THE CONTRIBUTION OF OPEN ECONOMY TO ECONOMIC GROWTH IN WEST SUMATERA

THESIS

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FAKULTAS EKONOMI
UNIVERSITAS ANDALAS
2010

بِسْمِ اللَّهِ الرَّحْمَٰنِ الرَّحِيمِ

The Way To Get Started Is

To Quit Talking And Begin Doing

——Walt Disney——

I Dedicated This Thesis To My Parents,

My Grand Ma, Grand Pa, Pak Adang, Ante and Om,

My brothers Yuda, Yudi, Angga, Anggi and Anggeri,

The All Of My Beloved Family, You Are Stay In My Heart Forever.

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The Contribution Of Open Economy To Economic Growth Of West Sumatera

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ABSTRACT

The modern economy can not separated with open economic systems, open economy also called international trade that are always connected with export and import activity. In the theory of economics activity, export and invesment has positive relationships with economic growth, investment undirectionally cause the capital goods import that are significantly cause economic growth. This research is a study about the contribution of open economy to economic growth of West Sumatera. The analizes using OLS (Ordinary Least Square) of time series data of 1983 to 2009. The varibales uses here are Gross Regional Domestics Products as dependent variable and Export, Import (including capital goods import), Investment as independent variables. Based on empirical result, writer suggest that export and capital goods import has big contribution to the Gross Regional Domestics Products. Furthermore, capital goods import also has positive relationships to investment in the case of West Sumatera.

Keywords: International trade, economic growth, ordinary least square, contribution

This thesis has been presented before the examiners in the Thesis Examination and successfully passed the Thesis Examination on January 13th 2011.

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PREFACE

All praise to Alloh SWT Lord of the world. The writer would like to thank God for its quidance and mercy therefore my thesis entitled **"The Contribution Of Open Economy To Economic Growth In West Sumatera"** has finally been accomplished on time and without matter problem.

This thesis is proposed as a partial requirement to acquire Bachelor Degree at Economic Department of Economic Faculty of Andalas University. The Reasons Lying behind the chosen of this title are; firstly to research economics potential of West Sumatera in order to rise economic growth and welfare of this region. Secondly, there are many problems facing by West Sumatera in economic sector, hopefully this thesis will gave contribution to many sides especially for the West Sumatera economy.

The writer that this thesis still far from perfection. It needs to be improved. For that reason, the Writer would gladly welcome constructive critics and suggestions for perfection. Hopefully this thesis can be helpful and gives to anyone who reads it, especially to academicians and students.

Padang, February 2011

Ceri Cintia Elva Nazmar

ANCKNOWLEDGEMENT

After a long period of though and careful effort, my thesis entitled The Contribution Of Open Economy To Economic Growth Of West Sumatera. In the process of complection, there are many people who have involved either directly or indirectly. I would like to express my gratitute to those people who made it possible for me to complete this thesis.

Foremost, I would like to express my sincere gratitute to Prof. Dr. H. Syafruddin Karimi, SE, MA as Dean Of Faculty of Economics and also as my thesis advisor, who expertise, understanding, patience, and added considerably to my graduates experience. His quidance helped me in all the time of research and writing of this thesis. I could not have imagined having a better advisor and mentor for my bachelor degree study. Thus, I would like to say thanks to the examiners: Drs. Masrizal, M.S.oc, Sc and Mr. M. Nazer, SE, MA for their encouragement, insighful comments, and hard questions.

Special appreciation also goes to Prof. Firwan Tan, SE, M.Ec,DEA.Ing as the Head Of Economic Department of Faculty of Economics of Andalas University. Besides that, very special thanks I giving to my academic conseulor Dr. Hefrizal Handra, M.Soc, Sc for his suggestion and direction that relate to academic affairs.

In addition, I would like thank to many people who pay important role to motivate me to study in economics department: Edy Ariyanto, SE, M.Si, and Fajri Muharja, SE, M.Si for the kind assistance with writing letters, giving me advice, and helping with various applications. Pak Supriyadi in Reading Room Of Economic Department for the kind of him to help me and quidance to prepare many books that I need in this lecturing process and thesis writing, and he also as my second Father in the college.

I also would like to thank to my friends that always encourage and support me to finish this thesis:

1. My classmates in IE-int 06 Dian, Ririn, Sari, Vike, Ilmi, Meza, Alfi, Riri, Puja, Robi, Cici, and Fannie for helping me get through the difficult times, and all for emotional support, camaraderie, entertaintment, and caring they provided. That was never ending memories for me when I psend my time with all of you guys,
2. To my best friends Heny and Yosi for supporting, trusting, Listenig, encouraging and criticizing me,
3. All of my friends in international class and reguler class, Syapta Wiguna, Afdal, Ronie, Dedy and others that are impossible to records one by one here. That was great moment when we shared and been through many things since our first day at Faculty of Economics.

Lastly and most importantly, I wish to thank my parents, Elvariano Nazmar and Husniati, Pak. Adang, My Grand Mother, My Grand Father, Ante, Om, and my brothers Yuda, Yudi, Angga, Anggi, and Anggeri. They supported me, taugh me, and loved me. To them I dedicate this thesis.

Padang, February 2011

Ceri Cintia Elva Nazmar

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CHAPTER I

INTRODUCTION

1.1.Background

Global economic relationships in the world are stay in the purpose of welfare. To reach this purpose each country try to be the best in global market. There are many theory expanded by the masters of economic, all of the theroy are end in the reason that how to fulfill nessecity. In the theory we know open economic systems and closed economic system, both of them have different role to reach welfare of their country. Closed economic systems are the economic without foreign trade, they are try to fulfill all of the nessecity in their country, sometimes this theory of closed economic systems are separated from the problem of currency. Vice versa of that, the open economic systems is the theroy that allow the relationships between countries and no trade barriers. There are many bennefits of this, but the problem also big, especially for the currency value.

The open economy also called international trade, modern econonomy today can't separated from international trade, we can't avoid international trade, becouse people needs to fulfill their nessecity and the best reason of why people do international trade is to rising welfare. International trade helps us to fulfill nessecity and consume more than what we can produce, rise welfare but also can worse economics in a country, becouse each of countries fight to be the best in the world market. Sometimes, developed countries are powerful than developing and under developed countries in the global market.

According to Crisholm (1981) on his book *The Priciples Of Economics,* The pure theory of international trade has microeconomic and macroeconomic implications. Its microeconomic aspects refer to the interaction of demand and supply in individual markets. As in domestic markets, trade establishes an equilibrium price and quantity for traded goods and services. When markets are linked through trade, equilibrium occurs at the intersection of global demand and global supply.

The demand and supply between countries we called export and import activity, export means when you trade goods and services out of your country, and import means when the foreign product enter to our country. A country try to be the best each other in the market, becouse it's not easy to challenge in the world market, quality and price are some reason by the consumers to accept our product. Every government in the world always support an effort in order to increase export than import, becouse a country will get trade surplus when export more than import, vice versa when import is greater than export means trade deficit for a country. We know balance of trade, which known as comparison between export and import. Balance of trade hopefully always positive, becouse it will bring us to be trade surplus, trade surplus bring welfare to people.

In open economic country of international trade, export has the important role to accelerated domestic growth. Export can be rise economic growth in one side, but also can worse the others side (Syafruddin Karimi, 1986). Indonesia as one country that hold open economy can't separated from the positive and negative effect of international economy, becouse most of Indonesian economy are dependent to international trade, especially for natural resources that are export to others countries of destiantions. Besides that export will help this country to rise the useful of capital goods import, in the side to reach good economic cooperations.

To rise welfare in a country, economic development is significant factor here. The new interest in the determinants of economic development has reignited the debate on opennes and growth. The new growth theories suggest that trade policy affects long run growth throught its impact on tehnologycal change. Opennes to trade provides access to imported inputs, which embody new technology, increases the effective size of the market producing producers. Which raises the returns to innovation and affects countries specialization in research intensive production (Ann Harrison, 1995).

As a big country, Indonesia has many region and there are many problems facing by each region especially related to the problems of economics. To minimize the problem of each region, government implement regional autonomy which is each of region has responsibilities to manage their economic activity self, this is we called region autonomy. According to Saikhu Usman (2002), the laws of regional autonomy or decentralization is based on five principles, there are:

1. Democracy,
2. Community participation and empowerment,
3. Equity and justice,
4. Recognition of the potential and diversity within regions, and
5. The need to strenghen local legislatures.

These five principles support Indonesia's push for reformasi, which continues to aim to eradicate the practices of corruption, collusion, and nepotism, within the government bereaucracy.

After more than three decades under a centralized national government, Indonesia decided to implement a new policy of regional autonomy that became *effective on January 1, 2001 (Saikhu Usman, 2002). This regulation* of regional autonomy based on the Law No. 22, 1999 on local government has developed central government authorities to local governments in all government administrative sectors, except for security and defense, foreign policy, monetary and fiscal matters, justice, and religious affairs. Consequently, local governments have had to reform their structures to accomodate the huge increase in responsibility that has been passed on from the central government. Besides that, decentralization must be carried out in a way that enhances democracy, one reason of this is to prevent corruption.

The main objectives of regional autonomy are to promote better delivery of government services and to raise the level of local government *accountability. Regional autonomy is not simply a matter of regulating the* relationships between the various level of government. Rather, it is about regulating the relationship between the government and the people. However, this is still difficult to achieve in the regions, because almost all local interest groups, including political parties, remain weak and poorly organized, because they have been almost completely left out of the political decision-making process over the last three decades. Without strong civil society institutions, it will be difficult to achieve practices of good governance.

Decentralization affecting economic growth in each region, becouse they are fighting to solve their self probelms, the growth of them is depend on their ability to manage their self area. Briefly, Saikhu Usman explaining the salaries of local parliement members that is significantly increased, despite the fact that the country is still recovering from the effects of the 1997 – 1998 monetary crisis.

Salary increases of local assembly members in selected regions

No	Region	Change based on the salary of the previous assembly (%)
1	North Sumatera Province • Simalungan district	+300 +250
2	West Sumatera Province • Solok district	+460 +250
3	East Java Province • Magetan district	+117 No change
4	Central Java • Kudus District	n.a +200
5	West Kalimantan Province • Sanggau District	+270 Increase
6	South Kalimantan • Banjarmasin Muncipality	n.a No change
7	West Nusa Tenggara • West Lombok District	n.a +330

Note: n.a = not available
Sources: The SMERU Reseach Institute, June 2002

Up table shows briefly the effect of regional autonomy to the salary of each province which is indirectly will affect the level of economic. as other region in Indonesia, West Sumatera also rise the level of it's salary reach until + 460 %, the biggest value than others. Hopefully this decentralization give positive impact to the region in Indonesia, especially for West Sumatera.

As the country that hold open economic system, Indonesia need to export and import goods and services to many countries, this is we called international trade which is significantly impact to economic growth. West Sumatera as one of the Indonesian region also manage their economic system to bennefit from this international trade, to rise export than import. Some export commodities like cocoa, rubber, woods, gambier, and others comes from West Sumatera.

According to the data of central bereau statistics of West Sumatera, economic growth is fluctuate for the case in West Sumatera in the year of 1983 until 2008. The lowest is about -6,5 %, at this year we have difficulties to prevent economic crisis. Economic crisis is started at 1997 in Indonesia and it bring negative effect to economic growth of Indonesia. When economic crisis is started, the impact to West Sumatera economy is not too significant. It shows in the level of economic growth is about 7,9 %, decrease 1,03% from 1996. But the significant effect is in the year of 1999. After that, economic is recovery and the growth is rise continually until 2008.

From above explanation, writer is interested in conducting research for knowing "**The Contribution Of Open Economic System To Rise Economic Growth In West Sumatera"** as topic of this thesis. Thesis purpose is to investigate the effect of open economic system to West Sumatera economy, benneficial of this open economic system to local people and also how to manage good economic system in West Sumatera with its relationships with international trade activity. Thus the dominant factors that is more contribute to rise economic growth in West Sumatera will be expalain here.

1.2.Research Question

There are several questions posed in this reseach:

1. What are the effect of open economy to economic growth of West Sumatera?
2. What is the dominant variable to rise economic growth in West Sumatera?

1.3.Reseach Objective

The main purpose of this research is to analyze the implication of open economy in West Sumatera. The objectives that the author wants to achieve is:

1. To analyze the effect of open economic system to economic growth of West Sumatera, and
2. To analyze the dominant variable that is significant to accelerated growth in West Sumatera.

1.4.Hypothesis

The hypothesis that will be tested in this research are: International trade significantly cause economic growth, and this hypothesis also happen and implemented in West Sumatera economy. The variable of international trade that are export, import (including capital goods import), investment (including domestics investment and foreign investment), and this variable are related to gross regional domestics product. So the hypothesis that will be tested are: (i) Investment and export has positive effect to the growth of income, (ii) income and export has positive effect to capital goods import, and (iii) capital goods import has positive relationships to the investment.

1.5.Research Advantage

This research hopefully gave the contribution to many side, especially for:

1. Analyze the impact of international trade to economy inside, in the year of 1983 – 2009,
2. As reference to other researchers that has relationships to the West Sumatera economy, and
3. Hopefully this reserach will have big contribution to the government of West Sumatera to recovery growth in the next period.

1.6.Organization Thesis

The writing systematic and the arrangement of this research consist of six chapters:

1. Chapter I : Introduction

   In this chapter, writer explains background to choose title, research question, objective, advantage, and hyphotesis of research.

2. Chapter II : Survey Of Literature

   Consist of the explanation of last research about the concepts of open economy.

3. Chapter III : Theoretichal Framework and Research Methodology

   Consist of the methods used in this research.

4. Chapter IV: The Economy Of West Sumatera

   Investigate the economic activity of West Sumatera, to the growth and others contribution inside.

5. Chapter V : How International Trade Affects The West Sumatera Economy ?

   Consist of the explanation of international trade contribution to West Sumatera economy

6. Chapter VI : Conclussions And Recommendation

CHAPTER II

SURVEY OF LITERATURE

The evidence of the variabels to cause economic growth has proved by experts of economics in many books and literatures, their researchs are focused to one question: How to rise economic growth in order to increase welfare in a country ? it started from the theory of classical economics thinking buit by Adam Smith, Richardian Theory, Harrord Domar Theory, Heckscher Ohlin, until inclusive growth theory and others theory of international trade. Now writer will explain the evidence founded by the expert of economics in the below.

2.1. Theoretical Study

Economic growth and development are two different terms used in economics. Generally speaking economic development refers to the problem of underdeveloped countries and economic growth to those of developed countries. Economic development is one of the main objectives of every society in the world and economic growth is fundamental to economic development. There are many contributors to economic growth, export is considered as one of the very important contributors among them (Sampath and Anwer, 1997), economic growth undirectionaly causes total exports (Njikam Ousmanou, 2003), tiuuhere is a positive relationship between exports and economic growth is known as export led growth hypothesis and the export sector can be considered as one of the most vital contributors to achieving economic growth and create new employment opportunities.

Export Is goods and services that are produced domestically and sold to buyers in another country, export are one important element to rise economic growth in a country. To reach positive economic growth the ratio between export and import or we called balance of trade must be positive, the value of this undirectly causing the welfare of a country. Export rate here is the rate of all goods exported by West Sumatera according to constant price of 2000, the formula is:

$$X = \frac{(Export)t - (Export)t\text{-}1}{(Export)t\text{-}1} \times 100\%$$

Where: X is for export, (export)t is for export in the year of t, (export)t-1 is export in the last period.

Export is the major factor to rise economic growth in a country, in other words it is called export led growth. Export led growth is an economic strategy using by developing countries (Sampath and Anwer, 1997) and The activity of export and import are including in open economic systems. A greater degree of quality and customer orientation causing by more open economy, and this can be increasing competition and firm presence in global market. To a country which before is a protected market (higher tariffs of foreign import products and others protections) it has also reduced the effectiveness to hide behind high tariff barriers and face inneficient production. Foreign product that is sometimes comes from advance country use more technology that can reduce the cost of production, this is the challenge by them to sell their product below the price of national product.

2.1.1. The Concept Of Economic Growth

Why is the world so much richer today than it was fifty or a hundred years ago? What are the prospects for increasing riches in the future? And why is the world today so unequal as we look across countries?, this is the question related to economic growth. So, economic growth is a positive change in the level of production of goods and services by a country over a certain period of time. The growth of economics consist of nominal growth and real growth, the nominal growth is defined as economic growth including inflation, while real growth is nominal growth minus inflation. Economic growth is usually brought about by technological innovation and positive external forces. To count the rate of economic growth, we can use the formula:

$$YI = \frac{(GRDP\_riil)t - (GRDP\_riil)t\text{-}1}{(GRDP\_riil)t\text{-}1} \times 100\%$$

Where YI is economic growth, Real Gross Regional Domestics Products is based on constant price of 2000.

Export And Economic Growth

Export is an important factor causing economic growth, researchers found the evidence about this relationship between export and economic growth, most of them found the result that there are positive relationships between export and economic growth. Theoretically, export-led growth appears among neoclassical economists after the victorious story of newly industrialized Asian countries. They argue that, for instance, Taiwan, Hong Kong, Singapore and Korea, the Four Asian Tigers, have been successful in achieving high and persistent rates of economic growth since early 1960s, because of their free-market, outward-oriented economies (Sami Ullah, Bedi Uzzaman, Faroq, and Javid, 2009).

In the research of Izani Ibrahim (2002) that is estimates the relationship between GDP growth and export, also found the limited results, there are:

1. The estimates show that there is a positive export productivity differentiation in all six countries (Hongkong, Korea, Malaysia, Philipiness, Singapore, and Thailand) in the sample, and positive export externalities in all except the Philipines,
2. Higher productivity in the export sector is associated with the size and trade orientation in a country, as well as the extent of manufacturing,

3. Externality aspects of this are the structure of exports, including product concentration, the percentage of primary and manufactured exports, and the type of products for export, and
4. A well diversified export structure and highly processed export products generally characterize countries with export sectors that generate positive externalities for the non export sector.

And then Abhijit sharma (2003) summarizes that:

1. The idea that export growth is one of the major determinants of output growth,
2. Export growth may effect output growth through positive externalities on nonexports,
3. Through the creation of more efficient management styles,
4. Improved production techniques,
5. Increased scale economies, and
6. Improved allocative efficiency and dynamic competitiveness.

If there are incentives to increase investment and improve technology, the marginal factor productivities are expected to be higher in the export sector than in the other sectors of the economy, an expansion of exports, even at the cost of other sectors will have a net positive effect on the rest of the economy. Growth of manufactured exports had a significant positive relationship with GDP growth while the growth of primary exports had no such influence.

With using Engle-Granger and Johansen aprroach and then Abhijit Sharma (2003) found the results that:

1. Export and GDP are cointegrated, means that there are strong relationships between GDP and export to cause growth of economic, and
2. There are positive relationships between investment and export, which using johansen approach and Engle-granger approach this relationships show high significant level.

It is argued that an expansion of exports will have a net positive effect on the rest of the economy.

Export-led growth (ELG) is an economic development strategy in which export, and foreign trade in general play a central role in a country's economic growth and development. There has been a general global shift towards the ELG strategy in recent years. This change has been found to be due to the actual and potential economic benefits this strategy accords to both developing and developed countries alike (Sentsho, Joel. 2000).

Then the evicende of the correlation between export and economic growth also found by Ann Harison (1995). He says that micro studies has positive correlation between increased exports and productivity growth, however the relationships between imports and productivity growth is often negative. This asymmetry is likely due to two factors:

1. Countries tend to export goods in which they have comparative advantage and import goods in which they do not, and
2. Productivity growth tends to be higher when output is growing, and falls during recessions and low growth periods. But if greater imports penetration is accompanied by a contraction of domestics industry , it is not surprising that productivity growth also falls.

The evidence explaining by Ann Harrison that the higher black market will affect low economic growth, a higher black market premium is negatively associated with growth. The most important variables are the growth of labor force and capital stock, on average a one percent increase in capital accounts for an increase in the rate of GDP growth of between 4 and 6 percent.

Elbeydi, Hamuda, and Gazda (2010) also found The fact that any rise in export growth would have a positive influence on economic development in both the long and short runs. The results of this study also suggest that promoting exports via export promotion policies will contribute to economic growth, this evidence also shown by Heiko Hesse (2008) in his article of Export diversification and economic growth write that: export diversification can lead higher growth.

Developing countries should diversivy their exports since this can, it can help them to overcome export instability or the negative impact of terms of trade in primarily products. The process of economic development is typically a process of structural transformation where countries move from producing poor country goods to rich country goods. Export diversification does play important role in this process.

Dr. Joel Senthso (2000) research the case of Botswana export, he suggest that export revenues derived from a primary export sector like the case of mining in Botswana can lead to a positive and significant economic growth in a country. The results indicate that Botswana has been able to manage its primary export revenues in such a way that the country is able to cover both recurrent and development expenditure as well as financing government effort to initiate industrial development for economic diversification through the financial assistance policy. In addition the country has been able to accumulate foreign reserves of well over 36 months of import cover. The statistical results indicate the importance of good governance and financial management in achieving sustainable economic growth in a primary exporting country.

Investment And Economic Growth

Besides export, investment is a major variable to cause economic growth. There are domestic investment and foreign investment. Foregin *investment known as Foregin Direct Investment (FDI). Maria Carkovic* and Ross Levine (2004) research about the effect of investment to economic growth, especially for Foreign Direct Investment (FDI). They are found that FDI inflows do not exert an individual influence on economic growth. Thus while sound economic policies may spur both growth and FDI, the result are consistent with the view that FDI exerts a positive impact on growth that is independent of other growth determinants.

The impact of FDI on growth depends heavily on the stock of human capital, countries with low level of human capital the direct *effect of FDI is negative, through sometime is insignificant. FDI has* increased dramatically since 1980s. Furthermore, many countries have offered special tax incentives and subsidies to attract foregin capital. An influential economic rationalle for threating foreign capital favorably is that FDI and portfolio inflows encourage technology transfers that accelerate overal economic growth in recipient countries (Maria Charkovic and Rose Levine, 2004).

Katerina, John and Antanasious (2004) examined the relationship of FDI and economic growth for selected transition economies. the selection was based on data availability. The evidence from the statistical analysis suggests that foreign direct investment does not have any significant relationships with economic growth for transition countries. They are derive some conclussions after splitting the samples into low and high income or grow countries. The use of informative priors did not change the results. Therefore, after removing outliers effects from data set, Foregin direct Investment does not exert any robust influence on growth.

Foreign direct investments as transmitted by the multinational corporations, have several welfare implications, one which is the effect on the economic growth. If this foreign direct investment has a positive impact on economic growth, then a host country should encourage foreign direct investment lows by offering tax incentives, infrastructure subsidies, import duty exemptions and other measures to attract FDI. If FDI has a negative impact on economic growth, then a host country should take precautionary measures to discourage and restrict such capital inflows (Katerina, John and Antanasious (2004)).

Xavier Sala and Elsa V. Artadi research about the contribution of investment to the economic growth in Arab. They are foud the result that the arab world has suffered for twenty years growth. The decline in the investment rate in the region is probably a consequence, not a cause of this slowdown. By international and historical standarts investment has remained high, but this not transalated into higher growth rates. The reason is that what matter for growth is not the quantity of investment, but it's quality. They are argue that there are two broad explanations for this slowdown of growth:

a. Too large a fraction of overal investment has been unproductive public investment,
b. The environment for private investment has been hostile for at leat three reasons, include: excessive political, social, ans military conflicts throghout the region; excessive government intervantion, protection and regulation (which suffocated the business environment and makes private investment expensive and therefore uncompetitive), and then
c. Inadequate human capital.

Economic growth is determined by productivity growth and labor force. Equity market and other asset returns determined by the overall cost of capital in the global economy and by return investors require to bear the risk that comes wtih equity ownership. Dean Baker, J. Branford Delong, and Paul Krugman (2005) has analysed about Asset returns and economic growth in the United States cases, they are found that economic growth determined by productivity growth and labor force growth. Equity market and other market and other asset returns determined by the overal cost of capital in the global economy and by the return investors reguire to bear the risk that comes with equity ownership. As a large open economy shifts in the economy that reduce the economic growth would be accompanied by reductions in the rate of returns on asset as well.

2.1.2. The Terms Of Trade

The terms of trade have an especially marked impact on the economies of developing countries. According to the bulletin of Federal Reserve Bank Of New York in the 9 volume (November 2003) that is in developing country's terms of trade, the price of its exports relative to the price of its imports, can seriously disrupt output growth. An analysis of the effects of a decline in export prices in seventy-five developing economies suggests that countries with a flexible exchange rate will experience a much milder contraction in output than their counterpanrts with fixed exchange rate regimes.

Christian Boda and Cedric Tile (2003) explored how the exchange rate regime adopted by developing countries can affect their ability to adjust to terms of trade fluctuations. Their statictical analysis has shown that a terms of trade shock will have little impact on growth under a flexible exchange rate system becouse the exchange rate's own movements will absorb the effects of the shock. This analysis has also shown that the terms of trade movements pose output growth in developing countries.

Robert C. Fensra, Marshal C. Reindolf, and Matthew C. Slaughter (2008) are demonstrate how unmeasured gains in the terms of trade and the declines in tariffs can cause conventionally measured growth in real output and productivity to be overstated. Building on the GDP function approach of Diewert and Morrison, they are develop methods for measuring these effects. Their reseach based on the information of the U.S Bereau Of Labor Statistics (BLS), in 1995 growth in US appears to have accelerated dramatically, becouse of gains on terms of trade and tariff reduction.

In the result of their experiment of economics, they are found that at first glance, the roles of trade prices and trade barriers in aggregare productivity might seem small. But for many reasons they can be very important. Unmeasured gains in the terms of trade cause real output growth and productivity growth to be overstated, and declines in tariffs can also be expected to raise productivity. Building in the function approach of Diewert and Morrison, in their paper they have developed new methods for measuring these effects. They have then applied this framework to the important case of the post-1995 U.S productivity accerelation.

According to Dominick Salvatore (1995) the terms of trade of a nation are defined as the ratio of the price of export commodity to the price of its import commodity. In a world of many traded commodities, the terms of trade of a nation are given by the ratio of the price index of its export to the price index of its imports. This ratio is usually multiplied by 100 in order to express the terms of trade in percentages. The value of terms of trade relates to international trade. In other words we can say that It is a single number that represents the ratio of a particular country's exports and imports. Specifically, terms of trade represents the relationship between the price a country receives for its exported goods and the price it pays for imported items. In general terms of trade also known as TOT, is considered to be more favorable when the price of exports exceeds the price of imports.

Terms Of trade (TOT) = Export Price / Import Price * 100%

Note: if the result under 100% generally indicate that there is more money going out of the economy than coming in.

A country's currency also affected the value of terms of trade. When interest rate rise, currency value generally also increases. *Developing countries were considered to be at disadvantage regarding* terms of trade. This is becouse exports are more often raw goods or commodities with lower prices than the manufactured goods imported from more developed countries.

2.2. Empirical Study

There are many researchers research about the relationships of international trade, especially on the case of export, adjustment policy to economic growth. In their research used cross-section and time series data, and the combination of both. Export, Investment and economic growth are the main factors to rise welfare to the countries. They are significantly used by countries to rise welfare. To rise export, we need investment and to rise economic growth, export and investment are benneficially.

Sampath and Anwer (1997) are examined causality between export and economic growth for 96 countries, using data from world bank for the period of 1960-1992. While determining the stationary of the two variables and their orders integration, they are found that GDP and Exports are integrated of different orders for 35 countries. Among other 61 countries, for 30 countries there was no long run relationship between the two variables, 20 countries show causality at least in one direction, with unidirectional causality from GDP to exports for 12, from exports to GDP for 6 and bidirectional causality for 2 countries, and 11 countries do not show any causality between GDP and exports. There are only 9 of 96 countries which show positive impact of economic growth on exports. Contrary to the common thinking that exports promote economic growth they are found that majority of the countries do not show any relationship between exports and economic growth.

Besides that the research of Abhijit Sharma (2003) analyzes the export growth in India, using the time series data of the year of 1971 until 2001. The purpose of this paper is to investigate the following hypotheses:

i) Whether exports and GDP are cointegrated using first the Engle-Granger approach and secondly by using the Johansen methodology,
ii) Whether export growth Granger causes GDP growth, and
iii) Whether export growth Granger causes investment.

For the first two cases, strong evidence is found against cointregration. The evidence against the ELG hypothesis using the simple Engle-Granger approach contradicts the results of some recent studies. For the second, this research use the Johansen approach, it does not negate the results obtained from the Engle-Granger approach. They also fail to find support for the argument that exports Granger cause GDP, using two measures for GDP (GDP with exports and GDP without exports). The same holds for the relationship between exports and investment. Finally, they have utilised the concept of impulse response functions in order to investigate how the system behaves as a result of a shock. This approach allows us to simulate the effect of a given (predetermined) shock on the economic system. They are conclude that relatively 'big' shocks in real exports do not generate significant responses. This strengthens the argument against the ELG hypothesis for the case of India and strengthens the argument that inspite of reforms, it still retains some characteristics of an import substituting economy.

The research using time series data also used by Anastasya Widia KW (2003). The result of this research shows causality between economic growth and real export. The rise of real income is not cause by the level of real export, but the raise of the level of national income significantly push the export, and then Ann Harrison (1995) which combine cross section and time series data to analyses the relationships between opennes and growth. The results suggest that the choice of time period for analysis is critical: whereas only 1 of the 7 opennes measures positively affects when the cross section data are employed, 3 of the 7 proxies for opennes reveal a positive association with growth when the data are averaged over five year periods, and 6 of the 7 proxies for opennes reveal a positive association with growth when the data averaged over 5 years periods, and 6 of the 7 measures are statistically significant using annual data, and they are find that greater opennes is associated with higher growth. So, according to the result of this research, opennes is very important to rise economic growth in a country.

The evidence of the relationships between export, investment and economic growth also found by Dipendra Sinha (1999) that is attemp at studying the effects of export instability on economic growth using recent time series econometric techniques. In this article, Dipendra Sinha use time series data to study the relationship between export instability and economic growth for the following nine Asian countries: India, Japan, South Korea, Malaysia, Myanmar, Pakistan, Philippines, Sri Lanka and Thailand. He/she get a variety of results between export instability and economic growth. For India, the results are mixed. For Japan, Malaysia, Philippines and Sri Lanka, the evidence suggests a negative relationship between export instability and economic growth. For Korea, Myanmar, Pakistan and Thailand, the results show a positive relationship between export instability. In the most cases, the investment variable is found to be positively with economic growth. Investment can be measure as capital goods import which undirectly cause percapita income.

The existence of the variable of capital import help countries to accelerated export, but the using of this variable should be appropriate with the human capital, they are significantly integrated. Jhong Wha Lee (1994) examined the role of capital goods imports on economic growth, using an endogeuneus growth framework of a two sector open economy where a core capital goods sector, which is produced by combining foreign and domestic capital goods, the model points out that lower income countries with relatively smaller capital stocks have a comparative advantage in the consumption goods sector and that they can grow faster by importing relatively cheaper capital goods from higher income countries. The theoretichal predictions accord with the regression results using cross country data for the period of 1960-85. The ratio of imported to domestic capital goods in the investment sector has a significant positive effect on the percapita income growth rates across ocuntries, in particular in developing countries. Thus, it is implied that imported capital goods have a higher productivity than domestically produced capital goods. The ratio of foreign to domestic components of investment is an important factor in economic growth. More use of imported inputs, which are relatively cheaper and more efficient than domestic capital goods, increases efficiency of capital accumulation and thereby growth rates of income. Therefore, any trade distortions that restrict the importation of capital goods reduce real incomes in the long run.

In the open economics systems, there are many countries cut the tariff in order to make easy in international trade. David Dollar and Art Kray (2001) in their article are identified a group of developing countries that have had large cuts in tariffs and large increases in actual trade volumes since 1980. Since China, India, and several other large countries are part of this group, well in their explanation over half of the population of the developing world lives in this globalizing economics. In the 1990s the globalizing developing countries grew at 5 % per capita, rich countries at 2,2 % percapita, and nonglobalizing developing countries at only 1,4% percapita. Thus, the globalizers are catching up with rich countries while the non globalizers falls further. The result shows that:

1. Changes in trade volume have a strong positive relationship to changes in growth rates,
2. There is no systematic relationship between changes in trade volumes and changes in household income inequality,
3. The increase in growth rates that accompanies expanded trade therefore on average translates into proportionate increases in income of the poor, and
4. The evidence from individual country cases and from cross country analysis supports the view that open trade regimes lead to faster growth and poverty reduction in poor countries.

CHAPTER III

THEORETICAL FRAMEWORK AND RESEARCH METHODOLOGY

3.1. Theoretical Framework

3.1.1. The Open Economy

Trade helps us to rise economic growth each country, especially rise the welfare of the person around. Nations with strong international trade have become prosperous and have the power to control the world economy. An open economy activity include the interaction between domestic and outside, it can be like people, business, trade of goods and services, and other activity in interantional community. We can say international trade as an open economy, an open economy is the opposite of a managed economy. The characterized of this is market oriented, which is implemented free market policies rather or less government intervention or limited to no government intervention. There are many private industries than government industries here. In the area of international trade an open economy is one whose policies promote free trade over protectionism.

In small open economy, when production is internationalized, movements of international relative prices affect the economy through an additional channel denoted as cost channel (Aurelien Eyquem and Gunes Kamber. 2004). Both quantitatively and qualitively, this channel increases the share of output variance explained by foreign shocks, consistent with empirical evidence, implies that the exchange rate pass-through is closer to estimated values, and increases the international correlation of output relative to that of consumption. For most inflation targeting small open economies trade of the intermediate imports represents approximately half of their total trade flows.

A completely open economy exists only in theory. For example, no country in the world allows unlimited free access to its markets. Most nations have fiscal and monetary policies that attempt to improve their economies. Many economies that are open in some respects may still have government owned, monopolistic industries. A country is considered to have an open economy, however, if its policies allow market forces to determine such matters as production and pricing.

An open economy comprises of two types of trade, there are export and imports, we can consume a large portion of product, that is from doemstics and international goods. Imports give citizens of a country access to products and services provided by other nations, which allows for more consumer freedom becouse people have wider range of choices.

The basic model of an open economy is:

$Y = C + I + G + (X - M)$..(1)

Where, Y for income, I for investment, G for Government expenditure, X for export and M is for import. (X-M) in other word we can called net exports. In closed economy: National savings equal to Investment. Closed economy countries can increase its wealth only by accumulating new capital.

3.1.2. The Theory Of International Trade

Ricardian Model

The Ricardian model focuses on comparative advantage, perhaps the most important concept in international trade theory. In a Ricardian model, countries specialize in producing what they produce best. Unlike other models, the Ricardian framework predicts that countries will fully specialize instead of producing a broad array of goods.

According to the law of comparative advantage, even if one nation is less efficient than the other nation in the production of both commodities, there is still a basis for mutually benneficial trade (Dominick Salvatore, 1995). The first nation should specialize in the production of and export the commodity in which its absolute disadvantage is smaller and import the commodity in which its absolute disadvatage is greater.

Accordint to the Dominick Salvatore (1995), the simple Richardian model are based of the assumption:

a. Depicts a world of two countries, suppose: country A and country B,
b. Each country using a single factor of production, labor (L) to produce two goods X and Y,
c. Technologies display constant returns to scale (fixed amount of labor),
d. All markets are perfectly competitive, so that goods are priced at cost in countries that produce them,
e. Labor is available in foxed supply in each country, and
f. It is immobile between countries but perfectly mobile within each.

The Ricardian model measures in the short-run, therefore technology differs internationally. This supports the fact that countries follow their comparative advantage and allows for specialization.

Heckscher – Ohlin Theorem

The Heckscher-Ohlin model assumes huge importance in the context of international trade. Developed by two renowned Swedish economists named Eli Heckscher and Bertil Ohlin, this general equilibrium model of international trade is based on four economic theorems. The Heckscher-Ohlin model has been developed on the Ricardian theory of international trade, considering the fact that pattern of trade is guided by the endowments of factors of production.

Factor Price Equalization Theorem,

1. Stolper-Samuelson Theorem,
2. Rybczynski Theorem, and
3. Heckscher-Ohlin Trade Theorem.

Assumptions:

a. No bariers to trade, no transportation cost,
b. perfect competition,
c. full employment,
d. factors are mobile in each country but are immobile across national borders,
e. no specialization,
f. production functions exibit constant returns to scale and differ among countries, and
g. identical technology between trading countries.

According to Thomas A. Pugel and Peter H. Lindert (2000) the Heckscher – Ohlin explanation of trade patterns begins with a specific hunch as to why product prices might differ between countries before they open trade. Heckscher and Ohlin predicted that the key to comparative cost lies in factor proportions.

New Trade Theory

The new trade theories base international trade on economies of scale and imperfect competition, relaxing the two essumtions of no trade model or the heckscher ohlin model leads to new theories:

1. While the H-O theory assumed constant returns to scale, international trade can also be based on increasing returns to scale,
2. Relaxing the assumption of perfect competition can also lead to new trade theory. About half of the trade in manufactured goods among industrialized nations is based on product differentiation

and economies of scale, which are not easily reconciled with the H-O factor-endowment model.

3.1.3. Economic Growth

Economic growth is a phrase used to indicate the increase in per capita GDP (gross domestic product) or for regional like a province we *use Gross Regional Domestic Product (GRDP). Many other factors like* increase in aggregate income of the individuals of a nation also reflect economic growth. Economic growth is usually calculated as the rate with which GDP changes in a particular period. The number of goods and services produced by a country is a reflection of economic growth in that country. It can either be negative or positive depending upon the decrease or increase when compared to data of previous years. Negative growth is often associated with economic depression and economic recession. Whenever the GDP of a country increases it means there is economic growth which is quite beneficial for the country, its people and the global economies.

Economic growth can be either positive or negative. If it is positive of course good for economic activity, and negative growth is associated with economic recession and the depresion of economics. Economic growth can be measured in nominal terms, which are adjusted for inflation. When economic growth is increase it is usually associated with technological changes. The result of growth of economy not only increase the technology and rise the productivity, but also the improvement in the quality of life to the people of that economy.

Economic growth can improve livelihoods, it can create job opportunities and increase household and government revenue. If households or individual incomes increase proverty will be reducing with. Others bennefits of this increase of economic growth is rise government revenue that can be invested into schools, roads, hospitals, etc. Some of the bennefits of economic growth are:

a. The living standarts will be rise

   Economic growth is vital to a country in bringing about an improvement in the living standards of its people. It also helps to reduce the rates of poverty for people of low incomes. This is principally true for underdeveloped and developing countries where growth is considered a principal method of reducing poverty among the populace

b. High rate of employment

   Economic growth results in bringing a high rate of employment. When firms and businesses produce more outputs, their internal requirement for people gradually increases. They bring in more people to work, thus increasing the rate of employment .

c. Increased capital investment

   As an accelerator effect of economic growth there is an increase in capital investment. As a result ,economic growth is sustained for long periods of time.

d. Bennefits to the government

   Economic growth brings in higher tax revenues for the government, making it stronger. Along with this ,the government spends less amount of money as unemployment benefits.

e. Increased fiscal divident

   Government finances are usually of a cyclical nature. As the country's economy boosts up, more tax revenues flow into the Government Treasury. This provides the government with additional money, which can be used for financing other projects that might lead to further development

f. Enhanced Business confidence

   Economic growth creates a positive impact on the confidence that people should have when they are running their businesses. As profits of small firms and businesses gradually increase with economic growth, their business confidence rises and they exert more efforts to grow big

g. Superior public services

When economic growth brings about an increase in government income, the government can spend more on public services like education thus resulting in superior public services.

Besides that to rise economic growth, the another way that is importance is technological and innovation. Technological innovation is considered as a major force in economic growth and focuses on some of the most distinctive features of innovation in the highly industrialized economies (Nathan Rosenberg, 2004). According to him, there are only two ways of increasing the output of the economy:

- Increase the number of inputs that go into the productive process, or
- New ways in which you can get more output from the same number of inputs

Means that most economist pursue that the technological innovation must have been a major force in the growth of output in highly industrialized economies.

3.1.4. Gross Regional Domestic Product

The Gross Regional Domestic Product is the branch of Gross Domestics Product, Gross Domestic product calculate to a country and Gross Regional Domestic Product is for a region or province like West Sumatera. The measure of gross regional domestics products should provide information about the growth of regional economics. The gross regional domestics products is usually presented in nominal and real terms, the difference of them are:

- The nominal gross regional domestic products measures the value of outputs of the economy at the current prices,
- Real gross regional domestics products measured at constant prices.

Gross Domestic Product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period, It includes all of private and public consumption, government outlays, investments and exports less imports.

GDP = C + G + I + NX...(2)

GDP = Gross Domestics Products

C = consumption

G = government expenditure

I = Investment

NX = Net Export

3.2. Research Methodology

3.1. Research Design

Data used in this research is getting from others institution that has relationships with this research, especially from the Central Bereau Statistics Of West Sumatera or we called secunder data. After getting the data and then writer appropriating the data with research nessecity, finally do the estimation calculation, .

Model used in this research is the model of Ordinary Least Square Methods (OLS). The data in this resarch are: The level of economic growth as processed data from the source, it is Gross Regional Domestic Products (GRDP) as dependent variable, Private consption, Government consumption, Gross Domestic Capital Formation, export of goods and services, and import of goods and services as independent variable.

3.2. Variable And The Measurement

The variable used in this research are:

1. Dependent variable is Gross Regional Domestic Product, and
2. Independent variable are private consumption, government consumption, Gross domestics capital formation, export of goods and services, and import of goods and services.

This quantitative analysis is used to calculate the contribution of independent variable to the dependent variable.

3.3. Data Analysis Methods

To knows about the contribution of open economy to West Sumatera economic growth, writer correlated the gross regional domestic product as the dependent variable and others (private consumption, government consumption, investment) as independent variable, and then becouse of that, writer used Ordinary Least Square Methods or we called OLS method.

3.3.1. The Regression Model

A country that hold open economic system may expenditures some of their revenues to get foreign product and services. Import value is one of the element of domestics expenditure, the formula is C + I + G. Import means the capital flows abroad and sometimes this import can be harm domestics economy becouse most of the domestics producers comes from small scale industries and they are weak to challenges in the global market. But imports not always harm domestics growth, there are capital goods import that are benneficial to rise economics activity in the domestics, undirectionally it can benneficials to domestics economic growth.

In the regression model here, writer use the model developed by Syafruddin Karimi (1986) that is correlated the *relationships of capital goods import, investment and economic* growth. This model are started in the Harrord-Domar Equation of the relationships of the change of revenue and invesment, there is:

Δ Yt = 1/v It..(3)

Where Yt is income in the period of t and It is change in stick, and v is for incremental output ration (ICOR).

According to Keynes model, saving is correlated with income via saving function *like:*

St = sYt..(4)

Here St is for the amount of saving in the period of t and s asmarginal prospensity to saving.

Import function divided into two, capital goods import and non capital goods import. With the assumption of developing countries imported capital goods as domestics investment, so the correlation of both are:

M' = c It..(5)

Here M' is for capital goods import and c as investment coefficient to the import. After that, capital goods import as the function of revenue,

M"t = m Yt..(6)

Import and m is inclining to import of non average marginal capital goods. If we combine the equation of (5) and (6) becoming:

Mt = M"t + M"t..(7)

Where Mt as the total import.

Export here determined as exogeneous variable, recorded as:

$Xt = Xo\ (1 + x)^t$..(8)

Xt = export in the year of t

$Xo\ (1 + x)^t$ the growth of export value in the period of t.

The relationships between investment and income, written in function of:

$It = b\ Yt$..(9)

b = inclined to do marginal prospensity to saving

and based on the equation of (3), (6), and (8) the balance condition written as:

$It – St = Mt – Xt$...(10)

Subtitute (6) and (9), we get:

$It – St = M't + M''t – Xt$..(11)

Via subtitution of (3), (4) and (5) into the equation of (10), then we get:

$bYt – sYt = M't + mYt – Xt$...(12)

and then:

$M't = (b – m – s)\ Yt + Xt$..(13)

Becouse of the equation of (4) and (12) are the same, then we get:

$It = (b – m – s) / c\ .\ Yt + 1/c\ Xt$..(14)

Subtitute the equation of (13) into (2) and divided both of the equation with Yt, then we get:

$\Delta Yt/Yt = (b – m – s) / vc + 1/c\ .\ X / Yt$...................................(15)

The equation of (14), shows positive relationships between export and economic growth in general. And the equation of (12) and (14):

$M't = m\ (Yt, Xt)$..(16)

$It = i\ (Xt)$..(17)

$Yt = y\ (Xt)$...(18)

The equation of (14) and (16), shows the relationships between export and capital goods import. Where in here export causing capital goods import, investment and Gross Domestics Product.

Yt = y (It, Xt, Yt-1)..(19)

Yt = y (Xt, Yt-1)..(20)

Where Yt is Gross Domestics Products, I for investment, and X for export at the period of t.

The demand equation for capital goods correlate with income and export, the equation become:

M't = m (Yt, Xt, Mt-1)...(21)

or

M't = m (Xt), M't-1..(22)

Where M' is capital goods import in the year of t.

In the system of equation, the variable of Yt, Mt and It are endogouneus variable. And then the variable of Yt-1, Mt-1 are exogeuneous variable. The methods used in the up equations is two stage least squares or 2 SLS.

Comes from theorities and model creation, so according to the equation of (19) and (20), we can get simple linear model:

Yt = ao + a1It + a2 Xt + a3 Yt-1...(23)

Or

Yt = a0 + a2Xt + a3Yt=1..(24)

and

M't = b0 + b1Yt + b2Xt + b3Mt-1...(25)

Or M't = b0 + b2Xt + b3Mt=1...(26)

It = c0 + c1M't + c2 It-1...(27)

The explanation about the up variable are:

Yt = Regional Domestics Products at the year of t

X = export in the period of t

M't = capital goods import in the period of t

It = Investment in the year of t

3.3.2. Hypothesis Test

a. T – Test

The purpose of T-test is to know the contribution of each independence variables to the dependence variable. To see the significant of each regresion coeficient, used T-test experiment, the formula of T test are:

$T = \beta i / s (\beta i)$

Where:

T = t-test

B i = regression coefficient

S = error standart

When the value of T-test more than T-table, so the relationships between the variable is signifincant or vice versa. The analisis of coefficient tables to know the effects of independece variables to dependet variable are significant if p-value less than 0,05. If t-count more than t-table the result is significant.

b. Determination Test (R^2)

To see the contribution of independent variable to dependent variable we can use double determinant coefficient with the symbol of R^2,

The formula of this equation is:

$R^2 = \Sigma e1 / (Y1 - Y)^2$

the value of this between 0 and 1. When the double determinant coefficient limited to 1, this is means that there are tigh relationships between dependent and independent variable.

c. F – Test

To know about regression coefficient between dependent variable and independent variable, we can use F-test, the result of F-test shows in the ANOVA of output. With the formula:

F $= R^2 / (k - 1) : (1 - R^2) / (n - k)$

F = F test

R^2 = determination coefficient

k = the amount of independent variable

n = the amount of research sample

If the result shows F-test more than F-table, means that all of independent varible has significant contribution to the dependent variable.

CHAPTER IV

THE ECONOMY OF WEST SUMATERA

4.1. West Sumatera

Before investigate about West Sumatera economy, it's useful we know first about the West Sumatera and it's potential that has relationships to its economics activity, besides this is the main economics factor of the economy here. Geographically West Sumatera stay at $0^0$54' North Latitude, 3^0South Latitude, then $98^0$36' until $101^0$53' East Longitudinal. Furthermore, the wide area around 42.297,30 Km^2 (4.297.300 ha), including 375 big and small islands (*Sekretariat Negara Repoblik Indonesia, 2008).* Then, West Sumatera comes from 19 regency and city:

1. Padang Pariaman Regency
2. Agam Regency
3. Pasaman Regency
4. Pasaman Barat Regency
5. Limapuluh Kota Regency
6. Sawahlunto Sijunjung Regency
7. Dharmasraya Regency
8. Solok Regency
9. Solok Selatan Regecy
10. Tanah Datar Regency
11. Pesisir Selatan Regency
12. Mentawai Islands Regency
13. Padang City
14. Solok City
15. Sawahlunto City
16. Payakumbuh City
17. Bukittinggi City

18. Padang Panjang City, and
19. Pariaman City.

Adsminitratively, the area of West Sumatera stay in the side between:

1. In the North : Nort Sumatera Province
2. In the South : Bengkulu Province
3. In the East : Riau Province and Jambi
4. In the East : Hindia Ocean

(Source: Sekretariat Negara Republik Indonesia. 2008)

4.2. West Sumatera Economy Today

Agricultural

The most importance activity are agricultural sectors in West Sumatera. agricultural sectors stay at all of regency and municipality, especially in Agam, Tanah Datar Regency and Padang Pariaman. From the estate sector, the important sectors are rubber, clove, gambier, and cassiavera. The expanding of agricultural sector that is explained in the up shows that agricultural sector is still dominant and estimated in the next future more than 60% of people stay at this sector of economics. Becouse of that the planning of West Sumatera economy to the next period is still focused on agricultural sectors (Sekretariat Negara Republik Indonesia. 2008).

Industry

West Sumatera industry are dominated by small scale industries. The amout of this industries is about 47.819 unit, comes from 47.585 small scale industries and 234 unit of midle and big industries, with the ratio of 203 : 1. If we compare this with national industrial sector, our industrial sector relatively small (Sekretariat Negara Republik Indonesia, 2008). This is shown that the industial sector in West Sumatera needs to be increase. The low of industrial sector role on the regency can be hard to government to provide occupation in the next period.

As Indonesia on 1997, West Sumatera also facing economic crisis that is causing limited fund of regional development. In the 1997 the rate of economic growth are 7,91 % in percentage, and down to 5,05 % in 1998, and the bad growth of economics in West Sumatera reach in the year of 1996 it's about -6,5 %, this is the worse of economic growth of West Sumatera in last 25 years (Central Bereau Statistics Of West Sumatera). To stabilize limited fund as the effect of low original income of region should be follow by investment from private sector of national or foreign investors. But, the investment from private sectors or international investors are oftern disturbing by uncertainty of political action, law, and national save.

Percapita income of West Sumatera people in the last period is too decrease, becouse the weak of income growth and high of inflation degree. From this condition, so the development of West Sumatera economy in the next period of time, should sole the main problem, there are: poverty, unemployment, and unfair of development is some aspect of development. To reach this purpose so, West Sumatera economy should have the priciple to growth the economy are:

a. Increasing human resource, environment life and culture of social, which is follow by technology
b. The develoment of economic should have good organization between small scale industries, midle scale of economics to the private sector of industries and government,
c. Rising relation of global organization of economy, which is follow by rising th export value and quality,
d. The growh of economics can be rise by increasing infrastructure of economics that can fluent out and in of mobility of goods and people from West Sumatera.

4.3. Economic Growth Of West Sumatera

Economic growth is one of the problem facing by all of the country in the world, each country has responsibilities to manage economic growth in order to rise welfare of the people around. The expert of economic research the problem of economic growth, starting from Adam Smith, Karl Marx and others has effort to investigate about economic growth and many others that has relationhips with this growth of economic. According to Robert Solow, economic growth depend on the supply of production factors and the advance of technology that are stressed to comparative advantage in international trade.

Neoclassical Econonomic believe that, social factors, education of the people around, financial system, open economic thinking and the management of government are the factor of growth. This theory of neoclassical thinking has evidence to rise economic welfare of a country. So, based on the thinking of the Neoclassical, International trade has important role to manage good economic cooperation to all countries in the word. But in reality developing countries has difficulties to challenge in international market, there are many factors of this. According to Writer the important factor is about quality, developing countries sometimes lack experience to increase quality, limited investment, and others.

Developing countries should diversify their exports since this can, for example, help them to overcome export instability or the negative impact of terms of trade in primary products. The process of economic development is typically a process of structural transformation where countries move from producing "poor-country goods" to "rich-country goods." Export diversification does play an important role in this process. We also provide robust empirical evidence of a positive effect of export diversification on per capita income growth. This effect is potentially nonlinear with developing countries benefiting from diversifying their exports in contrast to the most advanced countries that perform better with export specialization (Heiko Hesse, 2008)

Generally, economic growth used as the variable to measure the success of the government to manage economics, to measure the level of output and also the view of economic activity in each period. Economic growth must be greater than the growth of people to reach the success of welfare. So, government needs a regulation to minimize the born of people.

To count economic growth of a country, we can use Gross Domestics Product and Gross National Product. Becouse of some reason, developing countries often used Gross Domestic Product, the reason are: Gross Domestics Products is the amount of all production activity in Economy, show the level of production factor, Gross Domestics Product count with the flow concept, means that GDP including the value of product in each period. So, we can compare it with the value in the last period, the Gross Domestics Product limited the count for the country, its benneficials to measure economics effectivity. Besides that developed countries often used Gross National Product to count economic activity in their countries, becouse they have many investment out of their country. Gross National Product count all of the national product including the economics activity out from their country.

Writer use Gross Regional Domestics Products (GRDP) becouse this thesis is research about the West Sumatera economy. As Gross Domestics *Products, GRDP count the economic activity in a province, it can used to* compare economic growth of West Sumatera in each period. Here, to saw the level of growh, writer used constant price. Becouse the count of Gross Regional Domestics Products based on inconstant price not always shows the production growth of goods and services. As Gross Domestics Products, Gross Regional Domestics Regional Products also divided into two, there are Gross Regional Domestics Products at constant price and Gross Regional Domestics Products at current market prices. GRDP in current market prices used to see the change of economics structures, income of the peole in a region, and also shows the value of goods and services taht is affected by inflation. So, GRDP aggresively shows the ability of a region to produce income or any divident to the pactor of production.

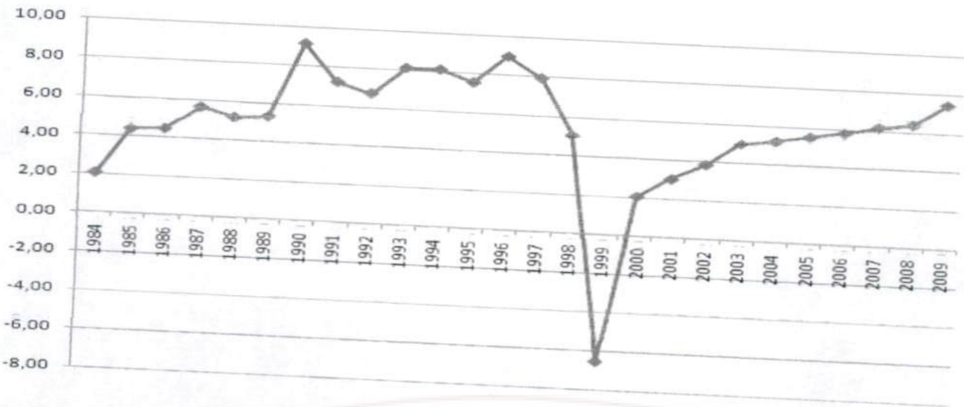
Table 4.1. The Rate Of Economic Growth Of West Sumatera In percentage (%). (2000 = 100).

No	Year	Economic Growth (%)	No	Year	Economic Growth (%)
1	1983	-	14	1996	8,95
2	1984	2,04	15	1997	7,91
3	1985	4,37	16	1998	5,05
4	1986	4,44	17	1999	-6,5
5	1987	5,63	18	2000	2,04
6	1988	5,18	19	2001	3,01
7	1989	5,31	20	2002	3,83
8	1990	9,13	21	2003	4,99
9	1991	7,23	22	2004	5,22
10	1992	6,73	23	2005	5,5
11	1993	8,11	24	2006	5,78
12	1994	8,11	25	2007	6,16
13	1995	7,54	26	2008	6,37

Source: Central Bereau Statistics Of West Sumatera (processed data)

The growth of economic of West Sumatera from the year of 1983 until 2008 in general is rise. But in the year of 1999, becouse of the effect of economic crisis face by Indonesia at that year, the growth reach -6,5 %. This is the lowest of growth of economic of West Sumatera from the year of 1984 until 2009.

To show the level of growth we used constant price in the year of 2000, this constant price used in order to avoid the effect of inflation in the calculation process of each year. According to the last sentence, let me explain about economic growth of West Sumatera in each year by the graph in the below.



Source: Central Bereau Of Statistics Of West Sumatera

Graph 4.1 : The Rate Of Economic Growth Of West Sumatera In the Period Of *1984 – 2009* (%)

Between 1984 to 2009, the growth of economics in West Sumatra is fluctuate. At 1984, the growth of economic of West Sumatera reach 2,04 %, at 1985 become 4,73 %, this condition shows a good economic cooperation, becouse economic growth rise about 2,61 %. This means government success to rise welfare in West Sumatera at that time. At 1986 the growth of economic not to contrast, it just about 4,44 %, it just rise 0,07 %. At 1987 increase to 5,63 %, but at 1988 decrease to become 5,18%, continually to 1989 rise to 5,31%. The differences of economic growth between 1989 to 1990 too contrast, it is increase 3,82 %, from 5,31 % in 1989 tobecome 9,13 in 1990. . At economic crisis in 1998 in Indonesia, West Sumatera also gets the impact of this, the growth of economics down from 5.05 % to minus 6,54 %.

As shows in the below table, economic growth of West Sumatera at 1998 to 1999 affected by economic crisis, there is bad evidence of growth at this time, from 5,05 % at 1998 become minus 6,54 % at 1999. Economic crisis in Indonesia means decreasing Ruapiahs value to the US Dollar value, everything we buy become expensive, including capital goods import and others to growth economic at that time. Like Indonesia and other countries, the economics of West Sumatera is affected by inflation also. Many sectors difficult to grow, like agricultural sectors and industrial sectors, that is very important to West Sumatera economic. After economic crisis, West Sumatera economics is recovery, it's from th eyear of 2000 (after crisis at 1999) until today.

According to Mangara Tambunan (1997), in general Indonesia facing three kinds of crisis:

a. Exchange rate crisis that is affecting the value of rupiah to dollar
b. Foreign debt crisis by government and private sectors
c. Diminishing expectations crisis to many government government institutions including economics and financials sectors.

The implications of financial crisis affecting cost regional structure. In this condition economic crisis has a negative effect to domestics economy. After economic crisis at 1996, the growth of West Sumatera economics become more better in each year. This condition is benneficial for regional economic, means that Gross Regional Domestics Products become greater every year. From this condition writer conclude that there are many factor affect economic growth or Gross Regional Domestics Product In West Sumatera, Government expenditure growth and private sector, and in sectoral stressed by trade sector, agricultural sectors, transportation, industrial sectors, communication, and others.

Economic and political factors are indicators affecting economic growth in West Sumatera. This political factors causing credibility of Indonesia in global economy, especially in West Sumatera. Unbalanced of domestical politics affecting amount of foregin investment, whereas investment is a crucial indicators to growth of the economics, foreign investors worry to invest their money inside becouse it not save in the unbalance condition of political situations. Then the domestic political situations can be worse domestics export activity, undirectionally worse domestics growth. Based on this explanation, government needs to stabilize the problems facing by us, especially in regional sectors by each regional government, hopefully this way can be rise domestics investment and also increase economic growth.

4.4. Investment in West Sumatera

The first answer economist tend to give when exploring economic success or failure of a country or an economic region is that the key determinant of economic growth is the investement rate, countries that grow quickly are countries that invest substancial fraction of their GDP, and countries that fail to grow are countries that fail to invest. This explanation is partly based on economic theory. After all the basic theory of neoclassical growth model of Solow (1956) and and Swan (1956), predicts that one of the key determinants of grwoth is the investment rate (Xavier sala, 1991).

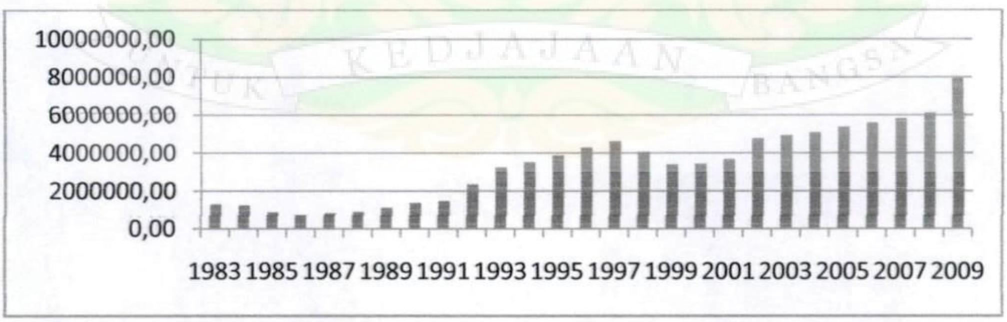
Investment is very important to accelerated growh. This is expenditure to hold capital goods that is undirectly rise the growth of economic. In general investment dovided into two: Domestics investment (comes from domestics investors) and foreign investment (comes from foreign investors), this foreign investment alsom popular as Foregin Direct Investment (FDI).

The are some bennefits of Foregin Direct Investment:

1. Develop the human capital resources
2. Creating new jobs in a particular country and sometimes increasing the salaries of the workers.
3. Advance technology and skills in a country
4. Increasing income that is generated through revenues realized through taxation
5. Rise productivity in a country in many sectors of economics
6. Increasing export and rise quality
7. Etc.

Higher amount of invesment hopefully rise economic growth in a country. In Indonesian economy today, it has difficulties to get many investment from foreign investors, especially from developed countries, one factor of this is unbanlace political issue in domestics government. Undirecly it cause amount of Foreign Direc Investment, people worries to invest their money becouse of this condition. As we know that invesment is very important to recover economic growth, especially in crisis economy (1996 – 2000). Indonesian investment including private investment and government investment, it comes from domestics and foreign country. It can be portfolio and direct invesment.

Domestics investment of private sectors comes from saving and as the up explanation investment from abroad comes from Foregin Direct Investment. Until today, invesment of Indonesian people depends on Foreign investment, this is becouse it is very crucial to growth the economics condition in this country. Investment in West Sumatera is fluctuate, starting from 1983 in the amount of Rp. 1.306.846,08 billion, down to Rp. 1.253.959,93 billion rupiahs in 1984. After that investment become more better until 1991. Between the year of 1987 to 1997, the growth of investment is in positive relationships, means that more higher in each year. But in the year of 1997 until 2000 investment down to the value of Rp. 3.453.945,34. As we know that at that time Indonesia facing economic crisis, now we can see the evidence of this economic crisis affecting the growth of investment in this time. After that investment is recovery tend to higher in each year, the best investment in West Sumatera reach in the year of 2009. This is means that in the year of 2009, West Sumatera have opporrtunities to expand economic growth in 2010. So, governement need to allocate this investment to the sector that has big contribution to economic growth, to reach the purpose of development.



Source: Central Bereau Statistics Of West Sumatera

Graph 4.2: The Growth Of Investment of West Sumatera

(Million Rupiahs)

Investment in West Sumatera from the year of 1983 until 2008 continually tend to higher rate. But in the year of 1997 is decrease, after that investment is recovery and tend to increase, until 2008, the best investment reach at the year of 2008 *(Source: Central Bereau Statistics of West Sumatera).*

4.5. International Trade Of West Sumatera

4.5.1. Export, Import and Balance Of Trade Of West Sumatera

Export

Export is one of the countries revenue that is very importance to open economic country like Indonesia. Becouse export to many countries may increase production and rach economics growth. Besides that Indonesia in many years ago facing economic crisis and multidimencial crisis, export may help us recover economics in our country via good cooperation of economics activity that is supported by balance economy, stability and good cooperation of law.

The main objectives of export are to expand the domestics production, to reach the purpose of development, to create a new job, and of course to rise domestics revenue. Means that, to rise amount of export we need to recovery the ways to produce a good quality of product and service. Export-led growth (ELG) is an economic development strategy in which export, and foreign trade in general play a central role in a country's economic growth and development. There has been a general global shift towards the ELG strategy in recent years. This change has been found to be due to the actual and potential economic benefits this strategy accords to both developing and developed countries alike. First, export growth is said to result in increased output, employment and consumption, all of which lead to an increase in the demand for a country's output (Jung and Marshall, 1985). Furthermore, a buoyant export sector enlarges the domestic market so that firms achieve economies of scale and thus lower unit costs. This may be expected because an export sector allows a country to trade along its lines of comparative advantage, specializing not only in commodities that use its abundant factors intensively, but also where its per unit costs are lower (Tyler, 1981.127). This generally leads to efficient resource allocation. This efficiency is further enhanced by exposure to international competition which forces firms to adopt modern technology and produce quality products that meet the demands of sophisticated consumers in international markets (Mayer, 1995). Second, trade may also benefit a country with positive export externalities which lead to increased productivity and economic growth (Bradford, 1994; Feder, 1983; Sengupta, 1990; and Sengupta and Espana, 1994). Furthermore, trade may help a developing country to overcome the ax-ante saving-investment gap and the ax-ante import-export gap by providing the necessary foreign exchange for development (Chenery and Strout 1966; Wilbur and Haque, 1992). Moreover, countries engaged in trade are thought to be more able to respond to and weather unfavourable external shocks than those following the inward-looking development strategy (Balassa, 1984).

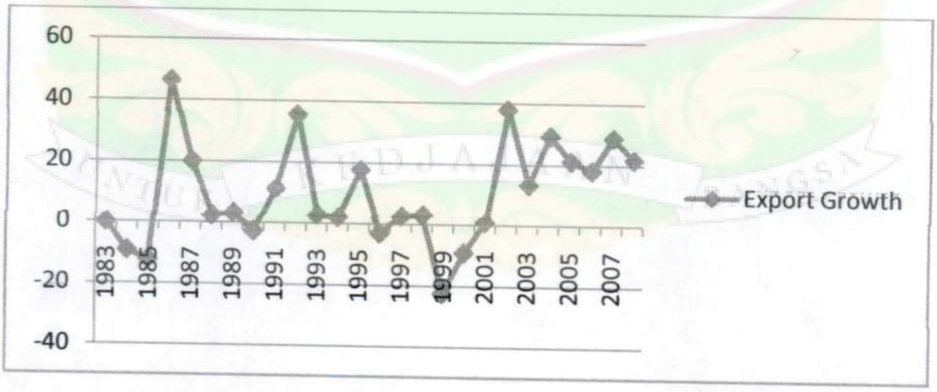
Export of Indonesia divided into two sectors, there are oil export and non oil export. In West Sumatera income of people around it just from non oil products and services. This sectors (oil and non oil products and services) affected by international economy. By Indonesian people, government policy is one factor to cause export, especially in our country. People hope to government to protect them from the negative impact of international trade, some regulations needed by us like international barriers of import. Each country needs to protects their domestics product from this negative impact. But in the era of free international trade, there is difficulties to barriers domestics products. The best action of government to survive from global market is to rise domestics products and quality and challenge price are very importance.

Table 4.2: The Growth Of Export Of West Sumatera In The Period

No	Year	Export (Million)	Percentage Of Change	No	Year	Export (Million)	Percentage Of Change
1	1983	1.254.064,31	-	14	1996	32.588.74,31	-2,98
2	1984	1.135.954,51	-9,2	15	1997	3.343.539,95	2,60
3	1985	996.960,39	-12,24	16	1998	3.448.552,80	3,14
4	1986	1.460.742,27	46,52	17	1999	2.674.841,52	-22,44
5	1987	1.753.055,50	20,01	18	2000	2.432.453,98	-9,06
6	1988	1.794.403,80	2,36	19	2001	2.456.234,78	0,98
7	1989	1.852.721,90	3,25	20	2002	3.390.675,97	38,04
8	1990	1.803.564,56	-2,65	21	2003	3.843.191,44	13,35
9	1991	2.006.432,47	11,25	22	2004	4.973.311,80	29,41
10	1992	2.719.636,74	35,55	23	2005	6.027.591,91	21,20
11	1993	2.794.063,85	2,74	24	2006	7.125.583,22	18,22
12	1994	2.852.490,08	2,09	25	2007	9.185.150,00	28,90
13	1995	3.358.861,46	17,75	26	2008	11.195.074,59	21,88

Source: Central Bereau Statistics Of West Sumatera (processed data)

Here, to explain the expanding of export of West Sumatera writer use constant price of 2000. This price converted to the constant price of 2000 to avoid inflation in analyzing the value.



Source: Central Bereau Statistics Of West Sumatera

Graph 4.2: The Rate Of Export Of West Sumatera In The Period Of 1983 – 2008 (Million Rupiahs)

Now let's we compare this export with the amount of import in this regional West Sumatera:

Import

Import means accept foregin product in domestics country. In international statistics import means entering foreign product into domestics industries. Import is contradiction of export. The demand of import depends on relative prices of the foreign product in domestics market. Import depends on the ability of domestics people to produce the best quality of product that can be challenge in global market. Each country hope to reduce the amount of import, some regulations to reduce this import like tariffs, quota, etc. An import activity also depends on national incomes of a country, when a country can serve domestics demand, it can reduce the amount of import.

Source: Central Bereau Statistics Of West Sumatera

Graph 4.4: Import Of West Sumatera (Million Rupiahs)

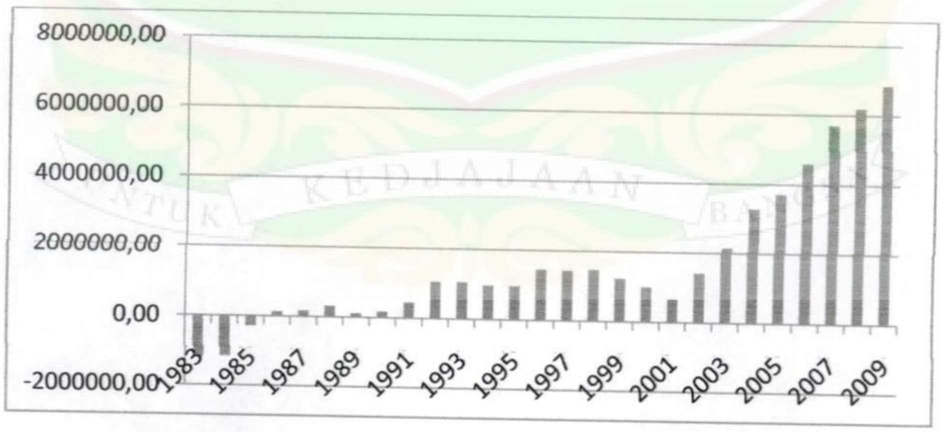
Before 1983 until 2004, West Sumatera import is fluctuate, but the amount of this import no too high, it is lower thatn 30 thousands in the value. But after 2004 import tend to higher by each year, highest amount of import reach in the year of 2009, before at 2008 import reach 50 thousands in value.

Balance Of trade

Balance of trade are the difference between a country's imports and its exports. Balance of trade is the largest component of a country's balance of payments. Debit items include imports, foreign aid, domestic spending abroad and domestic investments abroad. Credit items include exports, foreign spending in the domestic economy and foreign investments in the domestic economy. A country has a trade deficit if it imports more than it exports; the opposite scenario is a trade surplus.

The trade balance is identical to the difference between a country's output and its domestic demand (the difference between what goods a country produces and how many goods it buys from abroad. In export-led growth, the balance of trade will improve during an economic expansion.

Factors that can affect the balance of trade include: The cost of production in the exporting economy and importing economy, the cost and availability of raw materials, intermediate goods and others, exchange rate movements, Non-tariff barriers. The availability of adequate foreign exchange with which to pay for imports, and Prices of goods manufactured at home.



Source: Central Bereau Statictics Of West Sumatera

Graph 4.5: The Balance Of Trade Of West Sumatera

(Million Rupiahs)

West Sumatera trade balance between the year of 1983 until 1985 is deficit, import is greater than export. After that tend to rise whereas it is not too high. It's fluctuate between the year of 1987 until 2001. After that it's a good economics condition of West Sumatera trade balance, that is tend to higher in each year from 2001 until 2009. In economic crisis at 2001, balance of trade tend to fall, but we still in the positive balance of trade, means that this region suffer from the bad economic crisis, whereas the amount of export tend to fall at this time.

In the recovery year after economic crisis, the three component of export, import and balance of trade is survice. Export tend to higher starting from 2001 by each year, import also tend to higer whereas it still on the fluctuation rate. If we compare our export and our import of in general we called balance of trade, we have good balance of trade in many years. it just shows the negative balanc eof trade in the year of 1983 until 1985, after that tend to higher by each year.

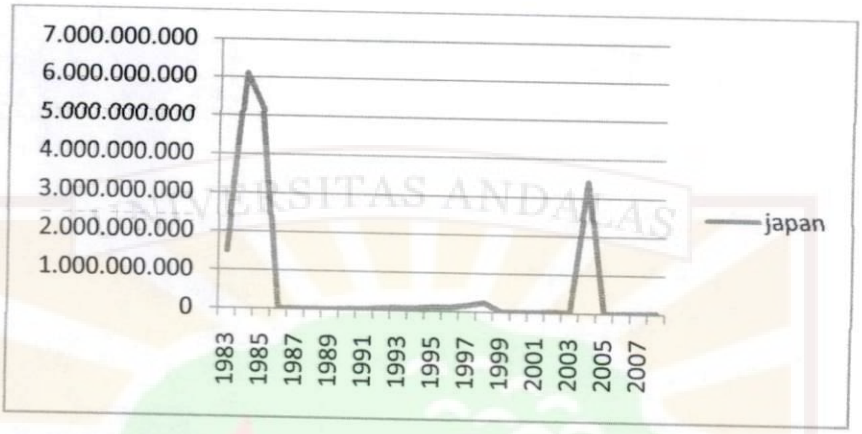
Many region iclusing West Sumatera, hopefully the balance of trade is not negative, besouse it cause economic growth of this country. *Like West Sumatera. The graph tells us about the balance of growth is* recovery after economic crisis.

4.3.2. Export Of West Sumatera to many countries

To Japan

Japan is one of the trade partner of Indonesia, we can see in the graph in the below, highest export of West Sumatera region to Japan reach in the year of 1984 it is reach 6 billio rupiahs. After that tend to fall in the year of 1986. After the trade between two country fall in the 1986, the trade between two countries is not too expand until 2003, the value of this is below the others value of export, means that in this time the export connection between two countries need to rise and manage well to reach good economic cooperation both. But in 2004, export of

Indonesia to Japan tend to rise about more than 3 million rupiahs. This export is very benneficial to the growth of economics of West Sumatera, especially for Japan as developed countries, raw materials are the best export every years.



Source: Central Bereau Statistics Of West Sumatera

Graph 4.6: Export West Sumatera To Japan

(Million Rupiahs)

In the year of 2009 (January until July), the West Sumatera exported 467 ton of Tuna fish to Japan and USA. The governor of West Sumatera at that time Mr. Fauzi Bahar says that, export to Japan recorded 309 ton in 2009. In the side of sea crops, Tuna fish as the new oxport commodity by West Sumatera, after this region holding as the central of Tuna in the West region of Indonesia. This export activity of West Sumatera to Japan in the side of fish product, starting from Juni 2008. Export activity of West Sumatera in the side of fish product in the year of 2009 has already sent 38 ton of Tuna fish in January, february about 35 ton, april about 59 ton, juni 54 ton and july is about 19 ton (ANTARA news, august 23, 2009).

To USA

From the data of central bereau of statistics of West Sumatera, United States Of America is one of the main purpose of export. This is the evidence of the data in between the period of

1983 to 2008. As the export to Japannese countries, export of West Sumatera to USA is higher in the year of 1984, but in the year of 1986 until 2001 it shows bad trade relationships between two countries, this is shows in the graph that the amount of export in this year is limited to zero. After 2001, this export tend to rise. The same as Japan, Unites States Of America also as developd countries. As the pricture shows the best export between two countries (especially for West Sumatera) reach in the year of 1983 to 1985, after that is tend to low. This export also need to manage well in order to rise welfare in our regency and maximize the potential that we have.

Source: Central Bereau Statistics Of West Sumatera

Graph 4.7: Export Of West Sumatera To USA

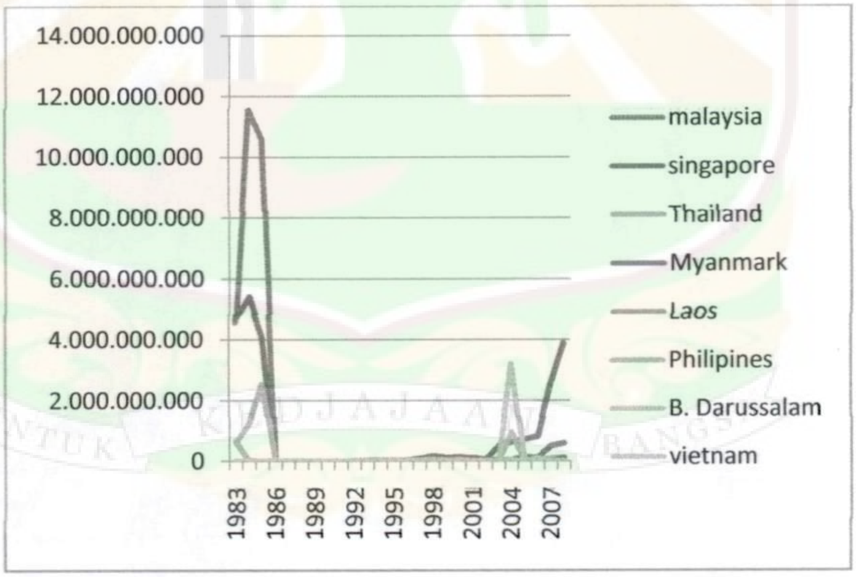
(Million Rupiahs)

The same like Japan, USA also is one of the greatest country of Tuna Fish purpose of export. As we know that USA is a developed countries, so this country is benneficial to us to export natural resources to this country. So, the bilateral trade between two countries need to rise by government, in order to rise economic growth of West Sumatera, especially in the supporting variable as Tuna Fish export.

To ASEAN Countries

There are many countries in the ASEAN (Association South East Asian Nation) including Indonesian country. The members of ASEAN are Indonesia, Philipina, Thailand, Singapore, Malaysia, Myamark, Laos, Vietnam and Brunei Darussalam. In the side of export volume from this region, the highest to them reach in the year of 1984 also. After that the trade value limited to zero. But, starting from the year of 2003 until 2009, this trade is expanding to rise.

The highest country of the export purpose are Malaysia, after that Singapore, Thailand and Philipiness, this is in the base year of 1983. At 2003 to the year of 2008, export amount to other coutries has changed. In this period, Singapore is in the first level, after that reach by vietnam, philipines and Malaysia. Here Malaysia is in th middle level.



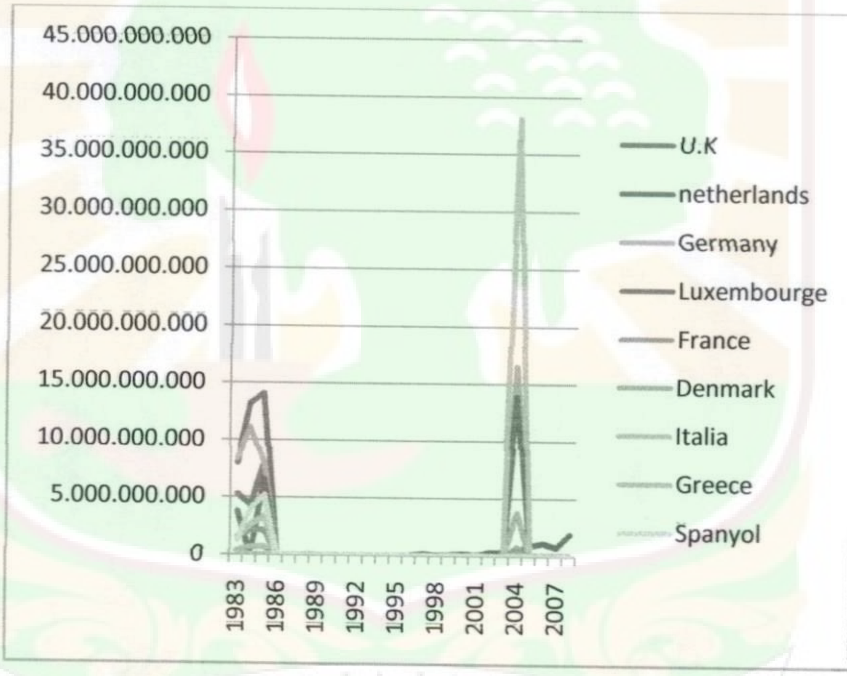
Source: Central Bereau Statistics Of West Sumatera

Graph 4.8: Export Of West Sumatera To ASEAN Countries (Million Rupiahs)

To European Union

In the case of trade by West Sumatera region to European Union countries, the graph show the bad relationships of bilateral trade between two countries in the year of 1986 until 2002. After that the graph shows trade relationships between two countries especially in the case of export tend to rise in the year of 2002 until 2008.

As shows in the graph, the main importing West Sumatera Product is Italia, awhis is reach more than 35 thousands. After that Germany, Luxembourge, Denmark and others.



Source: Central Bereau Statistics Of West Sumatera

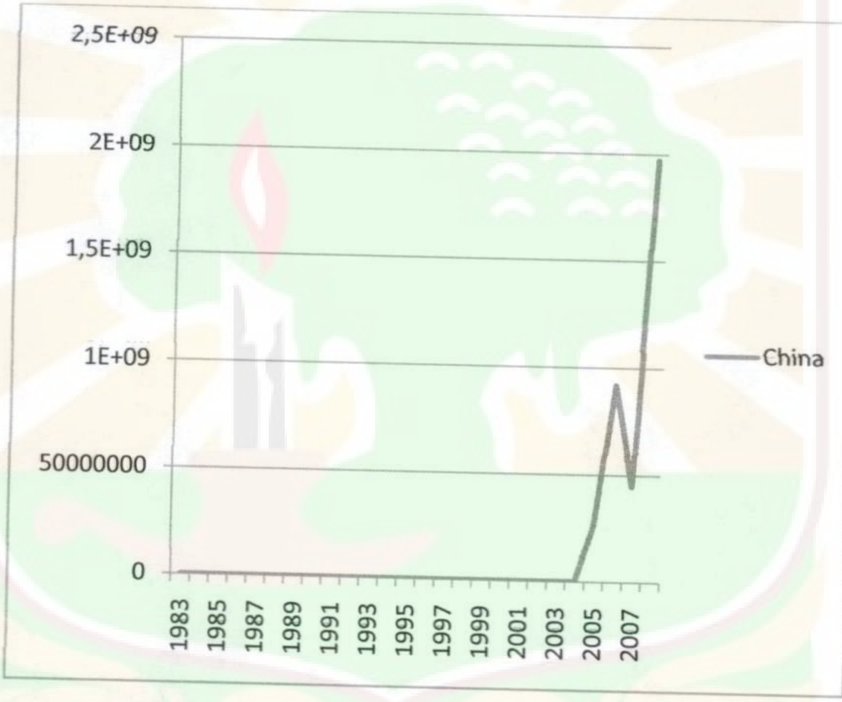
Graph 4.9: Export Of West Sumatera To European Union (Million Rupiahs)

To China

Bilateral trade between China and Indonesia has been sign in China _ASEAN Free Trade Area, and starting in January of 2010. Means that free barries of trade between Indonesia and

China. Becouse this barries is for ASEAN including Indonesia, it is directly will affect West Suamtera Trade Also. The growing concerns among businesses, small-scale industries, workers and farmers in Indonesia over a possible decline in Indonesia's competitiveness since the full implementation of the China–ASEAN Free Trade Agreement (CAFTA) in January 2010.

The graph in the below shows the bilateral trade relationships between West Sumatera and China's country, especially in the amount of export.



Source: Central Bereau Statistics Of West Sumatera

Graph 4.10: Export Of West Sumatera To China

(Million Rupiahs)

Before the year of 2003 there is no export to China, but after that export trade is fluctuate, in the year of 2003 until 2005 export reach higher value, and tend to fall in the year of 2007, after that the export of West Sumatera reach the highest value in the year of 2008 according the data of Central Bereau Statistics Of West Sumatera.

When we see in the graph, West Sumatera may challenge to face free trade barries with China's country, becouse the export amount tend to rise. But we still need good cooperations of government to reach the succes in this free trade area.

4.3.3. Terms Of Trade

The terms of trade is an indicator to explain international trade of a country. when the value of terms of trade is below 100 means that there is fall down of international trade of a country, and vice versa if terms of trade up to 100 means it is the rising of international trade of a country. There are two kinds of terms of trade, Net barter terms of trade and gross barter terms of trade. The difference both of them in principle is the same. But it just in Net Barter terms of trade shows from price side, and Gross barter terms of trade is shows from volume side of goods imports and exports.

In the simple case, terms of trade is calculated from the ratio of the price country must pay to its imports of commodity. Export of one country is the imports for another country. The terms of trade improvement benefits, however, a tariff also imposes cost by distorsing production and consumption incentives wothin home's economy. The general statement then, is that a rise in the terms of trade increases a country's welfare, while a decline in the terms of trade reduces its welfare (Paul R.Krugman and Maurice Obstfeld, 2000).

There are many kinds of terms of trade:

a. Net barter terms of trade is the ratio of relative export and import prices when the volume is held constant,
b. The gross barter terms of trade is the ratio of a quantity index of of exports to the price of imports,

c. The income terms of trade is the net barter terms of trade adjusted for changes in the productivity of exports,

d. The double factorial terms of trade adjusts for both the productivity of exports and the productivity of imports.

In this terms of trade writer uses net barter terms of trade and it is calculated by the constant price at the year of 2000.

Table 4.2 : The Expanding Of Terms Of Trade of West Sumatera In the Period Of 1983 until 2008

No	Year	TOT	No	Year	TOT
1	1983	50	14	1996	182
2	1984	49	15	1997	175
3	1985	78	16	1998	175
4	1986	110	17	1999	186
5	1987	110	18	2000	169
6	1988	121	19	2001	137
7	1989	106	20	2002	172
8	1990	111	21	2003	229
9	1991	129	22	2004	295
10	1992	163	23	2005	260
11	1993	161	24	2006	281
12	1994	152	25	2007	264
13	1995	140	26	2008	223

Source: Central Bereau Statistics Of West Sumatera (Processed Data)

According TOT the table in the up, the expanding of terms of trade of west sumatera in general is increase year by year. The international trade of West Sumtera in 1983 to 1985 is down, this is showing by the value of terms of trade is below 100. In 1983 the value is about 50 and don to 49 in 1984, but in 1985 is rise until 78. In the next year after 1985, terms of trade is up to 100, means interntaional trade is increase. The good terms of trade reach in the year of 2004, it is about 295. Economic crisis that is facing by Indonesia in the midle year of 1997 to 1998 is not affect terms of trade too significant. It shows in the up that the value is still up to 100.

4.3.4. Export Concentration Index

A measure of consentration of the production an indusry calculated as the sum of the squares of market shares for each firm. The Export Consentration Index can be expressed as company's unit sales volume divided by the total volume of units sold in that market. Market share is used to determine the competitive strength in a sector as compared to other companies in the same sector.

The formula to calculating the herfindahl index (HI) is:

HI = (share1)^2 + (share 2)^2 + (share 3)^2 + ... + (share n) ^2

- Share 1, share 2, share n : The market share for each commodity
- The last term (share n) indicates the market share of the last export or import,
- The "^2" means the market share is being squared.

The herfindahl index is designed to measure export concentration. While there are no absolutes when it comes to evaluating concentration. The concentration index ranges from a low of 0, indicating perfect competition, to higher of 10,000, indicating compete monopoly. Greater values mean greater concentration, less competition and more market control. To the West Sumatera economy writer categories the concentration index here based on the group of commodity. Lets see table in the below.

Table 4.3 : Export Concentration Index Of West Sumatera In The Period Of 1983- 2008

No	Group Of Commodity	Index
1	Food stuff and animals	48,4
2	Beverages and tobacco	53,2
3	Raw material in edible	4,95
4	Mineral fuels, lubricants	56,0
5	Animal and vegetables oil	13,21
6	Chemicals	45,16
7	Manufactured goods	47,77
8	Machinery and transport equipment	9,49
9	Miscellaneous manufactures	33,1
10	Classified according to kind	46,04

Source: Central Bereau Statistics Of West Sumatera (processed data)

The higher level of concentration index is in the export of the group of mineral fuels, lubricants and related material, it is about 56 of index concentration. After that beverages and tobacco about 53,2 % , food stuff and animal about 48,4 %. The lowest concentration is in machinery and trasport equipment, that is about 9,49 %.

Table 4.4: Import Concentration index of west sumatera in the period Of 1983 – 2008

No	Group Of Commodity	Index
1	Food stuff and animals	22,12
2	Beverages and tobacco	18,58
3	Raw material in edible	8,84
4	Mineral fuels, lubricants	18,12
5	Animal and vegetables oil	63,21
6	Chemicals	14,07
7	Manufactured goods	6,77
8	Machinery and transport equipment	10,04
9	Miscellaneous manufactures	17,22
10	Classified according to kind	27,1

Source: Central Bereau Statistics Of West Sumatera (data is counted)

In the side of import concentration idex of West Sumatera economy, the biggest index is for animal and vegetables oil, that is about 63,21 % of concentration. After that is for food stuff and animal group that is about 22,12 %. The lowest rank is for manufactured goods group, it just about 6,77 % of concentration index.

CHAPTER V

HOW INTERNATIONAL TRADE AFFECTS THE WEST SUMATERA ECONOMY ?

Empirical study and analysis shows the relationships between export, economic growth and invesment. The equation used in this model based on linear modle. Linear regression shows the marginal inclined from Gross Regional Domestics Product to each variable. Linear regression is to see the marginal inclined from Gross Regional Domestics Products to each independent variable.

It is also to see the relationships between export, Gross Regional Domestics Products and capital goods import to t-1 to the capital goods import in the year of t. The same threatment also in the relationships between investment and capital goods import and investment in the period of t-1.

5.1. The Effect Of Export To Economic Growth Of West Sumatera

From the regressions result, writer get the equation:

No	Equation	R square	D-W
1	Y = 616008,995 + 0,23 Xt + 0,972 Yt-1 (1,713) (3,206) (32,957)	0,995	1.430

The up equation shows the relationships between export and economic growth. In the case of West Sumatera, there is positive realtionships between export and economic growth. This relationships is the same with the hypothesis that is when export is increase and the Gross Regional Domestics Products will be increase too. The amount of increase this growth depends on marginal prospensity and elasticity of export to Gross Regional Domestics Product. The value of Marginal prospensity are 0,23 means that when export increase 10 unit and GRDP will be rise about 20 unit. In the constant.

When all of independent variables are assumes as constant and the value of income is about 616008,995 million. Where export are rise about 1000 unit and then gross regional domestics products will be rise about 230 million. If the gross regional domestics products in the last period increase 1000 unit, it will rise income about 972 million. The value of R square is about 9,95 % means that there are tight relationships between variables.

5.2. The Relatioships Between Export And Capital Goods Import

Using available data, we do the regressions between capital goods import and export, from the result of regressions, writer get the equation:

No	Equation	R Square	D-W
1	M't = 108459,885 + 0,177 Xt + 0,675 Mt-1 *(0,558)* *(5,295)* *(5,716)*	0,901	1.282

The relationships between export and capital goods import shows a positive relationships. In this case, export cause the amount of capital goods import. When export increase capital goods import will be rise too. R square shows the value about 9,01 means that there are tight relationships between each of independent variable and dependent variable. At a constant price capital goods income will be rise about 108.459 unit. Where export increasein the amount of 1000 unit, so capital goods import will be rise about 177 unit, besides that the amount of capital goods import in the last period also cause the amount of capital goods import in this year. In the case of West Sumatera, the increase of 1000 unit of capital goods import in the last period cause the amount of capital goods import in this period about 675 unit.

5.3. The Relationships Between Capital Goods Import And Investment Of West Sumatera

No	Equation	R Square	D-W
1	It = 357806.080 + 0,297 M’t + 1,02 It-1 (1,391) (2,149) (17,126)	0,950	1.320

There are tight relationships between dependent variable and independence variable, this equation means the positive relationships between variables. All of equation mark as positive. When investment increase about 1000 unit, means that import rise about 297 unit, and it also causing by the last investment.

5.4. Empirical study analysis

From empirical studies using time series data from 1983 until 2009, it can conclude some analysis and implication from the up result of equation:

1. Comes from the level value of determinant coefficient (R square) that is getting from the significancy of independent variable in together with variable variation, that is independent variable has a tight role to independent variable in West Sumatera Economy,
2. From the result of equation, shows that export cause positive relationships to rise economic growth, as the region that just have non oil product, this sectors has positive relationships with econmic growth. This result may same with the last research about that used time series data or sectorals data,
3. Export have positive realtionships with gross regional domestics product in each year with the constant price. This positive relationships shows by the elasticity of export that are inelastics. This is shows that export significantly as the factor to support economic growth, it’s better if we can take the action to rise the amount of export,

4. Export of this regions depends on invesment, when there is no investment so this sector can't to grow, means that it will not rise economic growth of West Sumatera. the conclussion is, investment is very important to reach good cooperation of economics,
5. Besides that, capital goods import also caused investment, if there is weak relationships between capital goods import and investment, the significant level of this tend to low. Means that the effect of capital goods import to export and economic growth is not via domestics investment., but via others allocation, like technology and allocation of human resource economics.

According to the explanation in the up, writer conclude that there many positive relationships of export, it's including, rising economic growth that is undirectly will rise welfare of a country. Any rise of domestics investment undirectly rising the amount of export and stressing capital goods import, it cause domestics production and also rise foregin direct investment. It will rise economic growth of West Sumatera. Here we can see the relationships between export and economic growth via capital goods import and investment.

In the case of West Sumatera economics, non oil export is one of the source to growth the economics, becouse West Sumatera not has oil products, they just import it from other region like Riau and others, but the first region that send their oil product to West Sumatera just Riau Province. One reason becouse it stay in near place. Non oil sectors depends on investment sector, government needs to make a good regulation and good cooperation of domestics investment and also foreign direct investment, becouse we are really need this investment to sustain the growth.

CHAPTER VI

CONCLUSSION AND RECOMMENDATION

5.1. Conclussion

According to the result of this research, writer conclude that:

1. International trade significantly cause economic growth. According to the result of this reseach export and import have big contribution to the growth of economy (Gross Regional Domestics Product), especially in the case of West Sumatera. The effect of international trade to Gross Regional Domestics Product not just from export sector, but also from capital goods import, that is undirectly rise economic growth,
2. The growth of investment, capital goods import, and export together significantly cause the level of Gross Regional Domestics Products. Using the data of 1983 to 2009 export cause economic growth about 23 % in percentage, 17,7 % cause the growth of capital goods import. Besides that capital goods import contribute 29,7 % of Investment,
3. Economic crisis at 1998 causing three factor of growth (export, capital goods import, and investment), it is directly cause economic growth. The evidence shows that Gross Regional Domestics Product of West Sumatera too fall reach minus level of GDP, investment also fall down whereas it not too fall, beside that export also down. But, althought export fall down, the balance of trade of West Sumatera still in the positive side. Means that, West Sumatera have good cooperation to face economic crisis,
4. The balance of trade of West Sumatera shows good cooperations after economics crisis facing by Indonesia at 1997. Balance of trade that is known as the comparison between the amount of export and import in a country shows the positive relationships in the year of 2003 until 2009 in the West Sumatera economy.
5. West Sumatera export to many countries of destination, this activity are very important to increase growth in West Sumatera. The biggest mount

of export to ASEAN country is to Malaysia in1983, but after that the amount of export to this ASEAN countries tend to low and limited to zero in the year of 1986 to 2001, after that rise again in the year of 2004 until today. Besides that Wes Sumatera also send the domestic goods to European Union, that is United Kingdom as the biggest value of export destination in the year of 2004. Hopefully this export can be risee overtime to reach good cooperation of economic activity in West Sumatera.

5.2. Recommendation

According to the result of the research, axplanation and conclussions before, writer suggest:

1. The government policy is an important role to the growth of economic. Becouse of that, to set this it's importance to coordinate planning with other relation. Government needs to sinergy to the business sector to make appropriate policy in each period,
2. To reach good condition of investment in West Sumatera, the government needs to sign a new regulation ro support the enter of foreign direct investment, and
3. The barriers of export like unadvance of technology, labor problem and infrastructure and other cases to make difficulties to do the business, hopefully it can be solve as soon as possible.

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APPENDIX I

GROSS REGIONAL DOMESTIC PRODUCTS ACCORDING TO CONSTANT PRICE OF 2000

YEAR	PC	GC	GDCF	EX	IM	GRDP	GDRPt-1	Imt-1	GDCFt-1
1983	3132692,68	689607,33	1306846,08	1254064,31	2461958,77	9103340,86	9002467,89	2376834,9	
1984	3212223,43	719123,85	1253959,93	1135954,51	2307966,00	9289477,55	9103340,86	2461958,77	1306846,08
1985	3299584,59	740410,40	904478,77	996960,39	1274030,53	9695049,24	9289477,55	2307966,00	1253959,93
1986	3352828,26	814458,59	752533,36	1460742,27	1325167,38	10125130,89	9695049,24	1274030,53	904478,77
1987	3905214,23	796999,95	849291,93	1753055,50	1581810,54	10695492,49	10125130,89	1325167,38	752533,36
1988	4100348,52	843604,62	922183,59	1794403,80	1471532,23	11249761,20	10695492,49	1581810,54	849291,93
1989	4353480,17	905620,56	1113611,44	1852721,90	1733953,40	11847317,31	11249761,20	1471532,23	922183,59
1990	4577522,54	945183,65	1378932,67	1803564,56	1622441,50	12928857,33	11847317,31	1733953,40	1113611,44
1991	4829450,66	1030116,71	1480761,81	2006432,47	1554920,80	13864091,74	12928857,33	1622441,50	1378932,67
1992	5689439,88	1830759,98	2335326,84	2719636,74	1659489,05	14797234,67	13864091,74	1554920,80	1480761,81
1993	8190561,29	2397896,96	3259597,38	2794063,85	1734740,25	15997188,55	14797234,67	1659489,05	2335326,84
1994	8778373,29	2445854,90	3524529,20	2852490,08	1874809,16	17294450,44	15997188,55	1734740,25	3259597,38
1995	9468690,24	2548580,81	3887945,23	3358861,46	2386815,98	18598061,68	17294450,44	1874809,16	3524529,20
1996	10402845,30	2665815,51	4293396,11	3258874,31	1789161,92	20261915,16	18598061,68	2386815,98	3887945,23
1997	11467345,14	2707611,76	4629779,31	3343539,95	1906024,67	21864239,44	20261915,16	1789161,92	4293396,11
1998	10765049,89	2722376,90	4069710,70	3448552,80	1967868,44	22969444,08	21864239,44	1906024,67	4629779,31
1999	12120050,05	2907583,65	3405760,48	2674841,52	1435687,17	21466662,03	22969444,08	1967868,44	4069710,70
2000	12675987,00	2776976,45	3453945,34	2432453,98	1432564,43	21903912,43	21466662,03	1435687,17	3405760,48
2001	13990987,00	2876546,24	3678654,05	2456234,78	1787564,34	22563847,04	21903912,43	1432564,43	3453945,34
2002	14558415,44	3196460,43	4785540,03	3390675,97	1968503,97	23427372,82	22563847,04	1787564,34	3678654,05
2003	15030491,04	3282955,96	4934280,76	3843191,44	1676959,08	24595739,93	23427372,82	1968503,97	4785540,03
2004	15605371,33	3354524,41	5091190,89	4973311,80	1682862,55	25879248,03	24595739,93	1676959,08	4934280,76
2005	16361887,82	3496420,79	5388134,59	6027591,91	2317852,85	27302068,62	25879248,03	1682862,55	5091190,89
2006	17037910,03	3658086,90	5604645,87	7125583,22	2528899,13	28880146,64	27302068,62	2317852,85	5388134,59
2007	17738700,70	3829000,04	5824270,00	9185150,00	3471970,00	30659980,82	28880146,64	2528899,13	5604645,87
2008	18541006,93	4020198,56	6112929,37	11195074,59	5001295,22	32612950,74	30659980,82	3471970,00	5824270,00
2009	19732345,23	7832465,87	7953287,34	12456234,09	5600432,32	35042135,61	32612950,74	5001295,22	6112929,37

APPENDIX II

GROSS REGIONAL DOMESTICS PRODUCTS ACCORDING TO THE MARKET PRICE

YEAR	Kind Of Expenditure										
	Private consumption	Government Consumption	Gross Domestic Capital	Export Of Goods and Services	Import Of Goods And	Change In Stock	Gross Regional Domestic	Export Of Goods and Services	Import Of Goods And	Change In Stock	Gross Regional Domestic
1983	757.846,88	162.771,42	191.190,52	312.830,18	188.421,75	-24.887,52	1.211.329,73	312.830,18	188.421,75	-24.887,52	1.211.329,73
1984	899.891,62	196.924,01	235.354,88	312.990,93	202.803,37	-27.621,31	1.414.736,76	312.990,93	202.803,37	-27.621,31	1.414.736,76
1985	1.006.724,91	223.163,95	180.122,28	287.491,21	121.688,22	10.908,31	1.586.722,44	287.491,21	121.688,22	10.908,31	1.586.722,44
1986	1.096.844,80	230.544,59	159.162,22	452.276,68	137.118,19	14.250,87	1.815.960,97	452.276,68	137.118,19	14.250,87	1.815.960,97
1987	1.264.611,55	248.867,25	187.266,60	626.526,96	191.542,92	22.930,80	2.158.660,24	626.526,96	191.542,92	22.930,80	2.158.660,24
1988	1.427.087,19	270.133,80	216.234,27	720.667,42	184.698,72	52.049,56	2.501.473,52	720.667,42	184.698,72	52.049,56	2.501.473,52
1989	579.654,25	303.563,02	287.764,03	807.590,88	230.641,50	113.685,29	1.861.615,97	807.590,88	230.641,50	113.685,29	1.861.615,97
1990	1.775.529,08	345.301,15	343.759,66	820.626,17	230.473,33	211.457,95	3.266.200,68	820.626,17	230.473,33	211.457,95	3.266.200,68
1991	1.985.583,41	405.492,64	428.220,55	947.116,43	232.020,40	191.760,43	3.726.153,06	947.116,43	232.020,40	191.760,43	3.726.153,06
1992	1.975.845,31	404.786,45	425.234,72	514.920,57	193.248,57	180.726,32	3.308.264,80	514.920,57	193.248,57	180.726,32	3.308.264,80
1993	3.087.011,16	879.213,36	1.492.546,15	784.185,00	387.144,38	101.452,79	5.957.264,08	784.185,00	387.144,38	101.452,79	5.957.264,08
1994	3.599.628,12	1.021.622,18	1.777.221,09	926.281,00	430.215,69	248.067,98	7.142.604,68	926.281,00	430.215,69	248.067,98	7.142.604,68
1995	3.969.861,41	1.104.506,34	2.006.733,21	1.088.514,23	462.751,01	316.480,29	8.023.344,47	1.088.514,23	462.751,01	316.480,29	8.023.344,47
1996	4.851.291,36	1.372.914,60	2.442.223,04	1.169.494,06	559.840,81	138.862,65	9.414.944,90	1.169.494,06	559.840,81	138.862,65	9.414.944,90
1997	5.691.967,64	1.458.645,32	2.851.564,35	1.373.803,71	688.467,78	-65.914,08	10.621.599,16	1.373.803,71	688.467,78	-65.914,08	10.621.599,16
1998	9.243.031,23	2.432.440,78	4.040.212,16	3.556.154,69	1.671.789,11	-135.836,95	17.464.212,80	3.556.154,69	1.671.789,11	-135.836,95	17.464.212,80
1999	11.664.949,26	3.201.438,71	4.437.299,19	2.737.526,19	1.362.212,18	-376.156,44	20.302.844,73	2.737.526,19	1.362.212,18	-376.156,44	20.302.844,73
2000	13.036.948,57	3.361.724,83	4.685.995,18	2.642.871,56	1.414.330,87	-81.278,80	22.231.930,47	2.642.871,56	1.414.330,87	-81.278,80	22.231.930,47
2001	14.780.514,55	3.686.797,96	5.137.555,09	2.827.158,71	1.538.763,95	16.491,25	24.909.753,61	2.827.158,71	1.538.763,95	16.491,25	24.909.753,61
2002	17.253.180,67	4.119.221,07	5.865.548,77	2.888.411,66	1.735.407,79	367.585,01	28.758.539,39	2.888.411,66	1.735.407,79	367.585,01	28.758.539,39
2003	15.030.491,04	3.282.955,96	4.934.280,76	3.723.589,06	1.239.194,21	147.125,41	25.879.248,02	3.723.589,06	1.239.194,21	147.125,41	25.879.248,02
2004	15.403.412,80	3.354.542,41	5.091.190,89	4.575.927,48	1.263.397,22	136.669,62	27.298.345,98	4.575.927,48	1.263.397,22	136.669,62	27.298.345,98
2005	26.005.973,86	5.150.365,09	8.053.485,09	8.057.796,68	2.166.592	-899.142,78	44.201.886,02	8.057.796,68	2.166.592	-899.142,78	44.201.886,02
2006	30.288.933,27	6.045.139,36	9.408.084,08	9.688.690,30	332.049,47	-371.190,65	54.727.606,89	9.688.690,30	332.049,47	-371.190,65	54.727.606,89
2007	33.367.201,79	6.713.057,83	10.453.661,43	15.136.542,66	902.924,08	-582.042,78	64.185.496,85	15.136.542,66	902.924,08	-582.042,78	64.185.496,85
2008	39.033.463,46	7.988.669,95	12.514.398,08	26.111.023,54	5.217.302,59	-290.893,94	80.139.358,50	26.111.023,54	5.217.302,59	-290.893,94	80.139.358,50
2009	39.452.765,23	7.990.673,42	12.612.324,72	26.232.098,12	5.327.987,78	-645.564,76	80.314.308,95	26.232.098,12	5.327.987,78	-645.564,76	80.314.308,95

APPENDIX III

VALUE AND VOLUME OF EXPORT BY KINDS OF COMMODITIES

YEAR	KIND OF COMMODITIES																			
	Coffee		Fish		Cinnamon		Nutmeg		Resin		Coal		Logs	Logs	Rubber		Cement		Cocoa Bean	
	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)
1983	4.533.069	8.342.855	0	0	16.866.315	20.924.236	6.260.500	170.897	135.000	16.276	162.450.159	5.927.603	37.442.662	12.667.438	58.959.680	52.607.491	20.000.000	730.000		
1984	4.912.890	11.166.207	0	0	14.730.445	17.450.100	0	0	990.250	169.052	391.978.653	14.051.223	86.406.362	22.463	71.666.108	66.578.857	109.300.000	3.597.300		
1985	3.322.700	8.312.122	0	0	7.377.012	10.543.999	0	0	0	0	0	0								
1986	6.505	16.286	0	0	19.554	25.988	0	0	62	17	343.095	12.400	70.152	22.013	74.183	53.493	320.250	8.853		
1987	0	0	6.397	7.380	13.340	20.143	151	417	1.329	542	1.479.922	43.751	53.651	46.670	141.993	148.927	383.550	16.725		
1988	1.963	3.604	0	0	13.681	25.825	0	0	0	0	318.820	11.116	65.648	19.578	107.072	114.864	409.209	11.132		
1989	3.258	4.137	0	0	10.528	28.219	0	0	746	206	661.437	24.331	81.214	31.785	108.141	93.598	523.631	18.400		
1990	6.090	5.028	0	0	3.744	7.645	0	0	401	110	503.276	19.013	60.371	38.935	95.903	73.727	359.050	15.652		
1991	8.517	6.892	0	0	5.214	9.585	0	0	251	107	638.682	23.582	67.409	42.615	99.851	76.616	245.269	11.485		
1992	4.649	3.495	0	0	18.538	29.090	0	0	0	0	1.034.984	35.248	76.538	51.313	115.065	92.461	651.890	32.315		
1993	4.617	4.239	0	0	4.423	9.386	0	0	864	783	1.044.808	37.711	63.675	57.645			186.550	8.901		
1994	2.826	7.304	232	1.396	19.232	36.872	0	0	0	0	1.185.930	40.282	52.342	50.921	130.860	130.859				
1995	3.229	7.648	139	1.210	16.494	31.977	242	269	259	67	2.243.154	65.536	44.491	38.157	132.796	199.047	106.511	5.116		
1996	2.113	3.028	109	553	1.710	3.773	120	151	889	273	1.719.830	56.566	43.154	38.355	149.733	194.547	290.944	14.835		
1997	0	0	6.397	7.380	13.340	20.143	151	417	1.329	549	1.479.922	43.751	53.651	46.670	141.993	148.927	383.550	16.725		
1998	36	60	13.420	15.065	19.212	17.865	157	735	873	319	1.627.380	36.089	55.143	28.560	173.878	109.248	930.341	22.577		
1999	0	30	840	921	15.886	11.309	395	330	30	43	947.623	22.730	46.065	26.082	131.883	71.479	1.738.491	33.824		
2000	3	2	97	129	15.160	9.291	850	495	37	136	305.825	6.626	40.871	19.856	165.711	105.779	1.807.911	34.725		
2001	146	85	130	350	9.331	4.667	419	250	0	0	410.657	8.627	44.031	17.872	144.281	76.792	1.522.260	32.873		
2002	38	13	111	96	8.074	4.818	259	278	0	0	786.395	15.459	39.602	18.596	184.988	120.129	629.495	13.017		
2003	216	134	45	215	12.755	6.408	278	426	0	0	66.400	935	32.292	16.684	416	358	353.185	7.889		
2004	0	0	14	35	8.895	5.269	357	699	0	0	204.627	6.026	31.194	25.898	2.633	2.854	264.629	6.320		
2005	57.060	51.730	30.950	70.315	6.033	3.522	211	693	0	0	530.425	14.360			670	900	0	0		
2006	117	93	1.067	344	8.888	6.104	43	146	0	0	121.902	4.291			1.274	2.310	1.142.459	41.790	3.789	3.039
2007	552	643	0	0	9.941	7.588	0	0	0	0	657.781	26.758			278.824	560.497	552.972	21.342	9.380	13.205
2008	659	1084	0	0	10.307	8.117	0	0	0	0	1.386.231	83.783			246.375	651.340	838.138	38.029	15.794	34.877

APPENDIX IV

VALUE OF EXPORT OF WEST SUMATERA TO MANY COUNTRIES OF DESTINATIONS (US $)

YEAR	JAPAN	USA	MALAYSIA	SINGAPORE	THAILAND	U.K	NETHERLANDS	GERMANY	LUXEMBOU	FRANCE	DENMARK	ITALIA	CHINA
1983	1.506.440	55.778.371	4.591.482	4.692.661	609.149	5.314.107	8.047.894	8.431.017	3.811.328	1.561.286	418.552	1.421.260	
1984	5.677.053	67.358.591	10.745.049	5.043.987	1.154.793	3.996.808	12.285.087	10.295.772		1.988.297	662.979	2.425.322	
1985	4.603.296	50.562.649	9.414.284	3.634.631	2.267.301	7.150.637	12.508.503	7.085.517	5.878.008	1.928.769	679.916	2.985.046	
1986	3.941	56.354	6.420	2.806	2.142	5.047	17.891	10.860	6.733	1.282	369	2.014	
1987	4.292	93.022	2.398	4.886	595	6.601	14.047	8.193		2.229	434	2.496	
1988	8.790	117.125	3.075	4.943	1.389	7.719	15.819	7.125	8.412	3.823	104	739	
1989	7.730	132.728	2.543	3.467	959	4.343	14,78	6.531	7.865	2.566	902	746	
1990	13.662	85.086	5.283	3.146	972	5.543	9.703	5.948	5.652	3.977	562	17	
1991	17.430	81.032	3.474	5.728	4.187	5.036	10.159	7.059	5.025	2.911	2.080	43	
1992	29.165	98.051	5.200	4.098	1.959	6.835	15.009	5.092	6.242	2.339	4.139	180	
1993	37.311	102.332	12.790	10.169	4.431	6.084	15.352	7.082	4.525	1.922	2.410	126	
1994	33.028	136.938	8.144	12.404	5.859	8.100	12.036	12.174	6.288	2.754	2.350	0	
1995	50.106	195.587	10.184	9.815	4.202	6.163	13.135	8.494	5.179	397	2.692		
1996	47.284	184.896	13.309	16.301	7.453	6.368	17.962	3.805	3.678	128	2.959	90	
1997	36.398	147.536	20.499	18.670	7.381	7.359	49.206	2.416	7.732	741	3.144	0	
1998	25.850	113.802	12.414	18.830	7.416	7.321	8.363	1.192	9.414	82	3.716	78	
1999	1.594	7.616	12.790	16.036	2.460	3.233	17.554	2.541	5.434	255	4.343	23	
2000	1642	13.494	6.717	16.673	5.822	2.693	29.105	3.190	6.131	577	3.525	1.409	
2001	770	10.939	11.232	9.846	1.622	4.635	12.182	4.064	6.983	233	4.565	44	
2002	3.857	117.177	6.012	4.868	200	5.920	42.432	968	6.640	67	1.668	1.937	
2003	933	160.728	2.334	58.770	377	4.680	42.297	973	6.336	175	429	270	
2004	380.096	237.861	5.583,96	71.612,55	343	1.625.287	56.281,08	1.838.965	1.554.362	91.714	419.584	4.242.598	0
2005	235,043	292.566,85	14.629,06	73.195,55	1.376,00	1.072,38	96.302,70	2.777,41	732,63	214,25	24,09	6.874,35	26.185,71
2006	1.025,41	388.522,93	13.592,83	90.191,19	1.974,52	438,73	130.221,36	4.978,12	639,25	968,22	5,28	16.540,96	102.169,70
2007	1.050,71	525.862,82	53.878,06	270.395,29	9.757,27	566,2	86.583,24	10.590,28		447,82		1.167,00	47.720,44
2008	2.736,84	609.738,73	54.818,67	355.591,05	10.836,03	277,54	177.723,81	6.769,21		810,43		10.367,82	180.123,92

APPENDIX V

VALUE AND VOLUME OF IMPORT BY GROUP OF COMMODITIES

YEAR	KIND OF COMMODITIES																			
	Food Stuff And Animal		beverages and tobacco		raw material in edible		Mineral Fuels, Lubricants, Related		Animal & vegetables oil & fats		Chemicals		Manufactured Goods		Machinery And Transport Equipment		Miscellaneous Manufactures Articles		Classified According To Kind	
	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)	VOLUME (Ton)	VALUE (US $)
1983	25.365	8.203,90	0	0	23.499	1.456,90	199.958	63.003,40	0	0	52.158	9.130,20	36.749	15.228,20	5.125	31.939	31	347,1	0	0
1984	6	3,6	0	0	56.202	1.866,40	32.190	8.114,70	0	0	9.332	1.975,00	21.718	22.783,60	21.382	73.049	820	6.060,80	0	0
1985	6	7	0	0	47.202	1.537	6.693	2.097	0	0	1.646	389	15.828	11.573	1.540	10.617	133	1.235	0	0
1986	7	2	0	0	13.439	388	10.308	2.153	0	0	1.822	894	18.048	10.501	1.113	6.422	8	274	0	0
1987	6.008	1.326	0	0	6.100	686	17.986	6.037	0	0	2.306	912	21.319	20.147	2.821	12.376	19	353	0	0
1988	11.010	2.832	0	0	7	22	6.730	1.179	0	0	1.320	740	10.594	7.634	1.538	9.726	12	135	0	0
1989	23.676	7.700	0	0	1.120	293	7.150	1.168	0	0	1.361	800	11.137	10.670	1.448	13.202	8	158	0	0
1990	7000	2.975	0	0	601	219	2.741	728	0	0	833	500	7.615	6.055	1.243	10.716	5	61	0	0
1991	9.027	2.394	0	0	493	511	46	122	70	861	0	0	2.593	2.574	870	1.011	2.733	15.434	4	192
1992	0	0	29.909	8.247	2002	382	1.656	954	1.069	907	0	6	1.979	1.707	2.091	2.582	11.954	78.879	12	55
1993	0	0	0	0	147	72	1.875	638	81	546	1	13	3.016	2.457	3.399	4.698	2.643	56.704	21	2.378
1994	0	0	36.318	8.709	134.677	3.440	6.730	1.593	126	645	0	12	4.305	4.102	4.064	7.366	0	42.559	0	163
1995	0	0	38.794	12.837	58.598	2.542	18.806	13.114	177	1.270	0	0	2.835	2.611	1.664	3.396	7.927	127.083	114	991
1996	0	4.456	104.323	5.759	22.972	345	36.989	234	44	4.313	6	43	872	5.657	158	2.543	1.618	543,64	4	215
1997	0	4.972	147.410	0	32.460	3.994	52.266	467	62	0	9	14.507	1.232	9.672	8.980	69.326	2.286	192	6	0
1998	0	70.510	103.656	0	85.258	1.135	61.144	0	24.469	0	143	1.386	1.247	4.411	19.508	26.424	3.519	119	1	0
1999	0	61.533	145.508	0	106.769	3.522	149.092	0	5.468	0	9.209	8.825	1.694	4.244	1.827	9.735	6.634	544	79	0
2000		958	0	0	158.046	6.768	0	0	0	0	60.109	7.226	17.634	7.652	3.037	32.493	223	20.637	0	0
2001		161	0	0	173.307	4.151	4.991	765	0	0	62.301	8.139	16.132	11.050	6.329	8.732	23	9.576	0	0
2002		5.167	0	0	164.122	4.347	1.450	181	0	1	88.975	10.053	11.241	7.945	6.155	6.183	4	147	0	0
2003		1.406	0	0	114.370	3.936	0	0	0	0	80.061	10.066	7.819	5.459	5.947	9.959	72	309	0	0
2004		1.200	0	0	40.230	880	0	0	0	0	39.053	7.099	4.405	3.518	988	2.910	6	41	0	0
2005		0,00	0	0	0	0,00	16	19	0	0	0	0	23	7	0	0	0	16	0	0
2006		3.797,20	0	0	145.600	3.276	0	0	0	0	86.153	15.580,70	9.802	7.997,18	987	6.058,04	6	103,47	0	0
2007		16.449	0	0	275.102	8.129,41	0	0	0	0	181.100	37.011,15	15.774	15.154,23	2.763	18.674,48	0	0	13	444,22
2008		7.826	0	0	332.553	36.042,35	261.304	278.536	0	0	212.279	112.928	25.956	27.914,15	1.318	12.902,60	0	0	21	307,26

APPENDIX VI

VALUE OF EXPORT BY GROUP OF COMMODITIES (US $)

YEAR	COMMODITY									
	food stuff and animals	beverages and tobacco	raw material and edible	mineral fuels, lubricants related materials	animal and vegetables oils and fats	Chemicals	manufactured goods	machinery and transport equipment	miscellaneous manufactures articles	classified according to kind
1983	35.582,00	0	61.191,00	5.927,00	0	2.073,00	17.389,00	0	19	12
1984	32485	4	85.649,00	14.051,00	0	2.008,00	16.833,00	515	29,00	0
1985	94889	7	3.832	17.050	0	7386	19.843	0	205	0
1986	45365	0	66380	12.400	0	7317	22.264	0	238	0
1987	37.906	0	105310	5.680	0	3055	27.398	0	729	325
1988	32.222	3	137321	15.710	0	4482	34.474	0	263	0
1989	33.871	0	126769	24.331	0	3061	43.377	0	372	0
1990	34.998	0	79147	19013	0	1814	50.314	0	299	0
1991	37.561	1415	35675	879	119314	3	2	0	3	152
1992	34489	873	68239	1457	144092	114	4	2	13	418
1993	45607	4159	48957	7329	147257	867	153	0	8	297
1994	46286	8.354	51.019	8.399	182114	85	340	1.203	0	129
1995	42330	0	202.486	65.536	11724	4475	41.838	0	613	0
1996	24.347	0	197359	56566	19334	10759	52.035	0	139	0
1997	28.966	52415	62.566	13296	195802	2	262	11	871	4101
1998	35.650	20251	61.030	15713	138024	0	6	1.493	7368	1042
1999	17.350	0	92.753	28264	41558	3.475	64.252	195	4389	72
2000	13708	0	108.439	8042	53210	3.822	48.684	916	525	0
2001	6764	0	84.263	6074	46871	11.380	52.139	111	578	0
2002	7.288	0	128.841	15459	119208	5.968	30.927	52	106	0
2003	7.781	0	171.726	935	168165	5.100	22.738	676	128	27
2004	9.413	0	254.079	6.026	304.631	4.721	15.794	211	74	0
2005	14.835,00	0	313.585,00	16.570	367.706	8.589	9.627	270	2	0
2006	23.466,00	0	504.521	4717	483.725	7.264,00	49.998,00	438,00	1	0
2007	15.753	841930	73.277,00	11268	570.139	1,00	22,00	1,00	0	404
2008	17.245	1523971	154.698,00	15.848	672.602	0	7,00	0,00	0	194

APPENDIX VII

VOLUME OF EXPORT BY GROUP OF COMMODITIES (US $)

YEAR	COMMODITY									
	food stuff and animals	beverages and tobacco	raw material and edible	mineral fuels, lubricants related materials	animal and vegetables oils and fats	Chemicals	manufactured goods	machinery and transport equipment	miscellaneous manufactures articles	classified according to kind
1983	33.674,00	0	77.248,00	162.450,00	0	7.427,00	76.920,00	0	7	2
1984	29833	2	140.521,00	391.979,00	0	3.290,00	143.216,00	129	8,00	0
1985	151448	3	2.738	465.093	0	45932	249.630	0	54	0
1986	36693	0	116254	343.095	0	66898	360.268	0	77	0
1987	29.079	0	151501	180.434	0	1048	321.075	0	91	0
1988	22.900	1	174841	459.895	0	1423	454.745	0	88	0
1989	17.107	0	194734	661.436	0	1487	505.175	0	80	0
1990	39.536	0	103068	503276	1224	413168	0	0	71	0
1991	28.011	1444	891931	285	167291	0	0	0	1	53
1992	24418	1.515	1696941	868	191984	25	0	4	7	189
1993	26945	9744	1270039	3134	179032	135	4.634	0	5	115
1994	22756	20.265	1.396.328	3.108	183321	30	5.011	0	0	115
1995	31093	0	153.351	2.243.154	22.077	2211	149.547	0	3.644	0
1996	26.137	0	175266	1719830	40.145	4857	332.865	0	118	0
1997	21.652	107808	1.892.707	3800	195749	0	1.432	24	606	3610
1998	33.890	36325	1.611.969	14804	229081	0	1	2.277	2318	1463
1999	448.947	0	18.852	1255402	103985	1.217	2.084.868	198	167	1280
2000	87777	0	196.665	395126	169416	542	1.907.861	301	45	0
2001	31559	0	204.410	295009	193743	13.295	1.788.104	36	555	0
2002	28.641	0	271.675	786395	370151	3.220	666.053	95	94	0
2003	17.785	0	250.158	66400	447127	2.615	379.721	172	36	39
2004	39.830	0	260.493	204.628	735.768	738	276.938	443	36	0
2005	119.736,00	0	321.942,00	606.337	986.282	7.598	16.064	226	1	0
2006	190.269,00	0	385.631	141648	1.207.603	1.770,00	1.151.770,00	576,00	0	0
2007	22.289	1237773	1.480.650,00	4338	286.257	12,00	42,00	19,00	0	512
2008	21.418	1771190	2.573.137,00	9.407	255.369	0	26,00	0,00	0	512

APPENDIX VIII

$$Yt = a0 + a2Xt + a3Yt\text{-}1$$

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	gdrpt-1, export[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: grdp

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.998[a]	.995	.995	5.60027E5	1.430

a. Predictors: (Constant), gdrpt-1, export

b. Dependent Variable: grdp

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.514E15	2	7.571E14	2.414E3	.000[a]
	Residual	7.527E12	24	3.136E11		
	Total	1.522E15	26			

a. Predictors: (Constant), gdrpt-1, export

b. Dependent Variable: grdp

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	616008.995	359701.621		1.713	.100		
	export	.230	.072	.089	3.206	.004	.265	3.779
	gdrpt-1	.972	.029	.920	32.957	.000	.265	3.779

a. Dependent Variable: grdp

APPENDIX VIII

Coefficient Correlations[a]

Model			gdrpt-1	export
1	Correlations	gdrpt-1	1.000	-.858
		export	-.858	1.000
	Covariances	gdrpt-1	.001	-.002
		export	-.002	.005

a. Dependent Variable: grdp

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	export	gdrpt-1
1	1	2.767	1.000	.01	.01	.00
	2	.211	3.625	.21	.24	.00
	3	.022	11.210	.78	.74	1.00

a. Dependent Variable: grdp

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	9.6552E6	3.5179E7	1.9441E7	7.63127E6	27
Std. Predicted Value	-1.282	2.062	.000	1.000	27
Standard Error of Predicted Value	1.093E5	3.576E5	1.785E5	55762.025	27
Adjusted Predicted Value	9.7265E6	3.5273E7	1.9465E7	7.64952E6	27
Residual	-2.09210E6	8.18490E5	.00000	5.38056E5	27
Std. Residual	-3.736	1.462	.000	.961	27
Stud. Residual	-4.098	1.493	-.020	1.034	27
Deleted Residual	-2.51706E6	8.54316E5	-2.37301E4	6.23957E5	27
Stud. Deleted Residual	-7.319	1.535	-.137	1.571	27
Mahal. Distance	.027	9.635	1.926	2.089	27
Cook's Distance	.000	1.137	.056	.217	27
Centered Leverage Value	.001	.371	.074	.080	27

APPENDIX VIII

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	gdrpt-1, export[a]	.	Enter

a. Dependent Variable: grdp

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.998[a]	.995	.995	5.60027E5	1.430

a. Predictors: (Constant), gdrpt-1, export

b. Dependent Variable: grdp

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.514E15	2	7.571E14	2.414E3	.000[a]
	Residual	7.527E12	24	3.136E11		
	Total	1.522E15	26			

a. Predictors: (Constant), gdrpt-1, export

b. Dependent Variable: grdp

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	616008.995	359701.621		1.713	.100		
	export	.230	.072	.089	3.206	.004	.265	3.779
	gdrpt-1	.972	.029	.920	32.957	.000	.265	3.779

a. Dependent Variable: grdp

APPENDIX VIII

Coefficient Correlations[a]

Model			gdrpt-1	export
1	Correlations	gdrpt-1	1.000	-.858
		export	-.858	1.000
	Covariances	gdrpt-1	.001	-.002
		export	-.002	.005

a. Dependent Variable: grdp

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	export	gdrpt-1
1	1	2.767	1.000	.01	.01	.00
	2	.211	3.625	.21	.24	.00
	3	.022	11.210	.78	.74	1.00

a. Dependent Variable: grdp

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	9.6552E6	3.5179E7	1.9441E7	7.63127E6	27
Std. Predicted Value	-1.282	2.062	.000	1.000	27
Standard Error of Predicted Value	1.093E5	3.576E5	1.785E5	55762.025	27
Adjusted Predicted Value	9.7265E6	3.5273E7	1.9465E7	7.64952E6	27
Residual	-2.09210E6	8.18490E5	.00000	5.38056E5	27
Std. Residual	-3.736	1.462	.000	.961	27
Stud. Residual	-4.098	1.493	-.020	1.034	27
Deleted Residual	-2.51706E6	8.54316E5	-2.37301E4	6.23957E5	27
Stud. Deleted Residual	-7.319	1.535	-.137	1.571	27
Mahal. Distance	.027	9.635	1.926	2.089	27
Cook's Distance	.000	1.137	.056	.217	27
Centered Leverage Value	.001	.371	.074	.080	27

b0 + b2Xt + b3Mt-1

ssion

Variables Entered/Removed[b]

Variables Entered	Variables Removed	Method
GDCFt, IM[a]	.	Enter

uested variables entered.

dent Variable: GDCF

Model Summary[b]

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.977[a]	.954	.950	442021.223	1.282

ors: (Constant), GDCFt, IM

dent Variable: GDCF

ANOVA[b]

	Sum of Squares	df	Mean Square	F	Sig.
Regression	9.733E13	2	4.867E13	249.083	.000[a]
Residual	4.689E12	24	1.954E11		
Total	1.020E14	26			

ors: (Constant), GDCFt, IM

dent Variable: GDCF

Coefficients[a]

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-259186.203	206749.049		-1.254	.222		
IM	.277	.105	.144	2.646	.014	.646	1.548
GDCFt	.973	.060	.884	16.237	.000	.646	1.548

dent Variable: GDCF

Collinearity Diagnostics[a]

Dimension	Eigenvalue	Condition Index	Variance Proportions		
			(Constant)	IM	GDCFt

esiduals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Value	9.12E5	7.24E6	3.41E6	1934831.690	27
icted Value	-1.294	1.978	.000	1.000	27
Error of Predicted	8.791E4	3.071E5	1.400E5	46879.546	27
Predicted Value	9.20E5	7.14E6	3.41E6	1913172.950	27
	-7.214E5	9.196E5	.000	424680.255	27
dual	-1.632	2.080	.000	.961	27
sidual	-1.897	2.237	.003	1.060	27
esidual	-1.031E6	1.375E6	5.149E3	530138.268	27
eted Residual	-2.014	2.462	.014	1.118	27
istance	.065	11.587	1.926	2.414	27
istance	.000	1.557	.101	.314	27
Leverage Value	.003	.446	.074	.093	27

dent Variable: GDCF