TAX REVENUE AND ECONOMIC DEVELOPMENT IN SOUTHEAST ASIAN COUNTRIES

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The article uses secondary data sources of World Bank and quantitative analysis model to examine the impact of the economic development level of countries in Southeast Asia on tax revenue. Research results show that, from 2000 to now, the level of economic development of countries in this region has increased significantly, which is reflected in the increase in GDP per capita, through which the income taxes of these countries have also increased from 2000 to the present. Besides, the results of quantitative analysis through the regression model also show that GDP per capita has a positive impact on tax revenue in countries in this region.

Keywords: tax revenue; economic development level; Southeast Asia

Introduction

Tax is an income that plays an important role for every country, is a tool that contributes to macroeconomic adjustment.

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TAX REVENUE AND ECONOMIC DEVELOPMENT

Tax income can be extracted from many different sources such as from businesses and individuals, from import and export activities, natural resources, corporate registration tax etc thus many factors affect the tax revenue.

There are many empirical studies, focusing on the factors affecting tax revenue. For example, Velaj & Prendi (2014) examined how GDP, inflation, imports and unemployment affect tax revenues in Albania; Castro & Ramírez (2014), Gupta (2007), Andrejovská & Pulikova (2018) used panel data to analyze factors affecting tax revenue in different countries.

Most of the above empirical studies consider the factors affecting tax revenue, but there is no study examining the impact of economic development level on tax revenue, especially in East Asian countries.

**Theoretical basis**

Tax revenue is defined as the revenues collected from taxes on income and profits, social security contributions, taxes levied on goods and services, payroll taxes, taxes on the ownership and transfer of property, and other taxes (OECD, 2021). Total tax revenue as a percentage of GDP indicates the share of a country’s output that is collected by the government through taxes. It can be regarded as one measure of the degree to which the government controls the economy’s resources.

Tax revenue is typically the major source of government revenue. In national accounts, taxes are defined as compulsory, unrequited payments levied by general government - or in a few cases by the EU institutions (EUROStat, 2021).

Economic growth is the continuing increase in the volume of production in one country, ie. GDP growth, while economic development is not only quantitative but also qualitative changes that lead to better meet their needs (Panth, 2020).

Economic development is a process of changing towards perfection in all aspects of the economy including economy, society, environment and institutions in a given period of time (Ho & Phuong, 2015).

In 2003, the United Nations used three criteria to determine a country's level of economic development. These criteria include: income (GDP) per capita, economic structure, and human development index (HDI), with GDP per capita as the core.

Tax revenue is influenced by factors including the level of economic development. Therefore, the paper examines the impact of economic development on tax revenues in Southeast Asian countries, and specifically examines the impact of GDP per capita on tax revenues in Southeast Asian countries.

The higher the GDP per capita, the higher the demand for goods and services in general and public goods and services in particular; in addition, high GDP per capita increases the tax payment capacity of society. As a result, the amount of tax collected will increase (Fox & Gurley, 2005).

Castro & Ramírez (2014) assert that GDP per capita positively affects tax revenues in 34 OECD member countries for the period 2000–2011. Azka et al (2014) also confirmed that real income per capita is considered as one of the main factors determining tax revenue in Pakistan in the period 1980–2010; Aneyew (2016) stated that GDP per capita has a positive effect on tax revenues in Ethiopia for the period 1975-2013.
On that basis, we use a quantitative model to test the impact of GDP per capita on tax revenues in Southeast Asian countries according to Regression analysis.

**Research data and methods**

The study uses secondary data from 10 countries for the period from 2000 to 2020. The selected countries include Singapore, Brunei, Cambodia, Indonesia, Lao, Myanmar, Malaysia, Philippines, Thailand, and Vietnam.

**Results**

Since 2000, GDP per capita in Southeast Asian countries has increased remarkably. According to data published by World Bank, Singapore is the country with the highest real GDP per capita in the region and reaches 58,057 USD/person/year. Brunei is the second country in the region in terms of real GDP per capita and reaches 30,718 USD/person/year. Malaysia is the third country in the region in terms of real GDP per capita and reaches 10,716 USD/person/year. In particular, Myanmar is the country with the lowest real GDP per capita in the region, reaching only 1,218 USD/person/year. In general, real GDP per capita among countries in the region has a significant difference and there is a large gap between developed countries and less developed countries in the region (Fig. 1).

![Figure 1 - GDP per capita of countries in Southeast Asia in 2020 (USD/person/year)
(Source: WorldBank)](image)

In terms of tax revenue of countries in Southeast Asia, there are also significant differences.
This difference is due to the tax incentives of different countries. Cambodia, Vietnam, Thailand, Philippines, Singapore are countries with high tax revenue in the region. To compare tax revenues across countries we use tax revenues as a % of GDP.

Before the global financial crisis, Vietnam’s number was at a much higher level, fluctuating over 20%/GDP and reaching 20.47%/GDP in 2015, while this figure in other countries in the region ranged from less than 10 to more than 16% (specifically Cambodia 9.7%, Indonesia 12.59%, Laos 13.42%, Malaysia 14.3%, Philippines 12.96%, Singapore 12.82% and Thailand 15.14%).

This ratio is currently on a decreasing trend, from 20.47% to 18.62% in 2019, but is still high when compared to other countries in the region,

![Figure 2 - Tax and fee collection rates/GDP of Vietnam and some countries in the region in the period 2010-2019 (%).](Image)

(Source: calculation from Worldbank data)

Tax revenue to GDP of countries in Southeast Asia tends to decrease.

Because of the governments have taken measures to reduce tax rates and remove difficulties for businesses in response to the financial crisis and global economic recession. Therefore, the tax collected from this area is reduced compared to the proposed estimates.

With secondary data collected from the World Bank, we conduct a regression with the dependent variables - tax revenue and the independent variable - GDP per capita. The following results obtained (Tab. 1).

According to the results of the regression model, GDP per capita has a positive impact on tax revenue and affects 94.7% on tax revenue of countries in Southeast Asia (the p-value = 0.000 is smaller than α=0.01).

\[ Y = 67143 + 9.2 \times X \]

The coefficient 9.2 explains the elasticity of GDP related to tax revenues.

With an increase of 1 USD in tax revenues, GDP will grow by 9.2 USD. This result is also consistent with many previous studies such as (Fox & Gurley, 2005; Castro & Ramírez, 2014; Aneyew, 2016).
### Table 1 - Quantitative Analysis Results
(authors calculations)

#### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
<th>Durbin-Watson</th>
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<td>.947</td>
<td>.944</td>
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<td></td>
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<td></td>
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</tbody>
</table>

a. Predictors: (Constant), TAXREV
b. Dependent Variable: GDP

#### ANOVA

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<th>Model</th>
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<td>Residual</td>
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<tr>
<td></td>
<td>Total</td>
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<td>2747486938.195</td>
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</table>

a. Dependent Variable: GDP
b. Predictors: (Constant), TAXREV

#### Coefficients

<table>
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<tr>
<th>Model</th>
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<th>Sig.</th>
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<td>Std. Error</td>
<td>Beta</td>
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<tr>
<td></td>
<td>(Constant)</td>
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<td>2422.520</td>
<td>27.716</td>
<td>.000</td>
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<tr>
<td></td>
<td>TAXREV</td>
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<td>.000</td>
<td>.973</td>
<td>.000</td>
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</tbody>
</table>

a. Dependent Variable: GDP

#### Conclusion

Tax revenue in Southeast Asian countries tends to increase in the period 2000-2019 and varies from country to country. The difference is because tax incentives are set differently from country to country.

At the same time, GDP per capita among countries in the period 2000-2019 also increased significantly. Particularly in 2020, despite facing many difficulties and challenges of the Covid-19 epidemic situation, GDP per capita in these countries still maintains a stable growth rate.

Besides, the results of quantitative analysis show that GDP per capita has a positive impact on tax revenue.

From there, we propose some governance implications to improve.

Countries in the region continue to flexibly implement dual goals: both to prevent the covid-19 pandemic, to recover and develop their economies, and to stabilize and maintain the situation of domestic production.

Improve the quality of education and training; develop highly qualified human resources in order to enhance the technology application ability of human resources in production.

Create all favorable conditions to support enterprises to maintain production, enhance the quality of business support services. Focus on removing difficulties for production and business, develop markets, increase purchasing power, and promote consumption of goods.
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