# The Effect of Age on Personal Income Tax Compliance: A Case of Youth in Malaysia

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## Abstract

This paper aims to examine age factor and its effects on personal income tax compliance in Malaysia. A quantitative approach utilising secondary data obtained from Inland Revenue Board Malaysia and Malaysian Department of Statistics, from the years 2002 to 2017 were used to generate the results, with validated secondary data that consist of individual income tax revenue and the youth age between 15 to 39 years old. All proposed hypotheses were tested using the EViews software. The study proposed five hypotheses and the data supported most of them with a significant of 5%. Results from the study indicate that age between 15 to 19 years old and 30 to 34 years old have negative effect on personal income tax compliance. However, age between 20 to 29 years old have contributed to a positive effect on the personal income tax revenue. While age between 35 to 39 years old was insignificant to individual income tax revenue in the context of Malaysia. Several theoretical and practical indications, as well as limitations of the study for future research, have been outlined.

**Keywords:** Youth, Tax Revenue, Tax Compliance, Malaysia.

## Introduction

Traditionally, the main factors influencing tax compliance are audit, tax rate and penalty (Allingham and Sandmo, 1972). There have been extensive studies investigating age affects tax compliance (Vogel, 1974; Aitken and Bonneville, 1980; Tittle, 1980). However, the findings of previous tax compliance studies on the effects are still unclear and inconclusive. To get a further explanation on the effect of age variable on income tax compliance, more empirical evidence needs to be done (Torgler, 2006).

The problem for most countries in public finance is to design a tax so that the government can provide public goods and provide financial assistance to unfortunate individuals especially in the recent Covid 19 pandemic. The impact of the Covid 19 pandemic has left many adolescents as income tax contributors unable to find employment or lose their livelihoods. Therefore, this paper examines the effects of the influence in terms of youth age on the collection of individual income tax in Malaysia.

In Malaysia, the tax revenue components are categorized into direct and indirect taxes. Direct taxes include company income tax, petroleum income tax, and individual income tax, which are collected by the Federal Government as the primary source of revenue for the country. The Inland Revenue Board of Malaysia (IRBM) is enacted as the legal agent to collect these direct taxes under the Income Tax Act 1967, Petroleum (Income Tax) Act 1967, Real Estate Taxation Act 1976, Stamp Act 1949, Investment Promotion Act 1986, and the Labuan Business Activities Act 1990.

Among the income tax collection by IRBM, taxpayer compliance has gradually increased from 2002 until 2017 that has contributed to the increase of individual income tax revenue received by the government of Malaysia for the said period, as shown in Figure 1. The individual income tax collections have escalated by 349 per cent, from RM7.1 billion in 2002 to RM31.9 billion in 2017.
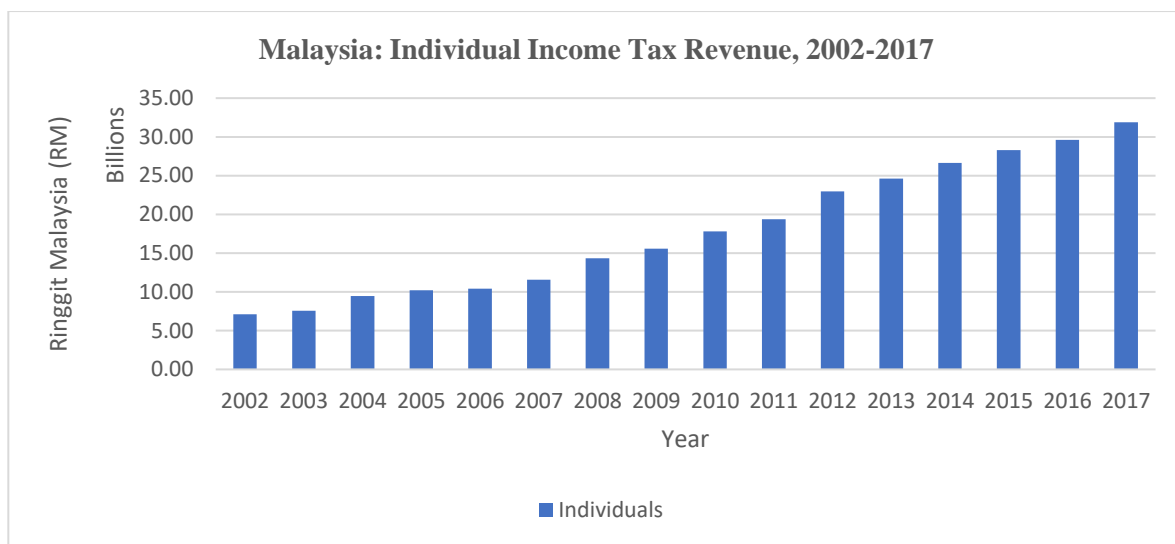


Figure 1 Individual Income Tax Revenue in Malaysia, 2002-2017.
Source: IRBM

In terms of population in Malaysia, the age group from 15 to 64 years old has the highest number of people compared to the age group from 0 to 14 and 64 years old and above from year 2002 to 2017, as shown in Figure 2. It is noticeable that youth comprise more than half in this age range. In that, young people between 15 to 39 years old are the major contributors.
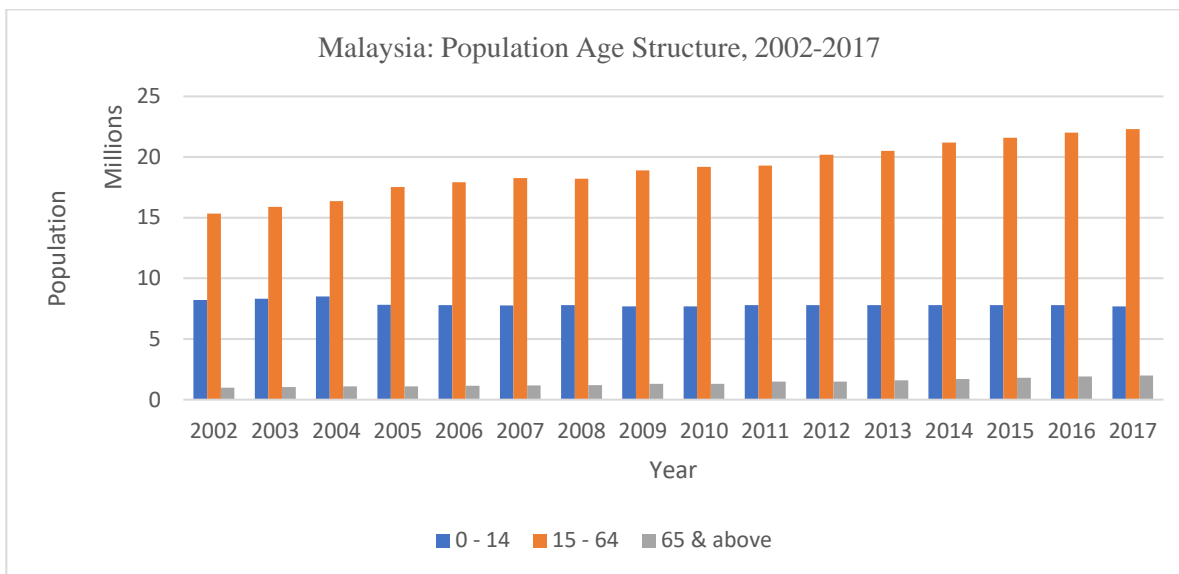
Figure 2 Population Age Structure in Malaysia, 2002-2017
Sources: Economic Planning Unit, Prime Minister's Department, Malaysia

Youth are the main contributor to the labour force in Malaysia, exceeding 60 percent annually, from 2002 to 2017, as shown in Figure 3. With the income received by youth, individual income tax contribution is expected to increase as well. Therefore, this paper examines the youth in more depth that resulted in effects on personal income tax revenue and/or compliance in Malaysia.



Figure 3 Percentage of Labour Force Between Age Group 15 to 39 Years Old and 40 to 64 Years Old in Malaysia, 2002-2017.
Source: Department of Statistics, Malaysia

This paper establishes a study on youth who contribute the most to personal income tax collection in Malaysia. The government can plan a policy that is suitable for this group of youth to further

increase the income of youth and thus further increase the collection of personal income tax in due course.

The paper is organized as follows. The paper introduces the background of the study follow by theoretical Background, Underlying Model, Conceptual Framework and Hypotheses Development. The research methodology and research model are also explained. It then follows by research results as well as, discussion and contribution respectively before drawing a conclusion.
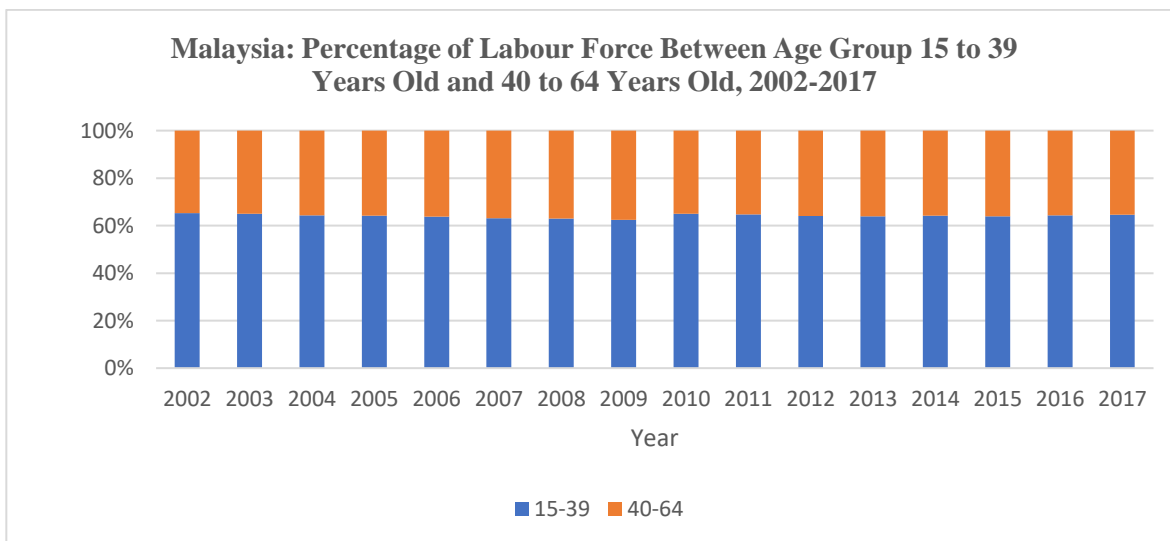
**Theoretical Background, Underlying Model, Conceptual Framework and Hypotheses Development**
**Personal Income Tax Compliance**
Basically, personal income tax compliance is the willingness of taxpayers to pay their income taxes. The benefits of the tax paid did not accrue directly to the taxpayers as the reason of tax evasions. (Chiumya, 2006). Tax was generally paid as an obligation rather than necessity to the government. The government uses income taxation to redistribute among agents and provide social insurance (Karabarbounis, 2016).

Non-compliance taxes were contributed by policy failures and caused the black market or shadow economy. Black market in general defined as an ample share of economics activities taken place outside the official or recorded economy all over the world (Hussain, 2006). However, taxpayers are often misunderstood that no responsibility to declare the income if the income from underground economies or black market. This is not true under case law Graham VS Green, Mann VS Nash and Commissioner of Taxes VS McFarlene. Generally, as long as there is systematic planning, trading pattern or profit transaction, the issue whether legal or illegal of the incomes are subject to income tax.

In Malaysia, analysed income tax non-compliance in Malaysia prior to implementation of individual Self-Assessment System in Year Assessment 2004. Abdul (2003) found out that the major issues in income tax non-compliance in Malaysia were due to the under declared income (33.17%), followed by failure to declare (29.83%), inflated expenses (25.33%), and over-claimed deduction (11.6%).

The economic crisis or Pandemic Covid-19 had deteriorated government finances in many countries, included Malaysia. Malaysian Government seeks ways to either cut spending or to increase the tax revenues. Tax treaties such as income tax allowance or tax exemption given to investors or foreigners. This is hoping them to invest in the country and boost up the Malaysian economics. In the other way, however, cutting the government spending will tighten out the Malaysian economy and causing economics recession. Therefore, the government chooses its tax instruments to maximize economic growth.

**Age**
The impact on age to tax compliance studies still uncertain (Torgler, 2007) Many researchers have found that positive relationship on impact of age increase the tax compliance (Vogel, 1974; Aitken and Bonneville, 1980; Grasmick et al., 1991). On the other hand, some researches also have found impact of age decrease the tax compliance with the negative relationship (Spicer, 1974; Jackson and Jones, 1985)

Since the average income received by an individual varies systematically with age in most countries, Blomquist and Micheletto (2008) examine the possibility to enhance the efficiency of the redistributive mechanism by relating the tax payments to the age of individuals. The model in Blomquist and Micheletto (2008) shown that there is scope for using age dependent taxes to increase the efficiency of redistributive fiscal policies.

Empirical evidence in taxpayer compliance obtained by Chan, Troutman and O'Bryan (2000) shows that age has a positive relationship with education, while education has an indirect relationship with taxpayer compliance through moral development and taxpayer attitude. This outcome is expected that age to have an indirect and positive effect on taxpayer compliance (Jackson & Milliron, 1986; Roth et al., 1989).

In general, youth taxpayers are more willing to take risks in tax noncompliance and are less sensitive to penalties and penalties that will be imposed on income tax noncompliance (Ritseme et al., 2003; Chau and Leung, 2009) and older people more sensitive on sanctions and tax compliance (Tittle, 1980). Therefore, this study focuses on the relationship of youth in the age range of 15 to 39 years old and income tax revenue in Malaysia. It may in turn helping the Malaysian government to identify the impact of youth compliance on personal income tax to the system and thus able to employ suitable measures to address the matter.

This paper is aware that the youth definition in Malaysia refers to those people aged 15-40 years old prior to amendment of Youth Societies and Youth Development Act 2007 (Act 668) in 2019. The Act 668 in its amendment has redefined youth as those who aged between 15 to 30 years old in Malaysia context. To date, it is yet to be implemented although the bill was passed by Parliament on 3rd July 2019 (Parliament of Malaysia, 2019) and approved by the Senate on 24th July 2019 (Malay Mail, 2019). However, age groups that have been categorized by the Department of Statistics Malaysia are in the range of 15 to 19 years old, 20 to 24 years old, 25 to 29 years old, 30 to 34, years old, 35 to 39 years old, 40 to 44 years old, and so on.

For this study, it is regrettable that the age 40 that falls in the 40-44 category has to be missed and excluded in due limitation. While estimation on the proportionate for age 40 can be done, however inaccurate, it does not reflect the actual figure for young people of age 40 years old. Hence, a better alternative is to exclude the group of age 40 years old from this paper.

**Underlying Model**
This Allingham and Sandmo (A-S) Model (1972) was used in this study, which combines the economics crime and risk and uncertainty (Lopez-Laborda et al., 2020). Generally, the A-S model is used to describe taxpayers during the income tax return filing process (Sandmo, 2004). Besides, as previously stated, an A-S model feature is that increasing the tax rate has an unexpected effect on tax evasion (Sandmo, 2004) or that decreasing risk aversion conceals less income (Traxler, 2006). Because the model is typically used in anticipation of a tax audit and the negative consequences of undeclared income, filling out a tax return is an uncertainty decision (B𝑎trancea et al., 2012).

The model is used in this study because Allingham and Sandmo (1972) stated that taxpayers is either adhere to tax laws or attempt to evade them (Kogler et al., 2020). In other words, an individual's

actual compliance with tax laws is entirely depended on his or her total income. As a result, under the A-S model, taxpayers must pay a penalty rate on unreported income (Yitzhaki, 1974).
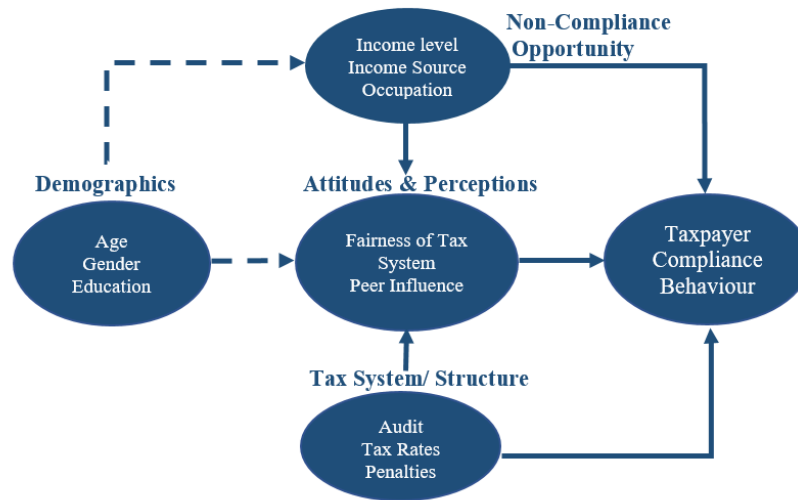


Figure 4 Taxpayer Compliance Model.
Source: (Fischer et al., 1992)

In addition to the Allingham and Sandmo Model 1972, The Fischer Model in Figure 4 incorporates economic, sociological, and psychological variables into a comprehensive tax compliance model. The Fischer Model focuses on demographic variables, opportunity noncompliance as well as attitudes and perceptions, in addition to tax system structure factors such as the Allingham & Sandmo Model. Age is an important component of the Fischer Compliance Model. Although the indirect relationship between age and tax compliance, but age is a fundamental factor that has a positive relationship to education, and a positive link with taxpayer compliance via moral development and taxpayer attitude, as shown in Figure 5 (Chan et al., 2000)



Figure 5 Illustration of Significant Structural Relationships (U.S. Model).
Source: Chau and Leung, 2009

**Conceptual Framework**
The conceptual framework for this study is depicted in Figure 6. This framework is composed of two components: independence variables (IVs) and a dependent variable (DV).

Figure 6 Conceptual Framework
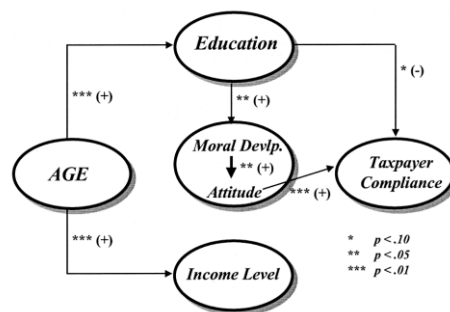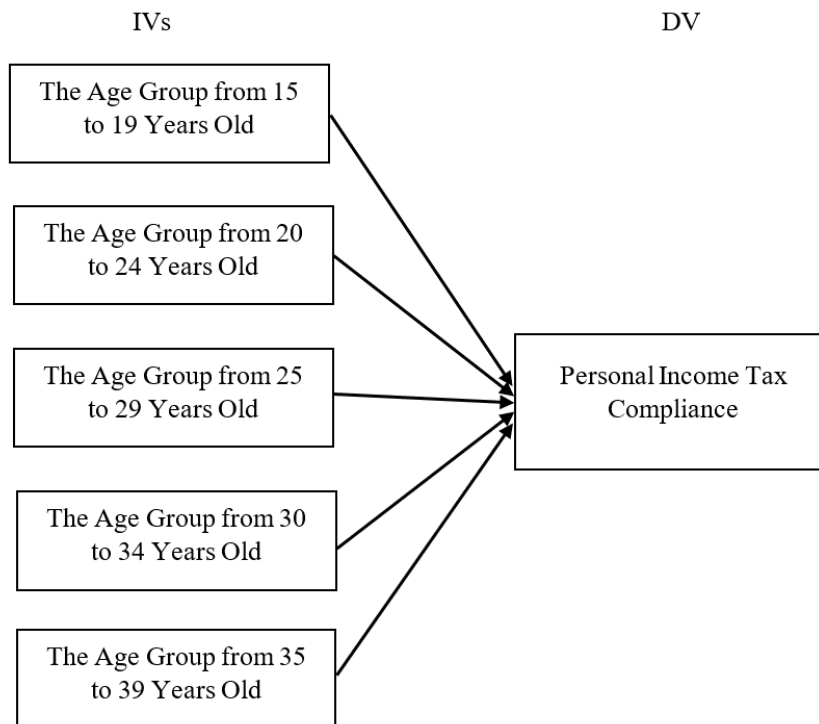Source: Authors

**Hypotheses Development**

The Fischer Model has been adopted as the foundation of this study, which investigated the impact of the youth age group between 15 to 39 years old on individual income tax compliance. The following hypotheses have been tested:

$H_1$: Age group from 15 to 19 years old is significantly related to personal income tax compliance in Malaysia context.

$H_2$: Age group from 20 to 24 years old is significantly related to personal income tax compliance in Malaysia context.

$H_3$: Age group from 25 to 29 years old is significantly related to personal income tax compliance in Malaysia context.

$H_4$: Age group from 30 to 34 years old is significantly related to personal income tax compliance in Malaysia context.

$H_5$:  Age group from 35 to 39 years old is significantly related to personal income tax compliance in Malaysia context.

**Research Methodology**

This study utilises quantitative analysis to test hypotheses based on secondary data from Inland Revenue Board of Malaysia (IRBM) and the Department of Statistics Malaysia. Individual Income Tax Revenue (Figure 1) and the number of Age in Malaysia (Figure 2) are presented in chart form. The population of this study is solely limited to Malaysian citizens. From the pool of secondary data of all age groups in Malaysia, this paper focuses on young Malaysian in the age range of 15 to 39 years old. Valid data on personal income tax revenue from 2002 to 2017 have been utilised in this paper.

To obtain a valid result delegate in Malaysia perspectives, the researcher used secondary data spanning the years from 2002-2017 (16 years). This range of period is sufficient and appropriate for conducting tax research due to the nature of tax as an annual affair unlike other data that may well available in daily, weekly, monthly, quarterly data and so on such as investment data et cetera. In that, the strategic assessment includes the expected operational environment over the range of 5 to 15 years (IMF, 2021), and the fact that taxpayers reported and declared their taxes only once a year (Income Tax Act, 1967) have suggested that 15 years as an recommended range. Specifically, the age category understudied is from 15 to 39 years old, being the closest proximity to youth definition prior to the amendment of the Act 668 (The Malaysian Reserve, 2019).

We used the computer statistics packages EViews9 to perform an Ordinary Least Squares (OLS) analysis. It includes several features for viewing residues in real time and determining serial correlations. Prior to the discussion, the regression model, residual diagnostics analysis, Breusch-Godfrey Serial Correlation LM Test, Heteroskedasticity Test, and Jarque-Bera Test of Normality were all performed. The researcher used a Multiple Regression Model to ascertain the factors that influence personal income tax compliance. The dependent variable (personal income tax compliance) is expressed in this regression equation as the sum of the modelled components. After estimating the regression coefficient, the dependent variable is divided into the portion explained by the regression and the portion that remains unexplained. The explained portion is referred to as the value appropriate portion, while the unexplained portion is referred to as the residue.

**Research Model**
The regression model (Eq. (1)) is intended to quantify the effect of national and household income on tax revenue under Malaysia's Personal Income Taxation System. The following equation was proposed for multiple regression:

$$incometaxrevenue_{2002-2017} = c + \beta_1 age15\_19_{2002-2017} + \beta_2 age20\_24_{2002-2017} + \beta_3 age25\_29_{2002-2017} + \beta_4 age30\_34_{2002-2017} + \beta_5 age35\_39_{2002-2017} + \varepsilon$$

…Eq. (1)

where, $incometaxrevenue_{2002-2017}$ = individual income tax collection in Malaysia from year 2002 to 2017, $age15\_19_{2002-2017}$ = Age group from 15 to 19 years old in Malaysia from year 2002 to 2017, $age20\text{-}24_{2002-2017}$ = Age group from 20 to 24 years old in Malaysia from year 2002 to 2017, $age25\_29_{2002-2017}$ = Age group from 25 to 29 years old in Malaysia from year 2002 to 2017 , $age30\_34_{2002-2017}$ = Age group from 30 to 34 years old in Malaysia from year 2002 to 2017, $age35\_39_{2002-2017}$ = Age group from 35 to 39 years old in Malaysia from year 2002 to 2017, and lastly $\varepsilon$ = Error term

**Research Results**
Before detailing the econometric estimation, it is useful to briefly explain the descriptive statistics of those variables under consideration. Detailed explanations of the variables and data sources are provided in Table 1.

Table 1
*Data source of the Variables*

| Variables | Age group from | Unit | Data Source |
|---|---|---|---|
| LNAGE15_19 | 15 to 19 years old | Person | Department of Statistics, Malaysia |
| LNAGE20_24 | 20 to 24 years old | Person | Department of Statistics, Malaysia |
| LNAGE25_29 | 25 to 29 years old | Person | Department of Statistics, Malaysia |
| LNAGE30_34 | 30 to 34 years old | Person | Department of Statistics, Malaysia |
| LNAGE35_39 | 35 to 39 years old | Person | Department of Statistics, Malaysia |
| LNINCOMETAXREVENUE | Individual Income Tax Collection in Malaysia | Ringgit Malaysia (RM) | Inland Revenue Board of Malaysia |

Table 2 show the result of the descriptive statistics. It is importatant that the research to use raw data of the variable and not the transformed data to launch the descriptive data. There have 16 observations to each variables. For normal skewness is 0. The value of 3 in kurtosis mean normal distribution, which is mesokurtic. All the variables are mirrors normal skewness and platykurtic, that mean the value is less than 3. The Jarque-Bera statistics measure the different between the skewness and kurtosis of te series with those from the normal distribution. The probability is the probability that a Jarque-Bera statistic exceeds (in absolute value) the obseved value under the null hypothesis, that is a small probability value leads to the rejection of the null hypothesis of a normal distribution. All of the probability of Jarque-Bera are above the significant level of point, which is 0.5. Therefore, with respect to all the research variables, we cannot reject the null hypothesis and all variables are normality distributed curve and have normal distribution.

Table 2

*Descriptive Statistics of variables in the Model*

|  | AGE | | | | | |
|---|---|---|---|---|---|---|
|  | 15_19 | 20_24 | 25_29 | 30_34 | 35_39 | INCOMETAXREVENUE |
| Mean | 2569.231 | 2443.262 | 2192.931 | 1938.294 | 1731.9 | 1.80E+10 |
| Median | 2606.55 | 2488.95 | 2313.3 | 1878.95 | 1710.4 | 1.67E+10 |
| Maximum | 2801.9 | 2752.8 | 2541.9 | 2372.9 | 1992.6 | 3.19E+10 |
| Minimum | 2355.8 | 2009.7 | 1726.5 | 1660.3 | 1580.5 | 7.11E+09 |
| Std. Dev. | 112.7284 | 214.2196 | 287.4184 | 254.0481 | 114.639 | 8.40E+09 |
| Skewness | -0.229746 | -0.619887 | -0.493493 | 0.468256 | 0.792547 | 0.258142 |
| Kurtosis | 2.86511 | 2.354027 | 1.688781 | 1.781247 | 2.821241 | 1.647866 |
| Jarque-Bera | 0.152886 | 1.302882 | 1.795624 | 1.574941 | 1.696317 | 1.396542 |
| Probability | 0.926406 | 0.521294 | 0.40746 | 0.454994 | 0.428203 | 0.497445 |
|  |  |  |  |  |  |  |
| Sum | 41107.7 | 39092.2 | 35086.9 | 31012.7 | 27710.4 | 2.87E+11 |
| Sum Sq. Dev. | 190615.5 | 688350.7 | 1239140 | 968106.4 | 197131.4 | 1.06E+21 |
| Observations | 16 | 16 | 16 | 16 | 16 | 16 |

Eq. (1) examined the age group from 15 to 19 years old, 20 to 24 years old, 25 to 29 years old, 30 to 34 years old, 35 to 39 years old in Malaysia between 2002 to 2017. The equation was transformed in this study by computing the natural logarithms of the dependent and independent variables, resulting in the log transformation form as shown in Eq. (2).

$$lnincometaxrevenue_{2002-2017}$$
$$= c + \beta_1 lnage15\_19_{2002-2017} + \beta_2 lnage20\_24_{2002-2017}$$
$$+ \beta_3 lnage25\_29_{2002-2017} + \beta_4 lngage30\_34_{2002-2017}$$
$$+ \beta_5 lnage35\_39_{2002-2017} + \varepsilon$$

…Eq. (2)

where, $lnincometaxrevenue_{2002-2017}$ = Log transformation of individual income tax collection in Malaysia from year 2002 to 2017, $lnage15\_19_{2002-2017}$ = Log transformation of Age group from 15 to 19 years old in Malaysia from year 2002 to 2017, $lnage20\_24_{2002-2017}$ = Log transformation of Age group from 20 to 24 years old in Malaysia from year 2002 to 2017, $lnage25\_29_{2002-2017}$ = Log transformation of Age group from 25 to 29 years old in Malaysia from year 2002 to 2017,

lnage30_34$_{2002-2017}$ = Log transformation of Age group from 30 to 34 years old in Malaysia from year 2002 to 2017, lnage35_39$_{2002-2017}$ = Log transformation of Age group from 35 to 39 years old in Malaysia from year 2002 to 2017, and ε = Error term

Table 3 show the Correlation Analysis in this study, with the high correlation value between 0.633919 to 0.953574. The multiple graphs presented in Figure 7 are also curve upwards from left to right. These mean all the variables are positive correlated with each other. Figure 8 show the scatter plot in multiple graphs.

Table 3
*Correlation Analysis*

|  | LNAGE15_19 | LNAGE20_24 | LNAGE25_29 | LNAGE30_34 | LNAGE35_39 | LNINCOMETAXREVENUE |
|---|---|---|---|---|---|---|
| LNAGE15_19 | 1.000000 | 0.928159 | 0.855113 | 0.616565 | 0.693477 | 0.639719 |
| LNAGE20_24 | 0.928159 | 1.000000 | 0.953574 | 0.837588 | 0.853783 | 0.831357 |
| LNAGE25_29 | 0.855113 | 0.953574 | 1.000000 | 0.902823 | 0.857299 | 0.936305 |
| LNAGE30_34 | 0.616565 | 0.837588 | 0.902823 | 1.000000 | 0.923479 | 0.913261 |
| LNAGE35_39 | 0.693477 | 0.853783 | 0.857299 | 0.923479 | 1.000000 | 0.791556 |
| LNINCOMETAXREVENUE | 0.639719 | 0.831357 | 0.936305 | 0.913261 | 0.791556 | 1.000000 |
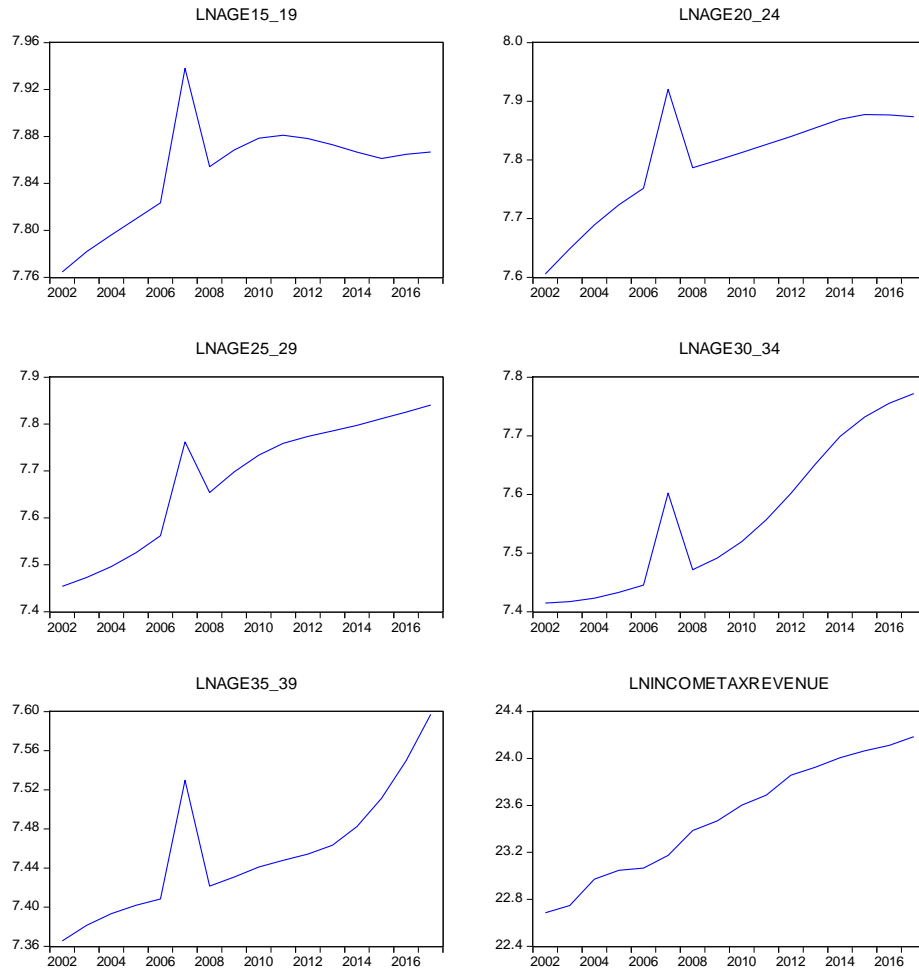
Figure 7 Line & symbols in Multiple graphs
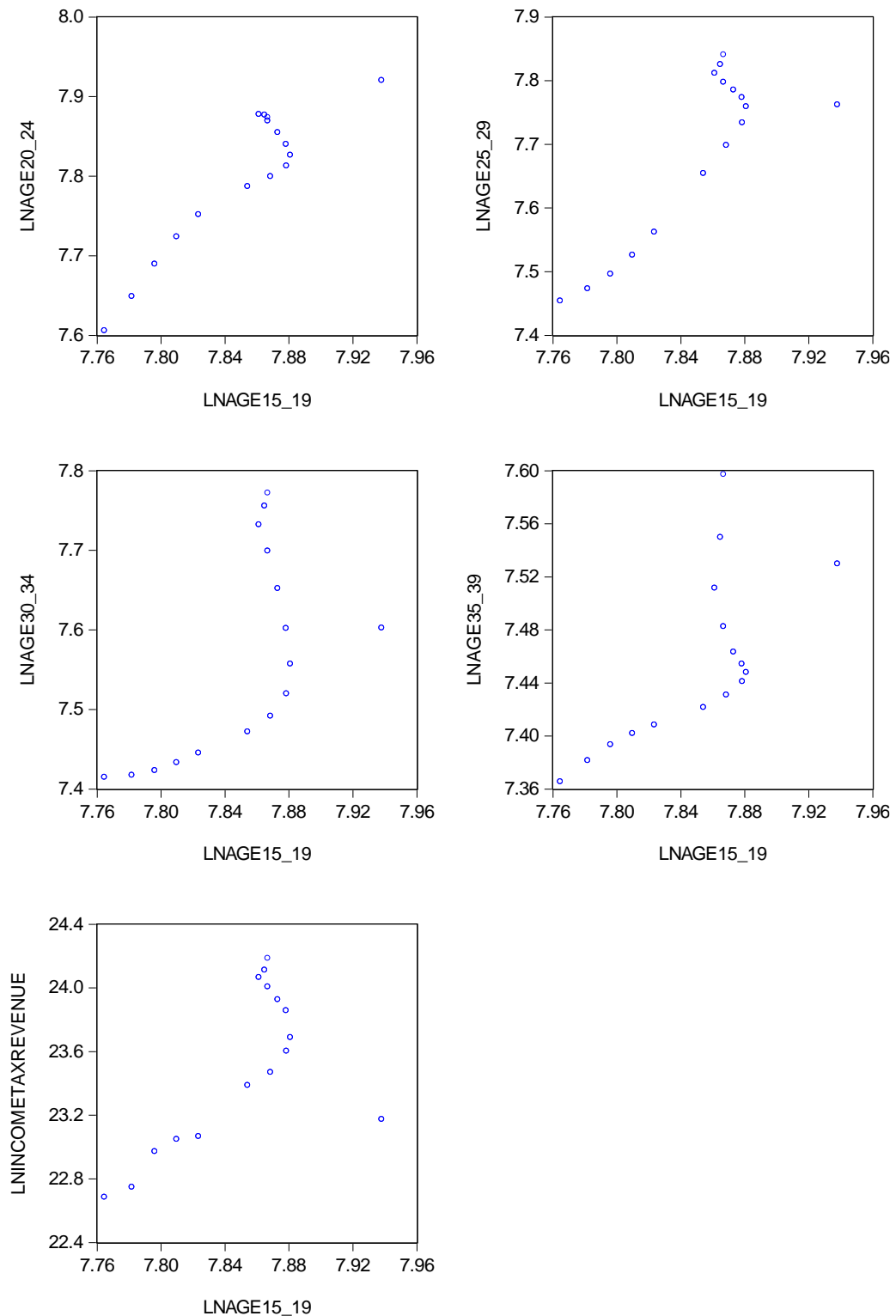
Figure 8 Scatter Plot in Multiple graphs

Moreover, to obtain more valid results, the researcher examined the Breusch-Godfrey (BG) Serial Correlation Lagrange Multiplier (LM) Test Indeed, Breusch-Godfrey (as demonstrated in Figure 9) is the most appropriate test when stochastic regressors are present (Rois et al., 2012) because it allows for $r^{th}$ order autocorrelation. The observed R-squared for the corresponding probability in the Chi-

Square value was 0.5018 (50.18%), indicating that the finding was not significant for Serial Correlation (p>5%), as illustrated in Figure 9. As a result, the model had no serial correlation.
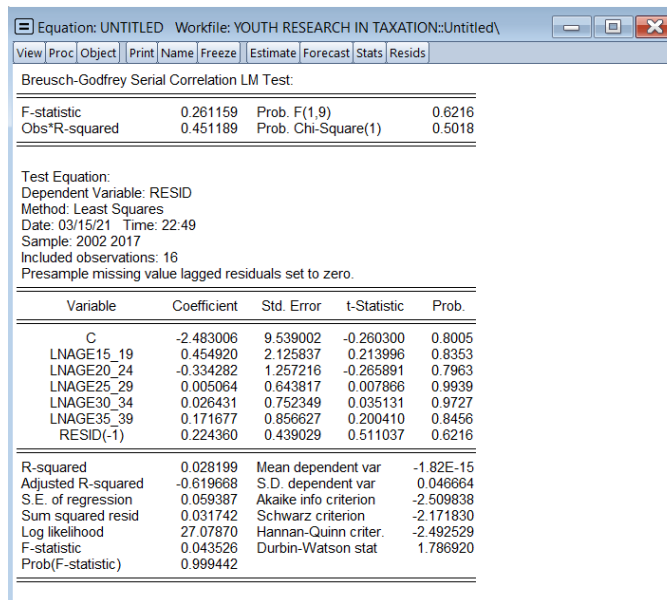


Figure 9 Breusch-Godfrey Serial Correlation LM Test

Additionally, the study examined Heteroscedasticity, as illustrated in Figure 10. The observed R-squared value for the probability associated with the Chi-Square value was 0.4790 (47.90%). This demonstrates that the finding was not significant for Heteroscedasticity (p>5%) and that the residual variance was constant. The model in this case was homoscedasticity with no issues.



Figure 10 Heteroskedasticity Test

Overall, the Jarque-Bera Test was used to determine the distribution's normality in Figure 11. The result revealed a skewness of 0.013728, which was between −2, 0, and +2. In the meantime, the kurtosis value was 2.060103, which was between −7, 0, and +7. The corresponding probability value for Jarque-Bera was 0.758585 (75.85%). It means that the results were not statistically significant

(p>5%) and the residuals followed a normal distribution. In summary, there was no heteroscedasticity, no serial correlation, and a normal distribution in the regression model.



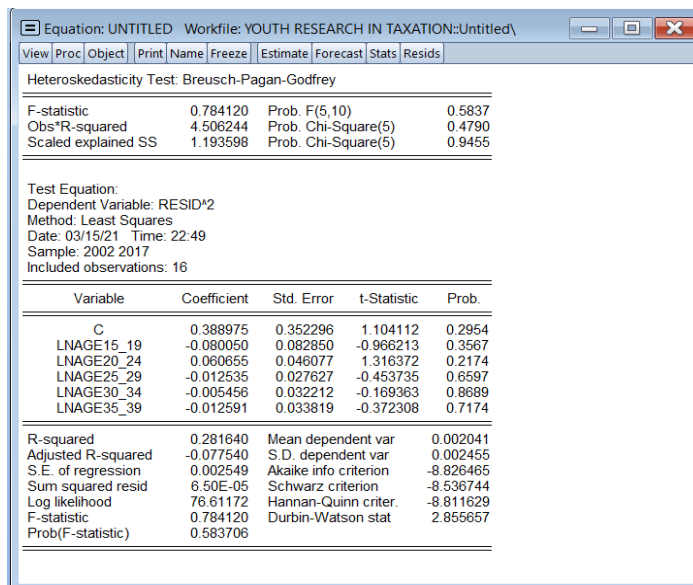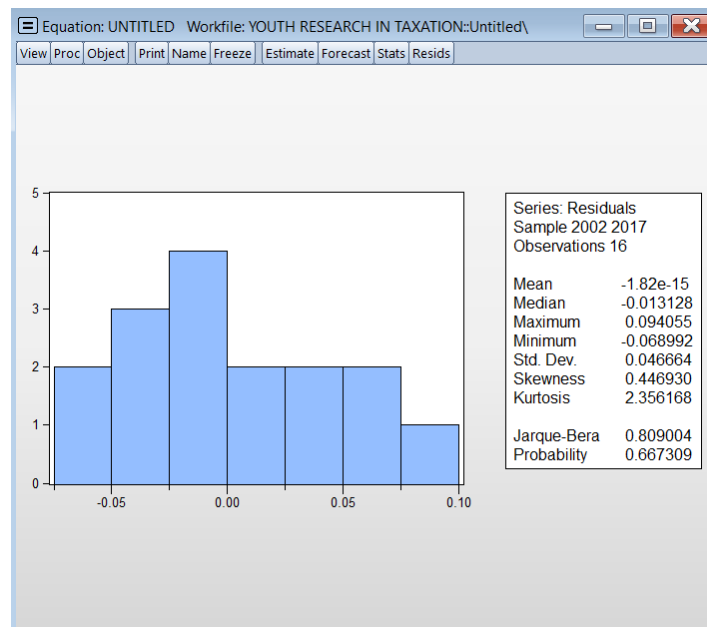**Figure 11** The Jarque-Bera Test

**The Ordinary Least Square Method using EViews**

The proposed hypotheses were tested and validated using the Ordinary Least Squares (OLS) Method. This study examined five direct association hypotheses according to the age group of adolescents. $R^2$ is used to determine the model's predictive power. The *R*-squared value was 99.14 percent in this study. In this sense, interactions accounted for 99.14 percent of the variance in personal income tax compliance. As illustrated in Figure 12, the probability of F-statistic was 0, which was less than 5% of the significance level.

The result revealed that the coefficient for the age group from 15 to 19 years old to income tax revenue was 3.813284, indicating a positive relationship. Age group from 15 to 19 years old's t-statistic was -7.473476, which exceeded the recommended value of 1.96 (<0.05) and the p-value was 0.0000 (P<0.05). At a 95% confidence level, the results were significant. In short, $H1_1$ was accepted.

However, the coefficient for the age group from 20 to 24 years old to the income tax revenue was -2.742598, indicating a positive association. The age group from 20 to 24 years old had a t-statistic of 3.690676, which was greater than 1.96 (<0.05). The p-value was 0.0042 (P<0.05), and it was significant at the 95% confidence level. As a result, $H2_1$ was accepted.

Furthermore, the coefficient for the age group from 25 to 29 years old to income tax revenue was 6.771691, indicating a positive association. The t-statistic for the age group from 25 to 29 years old was 10.93084, which was higher than the suggested value of 1.96 (<0.05). In short, $H3_1$ was accepted because it concluded that mean household monthly income was significantly related to personal tax compliance.

Moreover, the age group from 30 to 34 years old's correlation with income tax revenue was -2.257721, indicating a negative association. The age group from 30 to 34 years old's t-statistic was -3.125698, greater than the concept standard value of 1.96 (<0.05) and the p-value of 0.0108 (P<0.05). These findings were significant at a 95% level of confidence, but significant at a 95% level of confidence. As a result, it was determined that $H4_1$ was accepted in this study.

Contrary to expectations, the coefficient for the relationship between the age group from 35 to 39 years old and income tax revenue was 0.053557, indicating a positive association. The t-statistic for the age group from 35 to 39 years old incidence was 0.070624, with a p-value was 0.9451 (P>0.05). These findings were statistically non-significant at the 95% confidence level. As a result, $H5_1$ was not accepted.



Dependent Variable: LNINCOMETAXREVENUE
Method: Least Squares
Date: 03/15/21  Time: 22:04
Sample: 2002 2017
Included observations: 16

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 67.39895 | 7.899766 | 8.531766 | 0.0000 |
| LNAGE15_19 | -13.88417 | 1.857793 | -7.473476 | 0.0000 |
| LNAGE20_24 | 3.813284 | 1.033221 | 3.690676 | 0.0042 |
| LNAGE25_29 | 6.771691 | 0.619503 | 10.93084 | 0.0000 |
| LNAGE30_34 | -2.257721 | 0.722309 | -3.125698 | 0.0108 |
| LNAGE35_39 | 0.053557 | 0.758338 | 0.070624 | 0.9451 |

| | | | |
|---|---|---|---|
| R-squared | 0.991400 | Mean dependent var | 23.49931 |
| Adjusted R-squared | 0.987100 | S.D. dependent var | 0.503193 |
| S.E. of regression | 0.057151 | Akaike info criterion | -2.606233 |
| Sum squared resid | 0.032663 | Schwarz criterion | -2.316512 |
| Log likelihood | 26.84986 | Hannan-Quinn criter. | -2.591397 |
| F-statistic | 230.5618 | Durbin-Watson stat | 1.667426 |
| Prob(F-statistic) | 0.000000 | | |

**Figure 12** Results using Least Squares Method

**Discussion**
The results show that an increase of 1 percent of group of age between 25 to 29 increases the personal income tax revenue 677.16 percent. The highest percent of changes of age group for youth to increase the personal income tax revenue from past experiences in Malaysia.

The results show increasing 1 percent of group of age between 15 to 19 will reducing the personal income tax revenue 1,388.41 percent. At the age between 15 to 19-year-old, the youth are still study in secondary school or some youth are studying in college. The highest percent of changes of age group for youth in reducing the personal income tax revenue from the past experiences in Malaysia.

From the individual tax relief in Income Tax Return Form B (for individual with business income) or BE (for individual without business income) perspective, the researcher found the increasing tax relief of the children and children with higher education from year to year.

Table 4 show the child relief in 18 years and above and studying increased from RM 3,200.00 in Year Assessment 2002 to RM 8,000.00 in Year Assessment 2017, with satisfies the condition according to the Act, and for child relied under the age of 18 years also increased from RM 800.00 in Year Assessment 2002 to RM 2,000.00 in Year Assessment 2017, according to Section 48, Income Tax Act 1967. Childcare fees are restricted to RM 1,000.00 also effective on Year Assessment 2017. With the increasing of allowable tax relief on the child, the individual income tax revenue will be reduced.

Table 4
Related Tax Relief for Children from Year Assessment 2002 to 2017

| Year Assessment | Child - 18 Years & Above and Studying | | Child – Under the Age of 18 Years | Child Care Fees to A Registered Child Care Centre Kindergarten for A Child Aged 6 Years and Below |
|---|---|---|---|---|
| 2002 | Relief for each unmarried child of 18 years and above who is receiving full-time education is RM800. Paragraph 48(1)(b) & 48(2)(a); | Relief of RM3,200 for each unmarried child of 18 years and above on condition. | Child relief of RM800 is allowed if the individual pays for the maintenance of each unmarried child under the age 18 years at any time in that year. Paragraph 48(1)(a) & 48(2)(a) | - |
| 2003 | | | | - |
| 2004 | Relief for each unmarried child of 18 years and above who is receiving full-time education is RM1,000. Paragraph 48(1)(b) & 48(2)(a); | Relief of RM4,000 for each unmarried child of 18 years and above on condition. | Child relief of RM1,000 is allowed if the individual pays for the maintenance of each unmarried child under the age 18 years at any time in that year. Paragraph 48(1)(a) & 48(2)(a) | - |
| 2005 | | | | - |
| 2006 | | | | - |
| 2007 | | | | - |
| 2008 | | | | - |
| 2009 | | | | - |
| 2010 | | | | - |
| 2011 | | | | - |
| 2012 | | | | - |
| 2013 | | Relief of RM6,000 for each unmarried child of 18 years and | | - |
| 2014 | | | | - |
| 2015 | | | | - |

| | | above on condition. | | |
|---|---|---|---|---|
| **2016** **2017** | A relief of RM2,000 per child is allowed if the child is unmarried, 18 years of age and above, and is receiving full-time education; | A relief of RM8,000 is allowed if the child is unmarried, 18 years of age and above, and satisfies the following conditions. | A relief of RM2,000 per child is allowed if the child is unmarried and below the age 18 years in the current year. | - This relief is restricted to RM1,000 even though the number of children who fulfils the mentioned conditions exceed one. |

Sources: IRBM

**Contribution**

This study is an empirical attempt to determine the key drivers of government in planning the budget to the youth in the income tax perspective from year 2002 to 2017. The study investigates the effect on population growth among the youth to the personal income tax compliance in Malaysia.

This study supports the Fischer Model that age effect to the taxpayer compliance. The results show negative effect on age group for 15 to 19 years old and 30 to 34 years old. This situation proves that the age group for 15 to 19 years old includes youth that are still in the formation of knowledge. Youth in this age group are still studying at the college or university level. While the demand for student relief at the tertiary level will reduce current tax collection, its negative effect is much welcomed with the knowledge to be received will help an increase in the income of the respective youth in the future (Marquez-Ramos and Mourelle, 2019; Goczek et al., 2021). The effect of age is found to be positive related to education, in fact education has an indirect effect and a positive link with taxpayer compliance (Chan et al., 2000).

However, negative association occurs in youth for the age group 30 to 34 years. This result demonstrates that in Malaysia, this group does not feel comply to contribute personal income tax, and thus reduction in the collection of individual income tax for this range of population. At this stage, most youth in this group have just started family, set up their respective household and expand their families at time. In terms of personal income tax, individual relief in Malaysia is focused on the married group such as child relief, breastfeeding equipment, and kindergarten education expenses. Due to this circumstance, the government has intended to facilitate and provide assistance to these groups in order to increase the income of this group of population and thus increase the personal income tax collection in Malaysia.

**Conclusion**

The findings lead us to conclude that youth, age between 14 years old to 34 years old are significant contributors to the increasing of total amount for personal income tax collection in Malaysia; with exclusion of the age group between 35 to 39 years old. This study contributes to the body of

knowledge on tax compliance by identifying significant determinants that are likely to affect personal income tax compliance among youth taxpayers. Furthermore, this study provides useful information to be considered by the relevant authority or the Malaysian government in formulating strategic policies and making critical tax revenue collection decision for this group of the youth in Malaysia. It will in turn offer significant effects on revenue collection and thereafter the government's ability to meets its fiscal and social goals. In line with theoretical implications, the findings from the present study have suggested several practical insights that are beneficial to related stakeholders such as policymakers, the Ministry of Finance, the respective Malaysia government departments, and the Malaysian Inland Revenue Board. In addition, findings of this study can be incorporated into the planning of Malaysia annual budget of the Ministry of Finance, Malaysia to benefit a wider audience in due course. While this study offers some useful findings related to Malaysian youth responses in personal income tax compliance, the future studies can be expanded to compare Malaysian youth and non-Malaysian youth that may discover interesting findings and insights for further understandings and way forward.

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