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WILL HIGHER WAGES BENEFIT THE ECONOMY? THE EFFECTS OF LABOR INCOME SHARE ON MACROECONOMIC VARIABLES IN MALAYSIA

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ABSTRACT

In Malaysia, household expenditure drives about 60% of the economy. This suggests that increasing aggregate demand is crucial for economic growth. As demand is a function of labor income, raising the latter puts more money into the pockets of consumers, which eventually facilitates feedback effects on the goods and factor markets and potentially triggers macroeconomic structural changes. Having these effects in hand raises a concern on the extent to which the increase in labor income could influence selected macroeconomic variables, such as shadow economy, female labor force participation rate, technology, labor productivity, foreign workers, and skilled-related underemployment. These are some structural issues pointed out in the Twelfth Malaysia Plan (2021-2025). In the pursuit of achieving targets to increase labor income to GDP from 37.1% in 2020 to 40% by 2025, this paper attempts to examine the impact of labor income on the selected macroeconomic variables using annual data from 2005 to 2021 and employing the Ordinary Least Square (OLS) with robust standard error due to Newey-West procedure. Our results indicate that the labor income could boost female labor force participation rate, labor productivity, and technological innovation. Meanwhile, it is also found that increase in the labor income could dampen the prevalence of shadow economy, skilled-related underemployment, and dependency on foreign workers at various skill levels. Therefore, a policy

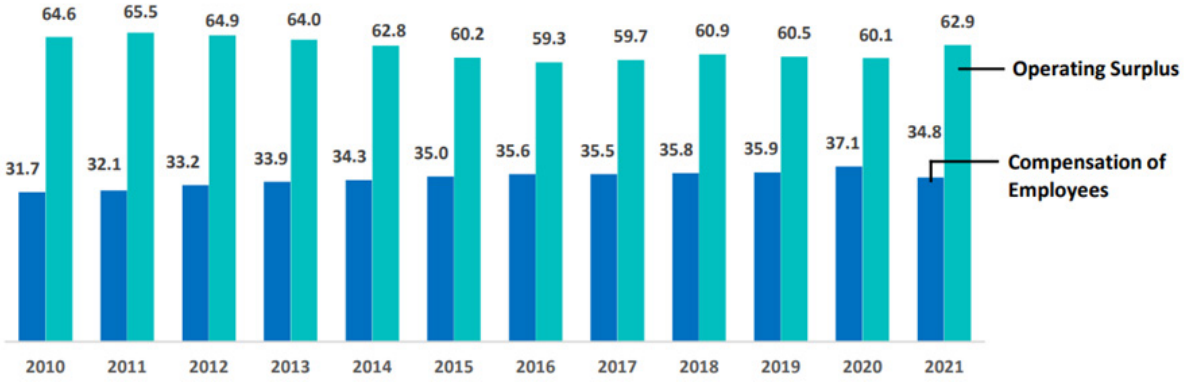
that targets improving labor income could have greater potential to solve various structural issues inflicted on the nation for decades. Whilst the present study provides empirical evidence on the macroeconomic perspective, it is of great importance for the policy makers to gauge a deeper understanding on such effects at the microeconomic side.

INTRODUCTION

The national account identity reveals the equality of national income or Gross Domestic Product (GDP) with respect to production, expenditure, and income approaches. The latter approach is seldom given research attention due to limited information. It is perceived that the total income of the nation is essentially shared by labour and capital owners (employers). Income received by labour is measured by compensation of employees (CE), also known as labour compensation. Whereas, income for capital owners is represented by profits, rents, and other forms of income generated by enterprises, which are also known as operating surplus (OS).

In Malaysia, the share of compensation of employees (CE) to GDP is considerably low, despite an increase from 31.7% in 2010 to 35.9% in 2019, as shown in Figure 1. The federal government aims to increase this share to 40% by 2025, as targeted in the Twelfth Malaysia Plan (12th MP). Though it may seem like a far-reaching goal, when compared to other countries such as Germany (53.4%), the United Kingdom (48.7%), Australia (47.2%), the Republic of Korea (47.5%), and Singapore (39.9%) in 2019, Malaysia's share of labour compensation is relatively low.

Figure 1: Share of compensation employees and operating surplus to gross domestic product, 2010 - 2021 (%)



Source: Department of Statistic Malaysia (2022)

The low share of compensation of employees (CE) in Malaysia is related to the structural issues faced by the country. As stated in the 12th Malaysian Plan (RMKe-12) document, untapped female participation, a high dependency on low-skilled foreign workers, and skill mismatches are some of the structural issues that can contribute to low wage distribution among local workers in Malaysia. Since 60% of total household incomes come from employee wages, the low share of CE could lead to increased income inequality between workers and employers. This situation is exacerbated when the world is hit by events like COVID-19, leading to more workers becoming unemployed and businesses ceasing operations. Therefore, interventions are needed to ensure that workers receive an equitable share of the distribution based on their productivity, thereby boosting overall company production.

This study attempts to assess the impact of labour income on selected macroeconomic variables, particularly pertaining to the core structural issues in Malaysia. It is important

to empirically assess the impact because understanding the relationship between labour income and these variables can provide further insights into potential policy measures that can address the challenges posed by the aforementioned structural issues and promote economic stability and equity in the country.

LITERATURE REVIEW

Cross-country studies (Lupu et.al, 2022) shows that increment in wage will generate more income to businesses. Study made by Lupu et. al, 2022 shows that there is a positive correlation between GDP growth and wage growth in Eastern European countries. As GDP increases, wages also tend to increase, suggesting that economic growth drives wage share. However, these impacts are mostly short-term and only supported in some European countries to catch up with the Western states. Meanwhile, other studies such as Growiec, et. al, 2018, Ibarra and Ros 2019, Abreu and Lopes, 2021 had also made a study on the relationship between wages share and economic growth with positive correlation. This is because, the higher the wages obtained by workers, the more they will spend, thus increasing the profit of the firm and its output.

In Malaysia, there are not many studies that have been made on understanding the increment in wage on the economy. The Department of Statistic had published the trend of the Malaysian salary and wage data from 2011 to 2019, which shows that Malaysia compensation of employees (CE) had remained positive but has a very low percentage share to GDP. This is caused by the low value-added and labour-intensive industries in Malaysia. Moreover, a study from Bank Negara Malaysia (BNM) on the outlook and policy in 2021 states that prevalence of the low-cost production model and high dependence on low-skilled foreign workers discourages productivity enhancements, and depresses wages from the observing the trend of wages, productivity through value-added per worker and size of non-citizen by sectors. The discourse on wages has been a persistent subject among private sector employees, featuring prominently in government initiatives such as the 12th Malaysia Plan, as well as in discussions within various ministries.

However, from an empirical analysis point of view there are a limited number of studies made to investigate the relationship between macroeconomic indicators and labour share. A study from Growiec J., 2012 used panel data to identify the determinants of labour share. The empirical findings shows that sector-specific factors, ownership structure, human capital, labour market characteristics, and firm demographics contribute to the growth of labour share. Furthermore, empirical studies on wage share and economic growth had also been made by Karabarbounis and Neiman, 2014, and Charpe, Bridji, and McAdam, 2019 that focuses in developed countries. Hence, this study aims to bridge the empirical analysis gap by evaluating the influence of labour share on macroeconomic indicators in Malaysia, this study will also provide valuable insights for policy development aimed at enhancing wage distribution in Malaysia.

METHODOLOGY

In a stochastic econometric model, the macroeconomic variables are determined randomly based on the study of Kindler. A, Golo. N, and Solomon. S on the Stochastic Agent-Based Simulation of the Role of Labor in the Economy, where the macroeconomic variables are chosen based on the discussion from academic and economics practitioners as stated in the RMKe-12. The model is as follow;

$$\mathrm{Macro}_{jt} = \alpha_0 + \alpha_1 \mathrm{CoE}_t + \varepsilon_t$$

where Macro_{jt} is the dependent variable represented by six macroeconomic indicators, which are woman labour force participation rate, labour productivity, technology adoption, shadow economy, skill mismatch and the low-skill foreign workers. COE_t is the compensation of employees. The error term, e_t, is assumed

to has zero mean and constant variance. The parameters are elasticities that suggest the response of $Macro_{jt}$ with changes in COE_t. All variables are transformed into logarithm.

Technology adoption is measured by component of total patent applications by both non-residents and residents (pattot), research and development expenditure to GDP (rndy), number of researchers in R & D (rndpc), number of scientific and technical journal articles (journal), number of technicians in R & D (techy), and total trademark applications by both non-residents and residents (tmtot). Technology Index is computed as log((0.145694*pattot) + (0.172612*rndy) + (0.175956*rndpc) + (0.163893*tmtot) + (0.176246*journal) + (0.165598*techpc)).

Whereas, skill-mismatch is computed by calculating the skilled workers working in semi- and low-skilled jobs. The skilled workers are categorized by education level, where workers who have a diploma, degree and above are categorized as skilled workers. While semi and low-skilled jobs are categorized by 1 digit MASCO, where occupations from digit 4 to 8 are categorized as semi-skilled workers and digit 9-elementary occupations are categorized as low-skill workers. The presence of skill mismatches indicates instances where skilled workers are not fully utilizing their capabilities, leading to a situation of underemployment.

Data for woman labour force participation rate, labour productivity, low-skilled foreign workers, employed person by education level and occupations by 1 digit MASCO were compiled from the Department of Statistics Malaysia; while data on total patent applications by both non-residents and residents, research and development expenditure to GDP, number of researchers in R & D, number of scientific and technical journal articles, number of technicians in R & D, and total trademark applications by both non-residents and residents were collected from the World Development Indicators available at the World Bank database. Shadow economy measures were estimated using the Modified Currency Demand Deposit Ratio (MCDR) approach and the estimates by World Bank using Computable General Equilibrium (CGE) and Multiple Indicator and Multiple Causes (MIMIC) approaches.

To estimate the above model, we employ the Ordinary Least Square (OLS) with robust standard error. To do this we estimate using the Newey-West approach that is correct for both autocorrelation and heteroscedasticity.

FINDINGS

Study from Growiec J. (2012) stated that labour market condition, market structures and firm demographics plays an important role in determining the labour share, which in other words is the share of compensation of employees to GDP. These factors are similarly observed in this study, where the labour market condition refers to the woman labour force participation, shadow economy, skilled mismatch and low-skilled foreign workers. While the market structure and firm demographic can be referred to the labour productivity and technology adoption in the firm level of the country. Our study findings are aligned with the findings by Growiec J (2012), corroborating the trends identified in prior research.

From the analysis, it is found that all of the macroeconomic variables significantly correlate with the CoE as seen in Table 1 at 1% level of significance. Women labour force participation rate, labour productivity, and technology are positively correlated with the changes of labour share at 1.1%, 2.2% and 3.7% respectively for every 1% in CoE. Therefore, the higher the share of labour compensation to GDP, the higher the participation of women in the labour force, labour productivity and adoption of technology in the industry. In addition, each of these variables exhibits a robust correlation with the labour share, exceeding 50%.

Whilst, the shadow economy, skill mismatch, and the presence of low-skilled foreign workers exhibit an inverse association with the Compensation of Employees (CoE) with elasticities of -0.5, -2.7, and -2.3, respectively. This implies that a 1% increase in the labour share will decrease the size of the shadow economy at 0.5%, indicating a positive transformation of the industry from non-taxable to taxable. Moreover, increasing in the CoE will also decrease skill mismatch by 2.7% and the use of low-skilled foreign workers by 2.3%, thereby enhancing the overall economic output of the country.

Table 1: Results of impact of COE on Macroeconomic variables

Models	Constant	Macroeconomic indicators	Adjusted R-square
1. Woman labour force participation rate	-0.1082***	1.1495***	0.9075
	(-0.3943)	(14.8215)	
2. Labour productivity	-3.4973***	2.2416***	0.6716
	(-2.1454)	(4.8638)	
3. Technology	-13.0702***	3.7385***	0.7331
	(-5.1816)	(5.2423)	
4. Shadow economy	5.2653***	-0.5473***	0.8091
	(14.7515)	(-5.3375)	
5. Skill mismatch	23.1186***	-2.7453***	0.4878
	(9.8216)	(-4.3793)	
6. Low-skilled foreign workers	21.2295***	-2.3234***	0.3091
	(7.1548)	(-2.9404)	

Notes: Asterisks ***, ** and * denote statistically significant at 1%, 5% and 10% level, respectively. denotes adjusted R-squared. All variables are in logarithm. Dependent variables are women labour force participation rates (lfpr); technology indices (innovation), labour productivity, measures of shadow economy (shadow), skilled mismatch and low-skilled foreign workers. All models have been estimated using OLS with robust standard error due to Newey and West (1987) that correct for both autocorrelation and heteroscedasticity. Variable CoE denotes compensation of employees and woman labour force participation rate denotes female labour participation rate estimated by DOSM. Labour productivity is computed by deflating real GDP with total employment in Malaysia. Technology index is computed as log((0.145694*pattot) +(0.172612*rndy)+(0.175956*rndpc)+(0.163893*tmtot)+(0.176246*journal)+(0.165598*techpc)). Shadow economy measures were estimated using Modified Currency Deposit Ratio (MCDR) approach and estimates by World Bank (using Computable General Equilibrium (CGE) and Multiple Indicator and Multiple Causes (MIMIC) approaches. Skilled mismatch is estimated through identifying the skill worker (worker with tertiary education) working in semi- and low skill jobs (based on MASCO classification). Low-skilled foreign workers are obtained from DOSM.

Therefore, these findings highlight the need to increase the wage for workers. As higher labour compensation is found to be the answer for some of the structural issues in Malaysia. Among the structural issues are low labour force participation rate (LFPR), inequality in income distribution as well as slow rate of technological innovation and adoption. The implication of this study can be used for some policy intervention. From the data analyzed in Table 1, the conclusion for each variable is explain as follows;

Higher wages attract more woman in the labour force

Firstly, higher wages attract more women in the labour force. When labour shortages arise, offering higher wages tends to attract more women to join the workforce, as indicated by empirical data. These findings emphasize the importance of a wage-focused policy approach in achieving the targeted women's labour force participation rate of 57.0% by 2025 under the Twelfth Malaysia Plan.

Higher wages promote technological adoption

Adopting technology in the production process is a way to increase output by optimizing the use of production inputs such as labour and energy (Maneejuk and Yamaka, 2020). Technological adoption is found to complement the demand for skilled workers that help to increase wages. The empirical assessment as shown in Table 1 indicates that adoption to technology leads to higher labour compensation and higher skilled workers. Thus, firms must be willing to share their wealth by increasing wages that commensurate with higher skills.

Higher wages improve economic efficiency by reducing the size of shadow economy

Shadow economy includes all market-based legal production of goods and services that are deliberately concealed from public authorities to avoid payment of taxes and social security contributions as well as to avoid complying with labour market standards and administrative obligations (Schneider, 2011). The size of the shadow economy in Malaysia for the period of 2010-2019 is estimated at approximately 21.2% of GDP. Shadow economy creates economic inefficiencies as it could potentially reduce government tax revenue, cause a fragmented labour market and lower economic growth. Increasing wages will possibly decrease the size of shadow economy.

Higher wages promote labour productivity growth

Productivity growth is the primary determinant of an economy's long-term growth and higher wages. If an employer is willing to share the wealth by raising wages, employees will consistently exert extra efforts in response to higher wages, in line with the so-called "efficiency wage" theory (Riley and Bondibene, 2017; Georgiadis, 2013). Workers, therefore, may be more motivated to work with higher pay that subsequently contributes to higher productivity. The analysis in Table 1 confirms this expectation, showing that productivity tends to expand by 2.2% for every percentage increase in wage.

Higher wages reduce the dependency on low-skilled foreign labour

According to the Department of Statistic Malaysia (DOSM), low-skilled foreign workers in Malaysia in 2021 made up about 8.0% or 1.2 million persons of the total employments, of which almost 91% of them occupied the low-skilled and semi-skilled employments. The economic costs of extensively relying on low-skilled foreign workers in Malaysia are well documented in the literature, which highlighted the high reliance of low-skilled foreign workers would suppress the domestic wage growth and adversely affect productivity growth (Bank Negara Malaysia, 2018). The empirical analysis as explained in Table 1 indicates that the size of low-skilled foreign workers can be reduced by 2.3% for every percentage increase in labour compensation. The results suggest that wage adjustment is the most effective market-based price mechanism to be used as a policy tool to reduce the dependency on low-skilled foreign workers.

Higher wages reduce the size of skill mismatch

Skills-related underemployment is a condition where workers hold skills or qualifications higher than that required to perform their jobs. Indirectly the skill-related underemployment

can be portrayed as the indicator for the skill underutilization which measures those workers with tertiary education and working in the semi- and low-skilled occupations. In 2021, the skill-related underemployment increased by 6.3% to record 1.9 million workers compared to 1.8 million in 2020 (DOSM, 2022b). Persistent instances of skills-related underemployment in Malaysia, akin to unemployment, signify a structural issue (Zakariya, 2014). Addressing this challenge is crucial, as sustained underemployment hinders the full realization of workers' potential, particularly for those with higher skills engaged in lower-skilled jobs, where increased labour compensation, as indicated in Table 1, could potentially reduce skills-related underemployment by 2.7% for every percentage point increase. This finding underscores the potential of wage-focused policy interventions to stimulate automation, technological upgrading, and heightened demand for skilled occupations, ultimately mitigating skills-related underemployment (Lee and Wie, 2015).

CONCLUSION

In conclusion, there is a need to increase the wages of workers, especially after COVID-19 pandemic as price increases and job loss is higher. From the workers' perspective, an increase in wage is necessary to compensate for the higher prices of goods and services. Generally, employers claimed that wage increases could inflate prices, leading to market distortions that could pose a threat to the economy. Nevertheless, cross-national investigations, exemplified by Lupu et al. (2022), indicate that an increase in wages correlates with a subsequent augmentation in business income—a trend substantiated by our empirical discoveries.

As two-thirds of household income is generated from the labour market, changes in wages can have a positive impact on the economy as well. This is because households provide labour input to the economic sector and receive wages in return. The more wages earned, the higher consumption of goods and services, hence generating additional profits for the business sector.

Therefore, this study has provided some insights to the possible scenario when wages are adjusted higher than the current rate. The empirical analyses clearly show the role of higher wages in addressing pertinent structural issues such as women participation in the labour market, technological adoption, shadow economy and skills-related underemployment. However, it is still crucial to have a thorough comprehension of the various aspects that come with higher income, for example social mobility, income inequality, and sustainable development. Thus, more dedicated studies on the possible impact from the multidimensional aspects of wages are needed, as Malaysia aspires to become a high-income economy.

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