

Tax and Economic Growth in Thailand

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Abstract

This research seeks to find out whether or not tax collecting from capital, labor, and consumption, undermines economic growth. The statistics used in this study are quarterly data of Thailand from 1993-2015 derived from the National Statistics Bureau of Thailand, Fiscal Policy Office and Bank of Thailand. To analyze, the regression method is adopted. The results drawn from this study suggest that average tax burden on labor is negatively related with Thailand's economic growth whereas average tax burden on capital and consumption do not have a significant association with the growth rates.

Keywords: Capital Tax, Labor Tax, Consumption Tax, Economic Growth, Thailand

1. Introduction and Literature Reviews

Richard A. Musgrave regarded as the father of the field of public finance defined the role of government into three types; allocation, redistribution, and stabilization of the economy. Taxation is a major channel for the government to achieve the goal in redistributing from the rich to the poor. Besides, taxation is a major source of government revenue. However, it is believed that many taxes produce distortion i.e. people would be discouraged to work and/or invest if the government impose too high of a tax. Thus, tax collection would lead to inefficiency and therefore hinder economic growth of a nation. To be more specific, tax collecting from labor and capital is believed to undermine the economic growth while tax from consumption is more benign (Hyman, 2010: 596). A huge number of empirical studies have been done in order to test the impact of these particular taxes on economic growth (for example Tomljanovich (2004) Myles (2007) Arnold et al (2008) Dackehag and Hansson (2012)). However, the research on this topic using data of Thailand is very limited. This research, therefore, can give a discrete explanation for Thailand, a developing country differing in background and socioeconomic context from their industrialized cohorts.

2. Model and Data

From the previous section, taxations which may have relationship with economic growth can be found using multiple regression analysis. The models can be presented as follows.

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Model

$$GROWTH = \beta_0 + \beta_1 CAPITAL + \beta_2 LABOR + \beta_3 CONSUMPTION + \beta_4 EDU + \beta_5 TRADE + \beta_6 GROSS + \varepsilon$$

GROWTH is GDP growth of Thailand.

CAPITAL, LABOR, and CONSUMPTION are average tax burden on capital, labor, and consumption, respectively.

EDU is the percentage of federal budget on education in relation to Gross Domestic Product (GDP).

TRADE is trade openness.

GROSS is gross capital formation.

Data

The data used in the analysis is a quarterly data of Thailand from 1993-2015. The tax variables; CAPITAL, LABOR, and CONSUMPTION derived from Fiscal Policy Office of Thailand whereas other variables were collected from the National Statistics Bureau of Thailand and Bank of Thailand.

3. Regression results

The results derived from models in Table 1 show that economic growth in Thailand is not significantly driven by capital tax as well as consumption tax while labor tax is statistically and significantly related to the economic growth. That is, for example, for model 1, for every additional percentage of total labor tax revenue to GDP, one can expect growth rate to decrease by 2.11 percent. Next, the findings show that gross capital formation (GROSS) do statistically have impact on the growth rates as expected. However, the findings from all models show that government spending on education seems to have no significant impact on growth rates in Thailand.

Table 1 OLS regression results

Variable	Model 1	Model 2	Model 3	Model 4
D(GROSS1000)	0.04 (6.28)	0.04 (6.25)	0.04 (6.35)	0.04 (6.33)
D(EDU)	-0.81 (-0.67)	-1.15 (-0.95)	-0.81 (-0.69)	-0.99 (-0.79)
D(TRADE)	5.36 (1.40)	3.00 (0.81)	5.20 (1.42)	3.97 (1.03)
D(CAPITAL)	0.09 (0.50)	0.15 (0.82)	-	-
D(CON)	-0.18 (-0.45)	-	-	-0.33 (-0.82)
D(LABOR)	-2.11 (-2.21)	-	-2.17 (-2.33)	-
C	0.82	0.83	0.81	0.90

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	(4.83)	(4.83)	(4.85)	(5.19)
No. of Observation	90	90	90	94
R²	0.44	0.41	0.44	0.40
Durbin-Watson stat	2.43	2.52	2.45	2.49
Prob(F-statistic)	0.00	0.00	0.00	0.00
F-statistic	10.94	14.61	16.60	14.59

Note : The value in parentheses is t-statistics.

4. Conclusions

The results suggest that average tax burden on labor does undermine growth rates in Thailand. This implies that, for the case of Thailand, the government should consider this negative impact altogether with the positive effect of it on other aspects, for example, the redistribution function of government. The role of government is to balance these two objectives; allocation function and redistribution function, to the best interest of the society.

References

- Arnold, Brys, Johansson, Heady and Vartia, L. (2008). Tax and Economic Growth, Economic Department Working Paper No. 620. *ECO/WKP (2008)28*, July 11,2008.
- Bacarreza, Vazquez and Vulovic, V. (2013). Taxation and Economic Growth in Latin America. *IDB working paper series no. IDB-WP-431*.
- Dackehag, M. and Hansson, A. (2012). Taxation of Income and Economic Growth: An Empirical Analysis of 25 Rich OECD Countries. Lund University, Scania.
- Davidsson, M. (2012). Optimal Growth Taxation. *Research in World Economy (2012)*, 3(1), 35-44.
- Engen, E. and Skinner, J. (1996). Taxation and Economic Growth. *National Tax Journal*, 49(4), 617-642.
- Furceri, D. and Karras, G. Tax changes and economic growth: Empirical evidence for a panel of OECD countries. *Organisation for Economic Co-operation and Development*.
- Gale, W. and Samwick, A. (2016). Effects of Income Tax Changes on Economic Growth. Retrieved from <http://www.brookings.edu/research/papers/2014/09/09-effects-income-tax-changes-economic-growth-gale-samwick> (accessed July 17, 2016).
- Gale, Krupkin and Rueben, K. (2015). The Relationship Between Taxes and Growth at the State Level: New Evidence.
- Goss, Ernest Preston, and Joseph M. Phillips. (1994). "State Employment Growth: The Impact of Taxes and Economic Development Agency Spending." *Growth and Change (1994)*, 25(3), 287- 300.
- Holcombe, Randall, and Lacombe, D. (2004). "The Effect of State Income Taxation on Per Capita Income Growth." *Public Finance Review (2004)*, 32(3), 292-312.
- Hyman, D. (2010). Public Finance: A Contemporary Application of Theory to Policy. South-Western Cengage Learning: Ohio.
- Jaimovich, N. and Rebelo, S. (2015). Non-linear Effects of Taxation on Growth. Duke University, Northwestern University, NBER and CEPR.
- Jorgenson, D. and Yun, K. (2012). Taxation, Efficiency, and Economic Growth. Yonsei University, Seoul. and Harvard University, Cambridge.
- Macek, R. (2014). The Impact of Taxation on Economic Growth: Case Study of OECD Countries. *Review of Economic Perspectives (2014)*, 14(4), 309-328.

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- Masika, J. (2010). Direct Taxes and Economic Growth in Kenya. *Research Project paper submitted in partial fulfillment of the requirements for the award of the Degree of Master of Arts in Economics of the University of Nairobi*(2014).
- Myles, G. (2000). Taxation and Economic Growth. *Fiscal Studies* (2000), 21(1), 141–168.
- Myles, G. (2007). Economic Growth and the Role of Taxation. University of Exeter and Institute for Fiscal Studies.
- Ojong, Anthony and Arikpo, O. (2016). The Impact of Tax Revenue on Economic Growth: Evidence from Nigeria. *IOSR Journal of Economics and Finance (IOSR-JEF)* (2016), 7(1), 32-38
- Poulson, B. and Kaplan, J. (2008). State Income Taxes and Economic Growth. *Cato Journal* (2008), 28(1), 53-71.
- Reed, W. Robert. (2008). “The Robust Relationship between Taxes and U.S. State Income Growth.” *National Tax Journal* (2008), 61(1), 57-80.
- Reed, W. Robert, and Cynthia L. Rogers. (2004). “Tax Cuts and Employment Growth in New Jersey: Lessons from a Regional Analysis.” *Public Finance Review* (2004), 32(3), 269-291.
- Scarlett, H. (2011). Tax Policy and Economic Growth in Jamaica. *Research paper*, Bank of Jamaica.
- Shuai, Xiaobing, and Chmura, C. (2013). “The Effect of State Corporate Income Tax Rate Cuts on Job Creation.” *Business Economics* (2013), 48(3), 183-93.
- Stoilova, D. and Patonov, N. (2012). An Empirical evidence for the impact of taxation on economy growth in the European Union. *Book of Proceedings- Tourism and Management Studies International Conference Algarve 2012*(3), 1031-1039.
- Tomljanovich, M. (2004). “The Role of State Fiscal Policy in State Economic Growth.” *Contemporary Economic Policy* (2004), 22(3), 318-30.