The Effect of Public Expenditure on Education and Economic Growth in Malaysia

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Abstract: This examination was meant to create and assess the effect of instruction use and monetary development in Malaysia from 1970 to 2015. To utilizing the Multiple Linear Regression Model into the Gross Domestic Product (GDP) to Real Gross Domestic Product (RGDP) which was a needy variable dependent on the free factor of Government uses on training (EduG) and cash supply or fund (Fin). The examination likewise broke down the impact of the model towards applying Ordinary Least Squares test (OLS), spell binding measurement, typicality test, coefficient test, Co-incorporation test, and residuals measurement Test. This examination additionally endeavored to add to the current writing by expediting new proof the connection among training and financial development and too explored whether formal models shed any light on the case that instruction assumed a focal job in development. The exact outcomes bolstered the principle speculation of this examination that open spending on training has influenced with a positive effect on monetary development in Malaysia. The finding of the investigation clarified the Null (H0) Hypothesis which isn't rejected and the positive effect of training with monetary development in Malaysia. The guidance was helped to build up a deferential country and increment the human capital, channel the cerebrum, money related exercises, remote trade, societies, and universal center point to raise the financial tackle. In this examination, the huge worth is acknowledged among training and development in Malaysia and it is exceptionally helpful for further research. A more prominent assignment of assets on training costs could make the Malaysian economy increasingly powerful.

Keywords: Economic Growth; Government Expenditures on education; Hypothesis, Multiple Linear Regression Model and international educational hub

1. Introduction

Higher education enrolments crosswise over Asia have encountered touchy development in the course of the most recent multi-decade, the consequence of expanding school investment rates, expanding dimensions of wealth, and the quality training in consequent life openings. Instruction is commonly considered as a basic and ground-breaking instrument in redesigning financial development, upgrading income at the private dimension, disheartening and diminishing destitution, enabling individuals, empowering wellbeing and adaptability in condition and advancement aggressiveness in the economy. In each spending limit, the administration of Malaysia reports different improvements in the instruction area with higher government consumption on it. This expansion happens with the conviction that the instruction of youngsters in creating nations is critical for further financial development and guaranteeing sustainable majority rule government bringing about more prominent soundness and improved way of life.

According to Mohd Yahya (2012), education is one of the most important determinant factors of economic growth. It is not only him but also some prominent classical and neoclassical economists such as Adam Smith, Romer, Lucas and Solow believed so as they emphasized the contribution of education in developing their economic growth theories and models. For example, education has been focused highly on ensuring economic growth in the main theoretical growth models of Robert Solow in 1957 and the model of Romer in 1990.

In Malaysia, as a knowledge-based economy country, education is recognized as the driver of economic growth aside from land, labor and physical capital. The knowledge accumulated through education will contribute to Malaysian economic growth.

As can be seen from the line chart, the Malaysian Government increased the educational expenses to develop the nation which is positively correlated in reaching the goal towards the economy. From 1970 to 1998, the expenditure on education increased slowly and became almost 5000 million. Then it experienced rapid growth in the beginning in the twenty-first century and by the end of that period (2015) the expenditure climbed by around 15000 million.

1.2 Research Question with the problem statement

Schooling has an imperative impact and major huge for making countries like Malaysia, which is the circumstance in this examination. In this investigation we will jump at
the chance to clarify the Government consumption on training is recorded in an expanding pattern for as long as decades. The principle ponders that have inspected the effect of the instructive dimensions on monetary development are introduced beneath:

- The connection between instruction use and financial development in Malaysia.
- Does instruction assumes a focal job in the development and why the Malaysian Government needs to use the training consumption to improve itself as an informed country and advance in the worldwide instruction showcase.

1.3 Objective of the study

The main objective of this study is to determine the necessity of education in Malaysia to develop the country’s economic growth.

The specific objective of this study is as follow:

- To assess the connection between higher education and financial development.
- To evaluate the correlation between money and monetary development and Education is indispensable to build the RGDP from GDP; there is no noteworthy connection between education expenditure and account. Understanding the Hypothesis about the instruction-use by Government is fundamental to building up the nation's development and there is no critical connection between training consumption with monetary development moreover the show of the Hypothesis.

2. Research Background

As a creating nation, Malaysia is endeavoring to expand its generation and improve its pay dispersion in the meantime is putting a major exertion to guarantee its objective. Along these lines so as to accomplish the target. Malaysia has embraced various approaches to expand its consumption on training to create monetary development.

For a considerable length of time instruction is recorded in an expanding pattern for as long as decades. The principle ponders that have inspected the effect of the instructive dimensions on monetary development are introduced beneath:

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- Does instruction assumes a focal job in the development and why the Malaysian Government needs to use the training consumption to improve itself as an informed country and advance in the worldwide instruction showcase.

Glomm and Ravikumar (1997) discovered that the administration consumption will prompt long haul monetary development by concentrating on two kinds of government use which are merchandise and enterprises and innovation speculation. Later they gave a model which the administration use on wellbeing which can help in broadening the human life expectancy may draw in the private financial specialist because of an appropriation from government and thusly prompt development.

Further examinations done by Goupta, Verhoeven, and Tiongson (2002), the legislature has a ton of divisions to spend so as to improve it. Among the administration consumptions, the instruction divisions are one of the parts that can be legitimized by the social rate of return which demonstrates the all-out estimation of all advantages got from the spending allotted to a specific zone. The past scientists have shown a positive effect of government spending on instruction whereby they have affirmed that administration spending will prompt an expansion in the rate of instructive accomplishment.

An examination led by Ram (1989) has shown a huge part of instructive consumption is taken up as an educator's pay. Along these lines, genuine spending on training is thought to be used at a similar degree. Numerous nations especially creating country has put a substantial need on expanding training consumption. Governments over the world accepted that training makes profitability and increment conceivable henceforth rising pay and advance financial development all in all. At long last, the development in training likewise empowers proficiency to increment and a superior monetary open door for each of them, a factor which is particularly required in nations with high-salary imbalance.

Further examinations done by Goupta, Verhoeven, and Tiongson (2002), the administration has many divisions to spend so as to improve it. Among the administration uses, the instruction parts are one of the segments that can be defended by the social rate of return which demonstrates the all-out estimation of all advantages got from the spending allotted to a specific zone.

In Malaysia, as an information-based economy nation, training is perceived as the driver of monetary development beside land, work, and physical capital. The learning aggregated through training will add to Malaysian financial development. An examined report utilizes the Musgrave model to use on the development of government spending and end. The rate of government consumption would be high as the monetary allowance spends on the essential infrastructural offices, for example, training, wellbeing, streets, power, water supply which these are the necessities that can be made the economy move to higher advancement, said by (Abdul Jabbar Abdullah, 2013).

2.1 Methodology

This part will display the procedure and the wellspring of Data dependent on the writing audits. The kind of information is utilizing for a chosen length. Its definitions, just as the information sources, will be clarified in
subtleties. This part will exhibit the techniques utilized in this exploration and this section will portray how the examination was done as far as research structure, information gathering, model detail, and information investigation.

2.2 Research Design

Research configuration is the outline to satisfy targets and responding to questions—said Cooper and Schindler (2008). An unmistakably characterized by techniques utilized in the gathering; understanding and breaking down the information will give a structure to the investigation. Targets of the investigation ought to be incorporated also to get the fitting data when taking care of the issue shared by Zikmund, Babin, Carr, and Griffin (2010).

2.3 Data Collection

As indicated by Pannerselvam (2006), elective information is gathered from sources that have just been made with the end goal of first-time use and future employment. The quantitative information is shown as a supreme genuine GDP for the financial development and outright estimation of government consumption on the instruction division.

The information was organized every year from a time of 1970 to 2015 (45 years). The example was picked principally based on information accessibility. The majority of the quantitative information was gathered from different dependable sources for the most part from the Economic Planning Unit of Malaysia, Ministry of Finance Malaysia, World Bank, Penn World Table, and International Monetary Fund.

2.4 Model Specification

Increment in GDP per capita or at the end of the day development for GDP per capita is influenced by few factors for the most part training spending. So as to guarantee the legitimacy of the impact, a model is created as a feature of the investigation to indicate how GDP per capita development is influenced by a couple of factors. Time arrangement information is utilized in Multiple Linear Regression Model. In the course of adopting the model specification and proposed by Norimah, Emilda and Dayang (2016)

The Multiple Linear Regression model of this study is written as:

\[ Y_t = \alpha_0 + \alpha_1 Edu + \alpha_2 Fin + \varepsilon_t \]

(Equation 1)

Where,

\[ Y_t = \text{Real economic growth}, \]

\[ \alpha_0 = \text{Constant}, \]

\[ InRGDP = \alpha_0 + \alpha_1 InEduG + \alpha_2 InFin + \varepsilon_t \]

(Equation 3)

After the factors in the investigation being substituted into the capacity and the logarithm capacity applying to equation 1 as pursues:

\[ InRGDP = \alpha_0 + \alpha_1 Edu + \alpha_2 Fin + \varepsilon_t \]

(Equation 2)

Here,

\[ InRGDP = \text{Real Gross Domestic Product in Logarithm}; \]

2.5 Data Analysis

There are a ton of kinds of tests that can be utilized to lead the investigation. A portion of the investigation tests that accessible resemble direct relapse, connection test, typicality test, co-reconciliation test, and unit root test.

As per the test, it's conceivable to get some essential data about the outcomes, as pursues:

- Despite the fact that Multiple Linear Regression estimator and the OLS estimator has huge changes and co-differences that will prompt trouble in making an exact estimation.
- Inferable from the above result, sure interims will, in general, be a lot more extensive. This will prompt acknowledgment of the "zero invalid speculations" all the more promptly.
- Likewise, because of the principal outcome, the t proportion of at least one coefficient will, in general, be measurably irrelevant.
- In the meantime, despite the fact that the t proportion of at least one coefficient is factually irrelevant, the pointer measure for the integrity of fit, R2 can be high.
- The OLS estimators and their standard mistakes can be delicate to little changes in the information.

2.6 Research Analysis and Reports

This section will present the findings of the empirical results regarding the impact of education expenditure on economic growth in Malaysia from the year of 1970 to 2015 that which explained the model in the previous discussion as well as the result in this study. According to the equation-2, it’s possible to modify the empirical analysis of the impact of education expenditure on economic growth in Malaysia. The equation-3 can be written in a framework as follow;
Table 1: The Model Summary Analyzed by SPSS application

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.998</td>
<td>.966</td>
<td>.906</td>
<td>0445247774401</td>
<td>.996</td>
<td>5</td>
<td>2</td>
<td>42</td>
<td>.000</td>
<td>1.113</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), InE-Fin, InE-EduG
b. Dependant variable: InRGDP

- R is the square base of R-Squared and is the relationship between the watched and anticipated estimations of the reliant variable.
- R-Square - is the extent of fluctuation in the needy variable which can be clarified by the free factors. This is a general proportion of the quality of affiliation and does not mirror the degree to which a specific free factor is related to the reliant variable.
- This table gives the R and R2 values. The R worth speaks to the relationship and is 0.998 in the "R" Column, which demonstrates a high level of connection. The R2 esteem, the "R Square" segment shows the amount of the absolute variety in the needy variable, can be clarified by the free factor. For this situation, 99.6% can be clarified, which is.
- Compute and translate the coefficient of assurance of R2, the coefficient of assurance is 0.996; along these lines, about 99.6% of the variety in the training use on development is clarified by the instruction variable.
- The relapse condition seems, by all accounts, to be helpful for making forecasts since the estimation of R2 is extremely near 1 (.996 > 1.00) where money and instruction use by Government is significant so as to clarify as the Real Gross Domestic Product is the needy variable.
- This is an alteration of the R-squared (.996 >1.00) that punishes the expansion of incidental indicators to the model.
- Std. Error of the Estimate – This is additionally alluded to as the root mean squared blunder. The sexually transmitted disease. The blunder of the Estimate in this report is .04454; it is the standard deviation of the mistake term and the square foundation of the Mean Square for the Residuals in the ANOVA report.
- The basic straight relapse is determined the indicator variable as a needy variable dependent on the autonomous variable. A critical relapse condition is using them ; (F (2, 42) = 5365.762), where is the P worth shows P < .000 and the R2 = .996 and 99.6% of the fluctuation side effects can be clarified by one's dismissal H0 delicately.
- In the meantime, despite the fact that the t proportion of at least one coefficient is factually irrelevant, the pointer measure for the decency of fit, R2 can be exceptionally high.
- The OLS estimators and their standard blunders can be exceptionally touchy to little changes in the information.

2.7 Coefficients

Table 2: The Coefficient Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>95.0% Confidence Interval for B</th>
<th>Correlations</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Constant)</td>
<td>B = 1.559, Beta = .087</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>InE-EduG</td>
<td>Coefficient = 0.581, Beta = 0.624</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>InE-Fin</td>
<td>Coefficient = 0.328, Beta = 0.494</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Where is,

\[ InRGDP = 1.559 + 0.581 \cdot InEdu + 0.328 \cdot InFin \]  
*(Equation 4)*

\[ F* = 5354.76 \]

As per the report investigation, the outcome recommends that all autonomous variables are essential to builds the

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nation's monetary development at 99.6% certainty dimension of instruction used by the Government. It implies that the autonomous variable of InEduG and InFin, are significant in impacting monetary development (GDP). Be that as it may, the autonomous variable of InEduG, InFin, and ward variable InRGDP are adequately identified with the nation's development and they are unequivocally associated with one another. Here is the huge worth under .005 (P > .005) and the certainty level at 99.6%; have the option to use that there is no connection between Government consumption on instruction and nation's development and the Hypothesis is acknowledged and it's NULL Hypothesis (H0).

Table 3: Multiple Linear regression descriptive and correlations output

<table>
<thead>
<tr>
<th></th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>InE-Fin</td>
<td>.968**</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>.46</td>
<td>.45</td>
</tr>
</tbody>
</table>

2.8 Residuals statistics

Table 4: The residuals analysis report

<table>
<thead>
<tr>
<th>Residual Statistics</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predicted Value</td>
<td>8.79033756256</td>
<td>11.4861650466</td>
<td>10.2661606417</td>
<td>.695634908407</td>
<td>45</td>
</tr>
<tr>
<td>Std. Predicted Value</td>
<td>.2122</td>
<td>1.754</td>
<td>.000</td>
<td>1.000</td>
<td>45</td>
</tr>
<tr>
<td>Standard Error of Predicted Value</td>
<td>.007</td>
<td>.021</td>
<td>.011</td>
<td>.003</td>
<td>45</td>
</tr>
<tr>
<td>Adjusted Predicted Value</td>
<td>8.79794311523</td>
<td>11.4804716110</td>
<td>10.2665086897</td>
<td>.695382396141</td>
<td>45</td>
</tr>
<tr>
<td>Residual</td>
<td>-.0218</td>
<td>2.392</td>
<td>.000</td>
<td>.977</td>
<td>45</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>-.1687</td>
<td>2.444</td>
<td>-.004</td>
<td>1.006</td>
<td>45</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>-.1687</td>
<td>2.444</td>
<td>-.004</td>
<td>1.006</td>
<td>45</td>
</tr>
<tr>
<td>Deleted Residual</td>
<td>-.111206449568</td>
<td>-.000347527012</td>
<td>.04518239636</td>
<td>.04518239636</td>
<td>45</td>
</tr>
<tr>
<td>Mean</td>
<td>.008</td>
<td>.208</td>
<td>.044</td>
<td>.038</td>
<td>45</td>
</tr>
</tbody>
</table>

Predicting the outcomes of some groups compared to stander value. About the error term in the report,
Minimum, $S_e = .007$
Maximum, $S_e = .021$
Mean, $S_e = .003$ (p > .005)
3. Recommendation and Conclusion

The target of this examination is to demonstrate the effect of instruction consumption on monetary development in Malaysia for the period 1970 to 2015. This part will condense the finding of this examination. The ends landed at dependent on the observational proof found over the span of the investigation. This paper arrangement is suggestions for development in instruction consumption by the legislature in Malaysia and recognized the investigation confines and course and talk for further research chip away at the zone. According to the studies and analysis, it is clear about the strong relationship between education and economic growth. The impact of education expenditure on economic growth in Malaysia is highly accepted by the public. To improve as a respectable nation education is a major option and it works.

The Hypothesis of this study, the relationship between education and government expending is too close and there is no significant value with education and Government expenditure on education. Malaysian Government must control the education budget to develop active human capital. This examination embarks to decide the effect of instruction use on monetary development in Malaysia. The consequence of this examination will concoct pointers that the Government uses on training and monetary development is decidedly proficient with a long-run relationship in Malaysia. The more elevated amount contributes measurably noteworthy esteem (.996 > 1.00) of the conditions is speaking to the connection between the training consumption by Government and financial development. By expanding the quantity of value work, the Government has a fantastic opportunity to bothering the arrival and increment as a deferential country with qualified human capital. Besides, the Malaysian Government needs to use the spending limit for the training area and contributes to it to return. With respect to contribute and return relationship, to raise the contributing line, the arrival will likewise emphatically increment to build up the development and in a long run connection among contributing and return. With respect to the instruction consumption by Government and monetary development has a positive long-run relationship for nation’s development over the timeframe.

At last, the effect of training consumption on monetary development in Malaysia is fundamental to intently screen as like other Asian nations. The investigation is effective to have a positive and long-run connection between Government use on Education and financial development. It is critical to the state; instruction can fabricate a quality country to expand RGDP and Human capital. The informed country is a fixed resource for the Government. An informed country never stops to do the budgetary exercises to change financial advancement.

References