

Analysis of the Effect of Gross Regional Domestic Product (GRDP), Human Development Index (IPM), and Open Unemployment Rate (TPT) on Poverty Rate in Lampung Province

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ABSTRACT - *The level of poverty in Lampung Province is still quite high so that the level of welfare in the community is still low and not evenly distributed, this is because many factors cause poverty such as Gross Regional Domestic Product, Human Development Index, and Open Unemployment Rate. This study was conducted with the aim of testing and analyzing the effect of Gross Regional Domestic Product, Human Development Index, and Open Unemployment Rate on poverty in Lampung Province in the 2017-2021 period. Using the type of secondary data obtained from BPS Lampung Province and other supporting journal literature. In this study, the method used is panel data regression using the Eviews9 program. The results in this study indicate that the Gross Regional Domestic Product has a positive and insignificant effect on the poverty level and the Human Development Index has a negative and significant effect on the poverty level and the Open Unemployment Rate has a significant positive effect on the poverty level. The drawback in this study is that the time period is very short so it cannot detect the relationship between long-term variables properly. This research is expected to benefit the government, so that it can focus more on poverty alleviation programs so that the poverty rate in Lampung Province can decrease.*

Keywords: *Poverty Rate, Gross Regional Domestic Product, Human Development Index, Open Unemployment Rate*

ABSTRAK - *Tingkat kemiskinan di Provinsi Lampung masih tergolong cukup tinggi sehingga tingkat kesejahteraan pada masyarakat masih rendah dan belum merata, hal ini karena banyak faktor yang menjadi penyebab kemiskinan seperti Produk Domestik Regional Bruto, Indeks Pembangunan Manusia, dan Tingkat Pengangguran Terbuka. Penelitian ini dilakukan dengan tujuan untuk menguji dan menganalisis pengaruh Produk Domestik Regional Bruto, Indeks Pembangunan Manusia, dan Tingkat Pengangguran Terbuka terhadap kemiskinan di Provinsi Lampung pada periode 2017-2021. Menggunakan jenis data skunder yang diperoleh dari BPS Provinsi Lampung serta literatur-literatur jurnal pendukung lainnya. Pada penelitian ini metode yang digunakan adalah regresi data panel dengan menggunakan program Eviews9. Hasil dalam penelitian ini menunjukkan bahwa Produk Domestik Regional Bruto berpengaruh positif tidak signifikan terhadap tingkat kemiskinan dan Indeks Pembangunan Manusia mempunyai pengaruh negatif dan signifikan terhadap tingkat kemiskinan serta Tingkat Pengangguran Terbuka berpengaruh Positif signifikan terhadap tingkat kemiskinan. Kekurangan yang ada dalam penelitian ini yaitu jangka waktu yang sangat singkat sehingga tidak dapat mendeteksi hubungan antar variabel jangka panjang dengan baik. Dengan adanya penelitian ini diharapkan dapat memberi manfaat pada pemerintah, agar lebih fokus dalam melakukan program-program pengentasan kemiskinan sehingga angka kemiskinan di Provinsi Lampung dapat menurun.*

Kata Kunci: *Tingkat Kemiskinan, Produk Domestik Regional Bruto, Indeks Pembangunan Manusia, Tingkat Pengangguran Terbuka*

INTRODUCTION

Poverty is a fairly complicated problem in all countries in the world, especially in developing countries, but several developing countries have succeeded in making progress in terms of production and national income (Sartika & Al., 2016) . The condition of poverty in a country or region reflects the level of welfare of the people living in that country or region (Christianto, 2013) . In developing countries such as Indonesia, poverty is still a problem that gets attention. Poverty is a complex and multidimensional problem so that it becomes a development priority (Royat, 2015) . Poverty is one of the basic problems, and concerns the fulfillment of a need in life (Yacoub, 2010) . Poverty is not only related to financial problems, but has several dimensions such as short life, illiteracy, social exclusion, and lack of material means to improve family conditions (Omoniyi, 2013) . In addition, poverty is also associated with limited job opportunities and those who are classified as poor who are mostly unemployed and their education and health levels are generally quite poor. (World Bank, 2004) .

Poverty has several different understandings, it can be seen again in poverty reduction in developing countries over the last 50 years. Historically, the term 'poverty reduction' in developing countries has been used intentionally to refer to direct intervention in the provision of inadequate facilities (Singleton, 2003) . Poverty reduction has evolved over the past 50 years in response to a deep understanding of the complexities of development (Domfeh, KA, & Bawole, 2009) . Poverty alleviation since 2000 has increasingly become a rights-based issue, by the international community leading to its endorsement as a universal norm through MGDs (Adejumobi, 2006) . However, (Todaro & Smith, 2006) stated that in order to reduce poverty over the last half century with significant efforts, the situation of poverty persists in developing countries. Poverty reduction has become a sustainable development approach in many countries, especially developing countries over the last few decades (Todaro & Smith, 2006) . Many innovation also had been proposed to accelerate economic growth and poverty reduction (Athief, 2019).

Economic growth is indeed one of the most powerful instruments in reducing the level of poverty as long as it can create job opportunities for the poor (Kraay, 2004) , to increase their abilities and accumulate productive assets that prepare them for a better life (Morduch, 1998) . Poverty reduction can be achieved by increasing the income of the poor or increasing the distribution of income. Both characteristics of the growth process and their implications for poverty indicators are important analytical approaches to describe the relative importance of growth and distribution components in the poverty alleviation process (Bourguignon, 2003) . Based on the identification of the characteristics of the poor as well as the targets for aid and programs set by the government to reduce the percentage of poverty in the community, it is hoped that optimal results will be obtained. One of the important aspects to assist poverty reduction strategies is economic growth and economic development to achieve a better level of welfare. In this study, the objectives to be achieved are: to analyze how big the variables of GRDP, IPM, and TPT are on poverty in Lampung Province. To find out the relationship between these variables and poverty, multidimensional data analysis is needed, namely the *cross section* and *time series dimensions* , with this two-dimensional structure allowing researchers to observe dynamic changes in individual characteristics.

Poverty is seen as an economic inability to meet basic food and non-food needs as measured from the expenditure side (BPS, 2022a) . In Indonesia, poverty is still a serious problem, especially in Lampung Province, the problem of poverty is a very important issue. The high

poverty rate in Lampung Province in the last 5 years is still above 10%. In 2021 the poverty rate in Lampung Province is around 12.62% with a total poor population of 1,083.93 thousand people (BPS, 2022).

The development of data on the percentage of poverty and population in Lampung Province is as follows:

Table 1.1
Development of poverty percentage and number of poor people 2017-2021

Year	Percentage of Poor People (%)	Number of Poor People (Thousand People)
2017	13.69	1131.73
2018	13.14	1097.05
2019	12.62	1063.66
2020	12.34	1049.32
2021	12.62	1083.93

source: Central Bureau of Statistics (BPS)

Judging from the table above, the development of poverty in Lampung Province has experienced ups and downs in the last 5 years, it can be seen in 2017-2018 which is quantitative and the percentage has slightly decreased. The decline occurred in 2018-2019 by 1,063.66 thousand people or 12.62 percent and increased to 1,049.32 thousand people or 12.34 percent in 2020 and again experienced a slight increase in 2021 by 1,083.93 thousand people or 12,62 percent. The increase in the poverty rate occurred due to the impact of the Covid-19 pandemic that occurred in almost all countries, including in areas in Indonesia, one of which was the Province of Lampung. For this reason, it is necessary to research on the factors that can affect the level of poverty. Various programs are being pursued by the current government for poverty alleviation, such as: public health insurance (Jamkesmas), the Family Hope Program (PKH), meeting basic needs or increasing income and the Education Assistance Program requiring information about who and where the poor are located. .

According to (Sussy Susanti, 2013), the magnitude of the poverty rate can be influenced by various factors, especially the Gross Regional Domestic Product (GRDP), Human Development Index (IPM), and the Open Unemployment Rate (TPT), which makes researchers interested in conducting research on poverty related to poverty. in Lampung Province, and the hope of this research is to be able to provide useful reports to the government about what factors can affect poverty in Lampung Province. According to the results of research conducted by (Sussy Susanti, 2013) in West Java, Gross Regional Domestic Product has a significant positive effect on poverty, which means that the higher GRDP in a district/city will increase poverty. Meanwhile, the Human Development Index (IPM) has a significant negative effect on poverty and the Open Unemployment Rate has a significant positive effect on poverty, meaning that the higher unemployment in a district/city will increase poverty.

LITERATURE REVIEW

According to (Arsad, 2016) Poverty is a fundamental problem for every developing country. Therefore, poverty alleviation to achieve a better quality of life is a concern for economic development in developing countries. Higher economic growth results in the region being able to achieve economic prosperity which has an impact on poverty alleviation (Barika, 2015) , therefore the condition for economic growth is sufficient, which means that economic growth needs to be directly ensured in every sector that employs the poor. Economic growth and per capita income are the most important indicators to measure the success of a region's development (Eigbiremolen, 2004) .

Gross Regional Domestic Product is the net value of goods and services produced by various economic activities in a region in a certain period or the sum of the net economic output produced by all economic activities in a certain period. Gross Regional Domestic Product is also defined as the sum of value added generated by all business units in a given region or the total sum of all final goods and services produced by all economic departments in a region (Stimson, R., Stough, R., & Roberts, 2002) . The amount of GRDP produced by each region is highly dependent on the potential of these natural resources and production factors. Therefore, GRDP can describe the ability of the region in natural resource management. In providing these limited factors, the amount of GRDP between regions varies.

According to the Central Statistics Agency (BPS, 2022) , the Human Development Index is a measure of the achievement of human development based on a number of components based on quality of life. There are several factors, including the average length of schooling which measures people's purchasing power. The average amount of per capita expenditure.

Unemployment as someone who is willing or able to work but does not get a job with an appropriate wage (Aiyedogbon, JO & Ohwofasa, 2012) . Meanwhile (O'Higgins, 1997) mentions that unemployment itself refers to people who have not worked more than one hour during a short reference but someone who is willing to actively seek. In the International Labor Organization (ILO) as stated by (Okafor, 2011) Unemployment is the number of available population, including those who are economically active but do not have a job but are actively looking for work and lose their jobs and voluntarily quit their jobs. According to employment indicators from the Central Statistics Agency (BPS), people who are unemployed but are looking for work or starting a business and residents who are not looking for workers because they have got them but have not started working.

In this study, researchers have references from several previous research results, according to Prasetyoningrum, AK, & Sukmawat, 2018 the results of previous research explained that the Human Development Index (IPM) had a direct negative effect on poverty, while unemployment had a positive effect on poverty and economic development had no effect on poverty. Poverty rate.

According to research (Suliswanto, 2010) showing the effect of Gross Domestic Product (GDP) and Human Development Index (IPM) on poverty in Indonesia, that which has a negative and significant influence is IPM. In the results of research (Saputra & Drs. Y Bagio Mudakir, 2011) regarding the analysis of the influence of population, GRDP, IPM, unemployment on poverty levels in Central Java Regency/City in 2011 explains that IPM has a negative impact on poverty levels. In addition, research conducted by (Sudarlan, 2015) shows that the Human Development

Index has a positive effect and affects the poor in terms of the education and health sectors. Furthermore, empirical studies (Singh, 2012) clearly reveal that the Human Development Index and income per capita have a significant impact on poverty reduction. IPM and per capita income have a large influence on poverty alleviation, while IPM has a negative impact on poverty

METHODS

This research was conducted based on locations in 15 regencies/cities in Lampung Province by collecting data from the unit of analysis, namely Gross Regional Domestic Product, Human Development Index, Open Unemployment Rate and Poverty Level. This study uses a quantitative approach with secondary data types. Sources of data obtained through the official publication of the Central Statistics Agency (BPS) of Lampung Province as well as some literature that can support the object of the study to analyze the poverty rate that occurred in Lampung Province from 2017 to 2021 by using panel data analysis tools. Panel data analysis used calculations with *Eviews9* and *Microsoft Excel* to determine the direct dependence of the dependent variable on the independent variable, the analysis was carried out in 15 districts/cities in Lampung Province. Combining cross sections and time series with panel data can make panel data clearer so that there will be a lot of freedom and more efficiency.

Variable Measurement

In measuring the criteria for calculating Gross Regional Domestic Product, Human Development Index, Open Unemployment Rate and poverty level. The following is an operational definition for each variable:

1. Poverty (Y) is someone who is below the poverty line and cannot fulfill their needs. Data on the number of poor people in Lampung from 2017 to 2021
2. Gross Regional Domestic Product (X1) as the amount of added value generated by business units in the region. Total data for Lampung Regency domestic products in 2017-2021 was obtained from the official website of the Lampung Regency Central Statistics Agency.
3. The Human Development Index (X2) is a strategic indicator used to identify the efforts and performance of development programs in a region. Lampung Human Development Index data for 2017-2021 was obtained from the official website of the Central Statistics Agency of Lampung Province.
4. The Open Unemployment Rate (X3) The Open Unemployment Rate (X3) is for people who do not have a job but are actively looking for work. Data on the Lampung Open Unemployment Rate for 2017-2021 were obtained from the official website of the Central Statistics Agency of Lampung Province.

In this study, panel data regression was used to determine the independent variable from the dependent variable.

$$Y = + b_{1\log} X_1 + b_{2\log} X_2 + b_{3\log} X_3 + e$$

Where:

Y : Poverty

a : Constant

b₁, b₂, b₃ : Determinant Coefficient

X₁ : Gross Regional Domestic Product (GRDP)

X₂ : Human Development Index (IPM)

X₃ : Open Unemployment Rate (TPT)

e : Error

Several approaches will be taken to streamline the panel data regression model calculations, such as: general effects model, fixed effect model, random effects model.

1. General effects model (CEM)

This model approach does not pay attention to time or individuals, which means that the data in each company is the same in certain periods (Aldino, 2018). The simplest approach in the panel data model. This is because we did not examine time or individuals, only time series data and one-sided data. This is similar to the usual least squares (OLS) approximation.

2. Fixed effects model (FEM)

This estimation method approach can still be done without weighting or Least Square Dummy Variable (LSDV), Weighting is to reduce non-uniformity between parts. This model is suitable for interpreting data and determining changes in data behavior for each variable (Aldino, 2018).

3. Random effect model (REM)

In this model involves a dummy which has the consequence of reducing degrees of freedom so that it reduces the efficiency of the parameter, to overcome it using an error variable (error term). This approach estimates panel data in which the disturbance variables are interdependent over time (Aldino, 2018).

Then the steps will be taken to determine the best model among the three approaches above, through the Chow test, Hausman test, and Lagrange Multiplier (LM) test.

RESULTS

Table 4.1

Descriptive Analysis

	Y	PDRB	IPM	TPT
Mean	72.33587	29055069	68.22320	4.097733
Median	59.89000	25709051	67.63000	3.890000
Maximum	167.6400	2.76E+08	77.58000	8.850000
Minimum	14.31000	15117157	61.87000	0.650000
Std. Dev.	50.93518	29555951	3.973170	1.573897

In the results of the table above, it can be seen that the average dependent variable is 72,335 thousand people and the independent variable is GRDP of 29055069 million, IPM of 68.22% and TPT of 4.09%.

From the results of the determination for the mean value of the dependent variable is 59.890 thousand people and the independent variable is GRDP of 25709051 million, IPM of 67.63% and TPT of 3.89%.

It can also be seen that the maximum value of the dependent variable is 167,640 thousand people and the Independent variable is GRDP of 2.76E+08 million, IPM of 77.58% and TPT of 8.85%.

Meanwhile, the minimum value for the dependent variable is 14,310 thousand people and the independent variable is GRDP of 15117157 million, IPM of 61.87% and TPT of 0.65%.

To determine the effect of Gross Regional Domestic Product, Human Development Index, Open Unemployment Rate on Poverty, a significance test was conducted to determine the selected model with the following results:

Chow test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	2307.071314	(14,57)	0.0000
Cross-section Chi-square	475.612758	14	0.0000

From the results of the Chow test panel data with a *p-value* of $0.0000 < 0.05$, which means that H_0 is rejected, the model chosen is the *fixed effect model*.

Hausman test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.153930	3	0.2453

From the results of the Hausman test panel data with a *p-value* of $0.2453 > 0.05$, which means that H_0 is rejected, the model chosen is the *Random effect model*.

Lagrange Multiplier (LM) Test

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	133.1679 (0.0000)	2.529403 (0.1117)	135.6973 (0.0000)

Lagrange Multiplier test panel data with *Both*, the results are $0.0000 < 0.05$, which means that H_a is rejected and H_0 is accepted so that the chosen model is the *Random effect model*.

Reporting Research Results

Judging from the results of the tests carried out, it can be concluded that the model chosen in this study is the *Random Effect Model*. The following is the estimation result of the REM table:

Table 4.2

Estimated Results of Random Effect Model Method

$Y = 783.6261 + 0.640669PDRB - 171.8828IPM + 2.500515TPT + e$
(0.5682) (0.0000)* (0.0262)*
$R^2 = 0.319591$, DW-Stat = 1.206057, F-Stat = 11.11631, Prob F-Stat = 0.000005

Source: data processing, Eviews9. Note: *significant at $\alpha=0.001$; **significant at $\alpha=0.005$; ***significant at $\alpha=0.010$.

From the table determining the results of the regression on panel data using the REM method, then the goodness of the model is tested:

a. Effect validity test (t test)

- The results of the Prob value of $t_{PDRB} 0.5682 > 0.05$ then H_0 is accepted, meaning that the Gross Regional Domestic Product variable has a positive but not significant effect on poverty.

- The results of the Prob value of $t_{IPM} 0.0000 < 0.05$ then H_0 is rejected, meaning that the Human Development Index variable has a negative and significant effect on Poverty.

- The results of the Prob value of $t_{TPT} 0.0262 < 0.05$ then H_0 is rejected, meaning that the Open Unemployment Rate variable has a positive and significant effect on Poverty.

b. F Uji test

Based on the results of the statistical probability value F of $0.000005 < 0.05$, then H_0 is rejected, which means that all independent variables affect the dependent variable.

c. Determinant Coefficient Test

From the results of the estimated R^2 value, it can be seen that the coefficient of 0.319591 means that 31.95% of the independent variables can explain the dependent variable, the remaining 68.05% is explained outside the model.

DISCUSSION**Gross Regional Domestic Product**

From the results of the *Random Effect Model test*, it shows that the Gross Regional Domestic Product has a positive but not significant effect on the poverty level. In other words, the value of the Gross Regional Domestic Product is directly proportional to the poverty rate in 2017-2021 in Lampung Province. An increase in the number of GRDP increases poverty in Lampung Province. Because GRDP is not significant, if the GRDP increases by 1%, the poverty rate will increase by 0.640%. The reverse burden of research (D. Dahliah & Andi Nirwan Nur, 2021) entitled "the Influence of Unemployment, Development Index and Gross Domestic Product on Poverty level" states that Gross Regional Domestic Product has a negative and insignificant effect on poverty in Lawu Regency East 2010-2020 period.

Human Development Index

Random Effect Model test indicate that the human development index has a negative effect on the poverty level because the IPM coefficient value is -171.88 and significant $p < 0.0000$, an increase of 1% can reduce the poverty rate by 171.88%. The decrease in poverty due to the increase in IPM indicates that human work with sufficient income to meet the needs of life can be more productive. This study supports previous research (Nainggolan et al., 2020) on "Factors Affecting Poverty in North Sumatra" in the results of this study, the Human Development Index has a significant negative impact on poverty. Where the coefficient value is -0.706, meaning that for an increase in IPM of 1%, the number of poor people decreases by 4.2379 % and vice versa.

Open Unemployment Rate

Tests based on the *Random Effect Model consideration model* show that Open Unemployment has a positive and significant effect on Poverty. If the coefficient value is 2.50% and the probability is $0.0262 < 0.05$, it is significant, meaning that for every 1% increase in the unemployment rate, poverty increases by about 2.50%. Therefore, the higher the unemployment rate, the higher the poverty rate in Lampung Province. Based on these results in accordance with research conducted (Windra et al., 2016) on "Analysis of the Effect of Inflation, Economic Growth, and Unemployment Rates on Poverty in Indonesia" that the Unemployment Rate has a positive and significant influence on poverty in Indonesia, if there is an increase in unemployment rate of 1% then poverty will increase by 1.32%. Meanwhile (ZuIPMyaty & Kaluge, 2017) in the study "Analysis of Factors Affecting Poverty in Indonesia During the Last Five Years (case studies in 33 provinces) TPT has a negative and insignificant effect on poverty with a constant value of $-1.12E-05$ and prob of $0.9824 > 0.05$, supported by research results (Ketut, N. & Endrayani, 2016) that not all unemployed people are poor people or people who are still supported by someone who has sufficient income.

CONCLUSION

Based on the results of a survey conducted to examine the variables of Gross Regional Domestic Product, Human Development Index, and Open Unemployment Rate for poverty in Lampung Province in 15 districts/cities from 2017 to 2021, researchers can conclude Gross Regional Domestic Product. This has a positive effect, but not so much for the poor level. For every 1% increase in total GRDP, the poverty rate increases by 0.640669 %. If the IPM has a significant negative effect on the poverty level on the Human Development Index variable, it can be concluded that an increase in IPM by 1 percent reduces the poverty rate by 171.8828%. Meanwhile, the Open Unemployment Rate variable concludes that the TPT has a positive effect on the poverty level, but it is not significant. That is, for every 1% increase in the unemployment rate, the poverty rate increases by about 2.50515% . Based on the results of the

discussion described previously, the suggestions from researchers to the government are expected to be more serious in dealing with poverty that occurs especially in the government in Lampung Province, to reduce poverty. The unemployment rate can open up more jobs and the government is expected to further increase the IPM by increasing the average length of schooling in the community, as well as making it easier for the community to get access to a more decent education so that they can develop human resources that can increase productivity, where education is as one of the important factors in poverty indicators. The advantages in this study can be used to determine the results of the influence analysis. If used according to the rules, an accurate analysis will be obtained. This analysis can be used to measure the interaction of the relationship between the variables GRDP, IPM and, TPT on poverty and can simplify complex problems in a model.

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TABLES AND FIGURES

Table 5.1
Chow Test Results

Equation: MODEL_FEM
Test cross-section fixed effects

Effects Test	Statistics	df	Prob.
	2307.07131		
Cross-section F	4	(14.57)	0.0000
Cross-section Chi-square	475.612758	14	0.0000

Cross-section fixed effects test equation:

Dependent Variable: Y

Method: Least Squares Panel

Date: 05/29/22 Time: 21:35

Sample: 2017 2021

Periods included: 5

Cross-sections included: 15

Total panel (balanced) observations: 75

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	-992.6931	549.3563	-1.807011	0.0750
LOG(GDP)	40.97719	15.35663	2.668371	0.0094
LOG(IPM)	83.36822	119.7169	0.696378	0.4885
LOG(TPT)	10.48002	16.00141	0.654944	0.5146

R-squared	0.142562	Mean dependent var	72.33587
Adjusted R-squared	0.106332	SD dependent var	50.93518
SE of regression	48.15107	Akaike info criterion	10.63842
Sum squared resid	164615.3	Schwarz criterion	10.76202
Likelihood logs	-394.9408	Hannan-Quinn Criter.	10.68777
F-statistics	3.934928	Durbin-Watson stat	0.074288
Prob(F-statistic)	0.011749		

Table 5.2
Hausman Test Results

Correlated Random Effects - Hausman Test
Equation: MODEL_REM
Test cross-section random effects

Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Random cross-section	4.153930	3	0.2453

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
LOG(GDP)	0.563777	0.640669	0.001444	0.0430
	-	-		
	177.12951	-		
LOG(IPM)	2	171.882761	13.518583	0.1536
LOG(TPT)	2.531225	2.500515	0.001425	0.4159

Cross-section random effects test equation:

Dependent Variable: Y

Method: Least Squares Panel

Date: 05/29/22 Time: 21:38

Sample: 2017 2021

Periods included: 5

Cross-sections included: 15

Total panel (balanced) observations: 75

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	807.0447	133.9799	6.023625	0.0000
LOG(GDP)	0.563777	1.118078	0.504238	0.6160
LOG(IPM)	-177.1295	30.81037	-5.749022	0.0000
LOG(TPT)	2.531225	1.102068	2.296796	0.0253

Effects Specification

 Cross-section fixed (dummy variables)

R-squared	0.998489	Mean dependent var	72.33587
Adjusted R-squared	0.998039	SD dependent var	50.93518
SE of regression	2.255577	Akaike info criterion	4.670252
Sum squared resid	289.9949	Schwarz criterion	5.226449
Likelihood logs	-157.1345	Hannan-Quinn Criter.	4.892336
F-statistics	2216,391	Durbin-Watson stat	1.528347
Prob(F-statistic)	0.000000		

Table 5.2
Lagrange Multiplier (LM) Test Results

Lagrange Multiplier Tests for Random Effects

Null hypotheses: No effects

Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

	Cross-section	Hypothesis Test time	Both
Breusch-Pagan	133.1679 (0.0000)	2.529403 (0.1117)	135.6973 (0.0000)
Honda	11.53984 (0.0000)	-1.590410 --	7.035310 (0.0000)
King-Wu	11.53984 (0.0000)	-1.590410 --	4.037324 (0.0000)
Standardized Honda	13.02352 (0.0000)	-1.425051 --	4.882742 (0.0000)
Standardized King-Wu	13.02352 (0.0000)	-1.425051 --	1.852347 (0.0320)
Gourieriou, et al.*	--	--	133.1679 (< 0.01)

*Mixed chi-square asymptotic critical values:

1%	7.289
5%	4.321
10%	2,952
