

Deteminants of Tax Burden in Vietnam

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ABSTRACT

Taxation is an important tool for each country's government to regulate the economy, distribute income fairly and contribute largely to the state budget. Tax revenue is related to the tax burden. How to achieve tax revenue to ensure an appropriate tax burden rate for the economy and the people is a relatively difficult task for each country. The empirical method is employed on a secondary time series data set during the period 1999-2016 to determine the impact of GDP at current prices, tax revenue, index of economic freedom on tax burden in Vietnam by using a linear approach. The empirical results find that the relationship between gross domestic product and tax burden is a negative sign at 1% significant level. Tax revenue has a positive effect on tax burden at 1% significant level. Economic freedom index has a positive effect on tax burden at 1% significant level. Based on the findings, the article recommends that Vietnam continues to seek positive solutions to enhance the economic growth rate, reducing tax revenue through the transfer of some socio-economic development tasks to the private sector which may be undertaken, strongly equitizing state-owned enterprises, retaining a number of businesses with economy regulatory function and social security.

Keywords: Tax revenue; Tax burden; Economic growth.

INTRODUCTION

Taxes are a major revenue source of the state budget, so the existence of taxes is tied to the existence of the state. What is the tax? Based on McLure's definition that has been posted on the Wikipedia, a tax is a compulsory financial charge or some other type of levy imposed upon a taxpayer (an individual or legal entity) by a governmental organization in order to fund government spending and various public expenditures (Charles E. McLure Jr., 2015). This means that the payment of taxes to the government is mandatory for all citizens and organizations, and is a cost of production, consumption, or taxes on income, in order to increase the budget revenue is spent mainly for public benefits. Based to the Investopedia's definition: "Taxes are involuntary fees levied on individuals or corporations and enforced by a government entity - whether local, regional or national - in order to finance government activities. In economics, taxes fall on whomever pays the burden of the tax, whether this is the entity being taxed, like a business, or the end consumers of the business's goods." The taxable income is the remaining income after deducting costs related to the production and business process (Nguyen Huu Cung, 2015). Thus, this definition show that a level of tax burden on the economy is inevitable, importantly the tax burden is consistent with the endurance of the people and the economy. From the perspective of the author, taxes are a compulsory transfer of income from individuals and legal entities to the state according to the

extent and duration prescribed by law for public use. According to Liu et al. (2012), tax policies have been applying in countries in two fairly obvious trends: *Firstly*, the tax burden is excessive, the state budget revenue increases rapidly, but it causes great losses to the economy, exceed the endurance of the economy, and consequently, the production of the whole society falls below its potential. *Secondly*, reduce the tax burden to increase savings, investment, aggregate demand, accumulate capital to expand production scale, but the first time the state budget will be reduced. From the above definitions express the role of taxes that taxes are one of the important and indispensable regulatory tools on the social and economic development of each country both in developed and developing countries (Nguyen Huu Cung, 2019).

Back to history, the study of the tax burden was first conducted by the agronomic economists in France. However, it was not until after World War II that this became a research field attracting the participation of many economists. Analyzing the impact of taxes to show who really bears the tax burden. More specifically, an analysis of the tax burden is the consideration of which taxable population groups in society suffer more from the enactment of a tax law. A nominal statutory taxpayer may not be the one who actually bears the tax burden if could transfer the tax burden on others. In general, there are two types of tax burdens distinguished by economists including initial and final tax burdens. The initial tax burden is the ones who contact tax authorities to pay taxes. The final tax burden is the ones who actually bear the tax, although to be unlikely that the person contacting the tax authority to pay taxes is taxable persons. For taxes with progressive tax rates, persons with higher incomes or more assets are more taxable persons. As for taxes with regressive tax rates, persons with lower incomes or fewer assets are more taxable persons.

In Vietnam, tax policies for production, trading and consumption was applied for a long time. But like other countries in the first stage of development, Vietnam's tax system was still not complete compared to many other countries. The amendment and adjustment of existing tax laws and the promulgation of new tax laws in line with the development of the socioeconomic and the awareness of the government are constantly. Until now, with the continuous socio-economic development and deep integration into the world economy, Vietnam has always been aware and acted on perfecting the tax system based on the application of experiences learned from other countries, especially more developed countries. However, the demand for budget capital for economic development in developing countries in general and Vietnam in particular is so large in the early stages of development due to the low accumulation of private capital, meanwhile, the loss of tax revenues and waste in the use process has occurred due to the management capacity to be not high. As a result, tax revenue has been becoming a major source of revenue for the government, at the same time the high tax burden to be inevitable. In the 2012 Macroeconomic Report of Vietnam (National Assembly's Economic Committee, 2012) asserted that the proportion of tax and fee revenues was increasing in Vietnam. The total state budget revenue was quite stable in the period of 2007-2011 at about 29% of GDP, tax and fee revenues about 26.3% of GDP, 21.6% of GDP (excluding crude oil). The report also asserted that Vietnam's taxes and fees (except for crude oil) was already very high compared to other countries in the region (Nguyen Huu Cung, 2015). Evidence for this assertion is that with average data of the 2007-2011 period, Vietnam's taxes and fees over 20% of GDP, China 17.3%, Thailand and Malaysia approximately 15.5%, Philippines 13%, Indonesia 12.1%, and India only 7.8%. In an article posted on the web portal of the Ministry of Finance on July 29, 2019 with the title "Restructuring state budget revenues in Vietnam", the annual average in the period of 2016 - 2018, the total state budget revenue reached 24.91% of GDP, higher than the annual average in

the period of 2011-2015 (23.57% of GDP). In particular, revenue from taxes, fees and charges estimated to reach 20.4% of GDP in 2016, 20.2% of GDP in 2017, 22.21% of GDP in 2018.

As mentioned above, there have been some research results in other countries and Vietnam on tax burden, tax burden distribution, tax burden transfer. However, research on the factors affecting the tax burden and the impact of each factor on the tax burden in Vietnam is still a new issue. If the research results on this issue are significant, Vietnam's tax policies would be able to aim to the optimal tax burden, ensuring the goals: (1) increasing state budget revenues; (2) stimulating economic growth; (3) equitable income distribution. The purpose of this paper is to identify the determinants of Vietnam's tax burden, and to clarify the influence of each factor on Vietnam's tax burden.

LITERATURE REVIEWS

The state budget is formed primarily from tax revenues to meet the government's spending needs for socio-economic development in each period (Nguyen Huu Cung et al, 2013). Tax collection creates a tax burden for businesses and citizens, but whoever is more burdened depends on the establishment of tax regimes. In a broad sense, the effect of taxes not only consider who would bear tax burden but also pay attention on who would receive benefits from the expenditures funded by tax revenues (Su and Bui, 2009). Therefore, it is impossible to determine absolute tax justice, even the optimal tax theory provides so little empirical evidence to determine reasonable tax rate for each country.

An increase in tax revenue could create an increase in tax burden and even a burden that is beyond the tolerance of businesses and individuals, resulting in an excessive tax burden that would reduce tax revenue in future due to the reduction of private investment and the increase of public investment, and the fact proves that reduces the social investment efficiency, which restraints economic growth, and of course this paradox is consistent with the Laffer curve. Empirical evidence shows that tax revenue has a close relationship with the tax burden. The overall tax burden is constituted by the component tax burden, meaning that a tax system consisting of many different taxes and each tax creating a corresponding tax burden ratio. An empirical study on the comparison of the individual income tax burden between Vietnam and China in the period of 2002-2011, the results show that annual average in the period of 2002-2008, Vietnam's individual income tax burden was nearly 0.57% and lower than China, but higher than China in 2010 – 2011 when ordinance on individual income tax for high-income earners was upgraded to law on individual income tax (Nguyen Huu Cung et al., 2013). The study also finds that the excess burden of Vietnam's individual income tax seems to exist, due to taxable income and family allowances did not change with changes in macroeconomic indicators such as economic growth, inflation rate, interest rate, cost of living and others, therefore, law on individual income tax was revised in 2013. Annual average in the period from 2002 to 2011, macro tax burden rate of Vietnam and China is respectively 20.74% and 18.17% (Liu et al, 2012; Nguyen Huu Cung, 2015). Another study finds that said that an excess burden of taxation is the efficiency cost, or deadweight loss, associated with taxation (James R. Hines Jr., 2007).

Tax-induced reductions in economic efficiency are known as deadweight losses or the excess burdens of taxation, the latter signifying the added cost to taxpayers and society of raising revenue through taxes that distort economic decisions (Alan J. Auerbach et al., 2001). Robert Carroll (2009)

estimates that economic cost of higher tax rates, what economists often refer to as the “excess burden” or “deadweight loss” of taxes. These research results show that the impact of taxation is economic losses without any object in the economy such as government, businesses or consumers to be enjoyed. This also implies a few key recommendations for governments that the issuance of any tax policy should consider economic cost of taxes. Based on the original investigation of the Asian Development Bank with the title “Key Indicators for Asia and the Pacific 2011” presented data comparing tax revenue to GDP in 48 countries in the world, the result shows that, in 2011, tax revenue to GDP of 4/48 countries is about 25%; 5/48 countries from 20% to 24%; 9/48 countries from 15% to approximately 20%; 30/48 countries under 15%, 23.1% of Vietnam (Nguyen Huu Cung, 2015). A study on the determinants of Vietnam's corporate income tax burden used a secondary data set for the period 1999-2012 to linearly regress the relationship between the burden of corporate income tax and the independent variables such as corporate income tax revenue, GDP at current prices, tax rate, and time trend (Nguyen Huu Cung, 2015). The empirical results find that the effect of corporate income tax revenue, GDP at current prices and time trend on the burden of corporate income tax is a positive sign and significant. The relationship between the burden of corporate income tax and tax rate has a negative effect and significant. Nguyen Huu Cung and Liu Hua (2013) research on the impact of tax burden on foreign direct investment in Vietnam by using a time series data set for the period 1999-2011. The finds show that the relationship between them has a negative effect and significant. The empirical results also show that unit labor costs and annual inflation rates have a positive sign and significant on foreign direct investment. A study on the effect of tax burden on economic growth in Vietnam by using a set of time series data for the period 2002 – 2011 and building a simple linear model with a dependent variable and an independent variable (Hua Liu et al, 2012). The empirical results find that the impact of tax burden on economic growth is a positive sign and significant.

Through the literature review above shows, the studies mainly focused on issues related to tax burden distribution, determining who bears more tax burden, economic cost of taxes, the determinants of the burden of each tax, the impact of tax burden on economic growth, foreign direct investment, and others. In addition, the studies on the factors affecting the tax burden in a country or some countries are still a scarcity in the scope of the author's research. Within the limit of the collected data and the author's perspectives, the article identifies the determinants of Vietnam's tax burden in the period of 1999-2016.

DATA AND MODEL

As analyzed above, the tax burden always exists in developed countries as well as developing countries when the government always has the spending demand and collects taxes to offset the spending demand. Therefore, determining the optimal tax burden is the goal of the countries. In fact, an optimal tax burden for each country is different and the distribution of the tax burden for subjects in society is also different. This means that in order to determine the optimal level of tax burden and distribute the tax burden among social subjects to be equitable in each country, it is necessary to identify the determinants of tax burden. To determine exactly the role of each factor, the empirical method is employed on a secondary time series data set during the period 1999-2016 to determine the impact of GDP at current prices, tax revenue, index of economic freedom on tax burden in Vietnam by using a linear approach. To accomplish the purpose of this study, the article uses secondary data collected from Vietnam Ministry of Finance, World Bank, Transparency

International - The Global Anti-Corruption, The Heritage Foundation. The following model was developed based on previous literature.

$$\text{TAXBURDEN} = F(\text{GDP}, \text{TAX}, \text{FREEDOM})$$

$$\text{TAX} = \beta_0 + \beta_1 \text{GDP} + \beta_2 \text{TAX} + \beta_3 \text{FREEDOM} + \varepsilon_t$$

Where,

TAXBURDEN is Tax burden (ratio)

β_0 is Intercept Term and $\beta_1, \beta_2, \beta_3$ are Coefficients

GDP = Gross Domestic Product (current, Bill.VND)

TAX = Tax revenue (Bill.VND, include: fees)

FREEDOM = Economic Freedom Index (score)

ε = Error Variable

With the given data this article has run the regression in Vietnam where TAXBURDEN represents the dependent variable and represents tax burden of the country, while others are the independent variables.

RESULTS AND DISCUSSION

The regression results show that there is a negative correlation between tax burden and GDP at current prices, corruption perceptions index, while there is a positive correlation between tax burden and tax revenue, economic freedom index.

Table 4.1: Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.928586	6.504415	-1.372696	0.1914
GDP	-1.25E-05	2.84E-06	-4.396671	0.0006
TAX	5.19E-05	1.34E-05	3.871444	0.0017
FREEDOM	0.611398	0.144338	4.235891	0.0008
R-squared	0.892458	F-statistic		38.72715
Adjusted R-squared	0.869413	Prob(F-statistic)		0.000000
Durbin-Watson stat	2.300399			

Source: Correlation Output of Data Collected

The regression results in Table 4.2 show, the explanatory degree of the determinants of tax burden in terms of R^2 is 0.892458. This means that around 89.24 percent of variation in tax burden is explained by this model via four independent variables like GDP at current prices, tax revenue, economic freedom index, corruption perceptions index. Sign of $\hat{\beta}_0, \hat{\beta}_1, \hat{\beta}_2, \hat{\beta}_3$ are in accordance with the economic theory and the case of Vietnam. The value d of Durbin-Watson test is $d = 2.300399$, meanwhile the significance level $\alpha = 5\% = 0.05$, the sample numbers $n = 18$, number of independent variable in the model $k' = 3$, inferred $d_L = 0.933$ and $d_U = 1.696$. Due to $d_U = 1.696 < d = 2.300399 < 4 - d_U = 2.304$, so the results show that an autocorrelation phenomena has not been detected in the model. The regression results in this article also show, $\text{Prob(F-statistic)} = 0.000000$ which is less than 0.01. This could be concluded that the model is suitable at 1% significance level. The author would continue to analyze the regression results of each factor.

GDP at current prices

In economic theory as well as in the empirical finds show that the relationship between tax burden (tax revenue to GDP) and GDP at current prices is a positive or negative sign depending on the tax policy is only for the increase of the state budget or for the development of the economy. In Table 4.1, the regression results find that GDP at current prices has a negative effect and significant on tax burden at 1% level of significance. This value also implies that Vietnam's tax and fee burdens exceed the endurance of the economy in the period 1999-2016. This conclusion is also consistent with the research results in the 2012 Macroeconomic Report of Vietnam, the original investigation of the Asian Development Bank with the title "Key Indicators for Asia and the Pacific 2011", an article posted on the web portal of the Ministry of Finance on July 29, 2019 with the title "Restructuring state budget revenues in Vietnam", means that Vietnam's tax and fee burdens are higher than several other countries. Sign $\hat{\beta}_1$ of the relationship between tax burden and GDP at current prices shows that in constant conditions of other factors (including the constant of tax revenue or growth rates of tax revenue is lower than the economic growth rates), an increase in GDP at current prices results a reduction in tax burden. The analysis advises that if Vietnam continues to maintain an increase in annual tax revenue and annual economic growth rate in the coming period similar to the period 1999-2016, Vietnam's tax and fee burdens would remain higher than many other countries in the region. This research results are also consistent with the finds of Nguyen Huu Cung (2015) on the relationship between GDP at current prices and corporate income tax burden.

Tax revenue (including fees)

In the economic theory, the relationship between tax revenue and tax burden has a positive effect, means that in constant conditions of other factors, an increase of tax revenue results in an increase of tax burden. In Table 4.1, the regression results find that the impact of tax revenue on tax burden is a positive sign and significant at 1% level of significance. This result implies that the increase in government's annual spending on economy and society results in a rapid increase in tax revenue in the period 1999-2016, as noted above, Vietnam's tax and fee burdens are high for several countries in the region. Evidence that the author's preliminary calculation is based on the collected data, the annual average growth rate of tax revenue (about 16%) is higher than GDP at current prices (about 14.6%) in the period 1999-2016. This result also advises that with the negative effect of COVID-19, Vietnam's economic growth is being seriously affected in the state of crisis. The evidence is that the bankruptcy of many businesses, the scarcity of input materials for production, the disruption of global value chains, the disruption of government's budget plans for development in 2020 and next years due to an increase in budget spending for anti-covid-19. The consequence is that budget revenue from taxes and fees are on a sharp downward trend.

Economic Freedom Index

In the economic theory, an increase in in the constant condition of other factors, an increase in economic freedom index results in an increase in tax burden. Because, an expansion of economic freedom of any country would have many opportunities to attract investment and business between host country and home country, resulting in an increase in tax and fee revenues. In Table 4.1, economic freedom index has a positive and significant effect on tax burden at 1% significance level. More specifically, in constant condition of other factors, a 1.0 score increase in economic freedom index results in raise approximately 0.611398 score in tax burden. This result also reflects Vietnam's positive in expanding international economic relations in many years ago, and now

continue to promote that positivity. Based on research results of Nguyen Huu Cung (2019) and the web portal of Vietnam Ministry of Foreign Affairs show that, Vietnam has established diplomatic relations with more than 170 countries around the world, expanding trade relations, exporting goods to more than 230 markets of countries and territories, signing over 90 bilateral trade agreements, nearly 60 investment encouragement and protection agreements. At the same time, Vietnam is actively participating and promoting its membership in international economic organizations, such as WTO, ASEAN, APEC, ASEM, others. Expanding international economic relations not only has opportunities to increase tax revenue but also stimulates economic growth. Therefore, the role of the economic freedom index for a country's socio-economic development is quite clear, and Vietnam is not an exception. However, according to the research results of Nguyen Huu Cung and Nguyen Thi Hong Nhung (2020) based on the Heritage Foundation's data, Vietnam's economic freedom index is still lower than several countries in the region. Average annual in the period 1999-2018, Vietnam's economic freedom index is 49.1 scores meanwhile this index of countries is 70.9 scores of Japan, 69.7 scores of South Korean, 65.8 scores of Malaysia, 64.8 scores of Thailand, 56.2 scores of Indonesia, 53.3 scores of China.

CONCLUSION AND POLICY APPLICATION

In this article, the author performs a regression analysis between a dependent variable (tax burden) and 3 independent variables (GDP at current prices, tax revenue, index of economic freedom). The impact of GDP at current prices, tax revenue, index of economic freedom on tax burden is at 1% level of significance. These results suggest several recommendations: *Firstly*, Vietnam continues to seek positive solutions to maintain high economic growth in the group of countries with the highest growth rates in the world. To achieve this goal, Vietnam's monetary and fiscal policies should be flexible, a harmony of two goals among inflation control and high economic growth during the period of negative impact of COVID-19, effective support of the Government to overcome the crisis of businesses due to the negative impact of COVID-19 through financial support packages, a reduction in costs and an increase in profits through tax policy, reform of administrative procedures in business and investment, a support of special policies for startups. *Secondly*, Vietnam needs to reduce the tax burden through the implementation of tax policies to stimulate economic growth, businesses development, a decrease in costs, an increase in people's income, an increase in private accumulation and investment. The pressure of the state budget revenues from taxes and fees would be reduced through the transfer of several economic fields from the state to the private (currently, the public sector is joining in many economic fields that could be performed by the private sector). At the same time, government spending would be reduced through restructuring the state apparatus, applying strong e-Government (Vietnam is doing but quite slowly). *Thirdly*, a combination of two solutions is that improving the index of economic freedom and applying preferential tax policies to attract foreign investment and expand import-export turnover. This in turn would stimulate GDP growth and an increase in tax revenue but not put pressure on increasing the excessive tax burden.

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