Thesis for the Degree of Master of Economics

Analyzing the Effects of Myanmar's Export System Change on GDP

(Based on data from the years 2005 to 2015)

미얀마의 수출구조 변화가 국가 GDP에 미치는 영향에 대한 분석연구: (2005년에서 2015년 데이터 기준으로)

by

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Department of Applied Economics

The Graduate School

Pukyoung National University

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Advisor : Professor Hyeong mo Youn

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Analysis of the Effects of Myanmar's export system change on country on GDP:
(Based on data from the years 2005 to 2015)

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Abstract

In this study, an attempts has been made to study the export system Myanmar. The main objective of this study is to examine the system change in Myanmar's exports and to develop the demand model of Myanmar. In this study , econometric models for export of Myanmar were constructed by appling the time-series data over the periods of 10 years from 2005 to 2015. Test for structure change of export in Myanmar was conducted using Chow test at the turning point 2011. The data used in this paper were collected from various issues of statistical yearbooks. This study concluded that structural change occurred in Myanmar's export at the suspected time point 2010-2011. From the results and findings of this study , Myanmar's export could be estimated some what satisfactorily and this study is hoped to provide some policy implications and suggestions in adopting more effective and well-organized planning and policy for promotion of the export of the country in future. The objectives of the study are to analyze commodity patten and direction of recent Myanmar export in detial and identify to what extent Myanamar export structure is

diversified in order to point out the urgency of export diversifacation for Myanmar. Six other southeast Asian countries are analyzed for export patterns, and based on the observations, Myanmar is found to be trading at about 15% of its export potential.

요약

본 연구는 미얀마 수출 시스템에 대한 연구이며 주요 연구목적은 미얀마의 수출 시스템변화를 측정하여 미얀마의 수출수요 모델을 발전시키고자 한다. 본 연구에는 미얀마 수출 관련 계량경제 모델을 2005년에서 2015년까지 10년간 매년 나오는 시계열 통계데이터를 사용하며 정치경제적으로 변화를 시켜 온 2011년 기준으로 Chow 분석방법을 사용하여 분석하였다.

본 연구에 2010-2011년 기준으로 변화가 있겠다는 연구 기대결과대로 변화가 있음을 발견하였다. 본 연구와 결과를 바탕으로 하여, 미얀마의 수출에 대한 만족스러운 측정이 되었고 미얀마의 미래 수출 분야에 있어서 정책개발 및 효과적이고 잘 구성되어 있는 계획을 제안하고 정책실행에 도움이 되었다. 본 연구의 목적은 유용한 패턴과 예전 미얀마 수출의 방향을 분석하고자 한다. 이어서 미얀마 수출 관련한 구체적인 변화와 미얀마의 급격하게 변화한 수출다양성을 파악하고자 미얀마의 수출 시스템에 관해 연구하고자 한다. 동남아 아시아 아시안 6개 국가의 수출패턴 분석결과에 따르면, 미얀마는 수출가능성의 15%정도 거래하고 있음을 볼 수 있었다.

CHAPTER I

INTRODUCTION

1.1 The Study of the Purpose

Myanmar has changed its economic course from a centurally planned economy to a market-oriented system in 2010. Since then, a series of structural reforms have been implemented in the economy. These measures were

intended to lead to more bilateral market-oriented economic structure; steps had been taken to decontrol agricultural sector, encourage foreign investment, legalize border trade, encourage private sector's participation in foreign trade, allow the setting up of companies, joint ventures, trade liberalization measures have been instituted

It is interesting to study system change in Myanmar's exports since it is hoped that change in export structure is one of the sources of structural the change in Myanmar economy which reflects its economic development. Studies on structural changes are important for at least two reasons. First, the inherent property of invariance in a structures produce different behavioral relatioons. Second, observations generated by an unstable structure give unreliable estimates of the relationships. Structural instability of economic variables may occur by a policy change such as a new tax law, a new government program or a major disturbance of the economy.

The model of normal liner regression has often been widely

applied to the measurement of economic relationships. Linear regression is used to the question often arises as to whether the relationship remains stable in two periods of time, whether the same relationship holds for two different groups of economic units or represent an [1] economic relationship . It is well-known that the effectiveness of international trade policy is highly dependent on the sizes of important way of assessing the reliability of an econometric model is to check whether the structural parameters are stable over time. There are four soures of structural change in an economy.They are (i) change in final demand, (ii) change in expots, (iii) change in import structure and (iv) change in technology . In this study the structural change in Myanmar's exports was investigated and estimated the export demand model is estimated.

This paper exmined the exports of Myanmar over the period covering from 2005 to 2015. The data were collected from various issues of Statistical Yearbooks, Ministries of Commerce , National Planning and Economic Development. The econometric model developed in this study can be employed to forecast export of Myanmar in future.

The study analyzes the top 10 importers which are the partner countries and the members of ASEAN.

The study period is from 2005 to 2015.

This study focuses on top 30 export item's performance and their contributions in the total export value of Myanmar. Emphasis on

1) Myat Thein, 2005 "Economic Development Of Myanmar's ,Singapore ,ISEAS.
2) Wah ,WH(2011), "A study on Structural Change in Myanmar's Export" ' Yangon Institute of Economics ,Department of Statistics (Master

Myanmar export potential and analysis on the export growth are undar extensive margin or intensive margin or intensive or both. Using gravity model the potential of Myanmar's expors is estimated using the bilateral export patterns of the top 10 countries.

This study was organized into five chapters which are as follows;

Chapter I was introduction encompassing the rationale, objectives, method, purpose of the study.

Chapter II dealt with an overview on the export structure of Myanmar , and annual growth rate of exports, imports and GDP were estimated.

Chapter III is overview on Myanmar Export performance and trade with pather Countries from 2005 to 2015

Chapter IV provided the review on theoretical concepts of stability of structure coefficients in econometric models.

Chapter V was concerned with the test for structure change of export in Myanmar by two-stage Chow test

The findings and conclusions were presented in Chapter V

Objective of the study

The main objectives of the study were as follows;

(i) to estimate the growth rate of Myanmar's export;

(ii) to examine the structural change in Myanmar's export; and

(iii) to provide policy implications and suggestions in adoptinf more eff[2)]

3) Myanmar Ministry of Commerce, Naypyitaw .

ective and well-organized palnning and policy for promotion of export of the country in the future

1.2 The study of the Method

In prepaing this paper, attempts have been made to investigate the export structure of Myanmar. Econometris models for export of Myanmar were constructed based on the time-series data for the period from 2005 to 2015. Then, test for structural change of Myanmar's export was conducted by two-stage Chow test at the turning point 2000-2011.

This paper examined the exports of Myanmar over the period covering from 2005 to 2015. The data were collected from various issues of Statistical Yearbooks, Ministries of Commerce, National Planning and Economic Development. The economic model develped in this study can be employed to forecast the export of Myanmar in fucture.

CHAPTER Ⅱ

EXPOT STRUCTU[3)]RE OF MYANMAR

2.1 Overview on Myanmar

Myanmar is a developing country,which is located in southeast Asia. it still remains a agricultural of economy with a share 35.2 percent of its gross domestic product (GDP) derived from agriculture, fisheries and livestock and forestry.

After 2010, the government had liberalized the trade including legalization of border trade with neighboring countries which is the major step for develpoment of trade. Most of the Myanmar's export items are agriculture and livestock, products textile and garment products manufactured by small and medium enterprises.

After enactment of the foreign Investment law in 2010, a part from increasing the agriculture and livestock sector products, there is an significant increase of export of garment and knitting, oil and gas and mineral.

east Asians countries, including China, Thailand, India, Japan and South Korea.

After enactment of the foreign investment law, the extraction of natural gas significantly increases, and it becomes the major export item accounting for 43 percent of the total export Myanamar.

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4) Aung, MC (2013), "An Analysis on Myanmar Merchandise Export", Yangon Institute of Economics,(Ph.DThesis) PP. 44-60

Due to of the trade sanctions of the western and EU countries, Myanmar's major export partner countries becom ASEAN member countries east Asians countries, including China, Thailand, India, Japan and South Korea.

2.1.1 Export Performance

The sanctions were renewed in 2011 for one year, and Myanmar's trading partners were negatively affected.

Some of Myanmar's export products were banned and Myanmar's firms and their their trading partners were denied financial services.

However, despite the sanctions, Myanmar's exports increased by about 20 percent in 2011-2015 compared to exports in 2005-2010.

The main exports are natural gas, teak (Teak) and hardwood, legumes, clothing, seafood and more.The transmission equipment, essential oils, non-metal products, electrical machinery, textiles and more. Domestic crowding in Myanmar.Mountain (GDP: Gross Domestic Product), inflation rate, and loans and deposits,Looking at the current account balance, foreign exchange reserves, external debt.

Myanmar Ministry of Commerce classifies the exports into the following categories: (i) agricultural products, (ii) forestry products, (iii) animal products, (iv) mines and minerals, (v) fishery, (vi) apparel and clothing, and (vii) other products.

Major export products of Myanmar for 2005-2010 are given in Table (2.1) which shows that the total value of exports shows an increasing trend.

Table (2.1) shows that some export categories are decreasing but those decreases are offset by other categories as shown in Figure (2.1).

The top export categories in 2005-2010 period are apparel and clothing and agricultural products.

In general, 2005-2010 show a relatively slow growth in Myanmar's exports.

Table (2.1) Main Specialized in Exports-Products (2005-2010)

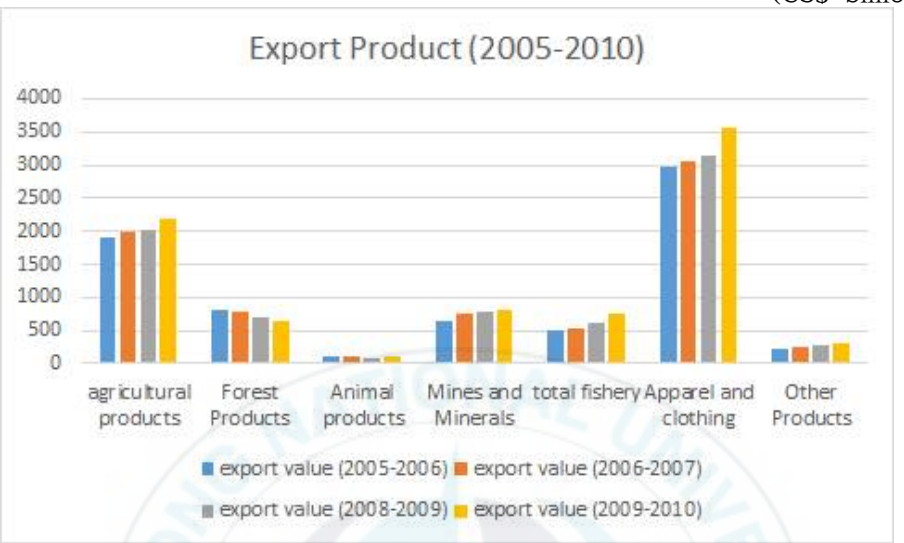
(US$ billion)

Products	export value (2005-2006)	(%)	export value (2006-2007)	(%)	export value (2008-2009)	(%)	export value (2009-2010)	(%)
agricultural products	1912.01	26.7	1983.02	26.64	2031.12	23.75	2191.61	26.18
Forest Products	800.12	11.2	789.23	10.6	703.56	26.57	652.07	7.79
Animal products	124.15	1.73	98.12	1.32	86.12	1.13	101.45	1.21
Mines and Minerals	645.18	9.01	756.13	10.15	782.45	10.23	804.13	9.61
total fishery	506.13	7.1	526.12	7.1	602.89	7.89	756.89	9.04
Apparel and clothing	4083.316	57.03	3045.13	40.9	3154.18	41.26	3561.31	42.55
Other Products	208.47	2.91	245.78	3.30	284.46	3.72	301.45	3.60
Total	7160.24		7443.53		7644.78		8368.917	

Source; Myanmar Ministry of Commerce

Figure(2.1) Main Specialized in Exports-Products (2005-2010)

(US$ billion)



Source; Myanmar Ministry of Commerce

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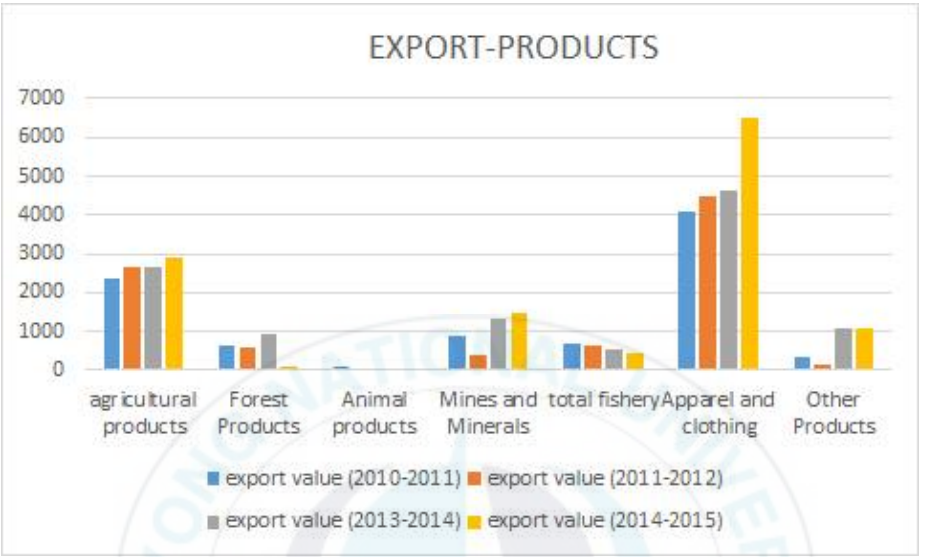
Table (2.2) Main Specialized in Exports-Products (2011-2015)

Products	export value (2011-2012)	(%)	export value (2012-2013)	(%)	export value (2013-2014)	(%)	export value (2014-2015)	(%)
agricultural products	2371.98	25.9	2669.74	29.73	2661.011	23.75	2919.625	23.31
Forest Products	641.63	7.02	595.646	6.63	948.027	8.46	94.395	0.75
Animal products	90.69	0.99	32.886	0.36	15.42	0.13	8.287	0.06
Mines and Minerals	894.71	9.79	399.056	4.44	1339.454	11.95	1498.885	11.96
total fishery	705.907	7.72	624.178	6.95	516.043	4.605	421.069	3.36
Apparel and clothing	4083.316	44.6	4492.87	50.04	4637.503	41.39	6524.612	52.09
Other Products	344.361	3.76	135.642	1.51	1086.497	9.70	1056.836	8.43
Total	9135.599		8977.02		11203.955		12523.709	

Source; Myanmar Ministry of Commerce

Figure(2.2) Main Specialized in Exports-Products (2011-2015)

(US$ billion)



Source; Myanmar Ministry of Commerce

2.1.2 Trade with Partner Countries from 2005 to 2010

Top 10 export countries are shown in Figure 2.3 for 2005-2010 period and Figure 2.4 for 2011-2015 period, respectively.

The actual data values are given in Table (2.3) for 2005-2010 period and Table (2.4) for 2011-2015 period, respectively.

The corresponding pie charts for financial years 2009-2010 and 2014-2015, are also shown in Figures 2.5 and 2.6, respectively.

In the 2005-2010 period, as shown in Figures 2.3 and 2.5, Thailand and India was the first and second export markets for Myanmar.

However, after the economic reforms, as shown in Figures 2.4 and

2.6. China becomes the top export market and Thiland and India had moved down to the second and third places, respectively.
In particular, it can be oberved that the exports to China has grown exponentially in Figure 2.4.

The export markets to China, India and Thailand, which are neighboring countries, consitute a large portion of export market in both periods. Moreover, China and India are the most populus countries in the world accounting for more than 2 billion people.

Hence, we can expect an increasing exports to these countries in the future.We can also see an overall increase in exports to top 6 countries in Figure 2.4.

The next 3 countries, Singapore, Japan and South Korea, are developed countries. Singapore is one of the world's busiest ports and most of Myanmar's trade pass through it. Japan and South Korea on the other hand are located in temperate regions with mountainous terrain and their winters are harsh. Since Myanmar is located in the tropics, and is primarily agriculture economy, the exports of agriculture products to Japan and Korea is expected to grow.

Table (2.3) Trade with Patner Countries from (2005 - 2010)

(US$ billion)

Country	2005-2006	2007-2008	2008-2009	2009-2010
THA	2407.35	2809.65	2630.93	3197.83
IND	733.91	727.25	803.82	1013.14
HKG	401.62	647.89	673.43	947.70
SGP	182.59	400.56	832.75	670.41
CHN	571.23	697.68	617.72	634.97
JPN	166.00	185.86	183.50	177.35
MYS	88.47	119.03	311.69	152.61
KOR	61.54	73.81	63.22	75.58
VNM	58.23	80.19	39.58	54.75
IDN	88.23	86.58	28.45	37.43
total	4759.17	5828.50	6185.09	6961.77

Source; Myanmar Ministry of Commerce

Figure (2.3) Trade with Patner Countries from 2005-2015

Source; Myanmar Ministry of Commerce

Myanmar's export policy is to export all exportable surpluses; every effort has been made to diversify export commodities and foreign markets as well. To achieve this objective, Myanmar has participated various International Trade fairs held in various countries including America (New York World's Fair 1964 and 1965), Canada (Expo "67" Montreal) Denmark (1966 Copenhagen Trade Fair), Japan (Expo "70" Osaka Trade fair)etc. By participating in these world wide trade fairs,

Myanmar could, indeed diversify markets to introduce her traditional export products, and new or non-traditional products , such as some

industrial products and many miscellaneous products including handicrafts, stamps, books and periodicals, coinage sets, etc..Main export items include agricultural products, forest and minor forest products , marine and marine by products, animal and animal by products, mineral products including precious stones (gems, jade and pearls) and industrial products. A number of news items or non-traditional items from the manufacturinf and processing sectors have been introduced to old and new markets in the past few years, when Myanmar government had taken part in the above mentioned International Trade Fairs.

Under the study period, Myanmar's economy can be divided into two parts; socialist economic system from 2005 to 2010 and market-oriented economic system from 2011 to 2015. The export of Myanmar from 2005 to 2015 is presented in Figure (2.1). During the period from 2005 to 2010 Myanmar's real export had increased from 3,776.02 (USD) to 9,387.32 (USD).During that period Myanmar's real export was highest at 6,888.28 (USD) in 2008 and that was lowest at 3,776.02 (USD) in 2005. During the period from 2011 to 2015 Myanmar's real export had increased from 9,139.57 (USD) to 14,666.2 (USD). During that period Myanmar's real export was highest at 14,666.2 (USD) in 2015 and that was lowest at 8,971.71 (USD) in 2012. Since 2015 Myanmar's real export has highest.

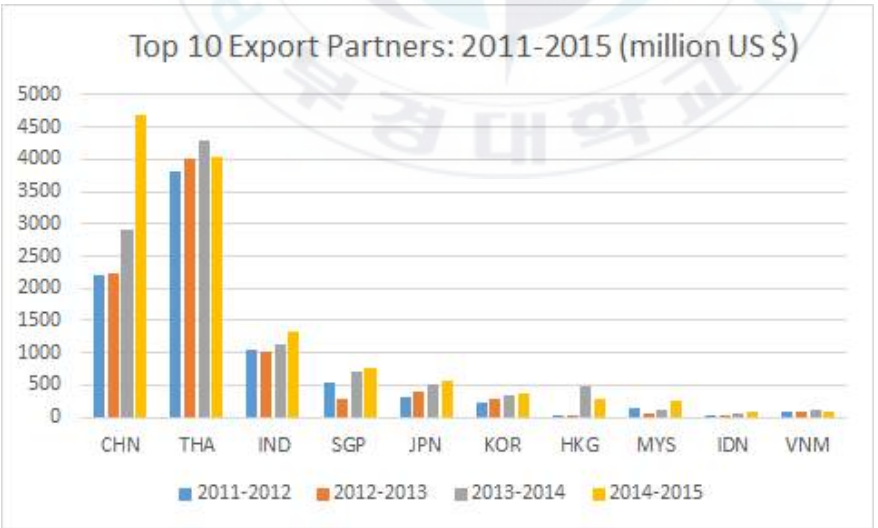
Table (2.4) Trade with Patner Countries from (2011 – 2015)

(US$ billion)

Country	2011-2012	2012-2013	2013-2014	2014-2015
CHN	2214.298	2238.069	2913.634	4692.461
THA	3823.827	4000.577	4304.019	4031.756
IND	1045.985	1018.692	1143.386	1340.58
SGP	542.751	291.35	694.027	758.535
JPN	320.201	406.487	513.245	555.653
KOR	214.821	280.766	352.918	369.604
HKG	41.474	12.726	489.103	288.527
MYS	152.038	67.977	108.868	264.999
IDN	40.936	31.537	60.04	86.045
VNM	81.09	81.243	111.155	80.181
total	8477.421	8429.424	10690.395	12468.341

Source; Myanmar Ministry of Commer

Figure (2.4) Trade with Patner Countries from 2011-2015



Source; Myanmar Ministry of Commerce

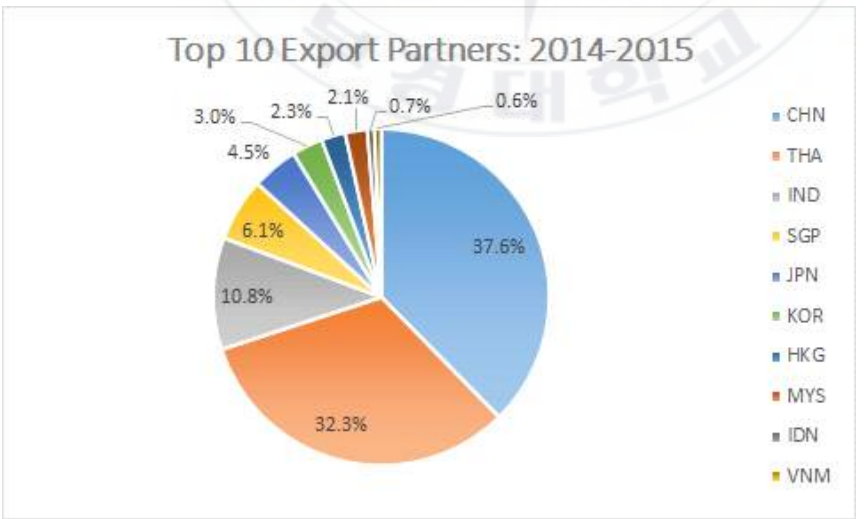
Figure(2.5) Market Share of Myanmar's top 10 Export Countries

(US$ billion)

Source; Myanmar Ministry of Commerce Figure(2.6) Market Share of Myanmar's top 10 Export Countries

Figure(2.6) Market Share of Myanmar's top 10 Export Countries

(US$ billion)



Source; Myanmar Ministry of Commerce

As mentioned above , Myanmar has changed to economic course of action from a centrally economy into a market-oriented system in late 2011. Since then, a series of structure reforms have been implemented in the economy. These structure reforms may be change the export structure of Myanmar. There, test for structural change of Myanmar's export was conducted in this study.

Table (2.5) The Real Exports and GDP of Myanmar (2005 to 2015)

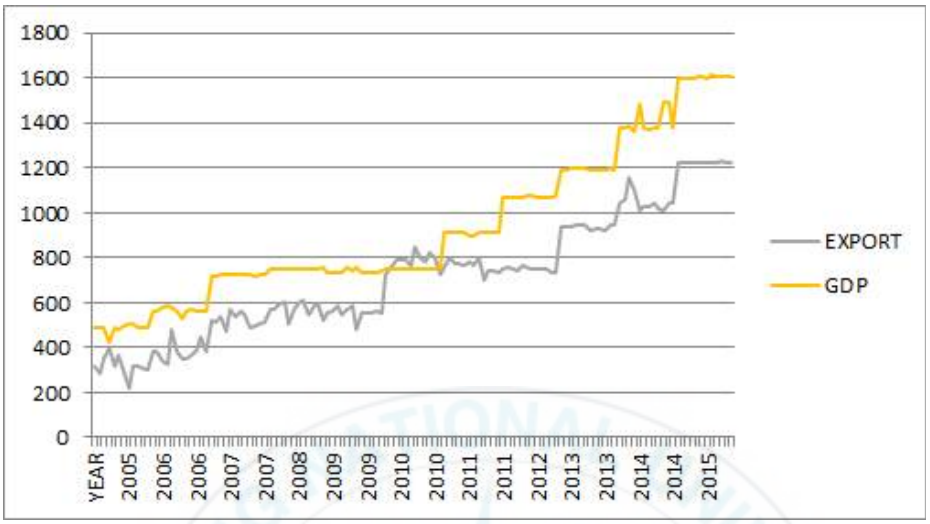
(US$ billion)

YEAR	EXPORT	GDP
2005	3776.02	5824.02
2006	4577.8	6782.24
2007	6260.7	8666.10
2008	6888.28	9013.83
2009	6665.70	8850.85
2010	9387.32	9013.83
2011	9135.60	10910.11
2012	8977.02	12842.6
2013	11234..96	14341.52
2014	12585.71	16833.2
2015	14666.20	19237.64

Source; Ministry of Commerce in Myanmar ,Ministry of National Planning and Economic Development, Statistical year book in myanmar

Figure (2.6)The real export structure of Myanmar(2005-2010)

(US$ billion)



Source; Ministry of Commerce in Myanmar ,Ministry of National Planning and Economic Development, Statistical year book in myanmar

2.2 Export Policy of Myanmar

In Myanmar has been in practice the market_oriented economic system in 2011. Process such as giving freedown to encouraging foreign investment, giving legal service for border trade and tradres ,cultivate the desired crops in the agricultural sector. Association of Union of Myanmar Chamber of Commerce and Industry (UMFCCI) are being implemented step by step and have been organized in sequences.

The Stage gave up Planning and Economic System which was encouraged independent market_oriented economic syetem , in October 2011. As a result, trading and economic business developed considerably. The main exports are farm produce such as rice, metallurgical products

and jewellery. pulses, wood products such as teak, hardwood, animal food and sawed wood,

Myanmar's export policy is to diversify foreign markets and export all exportable surplus by using human resourses and natural. Diversification and improved products, the amount of mosquitoes and I tried to update value.

The main policy guidelines for Myanmar's exports are as follows:

1. To promote exports to the external sectors

For the private sector, external trade activities engaged within export rules and regulations are allowed and encouraged.

2. Accounts transfer between different foreign currency accounts holder is also permitted. For the private sector, export first policy is adopted and enforced.
3. The main export products is 100 percent private rice exports are being sent across the retention
4. Owned land for rice and rice output equipment, Some equipment on Food security storage barrels ordination view and wait to make sure not to allow balances

Export licensesare issuedis including state enterprise and foreign traders.

2.3 Trends of Export and GDP

Annual growth rates of gross domestic product(GDP) and export values in 2010-2011 prices were computed by a semi-log model for the two sub-periods; 2005-2010 , 2011-2015 and the whole period 2005-2015. Detailed estimates of semi-log model were presented as follows.

The computed p-values were shown in parenthese below the corresponding regression coefficients.

Semi-log model of GDP

For the whole period 2005 - 2015

ln(GDPt) = 6.7 +0.009 t

(0.0000)

R^2=0.945 , $\overline{R^2}$ =0.96 , F=1293.63

For the period 2011-2015

ln(GDPt) = 6.75 + 0.011 t

(0.0000)

R^2=0.96, $\overline{R^2}$= 0.96 ,F=1293.63

For the period 2005-2010

ln (GDPt) = 6.24 + 0.0070

(0.0000)

R^2=0.73 , $\overline{R^2}$ =0.72 , F= 185.58

From above estimated models for GDP, the values of R^2, $\overline{R^2}$ and F statistic showed that the estimated models are highly significant and p-values of the coefficient showed that the time variable (t) included in the model is higly significant.

Semi -log model of Export

For the period 2005-2010;

ln(Expt) = 5.719 + 0.013 t

(0.0000)

R^2=0.820 , $\overline{R^2}$ =0.8177 , F= 319.59

For the period 2011-2015;

ln(Expt) = 8.520 + 0.010 t

(0.0000)

R^2=0.8663 , $\overline{R^2}$ =0.8640, F= 376.12

For the whole period 2005-2015;

ln(Expt)= 5.819 + 0.010t

(0.0000)

R^2=0.9098, $\overline{R^2}$ =0.9092, F= 1312.7

From estimated export models , the values of $R^2$and $\overline{R^2}$ are high except for the period 2005-2015. The values of F showed that the estimated models are highly significant and p-values indicated that the time variable included in the model is also highly significant at 1% level.

CHAPTER Ⅲ

METHODOLOGY OF STUDY

3.1 Unit Root Test and Cointegration

The dissertation investigate whether Myanmar's export time series are non-stationary processes that have no tendency to better characterized as stationary conversion around a decisively trend or return to a deterministic path.

In this case Myanmar's exports, it is common practice in macroeconomics to decompose real variables, into growth component or a secular and a cyclical component. The secula component is viewed as being in the domain of growth theory with real factors , such as capital accumulation, population growth, GDP and exports, whereas the cyclical component is assumed to be transitory (stationary) in nature with numismatic factors.

Since cyclica conversionare assumed to dissipate over time, any long-run or permanent movement is usually to the secular component. The well-known unit root test was first proposed by Nelson and Plosser (1982) and have been used in many empirical studies.

Nelson and Plosser (1982) analyzed fourteen annual macroeconomic time series for the US to establish whether they could be better characterised as trend-stationary or difference-stationary processes. In all cases but the unemployment rate and the bond yield, strong evidence of unit roots was found. However, this method does not account fo an

increase in the probability distribution of time-series data following a random walk process which is not constant for the least-squares (LS) estimate since it does not satisfy the Gauss-Markov theorem. In such cases, converting the time series data into its first difference followed by the traditional regression can provide a stationary time series. The existence of unit roots of the problems become critical in time-series analysis.

There is no reliable statistics to test whether unit root exists because it does not conform to the standard asymptotic distribution theory. Base on the work done by Nelson and Plosser (1982), many subsequent studies had further developed the unit root and cointegration method. Dickey and Fuller (1979) developed tests to imporve on Nelson and Plosser (1982). Said and Dickey (1984) proposed mehtods for autoregressive moving average in time series and detecting unit roots in autoregressive (AR), i.e., the Augmented Dickey and Fuller test (ADF).

Phillips and Perron (1988) also proposed another unit root test. KPSS tests, unlike most unit root tests, do not investigate the null hypothesis but the alternative to the presence of a unit root.

3.1.1. Augmented Dickey-Fuller (ADF) Test

ADF test was first proposed by Fuller (1976) and had been further by Dickey and Fuller (1981) and Said and Dickey (1984). The method investigates the AR and AR moving average time series variables (in this case Myanmar's exports) using an error term.

The limit distribution of unit root test statistics are free and same

share (i.i.d.) with zero mean and variance sigma_{\epsilon}^{2} and consistent with the LS estimates.

The output of the estimation is a probability distribution with zero mean and negative dispersion. This output is equivalent to the white noise under stationarity in the ARIMA model proposed by Box-Jenkins (1970).

The testing procedure of ADF is given by the model

$$\text{(Model I-2)}\ \triangle Y_t = {}_r Y_{t-1} + \sum_{i=1}^{0} \delta_i \triangle Y_{t-i} + \varepsilon_t \text{.....eq(1)}$$

$$\text{(Model II-2)} \triangle Y_t = \alpha + {}_r Y_{t-1} + \sum_{i=1}^{0} \delta_i \triangle Y_{t-i} + \varepsilon_t \text{.....eq(2)}$$

, (Model III-2)

$$\triangle Y_t = \alpha + \beta T + {}_r Y_{t-1} + \sum_{i=1}^{0} \delta_i \triangle Y_{t-i} + \varepsilon_t \text{.....eq(3)}$$

where alpha is a immutable , beta is the calculation on a time trend, p is the lag order of the auto-regressive process and epsilon_t is the error term (white noise).

Said and Dickey (1984) introduced the error term \epsilon_t to sufficiently extend the degree of auto-correlation in the time-series.

There are three different models of the test depending on the values of alpha and beta.

When alpha = 0 and beta = 0, the model corresponds to a random walk which is equivalent to the Dickey-Fuller (DF) test model.

When beta=0, the model corresponds to a random walk with a drift.

In this case, the ADF method considers the existence of a constant term alpha, in addition to investigating the trend-stationarity.

By including previous p samples (i.e., lags), the ADF model allows for higher-order auto-regressive processes. When applying the test , this means that the lag length p has to be determine. The t-values examine on coefficients and totest down from high orders ,one possible approach.

The test statistic is calculated as follows: DF_{\gamma} = \hat{\gamma} / SE(\hat{\gamma}), which can be compared for the Dickey-Fuller Test to relevant critical value . The ADF statistic is a negative number are used in the test.

3.1.2. Phillips-Perron (PP) Test

In the Dickey-Fuller test, error term, \epsilon_{t} is assumed to be i.i.d. with zero mean and variance \sigma_{e}^{2}.

$\varepsilon_t \sim i.i.d\,(0,\sigma_\epsilon^2)$ In some cases, the independent assumption for the error term is not true.

In this case, the distribution of the error term is an extreme distribution which follows the Brownian motion function.

The Brownian motion function increases with sample size, and hence, PP test has a more extended range than the DF or ADF test in terms of auto-regression.

However, the error terms are long-term dispersed and the disadvantage of PP test is estimating the variance of error terms.

DF there is PP black is considered $\varepsilon_t \sim i.i.d\,(0,\sigma_\epsilon^2)$ when test conditions of the assumptions about the error term not be met in the error terms are independent of each page does when a distributed here, the

extreme distribution of the error term is Brownian motion function (function Brownian motion) depending on the sample size gets larger It is assumed to have a. Therefore, the advantage that it can be a more extended range than that of the black DF black or black ADF. However, by estimating the variance of the error terms of the long-term dispersion has the disadvantage that you must obtain the statistics. PP black is then estimated as the primary DF test statistic using the variance of the estimated error term secondarily sikimeuroseo convert the test statistic used for the test statistic was removed the effects of autocorrelation.

The model of PP test can be given as follows (Dolado, 1990, p 256-257, Walter Enders, 1987, p265-267.

$$Z(\tau_\mu) = (\frac{\hat{S}}{\hat{S}_{Tm}}\tau_\mu - 0.5(\hat{S}^2_{Tm} - \hat{S}^2)T[\hat{S}^2_{Tm}\sum_{2}^{T}(X_t - \overline{X}_{-1})^2]^{-1/2}$$

where T is the number of time lags and M is the estimated auto-correlation?

$$\overline{X}_{-1} = (\frac{1}{T-1})\sum_{2}^{T}X_{t-i}$$

Further work PP test statistic is $Z(\pi_u)$ is as follows:

$$Z(\tau_\mu) = (\frac{\hat{S}}{\hat{S}_{Tm}}\tau_\mu - (\hat{S}^2_{Tm} - \hat{S}^2)T^3[4\hat{S}[3Dxx]^{-1/2}]^{-1}$$

The matrix of determinants (discriminant values) of the explanatory variables are given by:

$$Dxx = [T^2(T^2-1)/12]\sum X^2_{t-1} - T(\sum tX_{t-1})^2 + T(T+1)\sum X_{t-1}$$
$$-[T(T+1)(2T+1)/6](\sum X_{t-1})^2$$

PP black calculates the variance and t value, as opposed to using the t-test error term. It is characterized by the use of the test statistic for the synthesis.

According to Handa and Ma (1989), the the error term of Monte Carlo process may contain small specimens that follow the irregular distribution or dispersion.

While the sample size affect the performance, PP test is preferred over DF test if the auto-correlation term has already been found.

3.1.3. (KPSS) Test

The KPSS test has been improve to complete unit root tests as the lundeveloped to long-run trend and near unit-root processes. provide straight for ward test of the null hypothesis unlike unit root tests, of trend stationarity against the alternative of a unit root.

For this , $Y_{1,}\, Y_{2,}\ldots, Y_{N,}$, they respect three-component delegate of the time series a stationary residual and a random walk as the sum of a deterministic time trend:

$$Y_t = \beta t + (r_t + \alpha) + e_t$$

where

$r_t = r_{t-1} + u_t$ is the initial value $r_0 = \alpha$ serves as an intercept,

t is the time,

u_t are $(0, \sigma_u^2)$, independent identically distributed

Without the time trend component is also used to test levelstationarity, the sinlified vwesion of the model.

$H_O : Y_t$ is $\sigma_u^2 = 0$(or) trend (or level) stationary,

$H_1 : Y_t$ is a unit root process.

3.2. Structural Change in Regression Model

The model of classical liner regression has often been widely applied to the measure of economic relationships, i.e., the relationship between regressand(Y) and the regressors (X' s). When a regression model incloding time series data is used, it may happen that there is a structural change. It means that the values of the model do not remain the same through the entire period of structural change.

The structural change may be due to similitude forces, due to policy variation , due to conduct taken by the US congress or to a variety of other causes. Therefore, the question often arises as to whether the relationship remains stable in two or more diffreent groups of economic numbers ,when a liner regression is used to represent an economic realitionship. It can be statistically examine

whether subsets of coefficients in two regressions are equal. There is no economic rationale in assuming that two relationships are integral the same. Suppose that one section of the relationships are same in different periods or it may be more reasonable for different groups.

To state this problem more formally, suppose Y be the dependent variable, and $X_{1,}\, X_2$,.....,X_K be the explanatory variables. Assume that there is a random sample of n observations. The classical linear regression of Y on X is

$$Y_i=\beta_1+\beta_2 X_{2i}+\beta_3 X_{3i}+\text{----------}+\ \beta_k X_{ki}\ +\epsilon_i \quad \text{.....eq(5)}$$

where the X's are k fixed variable . The β's are the regression coefficient . $\beta_1$is the intercept if $X_{1,}$ all X_{i}'s are set identically equal to one. The unknown parameters β_1, β_2,------,β_k and σ^2 can be estimated under the classical assumptions such as ; the ϵ's are independent and distributed of normally, each with constant standard deviation σ and mean zero. The number of observations n is greater than the number of parameters k and nonsingularity of the X matrix.

$$\begin{bmatrix} y_1 \\ y_2 \\ . \\ . \\ . \\ y_n \end{bmatrix} = \begin{bmatrix} X_{11}X_{21}.....X_{K1} \\ X_{12}X_{22}.....X_{K2} \\ \quad . \\ \quad . \\ \quad . \\ X_{1n}X_{2n}.....X_{kn} \end{bmatrix} \begin{bmatrix} \beta_1 \\ \beta_2 \\ . \\ . \\ . \\ \beta_k \end{bmatrix} + \begin{bmatrix} \epsilon_1 \\ \epsilon_2 \\ . \\ . \\ . \\ \epsilon_n \end{bmatrix} \quad \text{.....eq(6)}$$

In matrix notations, the model is;

$y = X\beta + \epsilon$

To investigate whether the relatinship remains stable in two periods of time, the suggested procedure is to divide the data set of n sample observations into n_1 and $n_2$observations. A structural break occurs if the parameters underlying a relationship or structural changr, differ from one subset of the data to another. There may be serveral relevant subsets of the data, with the possibility of serveral structural breaks. In this study, the whole sample is divided into two regimes at the suspected time point 2010-2011. The whole period 2005 to 2015 will be considered two subsets of n_1 and n_2 observations making up the total sample of n= n_1 + n_2 observations.

3.3 Analysis of Covariance (A0C) Test

Researchers are often interested in testing equality in applied econometric work between coefficients in two linear regressions.Liner regression models are frequently used by econometricians in the coefficients tests for changes .The well known tests of Analysis of variance (A0C) test AND Chow test will be presented in the following section.

The AOC test is used to test the occurrence of the suspected change via the change in regression coefficients of sufficient samples before and after the change.

the AOC test is the AOC test. conducted on the assumption that the disturbance variances are the same for the entire period. To deal with this test, the model (3.1) is partitioned into to parrts as;

$$\begin{bmatrix} y_1 \\ y_2 \end{bmatrix} = \begin{bmatrix} X_1 & 0 \\ 0 & X_2 \end{bmatrix} \begin{bmatrix} \beta_1 \\ \beta_2 \end{bmatrix} + \begin{bmatrix} \epsilon_1 \\ \epsilon_2 \end{bmatrix} \quad \text{.....eq(7)}$$, where

Y_i = X_i β_i + ϵ_i, I =1,2

The regression model contains k non- stochastic regressors. There are n_i observations (n_i> k, n_1 + n_2 =n) and ϵ ~ N (0, $\sigma_{ni}^2 I_{ni}$) with E ($\epsilon_i \epsilon_j$)= 0 for I $\neq$ j .

Under the null hypothesis $H_0 : \beta_1 = \beta_2 = \beta; \sigma_1^2 = \sigma_2^2 = \sigma^2$, the model becomes

$$\begin{bmatrix} y_1 \\ \\ y_2 \end{bmatrix} = \begin{bmatrix} X_1 \\ \\ X_2 \end{bmatrix} \beta + \epsilon \quad \text{.....} eq(8)$$

where there are n obervations and $\epsilon \sim N(0, \sigma^2 I)$

Implicit assumptions rather than explicit assumptions are made in discussion on testing the change. First, using the variance ratio (VR) test proceeds the joint test producedure followed by the AOC test if is not rejected.

The VR test under the null hypothesis $H_0 : \sigma_1^2 = \sigma_2^2$ is based on the statistic

$$F_1 = \frac{RSS_2/(n_2 - k)}{RSS_1/(n_1 - k)} \quad \text{.....eq(9)}$$

whiich follows, F distribution with $n_2 - k$ and $n_1 - k$ degrees of freedom (d.f).

The F-test statistic for AOC test is given by

$$F_2 = \frac{RSS_2/(n_2 - k)}{RSS_1/(n_1 - k)} \quad \text{.....(eq10)}$$

where equation (3.3) from RSS is the residual sum of square . RSS , I=1,2 is the residual sum of squares from equation (3.2). Under : k and (n-2k) d.f. distribution with test statistic follows F .

The size of the joint test is then simply one minus the probability that neither test rejects when , is true.The over all test size is , If VR test and AOC test size is chosen as

α^*= 1-(1-α)^2 .

3.4 Chow Test of Switching Regression Method

One of the most importnt criteria for an estimated equation is thaat it should have relevance for data outside the sample data used in the estimation. This criterion is embodied in the notion of parameter constancy; that is, that the β vector should apply both outside and within the sample data. Parameter constancy; may be examined in various ways. One of the most useful is a test of predictive accuracy, widely referred to as the Chow test proposed by G.C Chow (1960).

Chow forecast test leads to more general tests of structural change. Structural break occurs if the parameters underlying in relationship differ or a structural change from one subset of the data to another. The test of structural change may be carried out as follows.

Let **Yi** and **Xi** (i= 1,2) indicate the appropriate partitioning of the

data. The unrestricted model may be written

$$\begin{bmatrix} y_1 \\ y_2 \end{bmatrix} = \begin{bmatrix} X_1 & 0 \\ 0 & X_2 \end{bmatrix} \begin{bmatrix} \beta_1 \\ \beta_2 \end{bmatrix} + \begin{bmatrix} \epsilon_1 \\ \epsilon_2 \end{bmatrix} \quad \text{.....eq(11)}$$

where β_1 and β_2 are the k- vectors of two sample groups, respectively and the error term ϵ is assumed to be independently and normally distributed with mean 0 constant variances σ^2

The OLS coefficients may be wrriten as;

$$\begin{bmatrix} b_1 \\ b_2 \end{bmatrix} = \begin{bmatrix} X'_1X_1 & 0 \\ 0 & X'_1X_2 \end{bmatrix}^{-1} \begin{bmatrix} X'_1Y_1 \\ X'_2Y_2 \end{bmatrix} = \begin{bmatrix} (X'_1X_1)^{-1}X'_1Y_1 \\ (X'_2X_2)^{-1}X'_2Y_2 \end{bmatrix} \text{.....eq(12)}$$

Thus the unrestricted model may be estimated by setting up the data eq.(3.2) and by fitting the equation to the data of n_1 and n_2 observations separately. The two RSSs must be summed to give the unrestricted RSS (RSS_{UR})

Under the null-hypothesis $H_0 : \beta_1 = \beta_2$, EQ (3.2) gives the restricted model as;

$$\begin{bmatrix} y_1 \\ \\ y_2 \end{bmatrix} = \begin{bmatrix} X_1 \\ \\ X_2 \end{bmatrix} \beta + \epsilon \quad \text{.....} eq(13)$$

Denoting residual sum of squares from fitting eq.(3.3) as RSS_R, the test statistic of the null hypothesis of no structural change , $H_0 : \beta_1 = \beta_2$ is

$$F\frac{(RSS_R - RSS_{UR})/k}{RSS_{UR}/(n-2k)} \quad \text{.....} eq(15)$$

which follows F distrubution with k and n-2k d.f.

Where RSS_R is restricted RSS obtained

RSS_{UR} is unrestricted RSS that is RSS_1+ RSS_2. RSS_1 is RSS obtained from the regression equation of Y_1on X_1 RSS_2 is RSS obtained from the regression equation of Y_2 on X_2.

Whether the difference is on account of the cut off, or the slopes, or both that the Chow test will tell us only if the two regressions are different, without telling . Johnston and Dinlardo (1997) extended the test for difference which is caused by intercepts, or slopes , or both.

3.4.1 Switching Regression Method

The may be situations in which it is no longer appropriate to assumed that the regression model is continuous. In the more general switching regression model the variance of the error term is assumed to be the same throughout the time period being studied but both the intercept and the slope may change at the point of structural break. When the break point is known, the regression model can be written as; for example;

$$Y_1 = \beta_1 + \beta_2 X_{2t} + \beta_3 D_t + \beta_4 D_t X_t + \epsilon_t \quad \text{.....eq(17)}$$

where D is dummy variable assigning values of 0 or 1to each observation based on the break point.

When the breakpoint is not known, the breakpoint as well as

regression parameters can be estimatted by using the method of maximum likelihood. Assuming that the error variance is equal for the entire period of study , this involves estimating e.q. (4.7) for different values of the point of structural break.

Chapter IV
EMPIRICAL STUDY

4.1 Unit Root Test and Cointegration

We take the Myanmar's exports and GDP for the time period from 2005 to 2015 as variables to test whether there is a structural change or not. The tests performed include ADF test, PP test and KPSS test which investigate the presence or absence of unit roots to determine if the situation is stable (stationary). The three tests were performed on Myanmar's exports and GDP to analyze the trends and trend-stationarity.

Unit root test of the logarithm of variables and the logarithm of the first difference of the variables are carried out for three time periods; (i) the entire period from 2005 to 2015, (ii) the period before the suspected change from 2005 to 2010, and (iii) the period after the suspected change from 2011 to 2015.

The unit root test results of logarithm of variables for different time periods are given in Tables (4.1), (4.2) and (4.3), respectively and the results for the logarithm of the first difference of variables are given in Tables (4.4), (4.5) and (4.6), respectively.

The results form Tables (4.1), (4.2) and (4.3) show that there is no significance difference for all three test periods when the unit root tests of the logrithm of variables (Myanmar's Exports and GDP) were performed. Hence, the unit root test of the logrithm of variables did not detect Myanmar's export system change.

The results from Tables (4.4), (4.5) and (4.6) display the existence of a

unit root for the logarithm of the first difference of variables (Myanmar's exports and GDP) for all three periods. This agree with the change in Myanmar's export system.

Therefore, the differential unit root test of logarithm of variables can detect the system change.

Hence, in this empirical study, the unit root test of differential logarithm of variables is better suited than logarithm of the variables.

Table(4.1) Log Variable Unit Root Test Results for 2005-2015

		EXP	GDP
ADF	t-statistic	-0.5338	1.4326
	Prob	0.878	0.999
PP	t-statistic	-0.4276	0.7884
	Prob	0.899	0.993
KPSS	LM-stat	1.3454	1.3133
	5% Level	0.4630	0.4630

Note ;(*, **, ****)Statistically significant at the 10%, 5% and 1% significance level.

Table(4.2) Log Variable Unit Root Test Results for 2005-2010

		EXP	GDP
ADF	t-statistic	-1.1618	-1.1608
	Prob	0.6864	0.4732
PP	t-statistic	-1.2515	-1.5678
	Prob	0.6476	0.4936

KPSS	LM-stat	0.9984	0.9257
	5% Level	0.4630	0.4630

Note ;(*, **, ****)Statistically significant at the 10%, 5% and 1% significance level.

Table(4.3) Log Variable Unit Root Test Results for 2011-2015

		EXP	GDP
ADF	t-statistic	-0.5856	0.4511
	Prob	0.8655	0.8927
PP	t-statistic	-0.4943	-0.4005
	Prob	0.8845	0.9019
KPSS	LM-stat	0.8919	0.9351
	5% Level	0.4630	0.4630

Note ;(*, **, ****)Statistically significant at the 10%, 5% and 1% significance level.

Table(4.4) Log Variable Differential Unit Root Test Results for 2010-2015

		EXP	GDP
ADF	t-statistic	-16.0633***	-13.6876***
	Prob	0.0000	0.0000
PP	t-statistic	-17.41806***	-15.46275***
	Prob	0.0000	0.0000
KPSS	LM-stat	0.03943	0.09127
	5% Level	0.46300	0.46300

Note ;(*, **, ****)Statistically significant at the 10%, 5% and 1% significance level.

Table(4.5) Log Variable Differential Unit Root Test Results for 2005-2010

		EXP	GDP
ADF	t-statistic	-11.9734***	-9.81465***
	Prob	0.0001	0.0000
PP	t-statistic	-14.9352***	-10.0562***
	Prob	0.0001	0.0001
KPSS	LM-stat	0.08080	0.232263
	5% Level	0.46300	0.46300

Note ;(*, **, ****)Statistically significant at the 10%, 5% and 1% significance level.

Table(4.6) Log Variable Differential Unit Root Test Results for 2010-2015

2011-2015

		EXP	GDP
ADF	t-statistic	-8.69616***	-7.85208***
	Prob	0.0000	0.0000
PP	t-statistic	-8.71077***	-10.10263***
	Prob	0.0000	0.0000
KPSS	LM-stat	0.08717	0.58494
	5% Level	0.46300	0.46300

Note ;(*, **, ****)Statistically significant at the 10%, 5% and 1% significance level.

4.2 Effects of Export on GDP (2005-2010)

$\ln(EXP) = \beta_0 + \beta_1 \ln(GDP) + \epsilon_t$

EXP= export demanded (USD)

GDP= real gross domestic product (USD)

ϵ = Error term

The expected signs of the parameters are: $\beta_1<0$, $\beta_0<0$. The unknown parameters β_0, β_1 in the above models were estimated by using the method of ordinary least-squares through the computer software, EViews.

These parameters signify for relative price elasticity and product elasticity respectively. The estimated export demand model for the entire period 2005-2015 and two sub-periods, 2005-2010, 2011-2015 were presented as follows. The computed t-values were shown in parentheses below corresponding coefficients and * indicates the insignificance.

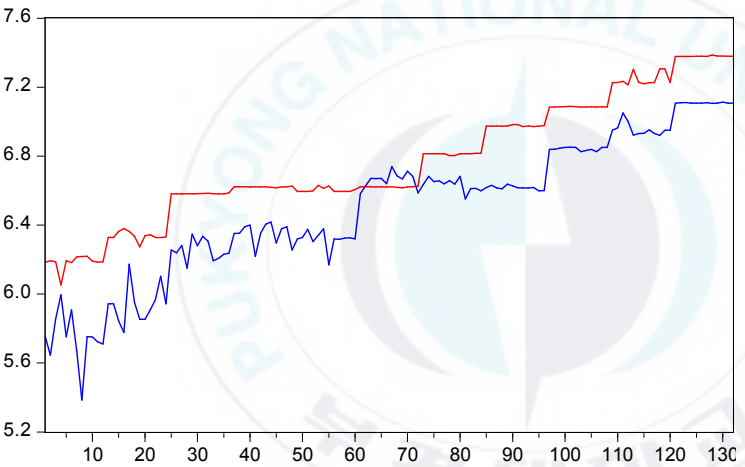
Table(4.7) Effects of Export on GDP (2005-2010) and (2011-2015)

Log variable	Log variable differential
Effects of Export on GDP 2005 to 2015 ln (GDP) = 1.429 + 0.8222 ln (EXP) (8.2777) (30.9875) R^2=0.8807 , $\overline{R^2}$ =0.8798 , DW= 0.518	Effects of Export on GDP 2005 to 2015 dln(GDP) = 0.0083 + 0.0742 dln (EXP) (2.1075) (1.9209) R^2=0.0278 , $\overline{R^2}$ =0.0202 , DW= 2.3936
Effects of Export on GDP 2005 to 2010 ln(GDP)= 3.513+ 0.479 ln(EXP) (17.1244) (14.5368) R^2=0.7511 , $\overline{R^2}$ = 0.7476 , DW= 0.723,	Effects of Export on GDP 2005 to 2010 dln(GDP)= 0.0058+ 0.0324 dln(EXP) (1.1066) (0.8128) R^2=0.0094 , $\overline{R^2}$ = -0.0048 , DW= 2.359
Effects of Export on GDP 2011 to 2015 ln (GDP) = 0.329 + 0.991ln(EXP)	Effects of Export on GDP 2011to 2015 dln(GDP) = 0.0063 + 0.4001 dlln(EXP)

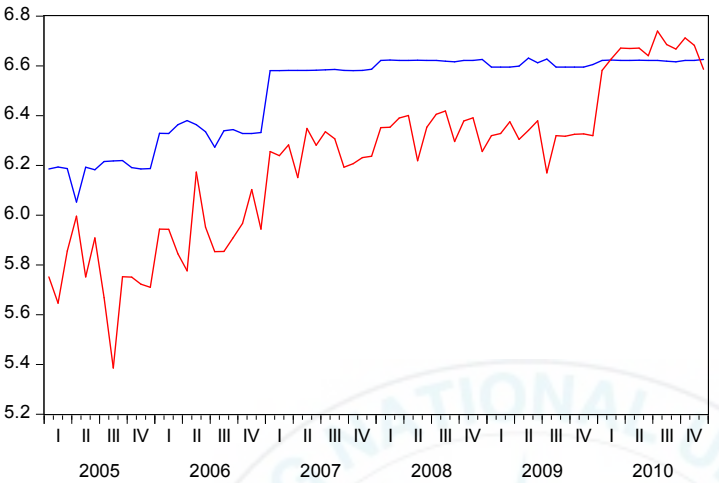
(1.0384) (21.34756) R^2= 0.8870 , $\overline{R^2}$ =0.8851 , DW= 0.4744,	(1.2960) (3.9733) R^2= 0.2169 , $\overline{R^2}$ =0.2031 , DW= 2.5233

From the values of R^{2}, logarithm of the variables show a relative high degree of fit but logarithm of variable differentials show a low degree of fit for OLS method.

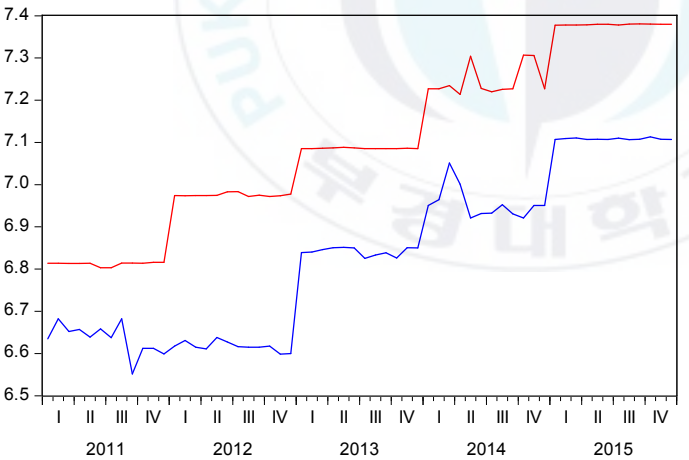
Fighter <5.1> Effects of Export on GDP (2005-2015)



Figher<5.2> Effects of Export on GDP (2005-2010)



Figher<5.3>Effects of Export on GDP (2011-2015)



4.3 Effects of Export on GDP (2011-2015)

To investigate the structural change between two periods 2005-2015 and 2011-2015 , the Chow test was performed. The Chow test is based on residual analysis and is a kind of standard analysis of covariance test.

According to the pre-test of F value of homoscedasticity, the null hypothesis ($H_0 : \sigma_1^2 = \sigma_2^2$) could not be rejected. This conclusion indicated that the Chow test should be conducted. Under the assumption of homogeneity of variances, Chow (1960) showed that the null-hypothesis can be tested by F ratio given by

$$F = \frac{(RSS_R - RSS_{UR})/k}{RSS_{UR}/(n-2k)}$$

where RSS_R = RSS obtained from the model of whole period (2005-2015)

RSS_{UR} = RSS_1 + RSS_2

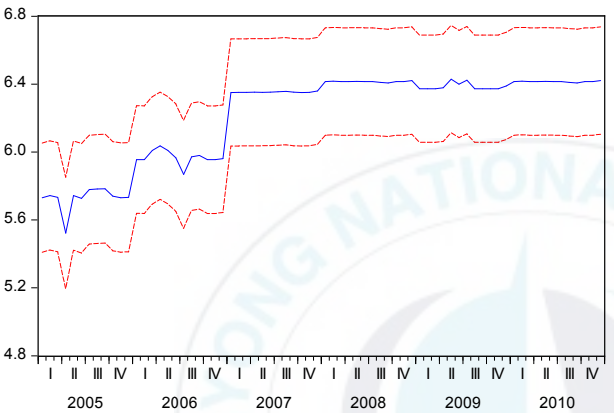
RSS_1 = RSS obtained from the model of first sub- period (2005-2010)

RSS_2 = RSS obtained from the model of second sub- period (2011-2015)

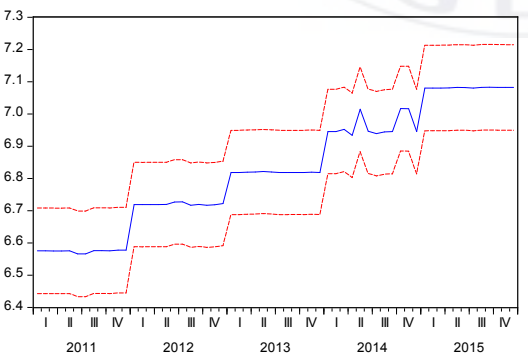
By using the results of estimated models, the computed F- value of 2.71 was statistically significant at 1% level. Therefore, the hypothesis of no structural change would be rejected at the 1% significance level.

	2005-2010	2011-2015
F	46.983	2.71
Prob	0.0000	0.07

Fighter<5.4> Forecast of sub-period 2005-2010



Figher<5.5> Forecast of sub-period 2011-2015



4.4 Switching Regression Equation of Export

By Using switching regression regression method , the export demand was developed ;

$$dln(GDP) = \beta_1 + \beta_2 dln(\text{Export}) + \beta_3 Ddln(\text{Export}) + \beta_4 Ddln(\text{Export}) + \epsilon_t$$

where D refers to the dummy varible and it takes 0 for before 2010 and 1 for after 2011.

For 2005-2010= $Y_i = \beta + \beta_1 X_i + \varepsilon_i$

For 2011-2015= $Y_i = \beta + \beta_2 X_i + \varepsilon_i$

dlnGDP= 0.0040+0.0093dln(Export2010)+0.3728dln(Export2015)

(0.6752) (0.2156) (2.9997)

R^2=0.1458 F=4.7825 DW=2.5427

From the estimated export demand model, the values of R^2,F and DW showed that the estimated model is highly significant and according to the t-statistic each of the coefficients were highly significant with expected signs. The coefficient of export showed that low elasticity and if an increase of 1 percent in export, the expected increase of 0.3728 percent in GDP values. It was found that the price ratio is related to the export during the period of market-oriented economy (2011-2015). In that period, if the price ratio was raised by 1 percent, it is expected to have a decrease of 0.0093 percent from the estimated model, the fitted values of Myanmar's export for the period (2005-2010).

CHAPTER V

CONCLUSION

There are four sources of sturctural change in an economy. They are (i) change in final demand, (ii) change in exports, (iii) change in imports structure and (iv) change technology. It is interesting to analyze structural change in Myanmar's exports since it is hoped that the change in export system is one of the sources of structural change in Myanmar economy which reflects its economic development. Therefore, the structural change in Myanmar's exports was also investigated by two-stage Chow test at turning point 2010-2011. Firsty, instantaneous and compound annual growth rates of gross dometic product (GDP) and export values in 2010 -2011 prices were computed by a semi-log model for the sub-periods: 2005-2010, 2011-2015 and the whole period 2005-2011. On the average , annual compound growth rates of GDP and exports were higher in the market-oriented economy during the period 2011-2015 than in the socialist economy during the period the period 2005-2015. Conversely, the average annual compound growth rate of import values was lower than the economy during the period 2005-2015.

Secondly, the export demand model was estimated for the two sub-periods of 2005-2010 and 2011-2015 and for the whole period 2005-2015. After performing the per-test that showed the equal residual variances for two sub-periods, Chow test was done. Based on the results of Chow test, is was found that structural change occourred in Myanmar's export at the suspected time point 2010-2011. There was commom intercepts but differential slopes in export demand model for

two sub period were delected.

Thirdly, the export demand models were forcasting fuctions for two-sub-periods, and switching regression model of export values was estimated for the whole period 2005 to 2015. The forecast of export model for the 2005-2010 , showed that the GDP influences on export values and its coefficient indicated that, with an increase of one percent in GDP, the export would increased by about 46.98 percent . From the forecast model for the period 2011-2015, Myanmar's export was found to be related to the GDP. With an increase of 1 percent in GDP, the estimated increase in export was ,on the average ,about 2.71 percent. Moreover, it was found that if the price ratio goes up by 1 percent, the export of Myanamr would decrease by about

Finally, this study concluded that Myanmar's export structure had change at the turning point 2010-2011. If one may wish to estimate the export demand model, the spline functions have to be used. If the break point was known switching regression method should be used. Moreover, GDP is found to be th important factors in explaining the variation of Myanmar's export.To promote the Myanmar's export it can be suggested that Myanamr should try to raise its GDP by assisting and services involving large capital and supporting production; and by opening up of more to opportunities of employment. Besides, Myanmar should also try to decrease the unit value of index. This study is hoped to provide policy implications and suggestions in adopting more effective and well-organized planning and policy for the promotion of export of the country in future

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