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TÁC ĐỘNG CỦA THUẾ THU NHẬP CÁ NHÂN ĐẾN TĂNG TRƯỞNG KINH TẾ Ở BA NỀN KINH TẾ THỊ TRƯỜNG XÃ HỘI CHỦ NGHĨA TẠI CHÂU Á

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Tóm tắt

Nghiên cứu đánh giá tác động của thuế thu nhập cá nhân (PIT) đối với tăng trưởng kinh tế tại ba nền kinh tế thị trường xã hội chủ nghĩa ở châu Á – Việt Nam, Trung Quốc và Lào – trong giai đoạn 2000-2023. Sử dụng bộ dữ liệu bảng trong 24 năm, nghiên cứu áp dụng phương pháp hồi quy bình phương nhỏ nhất thông thường (OLS) và khắc phục đa cộng tuyến bằng phương pháp bình phương tổng quát khả thi (FGLS). Nghiên cứu cũng xem xét các biến kinh tế quan trọng khác như độ mở thương mại, tổng thu thuế, cung tiền M1, lạm phát và chi tiêu tiêu dùng của chính phủ trong mối quan hệ với tăng trưởng kinh tế. Kết quả nghiên cứu cho thấy có mối tương quan tiêu cực giữa PIT và tăng trưởng GDP, thuế thu nhập cá nhân cao làm giảm thu nhập khả dụng trong ba nước nói trên, từ đó hạn chế tiêu dùng và đầu tư. Kết quả này nhấn mạnh sự cần thiết của cải cách chính sách thuế, bao gồm việc tái cấu trúc các bậc thuế, đa dạng hóa nguồn thu thuế và tối ưu hóa chi tiêu chính phủ. Nghiên cứu đã góp phần làm rõ tác động

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của PIT đối với tăng trưởng kinh tế tại các nền kinh tế thị trường xã hội chủ nghĩa, nhấn mạnh tầm quan trọng của hệ thống thuế hiệu quả nhằm thúc đẩy tăng trưởng kinh tế bền vững.

Từ khóa: Thuế thu nhập cá nhân (PIT), tăng trưởng kinh tế, nền kinh tế thị trường xã hội chủ nghĩa

EVALUATING THE INFLUENCE OF PERSONAL INCOME TAX ON ECONOMIC GROWTH: ANALYSIS OF THREE ASIAN SOCIALIST MARKET ECONOMIES

Abstract

This study examines the impact of personal income tax (PIT) on economic growth in three Asian socialist market economies - Vietnam, China, and Laos - over the period from 2000 to 2023. Using a panel dataset covering 24 years, the study applies the Ordinary Least Squares (OLS) regression methodology while implementing the Feasible Generalized Least Squares (FGLS) to address multicollinearity. The analysis also considers key economic variables, including trade openness, total tax revenue, money supply M1, inflation, and government consumption expenditure in the relationship with economic growth. The findings reveal a significantly negative correlation between PIT and GDP growth, suggesting that higher PIT reduces disposable income in three countries, thereby constraining consumption and investment. These results underscore the need for tax policy reforms, advocating for restructuring tax brackets, diversifying tax sources, and optimizing government spending. The research highlights the implications of PIT policy for economic growth in socialist market economies, emphasizing the necessity of an efficient taxation system to foster long-term economic sustainability.

Keywords: Personal income tax (PIT), economic growth, socialist market economies.

1. Introduction

Taxation serves as the primary revenue source for governments, playing a vital role in shaping economic trends and funding essential public services (Javed et al., 2018). Personal income tax (PIT) is a critical component of fiscal policy and overall taxation (OECD, n.d.). In China, Vietnam, and Laos - three of the few remaining communist regimes in the world, personal income tax structures vary in terms of tax rates, exemptions, and compliance levels.

Economic growth, measured by Gross Domestic Product (GDP), is a key indicator of a nation's economic performance (Reserve Bank of Australia, n.d.). Among global regions, Asia is an economic powerhouse, with several member states experiencing rapid development. Notably, China, Vietnam, and Laos have consistently been among the fastest-growing economies, contributing to significant improvements in social and material well-being despite their structural differences from traditional capitalist economies (IMF, 2019). These nations follow a 'socialist market economy' model, combining state-directed policies with market mechanisms (Hansen et al., 2020). Their rapid ascent - among the top ten fastest climbers upwards in the UN Human Development Index from 1990 to 2015 - further underscores their economic progress (UNDP, 2016).

Studies, including those by Nguyen, Onnis, and Rossi (2021), highlight personal income tax's substantial influence on macroeconomic indicators such as output, consumption, and investment. Given the evolving fiscal policies, particularly taxation, in these three nations, further examination is necessary to understand their impact on economic development in socialist market economies.

This study is conducted to evaluate the impact of personal income tax on economic growth within the context of Vietnam, China, and Laos from 2000 to 2023 applying quantitative methodology. By analyzing the relationship between PIT and macroeconomic performance, this research aims to provide insights into optimal taxation policies for socialist market economies.

To achieve these objectives, the study addresses three key research questions:

(1) To what extent does PIT influence economic growth in socialist market economies?

(2) What other factors may affect economic growth apart from PIT?

(3) What recommendations can be proposed to promote economic growth in socialist market economies?

The remainder of this paper is structured as follows: Section 2 presents the theoretical framework on economic growth and personal income tax. Section 3 provides a literature review on the relationship between taxation and economic growth, with a particular focus on PIT. Section 4 outlines the data and methodology employed in this study. Sections 5 and 6 present and discuss the empirical findings, respectively. Section 7 offers policy recommendations for socialist market economies. Finally, Sections 8 present the study's conclusion, in which research limitations and suggestions for future research are also meticulously discussed.

2. Theoretical framework

2.1 Theoretical framework on personal income tax

According to OECD (n.d), personal income tax (PIT) is the tax imposed on the net income (gross income minus allowable tax reliefs) and capital gains of individuals. As a direct tax, PIT is paid directly to the government and cannot be transferred to others, unlike indirect taxes, which are typically passed on or shifted-to another individual or group through higher prices on goods or services (Internal Revenue Service, n.d.).

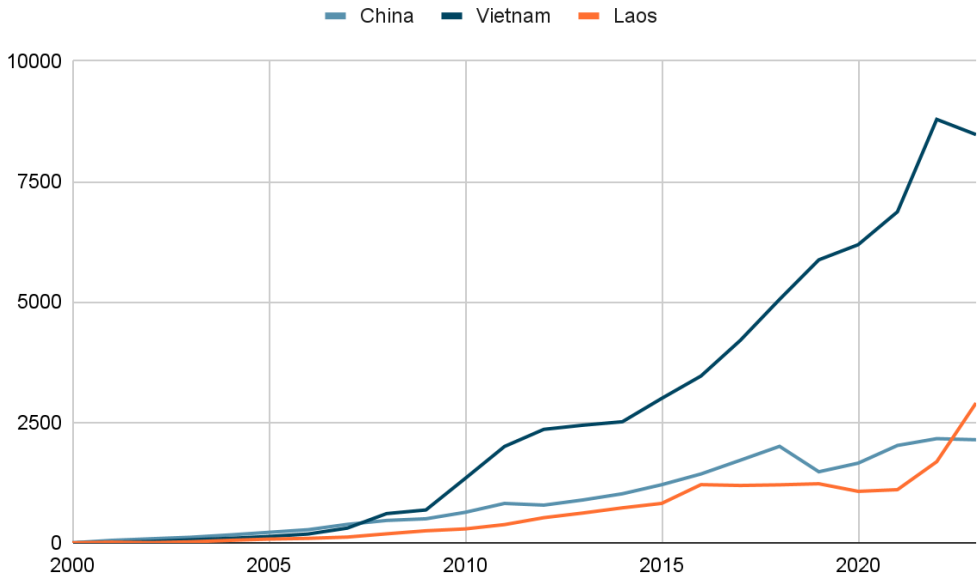

Chart 1. PIT Growth Rates (%) of China, Vietnam, and Laos from 2000 to 2023

Source: National Bureau of Statistics of China (2024), Trading Economics (n.d.), Bank of the Laos PDR (2023)

Since personal income tax is a crucial component of the entire tax system in Asia, it is essential to examine the fundamental theories surrounding it. Two significant theories that contribute to the analysis of three socialist market economies, namely Vietnam, China and Laos are the Optimal Taxation Theory and the Elasticity of Taxable Income (ETI) Theory.

Most importantly, in *An Exploration in the Theory of Optimal Income Taxation,* Mirrlees (1971) provides a theoretical model of organizing tax policy for the most social welfare and minimum economic distortion. The theory targets attaining equity and efficiency in tax design. A work of Mankiw, Weinzierl, and Yagan (2009) describes the application of optimal taxation theory to reality, illustrating policymakers' trade-offs in setting tax rates. Nevertheless, one of the greatest assumptions of this theory is that it is premised on complex mathematization as well as on behavior assumptions from taxpayers that need not necessarily comply with economic conditions as they unfold in real-time, particularly within the transitional economies of China and Vietnam.

Meanwhile, the Elasticity of Taxable Income (ETI) Theory examines how taxpayers adjust their reporting of income and economic activities in response to changes in tax rates. Saez, Slemrod, and Giertz (2012) provide a review of ETI, taking into consideration its implications on tax policy design. It is particularly relevant to Vietnam, China and Laos as it shows how, in theory, changes in individual income tax rates can impact labor supply, investment decisions, and economic growth, respectively. In particular, if taxpayers in the two countries are very elastic, substantial tax rate increases would lead to substantial reductions in taxable income, consequently impacting government revenues as well as economic activity. But one key weakness of ETI theory is that it typically cannot separate between genuine economic response

(e.g., lower supply of labor) and tax-evading or shifting response (e.g., evading or shifting income), hence it is unable to ascertain the actual impact of tax policy on economic growth.

2.2 Theoretical framework on economic growth

Economic growth, defined as the sustained increase in a nation's output of goods and services, is typically measured by real GDP growth. It refers to the long-term expansion of the productive capacity of an economy, driven by increases in capital, labor, and technological innovation (Barro, 1996).

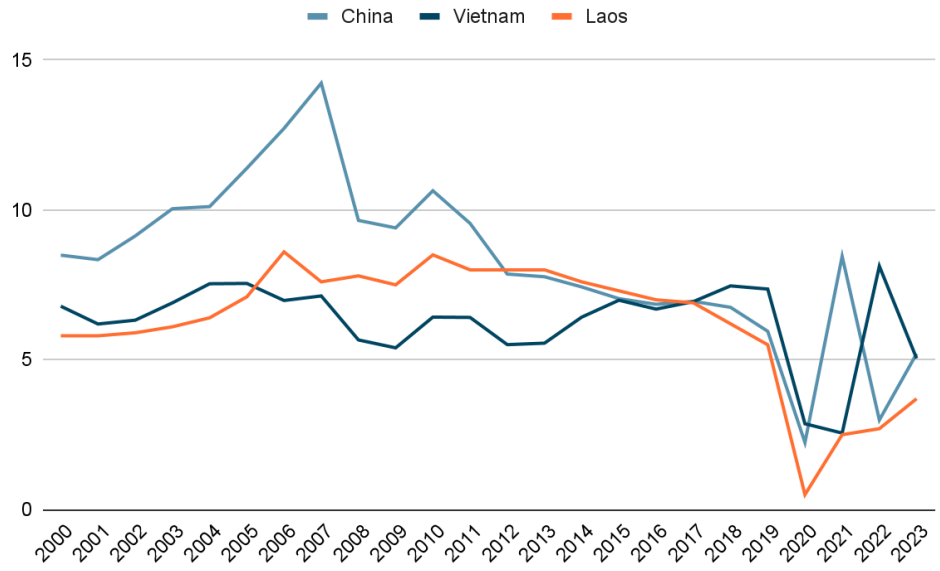

Chart 2. GDP Growth Rates (%) of China, Vietnam, and Laos from 2000 to 2023

Source: Statista (2023), World Bank (n.d.)

Economic growth has consistently been a fundamental topic in economic research. Key theories, such as the neoclassical growth model by Solow and Swan (1950s) and the endogenous growth theories by Romer and Lucas (1980s), are frequently used to analyze economic growth.

The Solow-Swan model explains GDP growth through capital (K) and labor (L), assuming constant returns to scale and diminishing productivity (Solow, 1956; Swan, 1956). Capital accumulation plays a key role in driving economic growth, yet it will eventually reach a limit without external factors. Therefore, exogenous growth is adopted, where technological progress makes labor and capital more productive over time. Nevertheless, treating technological progress as an external factor means that growth could not be directly affected by policy or internal actions. Exogenous growth, therefore, does not explain how factors like innovation, education, or investment in technology drives progress.

As a result, endogenous growth emerged to supply the missing explanation of long-run growth (Öztürkler and Bozgeyik, 2014), which emphasizes that economic growth can be driven by internal factors, such as investment in human capital and research, where policymakers can influence. These models, which allow for sustained growth and explain its determinants, are

referred to as having endogenous growth (Myles, 2000). According to Romer (1990), the driver of sustained economic growth is technological change. Rather than being an external factor, Romer's model makes it endogenous, meaning that innovation and ideas are produced within the economy by individuals and firms. Meanwhile, Lucas (1988) assumed that investment in human capital rather than physical capital creates spillover effects that help drive technological progress. A general feature of these models is the presence of constant or increasing returns in the factors that can be accumulated (Barro, 1990).

Regarding the relationship between taxation and economic growth, the Solow model with a constant saving rate leaves little role for tax policy to affect the rate of growth. The saving rate could be made variable but there would still be a limited number of economic choices that can be taxed in the Solow framework (Myles, 2009). On the other hand, the endogenous growth model provides a framework in which the relationship between taxation and economic growth becomes inherently evident (Myles, 2009). Endogenous growth theory, largely shaped by the foundational works of Romer (1990) and Lucas (1988) focuses on human capital as the key driver of economic growth in the long run. As such, all kinds of taxation which affect not only the existing stock but also the accumulation of human capital play an important role in determining the growth rate of an economy (Zagler and Durnecker, 2003). Specifically, personal income taxation (PIT) can reduce returns on education, which, in turn, discourages the accumulation of human capital (Myles, 2009).

3. Literature review

3.1 Previous research

Overall Tax and Economic Growth

The relationship between taxation and economic growth has been widely studied, with findings varying across contexts. Romer and Romer (2010) provided a foundational study showing that tax increases significantly reduce economic output, demonstrating strong and robust negative effects. Building on this, Furceri and Karras (2010) concluded that a 1% increase in the tax-to-GDP ratio lowers real GDP per capita by 0.5% to 1%, while Cloyne et al. (2018) found that tax increases can reduce GDP by more than twice the amount of revenue collected within two years. Gunter et al. (2019) found that higher initial tax rates intensified the negative effects, while Mertens and Olea (2018) showed that marginal tax cuts increased GDP. Zidar (2015) further noted that tax cuts for lower-income groups promoted growth, whereas those for high earners had little effect.

On the other hand, Alinaghi and Reed (2020) argued that the relationship between taxation and growth depended on broader fiscal policies, as tax increases could either hinder or stimulate growth depending on government spending and deficit structures.

In the context of three Asian socialist economies (China, Vietnam, and Lao), the relationship between taxation and economic growth also showed mixed results, and to our best knowledge, no existing research has explored this relationship in the case of Laos and the three

countries in general. Gordon and Li (2005) concluded that taxation had a positive impact on China's economic growth, though the effects were multifaceted and required careful policy balancing. Similarly, studies on Vietnam presented mixed findings. Nguyen et al. (2023) and Nguyen (2019) found a positive link between state budget revenue and economic growth, while Dinh and Ha (2020) identified a long-term positive relationship, with 19% as the optimal tax-to-GDP ratio.

Personal Income Tax and Economic Growth

In general, most studies suggest that increases in personal income tax tends to hinder economic growth. Fang (2024) argues that cutting income tax has a negative effect, as tax cuts stimulate consumption, investment, and employment. Similarly, Dackehag and Hansson (2012), analyzing data from 25 OECD countries between 1975 and 2010, found that personal income tax negatively affects economic growth, though the extent of this impact varies across different models. In the U.S., Zidar (2015) observed that personal income tax reductions benefited lower-income groups, significantly boosting employment and overall economic growth. However, tax cuts for the highest-income earners had little to no impact.

On the contrary, Khondker et al. (2024) found that increasing personal income tax revenue by 2% could boost economic growth by 0.5%. This finding contrasts with most existing literature, which suggests a negative relationship between personal income tax and economic growth.

Meanwhile, Gale and Samwick (2016) emphasized that the effect of income tax cuts remains uncertain and depends on how they are financed - those that increase deficits tend to reduce long-term national income, while those offset by spending reductions may have positive effects.

Despite the extensive research on taxation, studies specifically examining personal income tax's impact on economic growth in these transitional socialist economies remain scarce, making it challenging to draw firm conclusions. Nguyen (2019), examining Vietnam, found no clear evidence that personal income tax directly influences growth, despite taxation overall contributing positively to the country's economy. In China, research suggests a long-run positive relationship between personal income tax and economic growth. Amin et al. (2018) and Kaewsopa et al. (2018) both concluded that personal income tax had a significant positive impact on China's economic growth during their study period (1999 - 2018). As for Laos, relevant empirical research on this topic appears to be unavailable.

3.2 Research Gap

While taxation and economic growth have been widely studied, research on personal income tax remains limited, with inconsistent and less conclusive findings. This inconsistency indicates that the relationship between personal income tax and economic performance may be more complex and context-dependent than previously assumed.

In the specific contexts of Vietnam, China and Laos, the research on this topic is even more limited, both individually and in general across the three countries. Given that the three

economies share many economic similarities yet have distinct tax systems and policy frameworks, a comprehensive analysis could offer valuable insights into how personal income tax functions in socialist market economies.

By addressing these gaps, the present research will investigate the impact of personal income tax on economic growth of China, Vietnam, and Laos, which aims to contribute to a more comprehensive understanding of taxation's role in shaping economic development in socialist market economies.

4. Methodology

4.1 Research methodology

The study adopted a quantitative research methodology, utilizing a panel dataset from three Asian socialist market economies - Vietnam, China, and Laos - covering 24 years from 2000 to 2023. The initial analysis employed the ordinary least squares (OLS) regression method to examine the relationship between the independent and dependent variables. Subsequently, the study analyzes three econometric models: POLS, FEM, and REM to determine the most suitable approach based on the presence and correlation of the unobserved component c_i. The Breusch-Pagan LM test determines whether FEM is preferable to POLS or not, while the Hausman test decides between FEM and REM. Multicollinearity is assessed using VIF, and if detected, FGLS is applied to address it.

4.2 Research model

Based on theoretical framework and literature review, the research develops the following model to investigate the impact of personal income tax on economic growth:

$$\text{GDP} = \beta_0 + \beta_1 lnPIT + \beta_2 lnTO + \beta_3 lnTT + \beta_4 lnM1 + \beta_5 Infl + \beta_6 GCE + \varepsilon_{it}$$

In which:

β_0: intercept of the regression model

$\beta_1 - \beta_6$: regression coefficients of the independent variables

GDP (Dependent variable): GDP growth, measured by annual percentage growth rate of GDP at market prices based on constant local currency (World Bank, n.d.)

$lnPIT$: Natural logarithm of personal income tax revenue, indicating the total revenue collected from taxes levied on an individual's income (OECD, n.d.)

$lnTO$: Natural logarithm of trade openness, defined as the ratio of total exports and imports of goods and services over GDP (Haddad et al., 2012)

$lnTT$: Natural logarithm of total tax revenue, indicating 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, n.d.)

$lnM1$: Natural logarithm of money supply M1 (narrow money), measured as the sum of currency in calculation plus sight deposits held by domestic non-banks (OECD, n.d.)

$Infl$: Inflation rate, measured by the percentage change in the consumer price index (CPI) over a certain period (Oner, n.d.)

GCE: Government consumption expenditure, indicating the current expenditure by general government on services to the community such as defense, education, public order and safety (Australian Bureau of Statistics, 2021)

ε_{it}: The error term for country i in year t. This represents any omitted variables or factors that influence the dependent variable but are not included in the model.

4.3 Data and data source

The data used in this study were obtained from secondary sources covering the period from 2000 to 2023. These sources comprised official reports, statistical yearbooks, databases, and published documents. The collected data underwent a systematic process of compilation and organization, resulting in a comprehensive dataset.

Table 1. Variables

Variable	Definition	Unit	Expected signs	Sources
GDP	GDP growth	%		World Bank
lnPIT	Personal income tax revenue	million USD	-	Annual Economic Reports
lnTO	Trade openness	%	+	World Bank
lnTT	Tax revenue	million USD	+	Statistical Yearbooks
lnM1	Money supply	million USD	+	IMF, Annual Economic Report
Infl	Inflation rate	%	-	Statista
GCE	Government consumption expenditure	million USD	-	World Bank, Annual Economic Reports

Source: Authors' compilation

5. Empirical results

5.1 Descriptive statistics of data

The study employs data from three countries over a 24-year period, resulting in a standardized sample of 72 observations for each variable. A statistical summary of the variables used in the model is provided in the following table:

Table 2. Descriptive statistics results

Variable	Obs	Mean	Std. Dev.	Min	Max
GDP	72	6.955092	2.118409	2.24	14.23
lnPIT	72	8.24507	2.398236	4.341421	12.25937
lnTO	72	4.567137	.5674486	3.54818	5.228261
lnTT	72	10.8054	2.290187	7.549246	14.75572
lnM1	72	10.58834	3.329876	6.457852	16.07936
Infl	72	4.55375	4.898291	-1.71	23.12
GCE	72	622037	1105791	2940.93	3882035

Source: Authors' compilation

After analyzing the variables, a correlation matrix was constructed to examine the relationships between the independent variables in the regression model. The correlation coefficient ranges from -1 (a perfect negative relationship) to +1 (a perfect positive relationship), while a value of 0 means no linear relationship.

Table 3. Variable correlation matrix

	GDP	lnPIT	lnTO	lnTT	lnM1	Infl	GCE
DP	1.0000						
lnPIT	0.2142	1.0000					
lnTO	-0.3330	-0.7247	1.0000				
lnTT	0.2769	0.9657	-0.8556	1.0000			
lnM1	0.3273	0.9386	-0.8914	0.9864	1.0000		
Infl	-0.1261	-0.3095	0.3467	-0.3084	-0.3745	1.0000	
GCE	-0.0376	0.7448	-0.8088	0.8350	0.8159	-0.2793	1.0000

Source: Authors' compilation

5.2 Estimated results

5.2.1 Model selection

Based on the regression model constructed above, the authors conducted an OLS regression analysis, with the results presented in the table below.

Table 4. OLS Model

GDP	Coefficient	Std. err.	t	P > | t |	95% Conf. Interval	
lnPIT	-1.642131	.4758002	-3.45	0.001	-2.592369	-.6918921
lnTO	.1097188	1.086328	0.10	0.920	-2.059827	2.279265
lnTT	2.349569	.937072	2.51	0.015	.4781068	4.221031
lnM1	.3741919	.4693181	0.80	0.428	-.563101	1.311485
Infl	-.0241549	.0452486	-0.53	0.595	-.1145226	.0662127
GCE	-2.39e-06	3.50e-07	-6.81	0.000	-3.09e-06	-1.69e-06
_cons	-7.762228	7.782201	-1.00	0.322	-23.30436	7.779901

Source: Authors' compilation

The authors analyzed three econometric models to determine the most suitable one: the Fixed Effects Model (FEM), the Pooled Ordinary Least Squares (POLS), and the Random Effects Model (REM). The model selection depends on the presence and characteristics of the unobserved and time-invariant component c_i. POLS is appropriate if c_i does not exist. If c_i is present but uncorrelated with the independent variables, REM is the preferred model. However, if c_i is correlated with any independent variable, FEM is the most appropriate choice (Dong, 2013).

First, the research team examines whether the dataset contains an unobserved and time-invariant component c_i. Then, the Breusch-Pagan LM test is applied with the following hypotheses:

- **H0:** The model does not contain the component c_i
- **H1:** The model contains the component c_i

Breusch-Pagan test	
F test that all u_i=0; F(2,63) = 3,46	Prob > F = 0.0374

Source: Authors' compilation

With a p-value = 0.0374 < 0.05, the result implies that at a 5% significance level, the null hypothesis (H0) is rejected in favor of the alternative hypothesis (H1). Thus, it can be concluded that the model contains the component c_i, confirming that between POLS and FEM, ***FEM is more appropriate at the 5% significance level.***

The research team then proceeds to choose between FEM and REM using the Hausman test, with the results presented in the table below.

Hausman FEM REM
chi2(5) = (b-B) ' [(V_b-V_B)^(-1)](b-B)
= 6.94
Prob > chi2 = 0.2248

Source: Authors' compilation

With $\chi 2 = 6,94$ and p-value = 0.2248, which is greater than the 5% significance level, there is insufficient evidence to reject the null hypothesis (H0). This suggests that the unobserved and time-invariant component c_i is independent of the other independent variables in the regression model.

As a result, at a 5% significance level (α=5 %), the authors conclude that ***REM is more suitable than FEM.***

5.2.2 Diagnostic test

After obtaining the initial OLS regression results, the research team conducted diagnostic tests to identify potential model deficiencies. To assess multicollinearity, VIF was applied, with the results presented in the table below.

Table 5. VIF test

Variable	VIF	1/VIF
lnTT	145.61	0.006868
lnM1	77.21	0.012951
lnPIT	41.17	0.024292
lnTO	12.01	0.083239

Variable	VIF	1/VIF
GCE	4.74	0.210930
Infl	1.55	0.643874
Mean VIF	47.05	

Source: Authors' compilation

The table indicates a VIF value of 47.05, which exceeds the threshold of 10, suggesting the presence of multicollinearity in the model.

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

F(1, 2) = 2.216

Prob > F = 0.2750

Source: Authors' compilation

With a p-value of 0.2750 exceeding the 5% significance level, it can be concluded that the model does not suffer from autocorrelation.

Breusch and Pagan Lagrangian multiplier test for random effects

Test: Var (u) = 0

chibar2(01) = 0.00

Prob > chibar2 = 1.000

Source: Authors' compilation

The heteroskedasticity test results show a p-value of 1.0000, which is greater than the 5% significance level. Therefore, it can be concluded that the model does not suffer from heteroskedasticity.

5.2.3 Regression analysis

To address the issue of multicollinearity in the model, the research team applied the FGLS regression method. The results of the FGLS regression analysis are presented in the table below.

Table 6. FGLS Regression Analysis

GDP	Coefficient	Std. err.	t	P > | t |	95% Conf. Interval	
lnPIT	-1.626227	.4923616	-3.30	0.001	-2.591238	-.661216
lnTO	-.3494929	1.119952	-0.31	0.755	-2.544558	1.845572
lnTT	2.549897	.4286272	2.82	0.005	.7771587	4.322636
lnM1	.1482141	.5233623	0.35	0.730	-.6918797	.9883079
Infl	-.0326254	.0400317	-0.81	0.415	-.1110862	0458353
GCE	-2.42e-06	4.17e-07	-5.79	0.000	-3.24e-06	-1.60e-06
_cons	-5.532241	8.108662	-0.68	0.495	-21.42493	10.36045

Source: Authors' compilation

The results show that only personal income tax, tax revenue and government consumption expenditure have an impact on the dependent variable (GDP). Specifically, personal income tax (PIT) and government consumption expenditure (GCE) are estimated to have a negative influence on the dependent variable GDP. If PIT increases by 1%, GDP will decrease by 1.626227%. If GCE increases by 1%, GDP will decrease by 2.42e-08%. In stark contrast, tax revenue (TT) is estimated to have a positive impact on the dependent variable GDP. If TT increases by 1%, GDP will increase by 2.549897%.

6. Discussion

The study reveals that there is a significantly negative relationship between personal income tax and economic growth in three Asian socialist market economies namely Vietnam, China and Laos; specifically, if PIT increases by 1%, GDP will decrease by 1.626227%. This indicates a strong negative elasticity and implies that GDP growth is highly sensitive to changes in PIT levels. The result is consistent with our expectation from the beginning and is on the contrary with the findings of Amin et al. (2018) and Kaewsopa et al. (2018), who both concluded that personal income tax had a significant positive impact on China's economic growth during their study period (1999 - 2018). This opposition may stem from variations in the study periods and the selection of independent variables included in the model. Additionally, the divergence in findings could be attributed to methodological differences, as prior studies relied on time series data to compare two countries, whereas this study employs a panel dataset to derive a comprehensive conclusion for all three countries. Concerning Vietnam, Nguyen (2019) found no clear evidence that personal income tax directly influences growth, despite taxation overall contributing positively to the country's economy. Similarly, there has

been no research investigating the impact of personal income tax on economic growth of Laos so far. Therefore, this study has been the first paper successfully evaluating the relationship between personal income tax and economic growth of Vietnam and Laos.

The negative relationship between personal income tax and economic growth can be explained from the contradiction between personal income tax and disposable income. An increase in individual income tax lowers disposable income, leaving people with less money after taxes. As a result, their reduced purchasing power may lead to a decline in consumer spending, which can negatively impact businesses and ultimately influence GDP (Fang, 2024). Moreover, high personal income taxes lead to increased labor costs. This discourages corporate investment decisions, which is crucial for innovation and economic expansion (Jacob and Vossebürger, 2022). In non-competitive labor markets, a higher tax burden can lead to a decline in employment because it makes the option of remaining unemployed more appealing (Bovenberg, 2003), which adversely affects the economy's output. Another possible explanation for this negative relationship between personal income tax and economic growth is that in these socialist market economies, the state plays a significant role in resource allocation and economic regulation. However, high personal income taxes can discourage private sector growth, which has been a key driver of innovation and economic expansion in recent years. If the private sector loses momentum, the economy may become overly reliant on state-owned enterprises, which are often less efficient in generating value.

The paper also indicates that government consumption expenditure (GCE) exerts a detrimental effect on economic growth. This is consistent with the study by Lahirushan and Gunasekara (2015), which represents a significant positive impact of government expenditure on economic growth in the Asian region. One possible explanation is that increased government consumption expenditure reduces the resources available for real investment, thereby hampering economic expansion and slows down growth (Nguyen et al., 2019).

Finally, the study reveals that there is a positive relationship between tax revenue and economic growth, aligning with the finding of Nguyen (2019). Higher tax revenue supports economic growth by funding infrastructure, education, and healthcare, which enhance productivity and improve the business environment. It also funds public services and social programs, reducing poverty and stimulating consumer spending.

7. Recommendation

To enhance fiscal sustainability while minimizing negative impacts on economic growth, tax policy should focus on optimizing the personal income tax system rather than simply decreasing tax rates.

Restructure tax brackets

The personal income tax (PIT) systems in Vietnam (7 brackets), China (7 brackets), and Laos (6 brackets) are overly complex, making even small salary increases result in

disproportionately higher tax burdens. While this structure aims to accommodate a developing economy, the narrow progression between brackets still creates inefficiencies.

As suggested by the OECD, simplifying the tax structure by reducing the number of brackets to 3-4 - following successful examples from South Korea and Japan - would enhance transparency, reduce compliance costs, and ensure smoother tax progression.

Revising Tax Rates to Balance Growth and Revenue

Adjusting tax rates is crucial for balancing economic growth with fiscal sustainability. While tax cuts can stimulate consumption and investment, excessive reductions may undermine government revenue, necessitating a carefully calibrated approach. This is particularly urgent in Vietnam, where the lack of inflation adjustments in the tax schedule since 2014 has negatively impacted lower-income groups, underscoring the need for reform (OECD, 2023). To address this, tax rates should be adjusted to better distribute the tax burden. Moderate reductions in tax rates for low and middle-income earners would provide financial relief, while a slight increase in the top tax rate for high-income individuals could help offset revenue losses.

In Laos, according to Worldwide Tax Summaries, the current tax system ranges from 0% to 25%, with the top rate relatively low compared to regional and global standards. A gradual increase in the highest tax rate would strengthen revenue collection while maintaining competitiveness. Since Laos has a less developed economy than Vietnam and China, its rates can remain slightly lower but should still be adjusted for fiscal sustainability.

Meanwhile, China's progressive tax structure, with rates from 3% to 45%, already aligns well with income distribution (Santander Trade, 2025). Given this, reforms should focus more on refining tax brackets rather than altering rates.

Increasing Personal and Dependent Exemptions

Raising personal and dependent exemptions can effectively ease the tax burden on low- and middle-income households. In Vietnam, the current personal exemption is VND 11 million per month and the dependent exemption is VND 4.4 million per dependent (Standing Committee of the National Assembly, Resolution No. 954/2020/UBTVQH14, 2020). These exemptions currently amount to approximately 0.90 times Vietnam’s GDP per capita, calculated using data from Resolution and the IMF. suggesting that they are relatively generous compared to average income levels. Given this, any adjustments should be carefully evaluated based on factors such as inflation, cost of living, and overall fiscal impact to ensure a balanced approach. While moderate adjustments to these thresholds could further boost disposable income and stimulate domestic consumption, the urgency for major changes remains lower.

In China, the personal exemption is set at CNY 5,000 per month, corresponding to about 0.64 times its GDP per capita, as calculated using PwC and IMF data. Although this indicates some room for adjustment, especially to account for rising living costs in urban areas, any increases should be carefully calibrated to maintain a balanced tax system.

By contrast, Laos has a significantly lower exemption-to-GDP ratio of only 0.37 times, derived from PwC and IMF estimates. This indicates that the current thresholds in Laos are

disproportionately low relative to the average income level. To enhance tax fairness, Laos should consider increasing its personal and dependent exemptions to provide greater support for low-income earners.

Strengthen alternative tax sources

To create a more balanced and sustainable tax system, governments should reduce their reliance on personal income tax and focus on other tax sources, such as VAT, property taxes, and taxes on natural resource rents. VAT and property taxes are less mobile tax bases, making them less distortive and more beneficial for economic growth. Increasing these taxes could help fund reductions in taxes on employment and investments in human capital (OECD, 2018).

Optimizing government spending

While personal income tax reform is crucial, it must be complemented by effective government spending. Optimizing public expenditures - especially in infrastructure, education, and healthcare - will enhance productivity and long-term growth. It is also important to ensure that government spending remains at a level in line with the size of the economy (as a percentage of GDP) to avoid crowding out private investment.

Finally, a comprehensive tax reform strategy is essential for ensuring sustainable economic growth in Vietnam, Laos, and China. By restructuring tax brackets, governments can create a more efficient personal income tax system. At the same time, shifting reliance toward broader tax sources, such as VAT and property taxes, will help stabilize fiscal revenues. Combined with effective public spending and trade policies, these reforms will foster long-term economic resilience and inclusive growth.

8. Conclusion

The paper presents a detailed quantitative analysis of how personal income tax impacts economic growth, with data extracted from three socialist market economies, namely Vietnam, China and Laos over a 24-year period from 1999 to 2023. The analysis revealed that personal income tax exerts a negative impact on GDP growth. This negative relationship can be attributed to personal income tax's effect on disposable income and consumption. Higher PIT reduces the amount of income available for households to spend, which can lead to decreased consumer spending - a significant driver of economic growth.

Besides, the study offers insights into the relationship between government consumption expenditure, tax revenue and economic growth. While government consumption expenditure has a negative impact on economic growth, the opposite is true for tax revenue. The negative relationship between government consumption expenditure and GDP growth may indicate inefficiencies in government spending. On the other hand, the positive correlation between tax revenue and GDP suggests that when tax revenues are effectively utilized for public investment and infrastructure development, they can contribute positively to economic growth. The study also examines the impact of money supply (M1), trade openness, and inflation rate on economic growth. Nevertheless, they show statistically insignificant correlations to GDP. This lack of

significance may result from the unique economic structures and policies within these socialist economies, where state control and planning play a more prominent role compared to market-driven economies.

The findings highlight the need for improving tax policy, as personal income tax negatively impacts GDP growth in all three countries. Specific recommendations are provided for China, Vietnam, and Laos, emphasizing the need for tax reforms, reduced income tax rates, and structural adjustments to foster a more growth-friendly fiscal environment.

Nevertheless, this study is subject to certain limitations. The analysis is constrained by time period, data availability and its focus on only three countries, which may restrict the broader applicability of the findings. The chosen variables may not account for all influencing factors, highlighting the need for future research to explore additional variables that have a significant influence on the dependent variable. Moreover, the study's reliance on OLS and FGLS methods may have limitations. Compared to more advanced quantitative methods such as Generalized Method of Moments (GMM), OLS and FGLS may not fully account for endogeneity issues. As a result, the findings may be subject to certain biases and efficiency concerns. Future research could enhance the robustness of the analysis by expanding the geographical scope to include additional countries or incorporating a more comprehensive set of variables and methodology that influence economic growth.

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