

Influencing Factors of Coffee Exports in Laos

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Abstract:- Coffee is a key manufacturing of Laos being the fifth largest export earner for the country. Now, Laos produces 0.25% worldwide coffee production. Laos is beginning a big change in its coffee business. The intensity is to move production to higher-value Arabica rather than the lower-value Robusta coffee that is the current backbone of the manufacturing. The purpose of this study is to define influencing factors of exporting coffee in Laos. Evaluating the relationship between the economic factors (FDI, CPI, Financial depth) and how the Coffee export is affecting the cycle.

Keywords:- Coffee Export; GDP; Financial Depth; FDI; CPI.

I. INTRODUCTION

Coffee has become one of the most typical drink consumed around the world. Organic coffee is an important trade product. It is estimated that some 100 million people around the world, particularly in many developing countries are dependent on coffee trade for their subsistence (Keith & Suranant, 2001)[1]. It is a basic source of main export

earnings for many developing countries. Prime prices for organic coffee production can make an estimated difference of 20-30 percent gain for farmers (Malaykham Philaphone, 2011)[2]. The USA, France, Italy, Germany and other European economies report for over 90 percent of world's organic coffee consumption. Furthermore, available data views that worldwide imports of organic coffee have increased considerably over the years. Global imports of organic coffee exceeded 67,000 tonnes in 2006, compared to 42,000 tonnes in 2003 and 52,000 tonnes in 2005 (Liu, 2008 & FAO, 2009)[3]. Laos is an organic coffee exporter. Most coffee tree are insecticide free or produced by organic farming. Among the different agricultural export products, coffee has the most advanced production and marketing system. Robusta and Arabica are the two main types of coffee in Laos. Arabia beans is 25% of the 20.000 tons of coffee produce a years, and Robusta is 75% of the 20.000 [4].

The main purpose of this study is to: define the economic factors that influence Laos's coffee export.

II. LITERATURE REVIEW

Research work	Methodology	Results
Promoting Foreign Direct Investment in Food Business in Lao, Data Collection Survey on Selecting the Processed Food (2011)	Qualitative data analysis, 2007-2010 Laos's Coffee export data	Japanese businesses involved in coffee production in Laos are buyers of Laotian products (BLPs). Processing of green coffee beans is performed by coffee farmers or local processors, and Japanese companies only purchase the green beans. This is a major modality of involvement by Japanese companies while a Japanese company is prepaying charge for supporting farmers and stabilizing the procurement cycle.
Agri-Food Trade Statistical Factsheet European Union - Laos (2019)	Qualitative data analysis	"Agri-food products" refers to the World Trade Organization definition of agricultural products and number of headings in chapters 33, 35, 38, 41, 43, 51, 52 and 53, includes the chapters 1-24 of the Harmonised System. The aggregate of Europe Union Agri-food trade doesn't contain tariff codes.
Agriculture, Natural Resources, And Rural Development Sector Assessment, Strategy, And Road Map Lao People's Democratic Republic (2018)	Qualitative data analysis, Growth in the Area and Production of Major Crops Other Than Rice (2005–2014)	Agriculture has a potential for significant growth and will continue to have a major and inclusive role in the Lao People's Democratic Republic (PDR) economy. The Asian Development Bank (ADB) remains committed to supporting modern sustainable agricultural development.
Ardakani et.al (2009). Effects of NTBs on agricultural export of Iran	Gravity estimation	NTBs had a negative effect on pistachios, raisins, and shrimp.
World Bank (2009). A survey on NTMs affecting Lao exporters	Qualitative data analysis	Coffee is affected by SPS imposed by EU.

Table 1:- An Overview of the Subjects Studied in Laos

Source: Researchs Bank of Laos

III. EMPIRICAL RESEARCH

➤ Research Methodology

This analysis data running from 2010 to 2018. Laos’s coffee export, GDP growth, CPI, FDI and m1 were taken from National Statistical office and Monthly Statistical bulletin of Central bank, then the source of all data relative to the price of copper on the global market was from

Federal Reserve Statistics respectively. The variables used in the model were displayed in Table 2.

➤ Empirical Research

It was intended to explain the Laos’s coffee export and the impact on the economic factors through the estimation methods in econometrics.

Variables	Note	Explanation	Unit
Consumer Price Index	CPI	The Consumer Price Index is a measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food and medical care.	Billion USD
Foreign Direct Investment	FDID	Foreign direct investment is an investment made by personal in one country into business attraction located in another country.	Billion USD
Laos’s coffee export	EXPC	An export is a function of international trade whereby things produced in one country are shipped to another country for trade or future sale.	Tons
Financial depth	GDP/M1	Financial depth captures the financial sector relative to the economy. It is the size of banks, financial markets in a country, other financial institutions, taken together and compared to a measure of economic product.	Percent

Table 2:- Variables Used in the Model

Source: National Statistical Office, Bank of Lao, the Fed's Statistical Bulletin

The stability of the variables was tested by the Augmented Dickey-Fuller test. The results are evaluated by the Granger Causality Tests test to determine whether the change in variance is one of the causes.

Variables	Lag value	Include in test equation	In Level	Level of Integration
			*MacKinnon (1996) one-sided p-values.	
CPI	3	+	0.0274*	I(0)
FDID	3	+	0.0008*	I(1)
GDP/M1	3	+	0.0008*	I(0)
EXPC	3	+	0.0007*	I(0)

Table 3:- Results of the ADF Test Unit of The Variable

Source: The results of the EViews 10 program

- * denotes the H0 hypothesis that unit sign at the 10 percent significance is unit root or not stable.
- + symbol represents the formulas used in the test.
- The I (0) mark indicates that test for unit root in level.
- The I (1) mark indicates that test for unit root in first difference.

As result from unit root test, null hypothesis that variables used in coffee export is unstable it was rejected at 0.01 significant level. It shows that least squares method can be used to estimate Laos’s coffee export.

➤ Equations

In open economy, defining Laos’s coffee export is based on simple model (GDP/M1, CPI, FDI). It involved hypothesis that financial depth has impact on these variables in the short term. Hence, linear expressions of variables are able to measure the impacts main economic factors on export.

Coffee export function is simulated simply as follows
 $Y = \alpha r + \beta q + \gamma l + v, \alpha, \beta > 0$ (1)
 In here: y – Laos’s Coffee export
 r – consumer price index, q – foreign direct investment, l – financial depth, v - stochastic error

The quantities of α , β and γ represent the relative impact on coffee export for CPI, FDI, Financial depth.

The stability of variables was checked by unit root. Based on above calculations, let it show how the CPI, FDI, Financial depth affect aggregate Coffee export through Ordinary least squares method. So according to the simulation mentioned in equation 1, the estimation of how the changes in CPI, FDI, Financial depth affect Laos’s coffee export (EXPC) showed in table4.

IV. RESULT

LOG(EXPC) _t =0.00024FDI _t +0.01881CPI _t			
+162.35GDP/M1 _{t-1} +8.5678			
prob	[0.0093]	[0.000]	[0.0435]
[0.000]			
R ² =65.0	DW=1.79	SER=0.0546	

Table 4:- The Dependence of Coffee Export and Explanatory Variables

Source: The results of the EViews 10 program

As the result showed above, these variables are statistically significant for Laos’s coffee export. When FDI inflow into Laos increases by one unit, Laos coffee export is increased by 0.024. foreign countries transfer surplus of

capitals as the form of investment into other countries. If Laos use wisely and rationally the investment coming from other countries, it is possible to increase the volume of coffee export to other countries. Laos is well known for coffee production and attracting further FDI in coffee production leads to increase the volume of coffee export.

The relationship between consumer price index and coffee export is positive, as Laos consumer price index increase by one unit, the volume of coffee export in Laos is increased by 1.88. when consumer goods price in Laos rises, the domestic purchasing power decreases. Thus, the number of exporting goods to other countries increases. Consumer price index is the main factor in determining inflation rate and also main indicator in determining public finance, implementation of monetary and lending policy, making researches on economy and hypothesis, and indexing the wage, pensions and other income of the population. So, it was considered as one of main factors affecting the volume of coffee export.

Increasing financial depth in Laos is enhancing Laos' financial sector development. It will open the investment gate in domestic small-medium enterprises. It leads to leverage the further coffee production, and by expanding coffee production the volume of Laos coffee export to other countries will increase. The analysis result showed that as financial depth in Laos increase by one unit, the volume of coffee export will increase by 162 percent after 1 year since base year.

Financial depth is considered as good sign for developing country. In other word, financial depth drives sustainable economic growth. In contrast, in developing countries too much financial depth has negative impact on economy through financial crisis. Economists considered that the impact of financial depth on economy is positive in short term and negative in long term.

Occurring financial depth in Laos is increasing the coffee export after 1 year. Financial sector development improves credit worthiness. In other words, it means that if Laos use wisely own resource and potentials, we will increase coffee export size.

V. CONCLUSION

The aim of research is to determine that how economic factors affect the volume of Laos coffee export. According to the purpose, the impact of financial depth, FDI, consumer price index on volume of coffee export was defined.

As the result showed above, the relationship (volume of export FDI, costumer goods index, ratio of GDP-to-money supply) is positive. For example, when occurring financial depth in Laos, it affects the volume of export after 1 year.

RECOMMENDATION FOR FURTHER RESEARCH

Main factors of affecting the volume of Laos coffee export were FDI, CPI and GDP/M. In addition, there is possibility of making researches on partner countries' economy, extending the data of variables used in the equation and improving this research based on VAR response function.

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