

FUTURE TRENDS OF FOREIGN TRADE OF ETHIOPIA

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Abstract

The foreign trade targets of GTP I have not been achieved, as can be seen in the leather sector that achieved only 30% of export targets by 2013/14. The core objective of this study is to model the level of foreign trade in Ethiopia, study the factors that influence its growth, and make recommendations.

The study makes use of data for 1986/87 to 2013/14 from the National Bank of Ethiopia. Analysis is made using the Auto Regressive Integrated Moving Average (ARIMA) model in STATA. Testing for stationarity, obtaining stationarity, model identification (selection), model estimation and diagnostic were made, and the fitted model was assessed. The model selected for export was ARIMA (0, 1, 3) and for import ARIMA (0, 1, 5). The projected forecasted value of exports is 276 Billion Birr by 2023/24, and for import 1,214 Billion. Foreign trade deficit of Ethiopia is also expected to increase. Major challenges in foreign trade are the low level of foreign trade condition, restrictive logistics, high maritime cost, high number of procedures needed, low access to credit, and world price volatility. Ethiopia has to overcome the above challenges in order to achieve the high level of foreign trade targets set in GTP II.

Key words

Ethiopia, Export, Import, Forecast, ARIMA, Trade Facilitation

1. Introduction

1.1 Background of the Study

International trade enables a nation to specialize in those goods it can produce most cheaply and efficiently. Trade also enables a country to consume more than it would be able to produce if it depended only on its own resources. Finally, trade enlarges the potential market for the goods of a particular economy. Trade has always been the major force behind the economic relations among nations. According to demand and supply of international market structure, countries of the world create economic interrelationship (Ashebir, Yirtaw and Godana, 2015).

Ethiopia is primarily an exporter of agricultural products and an importer of consumer and capital goods, and typically experiences a very high trade gap. Ethiopia's trade is highly dependent on the export of agricultural products. Coffee is the prime export product for Ethiopia. The import export trade has been growing steadily in Ethiopia. However, for successive years the import trade has outweighed the export trade.

It is a known fact that a positive balance of trade is favourable and that foreign trade is the engine of growth. Ethiopia's Growth and Transformation Plans (GTP)I and II lay particular attention to this sector. The export target set in GTP I was not achieved and therefore this sector requires particular attention.

1.2 Statement of the Problem

The main development agenda of the Ethiopian government is poverty eradication. All the country's development policies and strategies are, therefore geared towards this end. Effective implementation of these policies and strategies in an integrated and comprehensive manner is key for eradicating poverty and dependence on food aid in a shorter period of time.

To achieve the above, The First Growth and Transformation plan (GTP I) that covered the period 2010/11 to 2014/15 was launched by the Ethiopian government. Prior to that plan, the country had launched the Plan for Accelerated and Sustained Development to End Poverty (PASDEP), which covered the years 2004/05 to 2009/10. According to MOFED, during the PASDEP period the economy grew by around 11%. GTP I was launched with the aim of sustaining the high

economic growth over the previous five years and achieve the Millennium Development Goals (MDG) by 2015 and attain a middle income country status by 2020/23.

The GTP I documents state that although exports have increased during the PASDEP period, the trade balance did not improve as desired. The trade deficit widened during that period because of significant increase in imports, an increase necessary to sustain the high economic growth levels achieved. The planned expansion of the export sector also did not achieve its target, as can be seen in the following table that shows target versus achievement of the export of the leather sector, as an example.

Table 1: Targets of the GTP I against actual performance for the Leather Export Sector

Year	GTP I target	Actual export performance	Percent of targets achieved
Base year 2009/2010	75.73	56.4	74.5
2010/11	190.5	103.8	54.5
2011/12	296.2	109.9	37.1
2012/13	352	121.1	34.4
2013/14	416.8	129.8	31.1
2014/15	496.9	131.6	26.5

When we compare the expected growth of all major items against the actual performance, we can see that export has not been growing as planned. Since the performance of any of the sectors of the economy have a long term impact over the rest, the performance of the trade sector of economy can have a high impact over the others. Therefore, a study that evaluates the current foreign trade conditions, and prepares projections on the expected performance of this sector is very critical. This will also give opportunity to look at the factors that adversely affect the trade conditions, and propose recommendations.

1.3 Objective of the Study

The general objective of the study is to study Ethiopia's current foreign trade and evaluate its future prospects based on the assessment of past trends and conditions and make recommendations.

1.4 Methodology

The study will make use of secondary data of Import and Export of Ethiopia over the last 28 years for which data is available. Elsayir, (2014) recommends having large number of years in the

input data for projections using the ARIMA model. The data used in this paper, which is of 28 years, fully satisfies the above condition.

ARIMA model Auto regressive integrated Moving Average is used to forecast imports and exports. Lags of differenced series appearing in the forecasting equation are called autoregressive terms, lags of the forecast errors are called moving average. (Abdulghafur and Hanif, 2005). ARIMA is chosen because of the nature of the study, availability of the data, and efficiency of the model to forecast.

The theory behind ARIMA estimation is based on stationary time series. A given series is said to be stationary if its mean and variance are constant overtime and the value of the covariance between any two time periods depends only on the distance or gap or lag between the two time periods and not the actual time at which the covariance is computed. If the time series data is not stationary, simple difference of order will be taken in order to make the data stationary. After making the data stationary, the model identification (selection) takes place. By looking at the spikes that exist in the autocorrelation and the partial autocorrelation, potential ARIMA models will be identified.

Because of highly subjective nature of the Box-Jenkins methodology, time series analysts have sought alternative objective methods for identifying ARIMA models. The penalty function statistics such Akaike's Information Criterion (AIC) and Bayesian Information Criterion (BIC) are often used in the identification of ARIMA models. Usually the smallest AIC or BIC value is preferred. (Arega, 2015)

According to Gomez and Maravall, "the BIC criterion estimates the orders of an ARMA model consistently, whereas the AIC does not. However, this is not a reason to prefer BIC instead of AIC because consistency is based on the assumption that there is a "true" ARMA model for the series and this is doubtful proposition. Models are artificial constructs and probably there is no such thing as a true model. It is our practical experience and also the experience of some other authors, like, for example, Liitkepohl (1985), that the BIC criterion works better in practice than AIC, in terms of selecting more often the original model when working with simulated series and selecting models with a better fit when working with real series". (Gomez and Maravall, 1998). Based on the fitted model for the data, forecasting for the value of imports and exports can be undertaken.

2 -Literature Review

Ashebir, Yirtaw and Godana(2015) forecasted the balance of foreign trade in Ethiopia. Their study uses secondary data on balance of trade (in Million Birr) in Ethiopia for the period 1974/75 to 2009/10 from National Bank of Ethiopia (NBE). The deficit of Ethiopia's trade balance can be interpreted into two ways. On the positive note, the fact that the value of imports is taken up by capital goods plus intermediate inputs is in fact an indication of growing domestic economy and expanding productive capacity of the country at an increasing rate. On a negative note, it can be seen as cause for alarm since such a wide and growing gap between the value of exports and imports of a country means that the country continues to need other sources of financing such as foreign aid and credit (Ashebir, Yirtaw and Godana, 2015).The objective of their study was to model and forecast the balance of trade in Ethiopia by using ARIMA model. The balance of trade was modeled as ARIMA (3, 1, 0). They forecasted the value of balance of trade in Ethiopia based on the fitted model from year 2011/12 up to 2015/16. The forecasted results indicated that the deficit in balance of trade is expected to keep on rising.Their result also indicates that there exist unbalance between value of import and export in the country. They recommended that the government should consider different types of solutions and implement different type of policies to overcome this problem.

Abdul Ghafoor and Hanif (2005) made an Analysis of the Trade Pattern of Pakistan, its past trends and future prospects. The study was based on secondary data collected from various institutions including Statistical Bureau and Export Promotion Bureau of Pakistan as well as from various issues of economic survey and Ministry of Finance of Pakistan. A time series data from 1971-2003 was used for analysis of the data and making projections. The authors used the ARIMA method for their model (Abdulghafoor and Hanif, 2005). Their analysis depicted an increasing trend both for imports and exports during the last three decades. Their forecasting results also showed progressive future trends from 2004-05 to 2009-10.

Sahu and Mishram (2013) made Modelling and forecasting of production and import-export of spices in India and China. The study was conducted in the Department of Agricultural Statistics, Bidhan Chandra Krishi Viswavidyalaya, Nadia, WestBangal of India during the year 2012. The objective was to find out trends in area, production, import and export of total spices in India and

China. This study also focused on forecasting the cultivated area, production, import and export of spices in India and China using ARIMA model. Time series data covering the period 1961-2009 was used for the study. The results revealed a strong simple growth rate for all parameters studied. Using different ARIMA models, forecasting values were estimated for area, production, yield, import and export (both in quantity and value) of total spices for the two countries upto the years 2020. The result showed that production of total spices in India and China for the year 2020 to be estimated to grow to 1331 and 115.84 thousand tons from 684 and 32.3 thousand hectares of area, respectively (Sahu and Mishram, 2013).

Mina MahbubHossain and Mehdi Rajeb (2007) authored the paper "Toward Bracketing The Seasonal Export-Import Of Bangladesh: A Time Series Analytical Approach.". The study focused on developing an ARIMA model for export and import data. ARIMA method is an extrapolation method for forecasting and, like any other such method, it requires only the historical time series data on the variable under forecasting. They used annual data on real export and imports from the year 2000 to 2006. The data was collected from the Economic Trend of Bangladesh, 2000-2006. To develop the forecasting models based on export and import, they used monthly export and import statistics as their variable. From their pattern of geographical representation of the ARIMA model they used, it was concluded that on the whole the trend of export and import rose through all the years (Hossain and Rajeb, 2007).

Elsayir (2014) in his article "Forecasting ARIMA model for foreign trade statistics", discussed his analysis of a time series model of Saudi-US foreign trade statistics that use the ARIMA method. By using this method, the article presented changes in the foreign trade for the period (1980-2010). The results for the analysis indicated that the ARIMA model provided useful information for identifying trade trend(Elsayir, 2014).

3 -Foreign Trade Conditions of Ethiopia

3.1. Value and Types of Export Items

According to the data obtained from the National Bank of Ethiopia, the general export value of the country shows an increasing trend throughout the years, as indicated in the figure below. In particular, starting from 2000 (2007/08) the value of exports has shown high increase and has gone up to around 62 Billion Birr in 2006(2013/14). Although the value has been increasing over the years, there seems to be a high budget deficit in the country because total value of imports remains higher than the total value of exports.

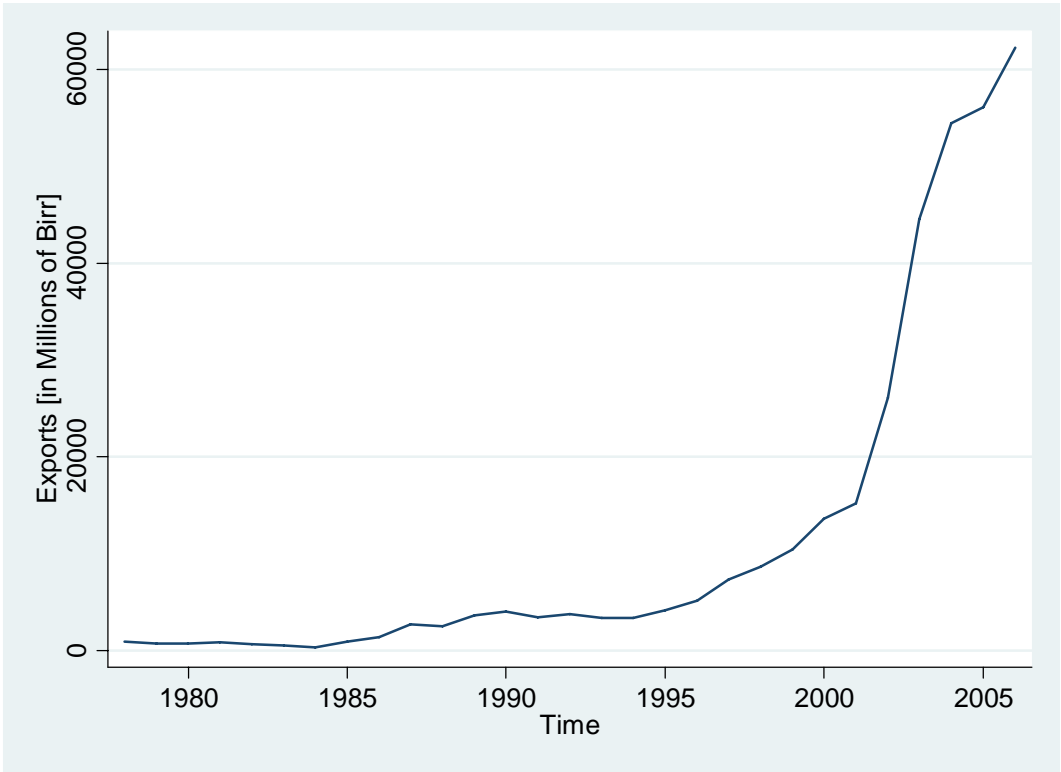


Figure 1: Value of Export in Millions of Birr

Table 2: Major Export Items by Value

Commodity	1985/86	1995/96	2005/06	2013/14	2013/14 (%)
Coffee	664790	1724008.1	3076494	13708114	22.0
Leather and Leather Products	119459	309700.8	651332.7	2474650.1	4.0
Live Animals	18908	770.4	239240.2	3553276	5.7
Bee's Wax	12721	7987.5	12551.5	52045.9	0.1
Chat	8477	174443.7	773235.4	5670685.5	9.1
Pulses	12635	77224.1	320969.1	4790442.6	7.7
Gold	0	68232.2	562141	8722190.8	14.0
Sugar	10401.0	0.0	0.0	0.0	0.0
Oilseeds	7686.0	41938.4	1835270.1	12477209	20.1
Others	68237	33198.5	1214142	10794385	17.3
Total	923314	2499515.1	8685375.8	62243000	100.0

Export items of the country are listed in Table 2 for the years from 1985/86 to 2013/14. Coffee has been the major export item of the country and constituted 22% of the total export value of the country in 2013/14(2006). Oilseeds, Gold, Chat, Pulses and Leather and leather products also have a high share and constituted 20%, 14%, 9%, 8%, 4% respectively. The country has long been exporting gold and the value has been increasing, even though there have been some fluctuations over the years. Sugar production shows the highest fluctuation over the years. The value of sugar exported ranged from 178,586 Million Birr up to 0.

The country began exporting flowers in 1995(2002/03) and by 2013/14, it reached 3.9 Billion Birr by 2013/14. Exports of textile and textile products was significant and reached 2.1 Billion Birr in 2013/14. Both of these products seem to show very good increment.

3.2. Value and Types of Import Items

The total value of imports in the country shows an increasing trend throughout the years. Even though the value has showed an increasing trend, the value started to rise at an increasing rate in 2000 (2007/08). By 2013/14 the value reached 251 Billion Birr. This high value of import is the reason for the increasing budget deficit in the country.

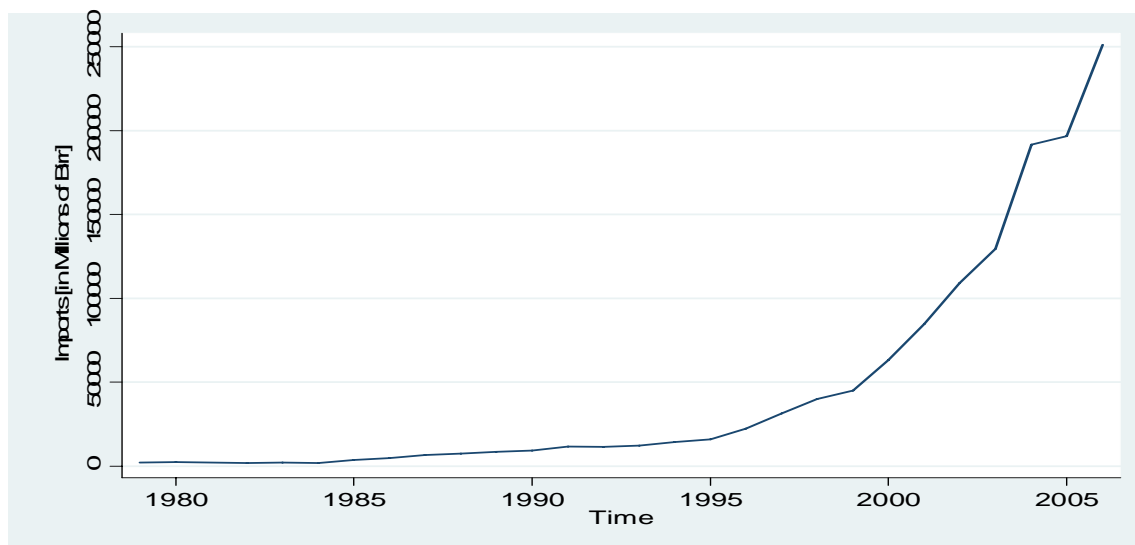


Figure 2: Value of Import

Table 3: Major Import Items by Value

Commodity	1985/86	1995/96	2005/06	2013/14	2013/14 (%)
Food & Live Animals	530,599	575,263	2,139,779	8,238,991	3.3
Road Motor Vehicles	287,134	1,393,422	4,183,804	24,134,380	9.6
Machinery and Aircraft	274,699	854,155	5,305,516	35,204,620	14.0
Petroleum Products	220,261*	485,912	7,422,807	32,283,130	12.9
Metal and Metal Manufacturing	166,878	709,985	4,157,675	30,064,839	12.0
Electrical Materials	76,691	328,577	2,978,793	14,835,464	6.0
Others	645,003	3,360,932	13,684,701	106,286,094	42.3
Total	2,201,265	7,708,246	39,873,075	251,047,518	100.0

*Imported in crude form and purified at Asseb.

Petroleum Products, Machinery & Aircraft, Metal & Metal Manufacturing, Road Motor Vehicles, Electrical Materials, Food and Live Animals are the major items that are imported to the country. In the period 2013/14, Machinery and Aircraft constituted about 14 percent of the total value of imports in the country while petroleum products constituted 13 percent. Metal and metallic products, road motor vehicles and electrical materials also have a large share of the imported value.

4 - Future Trends of Foreign Trade Using ARIMA model

4.1. Forecasting for exports

Descriptive statistics

The summary statistics of the general exports is as given in the following table.

Variable	Obs	Mean	Std. Dev.	Min	Max
exports	28	1.22e+07	1.86e+07	300267	6.22e+07

The average value of total exports is 1.22e+07 (in thousands of Birr) the maximum value being 6.22e+07 and minimum value 300267 (in thousands of Birr) over the period 1979-2006.

Testing for stationarity

The ADF test gives the following result.

Dickey-Fuller test for unit root		Number of obs = 27		
Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value	
Z(t)	-4.362	-3.592	-3.235	

MacKinnon approximate p-value for Z(t) = 0.4135

As can be seen, the test statistic i.e. the calculated value -2.337 is less than the critical values with p value (0.4135). This implies that we fail to reject the null hypothesis that there is a unit root problem. The data is non-stationary.

Obtaining stationarity

Due to the presence of unit root problem, the first difference of the log exports has to be considered to make it stationary. When differencing the variable, the calculated value -4.658 becomes greater than the critical values with p value (0.0008). The unit root problem has been solved by differencing the variable once. We can conclude that the time series data of exports becomes stationary at first difference.

Model identification (selection)

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. corrgram D.logexports
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LAG	AC	PAC	Q	Prob>Q	-1	0	1	-1	0	1
					[Autocorrelation]			[Partial Autocor]		
1	0.0581	0.0580	.10153	0.7500						
2	0.1186	0.1162	.54214	0.7626						
3	-0.3174	-0.3381	3.829	0.2805						
4	-0.0203	-0.0075	3.8429	0.4277						
5	-0.1959	-0.1720	5.2086	0.3910						
6	-0.1483	-0.2288	6.0286	0.4200						
7	-0.0414	0.0354	6.0959	0.5286						
8	-0.0259	-0.0756	6.1234	0.6334						
9	-0.0222	-0.1279	6.1449	0.7253						
10	0.1050	0.1113	6.6527	0.7578						
11	0.0667	-0.0424	6.8702	0.8095						

From the above corrgram, it can be seen that the Autocorrelation function has spike at lag three, five and six and the partial correlation function has spike at three, five and six. These patterns suggest ARIMA models such as ARIMA (0,1,0), ARIMA (3,1,0), ARIMA (0,1,3), ARIMA (5,1,0), ARIMA (0,1,5), ARIMA (6,1,0), ARIMA (0,1,6), ARIMA (3,1,3), ARIMA (3,1,5), ARIMA (3,1,6), ARIMA (5,1,3), ARIMA(6,1,3), ARIMA(5,1,5), ARIMA(5,1,6), ARIMA(6,1,5), ARIMA(6,1,6).

Model estimation and diagnostic

Table 4: Computed Values of AIC and BIC for the Selected Models of Export

Selected Models	AIC	BIC
0,1,0	19.71	22.31
3,1,0	22.19	28.67
0,1,3	13.39	17.28
5,1,0	25.00	34.07
0,1,5	21.36	30.43
6,1,0	23.85	34.21
0,1,6	21.27	31.64
3,1,3	18.14	25.91
3,1,5	-	-
3,1,6	-	-
5,1,3	19.62	29.99
6,1,3	25.26	36.92
5,1,5	23.76	36.72
5,1,6	-	-
6,1,5	23.79	38.04
6,1,6	23.68	37.94

Based on the selection criteria, ARIMA model (0,1,3) is the model with the lowest AIC and BIC, which makes it the fitted model.

Assessing the fitted model

Based on the selected model, ARIMA(0,1,3), we can now forecast the value of exports based on the fitted model from year 2007(2014/15) up to 2016(2023/24).

Table 5: Prediction for Data of Exports

Years	Forecast of Exports
2014/15	82.41
2015/16	84.46
2016/17	81.17
2017/18	96.68
2018/19	115.19
2019/20	137.16
2020/21	163.37
2021/22	194.59
2022/23	231.77
2023/24	276.06

[Forecasted value in Billions of Birr]

As the result obtained from STATA shows, the value of exports increases, even though there are fluctuations in some of the years, the overall result shows that the variable shows an increasing trend.

As has been stated in the GTP I and GTP II, the government of Ethiopia aims at increasing the value of Export over the years. And according to the forecasted values obtained, the value of exports can be expected to increase to 276 Billion Birr by 2023/24.

4.2 Forecasting for Imports

Descriptive statistics

The summary statistics of the general imports is as given in the following table.

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. sum imports
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Variable	Obs	Mean	Std. Dev.	Min	Max
imports	28	4.58e+07	6.83e+07	1811000	2.51e+08

The average value of total exports is 4.58e+07 (in thousands of Birr) the maximum value being 6.83e+07 and minimum value 1811000 (in thousands of Birr) over the period 1979-2006.

Testing for stationarity

The ADF test gives the following result.

Dickey-Fuller test for unit root		Number of obs = 27		
Test Statistic	Interpolated Dickey-Fuller			
	1% Critical Value	5% Critical Value	10% Critical Value	
Z(t)	-2.664	-4.362	-3.592	-3.235

MacKinnon approximate p-value for Z(t) = 0.2511

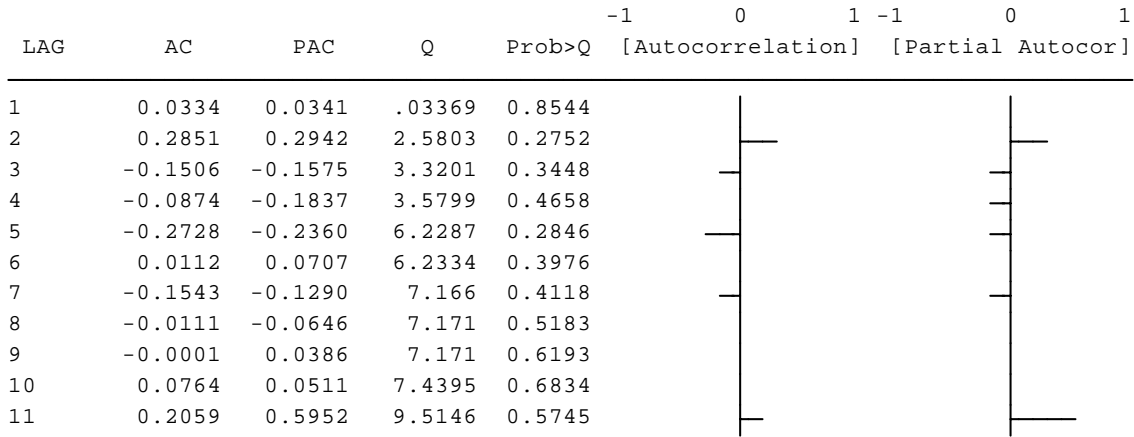
As can be seen, the test statistic i.e the calculated value /-2.664/ is less than the critical values with p value (0.2511). This implies that we fail to reject the null hypothesis that there is a unit root problem. The data is non-stationary.

Obtaining stationary

When differencing the variable, the calculated value /-5.117/ becomes greater than the critical values with p value (0.0001). The unit root problem has been solved by differencing the variable once. We can conclude that the time series data of imports becomes stationary at first difference.

Model identification (selection)

. corrgram D.Logimports



From the above corrgram, it can be seen that the Autocorrelation function has spikes at lag two, three and five and the partial correlation function has spikes at two, three, four and five. These patterns suggest ARIMA models such as ARIMA (0,1,0), ARIMA (2,1,0), ARIMA (3,1,0), ARIMA (4,1,0), ARIMA (5,1,0), ARIMA (0,1,2), ARIMA (0,1,3), ARIMA (0,1,5), ARIMA (2,1,2), ARIMA (2,1,3), ARIMA (2,1,5), ARIMA(3,1,2), ARIMA(3,1,3), ARIMA(3,1,5).

Model estimation and diagnostic

Table 6: Computed Values of AIC and BIC for the Selected Models of Import

Selected Models	AIC	BIC
2,1,0	-11.29	-6.10
3,1,0	-10.07	-3.59
4,1,0	-9.04	-1.26
5,1,0	-8.94	0.12
0,1,2	-12.26	-7.08
0,1,3	-10.27	-3.79
0,1,5	-15.20	-8.72
2,1,2	-12.49	-6.012
2,1,3	-6.40	2.66
2,1,5	-16.16	-8.38

3,1,2	-9.53	-1.76
3,1,3	-6.69	3.66
3,1,5	-14.31	-5.24

Based on the selection criteria, ARIMA model (0,1,5) is the model with the lowest BIC, which makes it the fitted model.

Assessing the fitted model

Based on the selected model, ARIMA (0,1,5), we can now forecast the value of imports based on the fitted model from year 2007(2014/15) up to 2016(2023/24).

Table 7: Prediction for Data of Imports

Years	Forecast of Imports
2014/15	285.62
2015/16	322.57
2016/17	343.61
2017/18	411.50
2018/19	484.14
2019/20	581.93
2020/21	699.47
2021/22	840.74
2022/23	1010.55
2023/24	1214.66

[Forecasted value in Billions of Birr]

As the result obtained from STATA shows that the value of imports is to increase over the years. Even though there are fluctuations in some of the years, the overall result shows that the value of imports will increase to 1215 Billion Birr by 2023/24.

The values of imports have exceeded the value of exports over the years. This case seems to continue. According to the result of the value of exports and imports obtained from the STATA, the negative value of imports minus exports is going to increase at an increasing rate.

The following table shows the forecasted values of exports minus that of imports

Table 8: Future Trade Deficit of the Country

Year	Forecasted Ex port Value	Forecasted Import Value	Export- Import
2014/15	82.41514	285.6282	-203.213
2015/16	84.46358	322.5701	-238.107
2016/17	81.17347	343.6107	-262.437
2017/18	96.68461	411.5047	-314.82
2018/19	115.1597	484.1493	-368.99
2019/20	137.1652	581.9351	-444.77
2020/21	163.3755	699.4712	-536.096
2021/22	194.5944	840.7466	-646.152
2022/23	231.7787	1010.556	-778.777
2023/24	276.0684	1214.663	-938.595

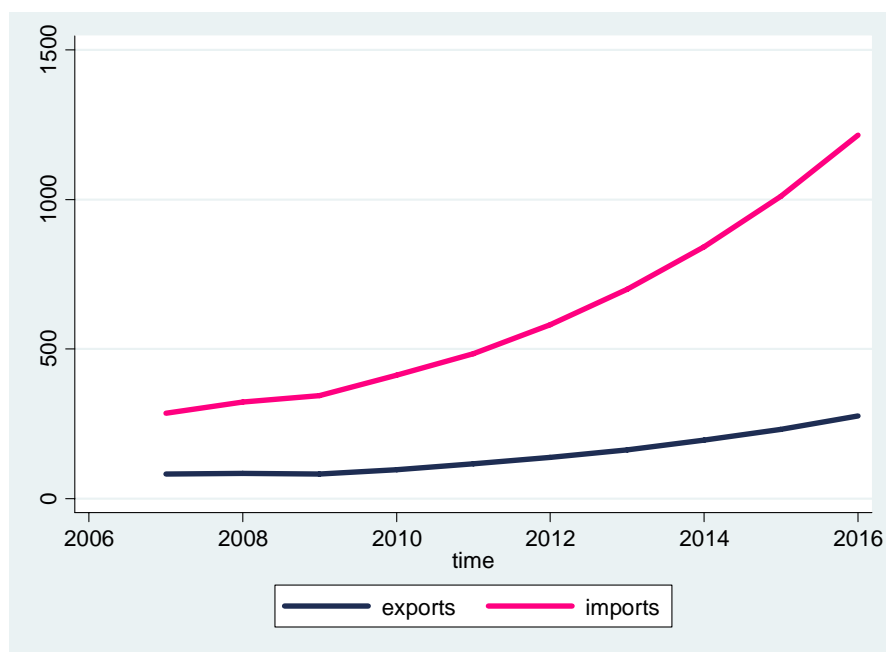


Figure 3: Future Values of Exports and Imports

The difference in the values is more visible when seen in graph. The deficit is to continue over the years if favourable trade conditions are not undertaken. And some measures are undertaken by the authority.

5- Foreign trade Challenges and prospects of Ethiopia

5.1 The Role of World Trade Organization

Ethiopia's World Trade Organization (WTO) accession process has been underway since 2003. Ethiopia has held three working party meetings with the WTO Secretariat, submitted its goods offer in early 2012 and is working on its services offer. Ethiopia's customs administration is the foremost agency at the border and plays a prominent role in the release of goods. The implications of WTO membership include the development of trade-related institutions such as the laws and regulatory frameworks that govern trade as well as the administrative mechanisms and processes for designing, implementing and evaluating trade and trade-facilitation related policies. One instance in this regard relates to the discussion made with respect to the legal regime on customs valuation of goods in Ethiopia.

The current practice of customs valuation in Ethiopia demonstrates that the WTO valuation methods are not fully incorporated in legislative guideline. As they cannot be applied effectively until necessary legislation is prepared and passed, the first key reform measure should involve legislative upkeep. Thus, legal inadequacy in Ethiopia still remains. What is needed is a comprehensive customs regulation with detailed definition of valuation terms, transparent provision of price adjustment, clear guidance to valuation and other similar measures. We can thus expect that customs reform and trade facilitation in Ethiopia will be driven by the Ethiopian government's decision to accelerate its WTO accession application. The problems of Ethiopia joining the World Trade Organization and the recommended solutions will be listed and mentioned in the recommendation sections.

5.2 World Customs Organization

In May 2005, a team from the WCO Secretariat visited Ethiopia to conduct a needs assessment mission using the WCO Diagnostic Framework tool. The team visited Customs Headquarters, interviewed senior managers and policy makers, met with operational officers, observed

operations and met with stakeholders from both the private and public sectors. This assessment mission was followed by a series of actions with the purpose to support Ethiopian Customs Authority (ECuA) in planning to address the issues identified.

Based on the Business Case, Ethiopian Customs submitted a proposal to the WCO concerning their priority areas which were as follows:

- Establishment of a program management structure to support the implementation of reforms
- Upgrade the intelligence function and develop effective intelligence system (Management, strategic, tactical and operational)
- Create and implement internal training system
- Design and implement a policy for staff retention
- Develop and implement a Compliance Management Strategy
- Introduce Risk Management as a basic decision making tool for all administrative and operational purposes
- Develop an Enforcement Strategy
- Upgrade the investigation function
- Introduce mobile/flexible anti-smuggling teams (FAST) to exercise controls throughout the country based on risk analysis and intelligence
- Upgrade the valuation database system so as to make it in line with WCO Guidelines
- Implement a solution for transit operations and management
- Management development and implementation of E learning Programme

Based on the priorities identified, the WCO provided targeted capacity building assistance by conducting a series of Management Development Programme actions for Senior Management Team within Ethiopia Revenue and Customs Authority (ERCA). The events included sessions on international standards and developments, managing reform, introducing facilitation and risk management. The WCO also continues to support ERCA by identifying subject experts from the WCO membership who can assist them with the development of their risk management, post clearance audit, anti-smuggling, and training functions. Through the WCO tripartite arrangement Ethiopia was provided with a platform to engage with countries like Israel, Kenya, Tanzania and Uganda in various areas that covered customs matters and internal tax administration.

5.3 Foreign Exchange Controls

All payments abroad require permits and all transactions in foreign exchange must be carried out through authorized dealers supervised by the NBE. The NBE has delegated most of the foreign exchange transaction functions to the commercial banks but strictly dictates margins. Importers and exporters can now obtain import/export permits through the commercial banks. In addition, exporters can retain indefinitely 10% of their foreign exchange proceeds, but must sell the remaining 90% to commercial banks within four weeks. Foreign investors may repatriate all of their profits abroad.

Periodic foreign exchange shortages due to weak export performance and high demand for foreign currency will continue to present significant market challenges, particularly for potential Ethiopian buyers of foreign goods and services. Private sector actors widely complain about the shortage of foreign exchange and point out the adverse implications on their businesses. Given the poor performance of exports in 2012/13, foreign exchange availability will continue to challenge businesses in the future.

5.4 Trade Facilitation

The 13th edition of the World Bank titled “Doing Business: 2016, Measuring Regulatory Quality and Efficiency, Economy profile 2016”, presents estimates on the time and cost of trading across borders in Ethiopia. The following table presents these estimates along with the estimate for sub-Saharan Africa.

	Ethiopia	Kenya	Egypt	South Africa	Sub-Saharan Africa	Middle East and North Africa	South Asia	Europe and Central Asia
Time to export: Border compliance (hours)	57	21	48	100	108	65	61	28
Cost to export: Border compliance (USD)	144	143	203	428	542	445	376	219
Time to export: Documentary compliance (hours)	126	19	88	68	97	79	80	31
Cost to export: Documentary compliance (USD)	175	191	100	170	246	351	184	144
Time to import: Border compliance (hours)	203	180	120	144	160	120	114	23
Cost to import: Border compliance (USD)	668	908	1383	657	643	594	652	202
Time to import: Documentary compliance (hours)	209	84	192	36	123	105	108	27

Cost to import: Documentary compliance (USD)	750	550	650	213	351	385	349	108
Rank	166	131	157	130				

When comparing the values and ranks of Ethiopian with the Sub-Saharan Africa, Ethiopia is better in certain areas like time to export: border compliance, cost to export: border compliance, cost to export: documentary compliance. Ethiopia is ranked 166th in the World Bank Report. In comparison, Kenya is ranked 131, Egypt 157 and South Africa 130. Areas that Ethiopia needs to give due attention are time to export: documentary compliance, time to import: border and documentary compliance, cost to import: border and documentary compliance. In these, the country is showing less efficiency compared to Sub-Saharan African countries. When we look at the time it takes for time to import: border compliance and time to export: documentary compliance in Europe and Central Asia we can see that there is a lot of room for improvement in this sector for Ethiopia.

6- Conclusion and Recommendation

6.1 Conclusion

This paper has investigated the level and composition of major export and import items of Ethiopia. It has also prepared twelve years projections for the total imports and exports value. It made use of 28 years data obtained from The National Bank of Ethiopia.

The paper has shown that the value of export has been increasing over the years. Coffee has been the major item that has been exported for many years. Oilseeds, chat and pulses also contribute significantly to the value of the exported items of the country. Germany and China are the countries that import most from Ethiopia.

The value of imports of the country has been increasing throughout the years, same as its exports. The major item that is imported to the country is machinery and aircraft and petroleum products. The percentage import of petroleum showed fluctuations, but the overall result is an increase. The percentage of import of machinery and aircraft have shown a slight decrease over the years. The biggest sources are China and Saudi Arabia.

The objective of the econometric model of ARIMA was to model and forecast the future trends of the values of exports and imports. The mathematical projections looked at the past trends and

arrived at future values that best fit the data. The analysis depicted an increasing trend both for imports and exports during the previous periods. Similarly, forecasting results also showed increasing future trends from 2014/15 to 2023/24.

Accordingly, exports are expected to reach 276 Billion Birr by 2021/22, whereas imports are projected to reach at 121 Billion Birr by the same year. However, it is possible to increase exports and change the pattern of imports based on policy measures that affect financing, logistics, custom regulations, incentives, investment, import substitutions and trade facilitation.

6.2 Challenges to the Trade Sector

According to the investigations of the current trade situations in the country, the major challenges and problems faced by the sector are presented below.

- There exists a negative balance of trade in the country, and it is expected to increase even more in the coming years if measures are not undertaken by the government.
- Ethiopia has one of the most restrictive logistics regimes with a complete dominance of the state monopoly with almost no private competition. This has exacerbated other international trade barriers such as access to ports and location.
- The maritime cost is very high and it seems to be transferred and reflected on the prices of the commodities of imported and exported items.
- There are many of procedures to be undertaken to have items exported or imported. Those long procedures frustrate those involved in that sector.
- Dependence on the export of agricultural products is major problem. The farmers and exporters have low credit and are affected highly by price collapse in the world. Because of their low access to credit and they cannot satisfy the market at the time of hardship.
- There appears an international price collapse in the world for major export items like coffee. Ethiopia's supply of the product to the world market fell considerably, because of that.

6.3 Recommendation

The following recommendations are presented for the improvement of the foreign trade sector of the country.

- As it has been mentioned above the balance of trade is negative and it continues to be negative according to the result from the current projection. The ultimate recipe for making balance of trade positive is to diversify Ethiopia's export pattern, both in terms of products and destination, and to produce at the lowest possible cost.
- According to the World Trade Organization, the ideal international movement of goods involves a facilitated customs administration. Competition in the maritime transport sector in Ethiopia is indeed crucial for trade facilitation.
- The benefits of improved performance of transport and logistics services should be enhanced through governmental trade reform measures. Trade facilitation measures, including, but not limited to, more efficient, well-coordinated border control mechanisms, will promote foreign trade.
- The government can use Ethiopia's currently ongoing negotiation efforts to WTO accession as a tool of institutionalizing its reform objectives.
- Since the major exported items in the country are agricultural products, enhancing yields and production level through enhancing extension service and in-depth training to farmers is essential to increase the value of exported items.
- Government needs to rescue farmers and exporters by providing them with support, particularly at difficult times, for example, at the time of price collapse, through introducing different incentives like subsidies and the like.
- Providing loan to farmers, particularly at the time of hardship, will enable them to continue satisfying the market, which will ultimately help the country to raise the volume of export.
- Government should create stabilization fund to buy coffee from farmers at a relatively modest price, particularly during a massive drop in international price, and then store the coffee to resale to farmers or exporters when international price of coffee recovers. This will minimize the adverse effects of price drop on farmers.
- The country should exploit the potential in diversifying its exports area away from dependence on traditional farming.

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