transport equipment	15.7	15.3	16.8	16.8	16.0	14.4	13.8	15.4	15.1	14.1
Automotive products	10.9	10.5	12.1	12.0	11.4	9.7	9.2	10.6	10.5	9.8
Other transport equipment	4.8	4.8	4.8	4.7	4.6	4.7	4.5	4.8	4.6	4.3
Other machinery	15.1	14.4	15.0	15.0	14.7	13.1	12.2	12.3	12.2	11.7
Textiles	2.3	2.2	2.1	2.0	1.8	2.3	2.1	2.1	1.9	1.7
Clothing	2.4	2.3	2.6	2.4	2.4	3.2	3.1	3.3	3.2	3.1
Other manufactures	9.3	8.9	9.6	9.4	9.2	9.3	8.9	9.5	9.2	9.1
Personal and household goods	2.2	2.1	2.2	2.1	2.0	2.2	2.1	2.3	2.3	2.2
Scientific and controlling instruments	1.9	1.9	2.1	2.1	2.0	1.8	1.8	1.8	1.8	1.7
Miscellaneous manufactures	5.2	5.0	5.3	5.2	5.2	5.3	5.0	5.3	5.1	5.1

Appendix E

World Trade Organization: Trade Policy Review Costa Rica

I. ECONOMIC ENVIRONMENT

(1) OVERVIEW

1. Costa Rica's annual economic growth averaged 4.9 per cent during 2001-2005. Growth has been particularly vigorous since 2003, reflecting in particular increased investment and exports. As a result, per capita GDP climbed 12.8 per cent from 2001 to 2005, reaching just over US$4,600 in 2005.

2. The fiscal deficit has been contracting since 2003. Achieving and maintaining fiscal balance is, however, one of the main challenges facing the Costa Rican authorities, particularly if high debt repayments, pension payments and specific statutory disbursements are taken into consideration. Monetary and exchange-rate policies have undergone substantial changes in the period under review. In October 2006, with a view to exerting a tighter rein on inflation (which reached 14.1 per cent in 2005), the authorities decided to change from a crawling-peg to a crawling-band exchange rate system, in what they consider to be a first step towards the adoption of a more flexible exchange rate.

3. In spite of good export performance, the balance-of-payments current account has been in deficit, mainly as a result of a worsening trade balance deficit. In contrast, the services balance has been in surplus, largely owing to favourable tourism sector performance. Costa Rica's main trading partner is the United States. The country's main exports are manufactured goods, notably microprocessors, and its most important agricultural export item is bananas. Almost 80 per cent of imports are manufactured goods, the most significant items being, in descending order of importance, electronic integrated circuits and electronic micro-assemblies, chemicals and fuel. Costa Rica is a net recipient of foreign direct investment, which has made a major contribution to GDP and export growth.

(2) MACROECONOMIC TRENDS

(i) Structure of the economy, production and employment

4. The sectoral composition of the Costa Rican economy has been relatively stable since 2001 (Table I.1). Services, taken as a whole, continue to account for the largest share of GDP, with commerce, restaurants and hotels being the most important single contributor. Of the goods-producing industries, manufacturing continues to be the largest contributor to GDP. The agriculture and livestock sector remains a significant employer, accounting for 14.7 per cent of employment in 2005, the second highest percentage after trade and repair (Table I.1).

5. During 2001-2005, the Costa Rican economy expanded at an average annual rate of 4.9 per cent in

real terms (Table I.2), showing particularly robust growth since 2003 in spite of the impact of oil prices. The growth rate has been sustained mainly by increased investment and exports. Net exports, however, have been negative as a result of structural factors in the national economy and the deterioration in the terms of trade. The unemployment rate has remained broadly stable.

Table I.1

Sectoral structure of GDP and employment, 2001-2005

	2001	2002	2003	2004	2005
GDP at current market prices			100.0	100.0	100.0	100.0	100.0
% of GDP at market prices:							
Less: Taxes on products and imports (net of subsidies)				9.6	9.6	9.3	9.5	9.8
GDP at basic prices	90.4	90.4	90.7	90.5	90.2			
Agriculture, forestry and fishing			8.0	7.7	7.9	7.8	7.8
Mining and quarrying		0.2	0.1	0.1	0.1	0.2	
Manufacturing industry		19.8	19.4	19.3	19.7	19.7	
Construction	4.3	4.2	4.2	4.3	4.1		
Electricity and water		2.6	2.5	2.4	2.6	2.5	
Commerce, restaurants and hotels			17.9	17.3	17.3	17.6	17.9
Transport, storage and communications			7.7	8.2	8.5	8.7	8.8
Financial services and insurance			4.7	5.1	5.4	5.3	5.5
Real estate services	4.1	4.0	3.8	3.6	3.4		
Other business services		3.7	3.9	3.9	4.1	4.2	
Public services	3.7	4.0	3.9	3.7	3.7		
Community, social and personal services			17.2	17.8	17.8	17.0	16.8
Less: Financial intermediation services indirectly measured (FISIM)					3.4	3.9	3.9	4.0	4.3
Employment									
Total employed persons (thousands)			1,552.9	1,586.5	1,640.4	1,653.9	1,777.0		
% of total employed:									
Agriculture and livestock		15.1	15.3	14.6	14.3	14.7			
Fishing	0.5	0.6	0.5	0.5	0.5				
Mining and quarrying		0.1	0.1	0.1	0.2	0.2			
Manufacturing industries		15.0	14.3	14.0	13.9	13.7			
Electricity, gas and water		1.3	1.4	1.3	1.4	1.2			
Construction	6.9	6.7	6.7	6.5	6.5				
Trade and repair	18.9	19.1	19.7	19.9	18.7				
Hotels and restaurants		5.5	5.2	5.5	5.5	5.5			
Transport, storage and communications			5.5	5.7	5.7	5.8	6.3		
Financial institutions		1.9	2.0	2.2	2.2	2.0			
Real estate and business activities			6.0	6.5	6.2	6.2	5.8		

Public service	4.7	4.5	4.6	4.7	4.6		
Education	5.5	5.8	6.0	5.8	5.9		
Health and social care		3.8	3.3	3.0	3.1	3.5	
Community and personal services			3.9	3.7	4.4	3.8	3.6
Households with domestic staff			4.9	5.3	4.8	5.5	6.8
Offshore organizations		0.1	0.2	0.1	0.2	0.1	
Non-specific activities		0.4	0.3	0.4	0.3	0.4	

Source: Central Bank of Costa Rica and the National Statistics and Census Institute (*Instituto Nacional de Estadística y Censos*).

6. Given the importance to the Costa Rican economy of current transfers (see below), national disposable income (NDI) is a more appropriate indicator than GDP of the resources available in the economy to finance domestic spending, since, unlike GDP, it includes net family remittances and income from producer entities abroad owned by Costa Rican residents and, most pertinently in this instance, excludes earnings transferred abroad from entities in Costa Rica. In the period 2001-2005, NDI was equivalent to 97.2 per cent of GDP and the difference between the two was largely attributable to net outflows of profits from foreign enterprises established in Costa Rica. In this same period, NDI grew at an average annual rate of 3.6 per cent.

Table I.2

Basic economic indicators, 2001-2005

	2001	**2002**	**2003**	**2004**	**2005**		
Current GDP (billions of colons)			5,394.6	6,060.9	6,982.3	8,142.4	9,542.9
Current GDP (US$ million)		16,403.4	16,844.3	17,514.3	18,593.0	19,969.2	
GDP per capita (US$)		4,092	4,119	4,200	4,376	4,616	
Gross national disposable income (billions of colons)			5,219.1	5,905.3	6,781.5	7,878.8	9,318.9
Real GDP and components, growth rates (%)							
Real GDP (rate of change)		1.1	2.9	6.4	4.3	5.9	
Final consumption costs		1.4	3.0	2.8	2.8	3.2	
Household consumption		1.1	3.1	3.2	3.1	3.6	
General government consumption			3.6	2.3	-0.3	1.3	0.1
Gross fixed capital formationa		2.6	6.6	7.2	-0.5	6.0	
Exports of goods and services		-9.6	3.7	12.0	8.1	12.7	
Imports of goods and services		1.1	7.0	0.9	9.0	12.5	
GDP by type of spending (% of current GDP)							
Final consumption costs		82.7	82.6	81.2	80.2	80.0	
Household consumption		68.4	67.8	66.8	66.1	66.3	
General government consumption			14.3	14.8	14.5	14.1	13.8

Gross capital formation	20.3	22.6	20.6	23.0	25.2				
Gross fixed capital formation	18.3	18.9	19.2	18.6	19.0				
Change in inventories	2.0	3.8	1.5	4.4	6.2				
Exports of goods and services	41.5	42.4	46.7	46.3	48.7				
Imports of goods and services	44.5	47.6	48.5	49.5	54.0				
Memorandum items									
Terms of trade (rate of change)		-1.8	-1.6	-2.7	-2.0	-3.7			
Gross savings (% of current GDP)		14.0	14.8	15.9	16.8	17.4			
Total population, as at July of each year (millions of inhabitants)				3.9	4.0	4.1	4.2	4.3	
Labour force, as at July of each year (millions)b			1.7	1.7	1.8	1.8	1.9		
Unemployment rate	6.1	6.4	6.7	6.5	6.6				
Nominal minimum wages (change)		12.4	7.0	9.4	11.3	14.6			
Real minimum wages (change)	1.3	-2.5	-0.4	-1.6	0.5				

a Gross fixed capital formation corresponds to asset investments by enterprises.

b Total employed and unemployed.

Source: Central Bank of Costa Rica and the National Statistics and Census Institute.

7. According to the IMF, economic growth and foreign trade have been subject to fluctuations in response to the volatile performance of the microprocessor industry, represented by US company Intel (see Chapter IV(3)), which accounted for 20 per cent of total exports in 2005. Central Bank of Costa Rica (BCCR) estimates show the simple average annual rate of change in real GDP for the period 1996-2003 to be 4.3 per cent if INTEL operations are included and 3.8 per cent otherwise.

8. The share of gross fixed capital formation in GDP has seen a slight upward trend in the period under review. Following a 0.5 per cent decline in 2004, gross fixed capital formation rose 6.0 per cent in 2005, fuelled by investment in capital goods undertaken mainly by enterprises operating under the free zone regime.

(ii) Fiscal policy

9. The Ministry of Finance is responsible for managing the country's fiscal policy. Its main objective is to stabilize public finances by focusing on enhanced tax revenues and the strengthening of mechanisms to rationalize public expenditure allocation. Achieving and maintaining balanced public accounts is an ongoing challenge for the Costa Rican authorities, especially if the rigid expenditure structure, including high debt repayments (see below) , pensions payments and specific disbursements laid down in the Constitution or by law, is taken into consideration. In 2006, the total public debt-to-GDP ratio was relatively high at 55.0 per

cent. Public external debt servicing represented 4.4 per cent of goods and services exports in 2005, down from 6.7 per cent in 1999.

10. The fiscal deficit has been declining since 2003 and in 2005 reached its lowest level in a decade (Table I.3). Efforts to reduce the fiscal deficit during 2002-2005 centred on the adoption of measures to control expenditure. The lower deficit is also the result of increased revenues, reflecting stronger economic growth, tax and Customs administration reforms (such as implementation of the duty collection system known as the Information Technology for Customs Control Scheme (*Tecnología de Información para el Control Aduanero* - TICA) (see Chapter III(2)(i)), and the creation of a temporary tax under the Fiscal Contingency Law (Law No. 8343). In mid-2006, the Government reverted to a proposal to introduce new fiscal measures in order to remedy the chronic deficit. The key elements of the proposal include: replacing sales tax by a broader-based value-added tax (VAT); broadening the income tax base; and introducing a tax on financial transactions as well as certain other taxes.

11. The 2007 draft budget submitted to the Legislative Assembly underlines the need for improved revenue collection efficiency, greater control of public expenditure and a reduction in the fiscal deficit. Under this draft budget, some expenditures do, however, escape government control, such as remuneration outlays, pension schemes funded out of the national budget, and public debt servicing, which together represent 80.7 per cent of the national budget.

Table I.3

Non-financial public sector (NFPS) financial accounts, 2001-2006

(Percentage of GDP and US$)

	2001	2002	2003	2004	2005	2006				
Total NFPS revenue (% of GDP)			25.5	26.0	24.8	24.4	25.1	..		
Tax revenue			19.6	19.9	19.9	19.7	20.2	..		
Non-tax revenue			2.1	2.2	2.1	2.0	2.0	..		
Operating surplus of non-financial public enterprises			2.9	4.1	2.7	2.8	2.9	..		
Current transfers			0.2	0.2	0.1	0.0	0.0	..		
Capital inflows			0.7	0.0	0.2	0.0	0.0	..		
Total NFPS expenditure (% of GDP)			27.1	28.4	27.4	26.5	25.5	..		
Current expenditurea			22.2	23.2	22.5	22.3	21.7	..		
Interest payments	4.0		4.3	4.3	4.1	4.1	..			
Capital expenditure	4.8		5.2	4.8	4.1	3.8	..			
Net lending	0.1		0.1	0.1	0.0	0.0	..			
NFPS balance (% of GDP)			-1.6	-2.5	-2.5	-2.0	-0.4	..		

Central government balance	-2.9	-0.9	-0.2	-0.1	0.6	..						
Decentralized non-corporate institutions balance	..	-1.9	-2.3	-1.7	-1.3	..						
Local government balance	-0.0	-0.1	-0.1	0.0	0.1	..						
Non-financial public enterprises balance	0.6	1.3	0.2	0.3	0.7	..						
Current account balance	2.6	2.8	2.1	2.2	3.4	..						
Total public sector balance (% of GDP)	-1.90	-2.3	-2.8	-1.7	-0.1	..						
Total public debt (US$ million)	9,295.7	9,987.6	10,599.1	10,716.5	10,786.3	11,387.7b						
Public external debt (US$ million)		3,174.6	3,280.6	3,733.0	3,883.7	3,639.0	3,612.1b					
Total NFPS domestic debt (millions of colons) (as at December of each year)						1,515,019.1		1,738,594.4		1,885,741.5		
2,249,671.7	2,436,180.9	2,668,206.8b										
Total domestic debt of the financial public sector (millions of colons) (as at December of each year)c								3,156.80	3,156.80	3,156.80	3,156.80	
43,521.60	56,784.78b											
Domestic and external NFPS debt (% of GDP)		4.2	4.1	5.3	5.9	5.4	5.2b					

.. Not available.

a Current expenditure includes: wages and salaries, social security contributions, purchases of goods and services, interest, and current transfers.

b Balance as at November 2006.

c Information on financial sector domestic debt to 2004 is provided by the BCCR and refers to bank debt capitalization instruments. Data provided by national banking institutions on the basis of half-yearly surveys are included as of 2005. The National Bank of Costa Rica, the housing mortgage bank *Banco Hipotecario de la Vivienda* - BANHVI, mutual insurance funds *Mutual Alajuela* and *Mutual la Vivienda* and mutual savings and loan association *Mutual Cartago de Ahorro y Préstamo* all reported debt in 2005. Agricultural credit bank *Banco Crédito Agrícola de Cartago* and *Banco Popular* joined their ranks in 2006.

Source: Central Bank of Costa Rica and the Ministry of Finance.

12. The issue of new domestic bond debt has been the main source of financing for deficit spending by the Government in order to meet its current requirements and service other obligations. Central government domestic bond debt, as at November 2006, totalled C2,670,809 million (US$5,235.4 million).

(iii) Money and exchange rate policy

13. Monetary and exchange rate policy underwent significant changes during the period under review. During the period 2001 to October 2006, the main objective of this policy, under the crawling peg exchange rate system, was to maintain domestic currency stability. In October 2006, the decision was taken to abandon the crawling peg exchange rate system and replace it by a crawling band system. This measure is seen as a first step towards a more flexible exchange rate system and the BCCR considers that it will provide it with the means to control inflation more efficiently. The BCCR also feels that this decision is a step in the right direction as regards reducing inflation but that, in order to bring inflation into line with the

international rate, progress must be made in respect of finding a solution to the fiscal problem, by means of the approval of fresh government revenue. The BCCR's medium-term objective is to move towards a system of inflation targeting.

14. Under the crawling peg exchange rate system, the BCCR set a daily reference exchange rate for intrabank transactions and undertook to buy or sell any excess foreign-currency supply or demand by banks. However, this system generated a series of costs. The semi-fixed exchange rate system meant that monetary policy was, to a great extent, conditioned by rising capital inflows, thereby hindering the struggle against inflation. Moreover, the crawling peg exchange rate system was fuelling inflation. In 2002, the pass-through coefficient was estimated at 13 per cent in the short term and 68 per cent in the long term for tradable goods and at 10 per cent and 45 per cent, in the short and long terms respectively, for non-tradable goods. According to the BCCR, exchange rate predictability discouraged economic operators from hedging the exchange rate risk, thereby encouraging the dollarization of deposits and credit and generating further risks for the financial system.

15. Furthermore, the fact of maintaining a semi-fixed exchange rate system has meant that monetary policy effectiveness has been limited by the BCCR operating deficit, which stood at 1.4 per cent of GDP in 2005 and is an ongoing cause of liquidity injection. This factor, together with the reserve accumulation, is the main cause of liquidity expansion. Reserve accumulation has only been partly neutralized, with the result that monetary aggregates have expanded (Table I.4). In the first half of 2006, currency issue and total liquidity (M3) showed average annual growth of 21.9 per cent and 22 per cent, respectively. Inflation hit an annual rate of 14.1 per cent in 2005, a fact that can be partly explained by the exceptionally high oil prices.

16. The Costa Rican authorities feel that there is a need to capitalize the BCCR in order to eliminate the impact of its losses - financed each year by the issue of currency - on domestic prices. According to the authorities, the origin and persistence of BCCR financial imbalances are, in essence, determined by past quasi-fiscal operations. Such operations involved the granting of a very wide range of exchange rate and interest rate subsidies. For the BCCR, these measures entailed exchange losses, the constitution of assets with below-market rates of return and the incurrence of public-sector and external debt to finance these subsidies, largely without a balancing entry in the recoverable assets account. All of the above brought about a structural problem, reflected by the existence of more cost liabilities than revenue-generating assets. Furthermore, the effective asset rate has been lower than the cost of obligations.

Table I.4

Main monetary indicators, 2001-2006

(Percentage)

	2001	2002	2003	2004	2005	2006						
Issue of currency (balances as at end December, in billions of colons)							223.0	249.9	275.4	277.7	332.2	448.5a
M1 measured at financial system level (balances as at end December, in billions of colons)									486.5	596.0	703.2	706.9	875.7	1,088.3a
M2 measured at financial system level (balances as at end December, in billions of colons)									1,037.5	1,241.9	1,480.6	1,746.9	2,157.6	2,749.1a
M3 (December, in billions of colons)				1,828.1	2,211.6	2,614.2	3,507.8	4,236.9	5,159.6a					
M1 / GDP ((% of GDP)			9.0	9.8	10.1	8.7	9.2	9.6						
M2 / GDP ((% of GDP)			19.2	20.5	21.2	21.5	22.6	24.3						
M3 / GDP (% of GDP)			33.9	36.5	37.4	43.1	44.4	45.6						
Interest rates														
Average active interest rate, colonsb				26.9	26.6	26.7	23.5	23.9	23.1					
Average passive interest rate, colonsc				13.6	13.8	12.9	11.5	12.0	11.7					
National currency interest margin				13.3	12.8	13.8	12.0	11.9	11.4					
Average active interest rate, US$				11.7	10.0	9.8	9.5	9.5	10.8					
Average passive interest rate, US$				5.3	4.0	2.7	2.1	2.2	3.0					
Interest margin, US$ 6.4			6.0	7.1	7.4	7.3	7.8							
Inflation (change December-December)														
Consumer price index (CPI)			11.0	9.7	9.9	13.1	14.1	9.4d						
Industrial producer price index (IPPI) including fuel				6.3	9.8	11.8	20.0	13.1	12.6d					
Industrial producer price index (IPPI) excluding fuel				8.6	8.4	11.0	17.8	12.1	13.9d					
Exchange rate														
Exchange rate (average for period: Colon / US$)				328.9	359.8	398.7	437.9	477.8	511.3					
Exchange rate variation (December-December)				7.4	10.8	10.5	9.6	8.3	4.2					
Real effective multilateral exchange rate variatione (December-December)								-2.2	5.8	6.6	-1.1	-0.9	-2.7	
Real effective exchange rate to the US$ (December-December)							-5.1	4.7	3.8	-1.9	4.0	-5.9d		

a Figures of the BCCR as at 15 December 2006 and of commercial banks as at 1 December 2006.

b Corresponds to the annual average of the weighted averages of the interest rates reported by financial intermediaries to the Central Bank every Wednesday. The weighting factors used are the amounts of new placements by each intermediary.

c Corresponds to the annual average of the weighted averages of the interest rates reported by financial intermediaries to the Central Bank every Wednesday. The weighting factors used are the deposit balances of each intermediary.

d November/ November.

e A minus sign indicates appreciation; a plus sign, depreciation.

Note: M1 corresponds to money in circulation plus current account deposits in national currency; M2 (liquidity in domestic currency) is M1 plus savings deposits in national currency; and M3 (total liquidity of the national banking system) corresponds to M2 plus deposits in foreign currency.

Source: Central Bank of Costa Rica.

17. The new exchange rate band system was introduced gradually in 2006. In January 2006, the decision was taken to adjust the exchange rate on the basis of inflation expectations, rather than past inflation. In April 2006, an exchange rate margin of C0.75 to US$1 was established for foreign currency transactions with the BCCR on the interbank market (Organized electronic foreign currency negotiation market (*Mercado Organizado de Negociación Electrónica de Divisas* - MONED)). This margin was established with a view to helping banks become accustomed to operating in an environment similar to that of a band. Regulations on reserve requirements for financial intermediaries were also amended to reduce daily reserve deposit volatility.

18. A new foreign exchange regulation, the Regulation on cash foreign exchange operations (*Reglamento para las Operaciones Cambiarias de Contado* - ROCC) , has been in effect since 20 September 2006. This new regulation, *inter alia*, defines BCCR rules in respect of bodies authorized to participate in the foreign exchange market and regulates the operation of stock exchange offices and foreign exchange dealers. New rules have been developed to allow for the use of foreign currency hedging instruments. In November 2006, the BCCR launched a new electronic platform for foreign exchange operations (Foreign currency market (*Mercado de Monedas Extranjeras* - MONEX)) to replace the MONED.

19. The exchange rate band system was introduced on 17 October 2006. Under this system, the exchange rate is determined by the market within the limits established by the exchange rate bands. The BCCR intervenes when the exchange rate reaches these limits. The band was initially established as a relatively narrow one and will broaden over time (taking economic conditions into consideration) as economic operators hedge against foreign exchange exposure. The BCCR expects uncertainty about the exchange rate, though limited, to help to reduce the high level of dollarization (see Chapter IV(5)(v)) and to restrain short-term capital inflows, together with their destabilizing impact.

20. In order to prevent the major exchange rate fluctuations which could arise from the participation in the system of non-banking public-sector institutions, such institutions are required to carry out their foreign currency transactions with the BCCR whenever their daily transactions exceed US$100,000 or the monthly transaction volume exceeds US$10 million; transactions involving lesser amounts are to be conducted with State commercial banks.

(iv) Balance of payments

21. The balance-of-payments current account suffered a chronic deficit in the period under review (Table

I.5), mainly as a result of a deterioration in the balance of goods. Preliminary estimates for 2006 indicate that both exports and imports continued to expand rapidly, in spite of which the trade deficit inflated. The deterioration in the balance of trade can be partly explained by higher oil prices, which contributed to a worsening of the goods trade deficit. This deterioration has, however, been partially offset by a continuous expansion in the services balance surplus, a surplus largely attributable to the favourable development of tourism, computer and online data-processing services and business support services (see section (3)(ii) below).

Table I.5

Balance of payments, 2001-2006

(US$ million)

	2001	2002	2003	2004	2005	2006a		
I. Current account	-602.9	-856.9	-880.0	-795.9	-971.0	-768.2		
A. Trade account	**-74.5**	**-592.6**	**-312.9**	**-564**	**-1,026.5**	**894.7**		
Exports	**6,848.7**	**7,132.1**	**8,184.0**	**8,611.5**	**9,720.8**	**8,325.1**		
Goods (f.o.b.)	4,923.2	5,269.9	6,163.0	6,369.7	7,099.6	6,169.6		
Services	1,925.5	1,868.2	2,021.0	2,241.8	2,621.2	2,155.6		
Imports	**-6,923.2**	**-7,730.7**	**-8,496.9**	**-9,175.5**	**-10,747.3**	**-9,219.9**		
Goods (f.o.b.)	-5,743.3	-6,547.7	-7,252.3	-7,791.0	-9,230.3	-8,072.7		
Services	-1,179.9	-1,183.0	-1,244.6	-1,384.5	1,505.3	1,223.2		
Goods balance	-820.1	-1,277.7	-1,089.4	-1,421.3	-2,142.4	-1,827.1		
Services balance	745.6	685.2	776.4	857.3	1,115.9	932.3		
B. Revenue	-679.3	-439.8	-775.9	-444.3	-214.9	-110.3		
Employee remuneration		-19.2	-19.0	-21.4	-19.3	7.5	-15.7	
Investment income	-660.1	-420.8	-754.5	-425.0	-222.4	-94.6		
C. Current transfers		150.9	175.5	208.8	212.4	270.4	236.9	
General government		14.8	3.3	3.6	6.2	4.3	15.4	
Other sectors	136.1	172.1	205.2	206.2	266.1	221.4		
II. Capital and financial account			447.6	1,070.9	1,183.8	812.4	1,208.8	935.1
A. Capital transfers		19.3	13.0	25.3	12.7	0.0	0.0	
B. Direct investment		450.8	625.3	548.1	733.3	904.0	1,073.6	
C. Portfolio investment		18.6	103.4	11.2	141.6	-344.5	-1,569.4	
D. Other investment		-41.2	329.3	599.2	-75.2	649.3	1,430.9	
III. Errors and omissions		168.5	-51.0	35.1	63.7	155.7	285.0	
IV. Reserve assets	-13.1	-163.0	-338.9	-80.3	-393.5	-452.0		
Memorandum items:								
Current account / GDP (percentage)			-3.7	-5.0	-5.0	-4.3	-4.9	-3.5
Capital account / GDP (percentage)			2.7	6.4	6.8	4.4	6.1	4.2

Total external debt (US$ million)	3,242.5	3,337.7	3,753.0	3,883.7	6,622.1	6,669.2	
Total external debt / GDP (percentage)	19.8	19.8	21.4	20.9	33.2	30.1	
External debt servicing / goods and services exports	9.2	8.6	11.3	8.6	6.5	5.2	

a First three quarters.

Source: Central Bank of Costa Rica.

22. The current transfers account has been positive and rose gradually in the period under review. The share of family remittances in current transfers climbed from 59 per cent of total current transfer receipts in 2000 to 85 per cent in 2005. According to 2005 estimates, inflows of remittances into Costa Rica represented approximately 2 per cent of GDP.

23. The capital account showed a growing surplus throughout the entire period under review, bar a temporary drop in 2004. Foreign direct investment and other private capital inflows have fuelled the growth of international reserves, in spite of the expanding current account deficit (Table I.5).

24. In 2005, the ratio of total external debt to GDP stood at 33.1 per cent (public external debt of 14.3 per cent of GDP and private external debt of 18.8 per cent of GDP). Public external debt as a percentage of GDP has shown a downward trend, standing at around 14.3 per cent in 2005. This reduction in public external debt is, however, partly the result of the substitution of external debt with domestic debt, as well as the early redemption of BCCR debt.

(3) TRADE AND INVESTMENT FLOWS

(i) Trade in goods

25. Tables AI.1 to AI.4, taken from the UN Commodity Trade Statistics Database (Comtrade), show the composition and direction of trade in goods in Costa Rica. Import and export statistics include the free zones.

26. Costa Rica's total trade (imports and exports) has continued to increase, albeit at slower rates than during the second half of the 1990s. Exports in the period 2001-2005 grew at an average annual rate (December to December) of 3.7 per cent, as compared with 11.0 per cent from 1997 to 2000; import growth rates were 9.0 and 12.8 per cent, respectively. Imports have seen a continuous upward trend, while exports have recovered from their fall in the year 2000, mainly as a result of the good performance of companies operating in the free zones. Exports have been expanding rapidly since 2002 and there has been a diversification of the export base.

27. Almost two thirds of exports are manufactured goods and one third are agricultural products (Table AI.1). The main export items under manufactured goods are electronic products (mainly microprocessors), followed by chemicals (including pharmaceuticals), medical devices, and made-up articles. The main agricultural export item is bananas, followed by pineapples and flowers. Other exports include coffee, melons, sugar and manioc.

28. The structure of exports has altered in the period under review. Industrial goods have captured a greater share of total exports, reaching 65 per cent in 2005. Exports of agricultural products increased in absolute terms in the period 2001-2005; their percentage share of total exports has, however, varied, accounting for 32.7 per cent in 2005. The importance of manufactured goods exports is closely linked to sales of modular circuits and computer parts, which represented around 20 per cent of exports in 2005.

29. Almost 80 per cent of imports are industrial goods, such as (in decreasing order) integrated circuits, petroleum oils and medicines. Fuel imports have grown steadily, doubling in value between 2001 and 2005 (Table AI.2), which is mainly a reflection of the rise in fuel prices.

30. The main destination for Costa Rican exports is the United States (Table AI.3). Exports to this country grew steadily during 2001-2005, although its percentage share of the total contracted by seven points, declining to 42.8 per cent in 2005. The other countries of the American continent, taken together as a group, are the second destination for Costa Rican exports, representing 24 per cent of the total in 2005, with the European Union ranking third that same year, with a share of 17.0 per cent. The share of Asian countries burgeoned from 7.3 per cent in 2001 to 14.5 per cent in 2005. Almost 10 per cent of 2005 exports went to the six East Asian traders, and almost 3.4 per cent to China, as compared with 0.3 per cent in 2001. The upswing in Costa Rican exports to China was driven mainly by sales of integrated circuits and computer parts.

31. With regard to imports, the US is Costa Rica's main supplier (Table AI.4). Imports from the US rose in terms of value from 2001 to 2005, although its share of total imports shrank to 41.1 per cent in 2005, having lost 11.2 percentage points from 2001 to 2005. Imports from other countries of the American continent as a group represented 28 per cent of the total. The US's relative loss of share has been absorbed both by Asian countries (mainly China and Japan) and by the European Union, with increases in exports to Costa Rica of 4.5 and 2.4 percentage points, respectively. Costa Rica imports petroleum oils mainly from Venezuela (23 per cent of total imports of this item in 2005).

(ii) Trade in Services

32. Costa Rica has traditionally recorded a trade-in-services surplus. The most important export item is travel, followed by other business services, transport, and computer and information services (Table I.6). Transport and travel top the list of the country's major services imports.

Table I.6

Trade in services, 2001-2006

(US$ million)

	2001	**2002**	**2003**	**2004**	**2005**	**2006**				
Balance	745.6	685.2	776.4	857.3	1.115.9	932.3				
Exports	**1,925.5**	**1,868.2**	**2,021.0**	**2,241.8**	**2,421.2**	**2,155.6**				
Transport	267.8	244.2	240.4	245.7	282.4	221.0				
Travel	1,173.3	1,160.7	1,293.1	1,458.5	1,670.8	1,301.7				
Communications services			86.7	32.1	23.5	25.6	34.9	28.9		
Construction services			0.0	0.0	0.0	0.0	0.0	0.0		
Insurance services	0.0		0.0	0.0	0.0	0.0	0.0			
Financial services	4.8		5.1	4.7	9.7	9.7	8.8			
Computer and information services				124.6	153.4	166.8	200.3	200.4	237.2	
Royalties and licensing fees			0.9	1.7	0.5	0.5	0.5	0.0		
Other business services			241.1	243.4	260.6	266.7	284.7	328.8		
Personal, cultural and recreational services					0.1	0.1	0.1	0.1	0.1	0.1
Government services, n.i.e.			26.2	27.5	31.4	34.6	37.0	29.1		
Imports	**1,179.9**	**1,183.0**	**1,244.6**	**1,384.5**	**1,491.9**	1,223.2				
Transport	424.9	447.2	508.3	581.8	668.9	539.4				
Travel	364.4	344.9	353.2	405.7	423.4	347.6				
Communications services			38.2	45.7	51.4	55.1	57.9	49.7		
Construction services			0.0	0.0	0.0	0.0	0.0	0.0		
Insurance services	49.4		68.9	64.1	85.2	83.9	73.9			
Financial services	2.0		1.6	1.9	3.8	3.9	8.3			
Computer and information services				14.3	14.8	10.2	16.4	15.9	8.5	
Royalties and licensing fees			49.0	51.2	63.9	51.4	52.4	62.4		
Other business services			224.5	195.1	178.2	171.0	171.2	130.4		
Personal, cultural and recreational services					0.1	0.1	0.1	0.1	0.1	0.1
Government services, n.i.e.			13.0	13.5	13.4	14.1	14.4	2.9		

Source: Central Bank of Costa Rica.

(iii) Foreign investment

33. Costa Rica is a net recipient of foreign direct investment (FDI). The stock of FDI in Costa Rica rose

by 70 per cent from 2001 to 2005, during which period annual FDI flows to the country averaged around US$ 670 million (Table I.7). FDI for 2006 has been estimated at US$1,410.8 million. Free zones have helped to attract FDI; FDI in such zones represented 48.8 per cent of the total in the period 2001-2005. According to the Costa Rican authorities, factors which have helped to attract FDI include political stability, workforce quality and the degree of liberalization. FDI in foreign companies (unrelated to free zones or the inward processing regime) established in Costa Rica represented 33.8 per cent of the total in the same period. Real estate investments (not included in Table I.7) totalled US$224.5 million in 2005 and were exceeded only by investment in free zones.

Table I.7

Foreign investment position, 2001-2005

(US$ million)

	2001	2002	2003	2004	2005	
Direct investment in Costa Rica	3,184.7	3,742.1	4,261.9	4,632.1	5,416.9	
Direct investment abroad	95.8	127.4	152.4	196.9	153.6	
Portfolio investment in Costa Rica		844.4	921.8	863.6	632.7	968.9
Portfolio investment abroad	142.5	131.1	222.7	169.5	850.2	

Source: Central Bank of Costa Rica.

34. The manufacturing sector (in particular the electronic and pharmaceutical industries) is the main recipient of FDI, to the tune of 65.1 per cent of FDI in 2004 and 57.0 per cent in 2005. US microprocessor manufacturer Intel continues to be a major foreign investor. In the period under review, the tourism sector has been the second biggest FDI recipient almost every year. Other FDI recipient sectors include other types of services, agribusiness, agriculture and the financial sector.

35. The US continues to be the main country of origin of FDI; other countries of origin vary on an annual basis. Investment has been channelled mainly into the manufacturing sector, but also into the areas of commerce, tourism and other services.

(4) OUTLOOK

36. The expected rate of increase of real GDP for 2006 is 5.9 per cent. According to the Ministry of Finance, the pace of economic growth is expected to slacken in 2007, resulting in a 4.5 per cent increase in real GDP. Factors expected to continue fostering growth are external demand and foreign investment, coupled with a subsequent expansion of bank credit. Marginally slower growth between 2006 and 2007 would

mainly be attributable to lower-than-expected growth in the electronic goods sector, but also to tighter fiscal policy. The expected inflation rate for 2007 is 10 per cent, very similar to the 2006 figure (9.4 per cent).

37. According to the IMF, the high level of public debt, inflation and financial sector vulnerability continue to pose significant challenges. The Costa Rican economy also remains vulnerable to external factors, in particular

Appendix F

UN COMTRADE: Country Data Statistics

Trade balance, goods, US$ (billions) (UN DPAD/Link estimates) [code 29936]

Country or Are	Country or Are	2001	2002	2003	2004	2005	2006	2007
152	Chile	0.84	1.09	3.69	9.2	10.18	24.34	19.9
188	Costa Rica	-1.55	-1.92	-1.09	-1.42	-2.14	-2.6	-2.81
440	Lithuania	-1.78	-2.29	-2.7	-3.08	-2.9	-3.9	-4.6
702	Singapore	5.75	8.74	16.25	25.05	29.6	33.1	32.99
858	Uruguay	-1	-0.1	0.18	0.16	0.03	-0.4	-0.3

Unemployment by sex, thousands (ILO/SYB50) [code 4680]

Country or Are	Country or Are	Sex	Labour force, t	Unemploymen	Unit	1996	1997	1998	1999	2000	2001	2002
152	Chile	Men	Labour force si	Total unemplo	Number	180.9	180.8	271.1	322.9	312.5	302.6	298.5
152	Chile	Men	Labour force si	Total unemplo	Rates	4.8	4.7	7	8.2	8	7.6	7.5
152	Chile	Women	Labour force si	Total unemplo	Number	121	122.8	148.1	206.2	176.9	166.9	170.2
152	Chile	Women	Labour force si	Total unemplo	Rates	6.7	6.6	7.6	10.3	9	8.4	8.5
152	Chile	Both sexes	Labour force si	Total unemplo	Number	302	303.6	419.2	529.1	489.4	469.4	468.7
152	Chile	Both sexes	Labour force si	Total unemplo	Rates	5.4	5.3	7.2	8.9	8.3	7.9	7.8
188	Costa Rica	Men	Labour force si	Total unemplo	Number	45.3	43.5	40.5	45.6	41.2	55.8	61.6
188	Costa Rica	Men	Labour force si	Total unemplo	Rates	5.3	4.9	4.4	4.9	4.4	5.2	5.6
188	Costa Rica	Women	Labour force si	Total unemplo	Number	30.6	30.8	36	37.7	30.8	44.6	46.9
188	Costa Rica	Women	Labour force si	Total unemplo	Rates	8.3	7.5	8	8.2	6.9	7.6	7.9
188	Costa Rica	Both sexes	Labour force si	Total unemplo	Number	75.9	74.3	76.5	83.3	71.9	100.4	108.5
188	Costa Rica	Both sexes	Labour force si	Total unemplo	Rates	6.2	5.7	5.6	6	5.2	6.1	6.4
440	Lithuania	Men	Employment o	Registered un	Number	49.8	58.3	61.7	94.6	123.1	117.7	95.1
440	Lithuania	Men	Employment o	Registered un	Rates	5.7	6.6	6.5	10.6	13.5	13.5	10.8
440	Lithuania	Men	Labour force si	Total unemplo	Number	155.4	137.1	130.9	140.5	158.5	165.6	121.1
440	Lithuania	Men	Labour force si	Total unemplo	Rates		14.2	14.7	16.2	18.8	19.9	14.6
440	Lithuania	Women	Employment o	Registered un	Number	59.6	61.9	61.1	82.8	102.8	106.3	96.1
440	Lithuania	Women	Employment o	Registered un	Rates	6.7	6.9	7	9.3	11.6	12.2	11
440	Lithuania	Women	Labour force si	Total unemplo	Number	162	120.1	95.8	108.5	115.2	118.4	103.3
440	Lithuania	Women	Labour force si	Total unemplo	Rates		13.9	12.2	11.6	13	14.7	12.9
440	Lithuania	Both sexes	Employment o	Registered un	Number	109.4	120.2	122.8	177.4	225.9	224	191.2
440	Lithuania	Both sexes	Employment o	Registered un	Rates	6.2	6.7	6.5	10	12.6	12.9	10.9
440	Lithuania	Both sexes	Labour force si	Total unemplo	Number	317.4	257.2	226.7	249	273.7	284	224.4
440	Lithuania	Both sexes	Labour force si	Total unemplo	Rates	16.4	14.1	13.2	14.6	16.4	17.4	13.8
702	Singapore	Men	Employment o	Registered un	Number	0.8	1.2	2.3	3.2	2.3	3.2	5.6
702	Singapore	Men	Labour force si	Total unemplo	Number	31	26.8	35.5	51.4	53.5	41.7	65
702	Singapore	Men	Labour force si	Total unemplo	Rates	2.9	2.4	3.2	4.5	4	3.5	5.4
702	Singapore	Women	Employment o	Registered un	Number	0.7	1.4	2.1	2.7	1.8	3.2	6
702	Singapore	Women	Labour force si	Total unemplo	Number	22.8	18.7	26.6	38.7	44	31.2	46.2
702	Singapore	Women	Labour force si	Total unemplo	Rates	3.1	2.4	3.3	4.6	5.1	3.4	5
702	Singapore	Both sexes	Employment o	Registered un	Number	1.5	2.6	4.4	5.9	4.2	6.4	11.6
702	Singapore	Both sexes	Labour force si	Total unemplo	Number	53.8	45.5	62.1	90.1	97.5	72.9	111.2
702	Singapore	Both sexes	Labour force si	Total unemplo	Rates	3	2.4	3.2	4.6	4.4	3.4	5.2
858	Uruguay	Men	Labour force si	Total unemplo	Number			53.7	59.4	74.7	80.4	93.3
858	Uruguay	Men	Labour force si	Total unemplo	Rates	9.8	9	7.8	8.7	10.9	11.5	13.5
858	Uruguay	Women	Labour force si	Total unemplo	Number			70.1	78.3	93	112.8	118
858	Uruguay	Women	Labour force si	Total unemplo	Rates	14.6	14.7	13	14.6	17	19.7	21.2
858	Uruguay	Both sexes	Labour force si	Total unemplo	Number	159.1	151.5	123.8	137.7	167.7	193.2	211.3
858	Uruguay	Both sexes	Labour force si	Total unemplo	Rates	11.9	11.4	10.1	11.3	13.6	15.3	17

Code	Footnote Text
1	Fourth quarter of each year.
2	Persons aged 15 years and over.
3	Sample design revised.
4	Persons aged 12 years and over.

Table 12: Imports of All Goods and Import Shares in Agricultures and Industrial Goods by Country, 1995-2004

					Total Imports from All Goods (SITC 0 to 9) in $ Million						
Code	Reporter / Group	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
2	Chile	14,903	16,810	18,111	17,082	13,891	16,620	16,136	15,383	17,376	22,361
2	Costa Rica	3,205	3,561	4,511	6,237	5,987	6,029	6,272	6,894	7,388	8,003
2	Lithuania	3,649	4,559	5,643	5,794	4,834	5,456	6,353	7,709	9,803	12,379
2	Uruguay	2,866	3,322	3,716	3,808	3,356	3,466	3,061	1,964	2,190	3,119
3	Singapore	124,503	131,340	132,442	101,732	111,061	134,546	116,002	116,446	136,264	173,581
	World	4,916,041	5,226,726	5,444,979	5,393,896	5,657,610	6,411,840	6,190,835	6,293,198	7,451,248	8,939,970

					Import Share in Agricultural Goods (SITC 0+1+2+4-27-28) in %						
Code	Reporter / Group	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
2	Chile	8.3	8.5	7.9	8.4	9.7	8.5	8.5	9.1	9.4	8.5
2	Costa Rica	11.4	14.1	10.6	8.6	8.1	8.2	8.3	8.7	8.6	9.6
2	Lithuania	16.9	15.5	13.3	13.2	13.8	12.6	11.9	10.5	10.4	10.5
2	Uruguay	14.4	14.0	13.2	13.5	13.6	14.1	14.7	18.7	17.4	12.6
3	Singapore	5.5	5.1	4.9	4.9	4.5	3.6	4.0	4.0	4.0	3.5
	World	11.8	11.5	10.9	10.6	10.0	8.9	9.3	9.4	9.2	8.7

					Import Share in Industrial Goods (SITC 3 to 9 +27+28) in %						
Code	Reporter / Group	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
2	Chile	91.7	91.5	92.1	91.6	90.3	91.5	91.5	90.9	90.6	91.5
2	Costa Rica	88.6	85.9	89.4	91.4	91.9	91.8	91.7	91.3	91.4	90.4
2	Lithuania	83.1	84.5	86.7	86.8	86.2	87.4	88.1	89.5	89.6	89.5
2	Uruguay	85.6	86.0	86.8	86.5	86.4	85.9	85.3	81.3	82.6	87.4
3	Singapore	94.5	94.9	95.1	95.1	95.5	96.4	96.0	96.0	96.0	96.5
	World	88.2	88.5	89.1	89.3	90.0	91.1	90.7	90.6	90.8	91.3

	Memo: values in totals and average shares
1 to 2	Developing countries (117)
1	Low income co (42)
2	Middle income co (75)
2	High inc Non-OECD (18)
4	High inc OECDs (24)

Note: The classifications of country income groups are based on World Bank WDI 2006.

Source: Based on country reporting from UN COMTRADE database.

Table 11: Exports of All Goods and Export Shares in Agricultures and Industrial Goods by Country, 1995-2004

		Total Exports in All Goods (SITC 0 to 9) in $ Million									
Code	Reporter / Group	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
2	Chile	15,901	15,407	16,678	14,842	15,619	18,214	18,745	17,423	20,077	30,894
2	Costa Rica	2,702	2,780	3,893	5,151	6,283	5,487	4,716	4,950	5,800	5,953
2	Lithuania	2,706	3,356	3,862	3,711	3,004	3,809	4,583	5,475	7,162	9,302
2	Uruguay	2,106	2,397	2,730	2,770	2,237	2,299	2,058	1,861	2,198	2,918
3	Singapore	118,263	125,008	124,988	109,905	114,682	137,806	121,754	125,177	159,963	198,633
	World	4,853,884	5,155,208	5,353,313	5,312,339	5,515,793	6,231,315	5,991,230	6,129,605	7,173,643	8,570,081
		Export Share in Agricultural Goods (SITC 0+1+2+4-27-28) in %									
Code	Reporter / Group	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
2	Chile	37.2	37.0	34.3	37.6	37.8	35.1	37.1	37.6	37.1	29.5
2	Costa Rica	68.4	72.3	55.1	45.9	31.0	33.0	35.8	34.7	33.2	36.0
2	Lithuania	25.9	22.5	20.3	18.1	18.5	16.8	16.6	15.1	15.9	15.1
2	Uruguay	49.5	51.8	53.2	54.3	55.2	50.7	48.9	54.2	58.2	60.0
3	Singapore	5.0	4.5	4.2	4.1	3.4	2.7	2.7	2.7	2.3	2.2
		11.6	11.2	10.8	10.2	9.6	8.5	8.9	9.0	9.2	8.6
		Export Share in Industrial Goods (SITC 3 to 9 +27+28) in %									
Code	Reporter / Group	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
2	Chile	62.8	63.0	65.7	62.4	62.2	64.9	62.9	62.4	62.9	70.5
2	Costa Rica	31.6	27.7	44.9	54.1	69.0	67.0	64.2	65.3	66.8	64.0
2	Lithuania	74.1	77.5	79.7	81.9	81.5	83.2	83.4	84.9	84.1	84.9
2	Uruguay	50.5	48.2	46.8	45.7	44.8	49.3	51.1	45.8	41.8	40.0
3	Singapore	95.0	95.5	95.8	95.9	96.6	97.3	97.3	97.3	97.7	97.8
		88.4	88.8	89.2	89.7	90.4	91.5	91.0	91.0	90.8	91.4
	Memo: values in totals and average shares										
1 to 2	Developing countries (118)										
1	Low income co (42)										
2	Middle income co (76)										
2	High inc Non-OECD (18)										
4	High inc OECDs (24)										
	Note: The classifications of country income groups are based on World Bank WDI 2006.										
	Source: Based on country reporting from UN COMTRADE database.										

Table 8: Foreign Direct Investment (FDI) Inflows and their shares of GDP and Exports in Developing and Industrial Countr

					Net FDI Inflows ($ million)						
code	Country / Group	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
3	Chile	2,957	4,815	5,271	4,628	8,761	4,860	4,200	2,550	4,385	7,603
3	Costa Rica	337	427	408	613	619	409	454	662	574	620
3	Lithuania	73	152	355	926	486	379	446	712	179	773
3	Uruguay	157	137	126	164	235	274	271	175	417	311
4	Singapore	11,619	9,499	13,497	7,408	16,602	16,479	14,088	5,725	9,348	16,032
4	Slovenia	150	173	334	216	107	136	503	1,636	333	827
					Net FDI Inflow as % of GDP (%)						
code	Country / Group	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
3	Chile	4.53	7.02	6.37	5.83	12.00	6.41	6.13	3.79	5.98	8.08
3	Costa Rica	2.87	3.61	3.18	4.35	3.92	2.56	2.77	3.93	3.28	3.35
3	Lithuania	0.97	1.88	3.61	8.35	4.48	3.33	3.69	5.06	0.97	3.47
3	Uruguay	0.86	0.68	0.58	0.74	1.11	1.33	1.46	1.43	3.73	2.35
4	Singapore	13.84	10.30	14.15	9.04	20.40	18.01	16.60	6.48	10.12	15.01
4	Slovenia	0.75	0.86	1.72	1.03	0.50	0.71	2.57	7.40	1.20	2.57
					Net FDI Inflow as % of Exports of Goods & Services (%)						
code	Country / Group	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
3	Chile	14.84	24.43	25.38	24.42	43.39	22.71	17.57	9.51	18.96	22.28
3	Costa Rica	7.65	9.17	7.80	9.16	7.57	5.27	6.68	9.27	7.02	7.21
3	Lithuania	1.95	3.61	6.80	18.26	11.47	7.42	7.38	9.54	1.90	6.39
3	Uruguay	4.50	3.44	2.82	3.74	6.15	6.87	7.96	6.49	14.58	7.93
4	Singapore	7.84	6.09	8.64	5.76	11.01	9.22	8.66	3.40	4.84	6.72
4	Slovenia	1.45	1.65	3.20	1.94	1.02	1.27	4.45	12.85	2.13	4.29
	Memo: FDI in Totals and Share in average										
1 to 3	Developing Co (135)										
1	Low income co (56)										
2 to 3	Middle income co (79)										
4	High inc Non-OECD (9)										
5	High inc OECD (24)										
Note: The classifications of country income groups are based on World Bank WDI 2006.											
Source: World Bank WDI database.											