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Revisiting Kuznets Hypothesis An Analysis with Time Series and Panel Data

by

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Significant impact of economic growth on poverty alleviation is eroded by high income inequality. This article revisits Kuznets Hypothesis which suggested that inequality and growth have an inverted U shaped relationship. This article differs from previous articles on this subject, by being broader in scope although remaining exploratory in nature. The article uses log quadratic model and level quadratic model, autoregressive time series analysis and panel analysis, expands the database by covering a time period 1963-1999, and a comparative time-series analysis using the augmented D-S inequality dataset (EHII2.3) and UTIP-UNIDO dataset as proposed by James K. Galbraith and Hyunsub Kum.

I. INTRODUCTION

An understanding of the pattern of evolution of income inequality during the course of economic growth is of obvious importance. One of the most influential hypotheses on the subject was proposed by Kuznets (1955), who suggested that, as a country experiences modern economic growth, income inequality is likely to worsen initially, but may be expected to improve after the "turning point" on the "inverted-U." The Kuznets hypothesis has received tremendous attention in the literature on income distribution and also in the discussions of economic growth and development. Its policy level implication for the least developed countries (LDCs) lies in the expectation that while inequality might rise initially, it will start declining almost automatically after a certain stage in the process of economic development.

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The underpinning of the Kuznet Curve could be explained in terms of modern sector enlargement growth, as a country develops from a traditional to a modern economy, from an agrarian base to a manufacturing base economy. Alternatively, return to education might first rise as demand for skill labour goes up and then fall as the supply of educated labour force increases.

II. LITERATURE STUDY

Some studies have derived empirical support for an inverted-U curve using cross-country evidence in the absence of adequate longitudinal data on distribution (Bourguignon 1994, Milanovic 1995, Jha 1996). However, it has been argued that this approach does not render suitable conclusions as it does not deal with intertemporal relationships. Others have solely focused on developing time series analysis for selected developed countries (Ram 1991). In some of the cases panel data was used but even then it was restricted to developed countries and the data set comprised of little more than 250 data points (Ram 1997). Also, in terms of model used, it was mostly restricted to log quadratic model (Ram 1997,1991, Galbraith and Kum 2003). Difficulty also arose due to unavailability of quality data, especially for the developing countries. The situation was made worse by the fact that data of around 30-40 years period was required to test the hypothesis. In most of the cases the data set covered time period between 1970 and 1999 (Angeles-Castro 2006, Ram 1997, Galbraith *et al.*).

Given the paucity of available data, Galbraith and Kum (2003b) developed a dataset on inequality covering over 30 years for majority of the countries. The UTIP-UNIDO manufacturing pay inequality, as it is called, is calculated from UNIDO's Industrial Statistics, and gives us ~3,200 country-year observations. The justification for the usage of a narrower definition of inequality is given below (the excerpt is taken from the paper by Galbraith and Kum).

"First, it is obvious that the importance of the manufacturing sector in total economic activity varies widely from place to place (and in some places also over time). The ratio of manufacturing employment to population provides a crude-but-effective measure of the relative size and importance of manufacturing, and conversely of the relative size and importance of services, agriculture, natural resource extraction, and government taken together. In general, since manufacturing tends to be more heavily unionised than the other sectors, and since industrialisation is associated historically with the development of the middle class, we expect higher shares of manufacturing employment in population to be associated with lower inequality (Galbraith and Kum 2004)."

It is evident that most research were compartmentalised in essence by the specific model they used, the specific estimation technique they used (fixed effect, random effect, auto regressive), by the choice of countries that they chose to analyse over the designate period, the type of dataset employed and the limited nature of the time period itself.

The present research tries to minimise the aforesaid limitations by:

- Usage of log quadratic model and level quadratic model,
- Usage of both autoregressive time series analysis and panel analysis,
- Expanding the database by covering an extended time period 1963-1999,
- Through inclusion of LDCs, developing countries and developed countries of the world, and
- A comparative time-series analysis using the augmented D-S inequality dataset (EHII2.3) and UTIP-UNIDO manufacturing pay inequality as proposed by James K. Galbraith and Hyunsub Kum.

The model and the data source will be dealt with in greater detail in the following section.

III. MODEL

Although models used to investigate Kuznets's proposition have not been identical, the basic form of the hypothesis suggests a quadratic relation between income inequality and the "level of development," in which inequality increases with development at early stages and, after reaching a peak, declines with economic growth. However, there are two forms of quadratic model that are prevalent in the literature (Ram 1991, Angeles-Castro 2006): one is the log form (more prevalent) and the other, which we call Level form, has quadratic income terms (without the logarithmic transformation). The two theoretical models are given below:

$$INEQ = \alpha + \beta_1 Y + \beta_2 Y^2 \quad \text{(quadratic level)} \qquad (1)$$

$$INEQ = \alpha + \beta_1 (\ln Y) + \beta_2 (\ln Y)^2 \quad \text{(quadratic log)} \qquad (2)$$

where INEQ is a measure of income inequality, Y stands for the income variable and In *Y* stands for the (natural) logarithm of the income variable, and is used as a proxy for the level of development. Anand and Kanbur (1993) found that the functional form chosen to test the U-shape can have considerable impact on the ''turning point'' of the curve, where inequality begins to decline. They also found that the U – shape is significant for some functional forms and not for others. They have criticised previous researchers by arguing that the functional form used by Ram (1991) and other researchers to test the inverted-U hypothesis was arbitrary. Hence, in this paper both the forms have been used to see if one can find inverted U-shaped curved under any model, since choice by previous researchers seems to have been rather subjective.

The econometric models to be used for the panel data analysis are given below:

$$INEQ_{it} = \alpha_i + \beta_1 Y_{it} + \beta_2 Y^2_{it} + u_{it} \quad (3)$$

$$INEQ_{it} = \alpha_i + \beta_1(\ln Y)_{it} + \beta_2(\ln Y)^2_{it} + u_{it} \quad (4)$$

where *INEQ,* is a measure of income inequality in country *i* and year *t, Y is real gross domestic product per capita, lnY* denotes logarithm of real gross domestic product per capita (GDP) to represent the level of economic development, and *u* is a well-behaved error term.

The time series autoregressive AR(1) econometric models are given below:

$$INEQ_t = \alpha + \beta_1 Y_t + \beta_2 Y^2_t + u_t \quad (5)$$

$$INEQ_t = \alpha + \beta_1(\ln Y)_t + \beta_2(\ln Y)^2_t + u_t \quad (6)$$

The variables are same as before; however, they represent the value at year *t* for a country.

IV. DATA SOURCE

The inequality data were taken from EHII2.3[1] developed by Kum (2003). According to Galbraith and Kum (2003), the income inequality data set of Deininger and Squire (D&S) fails to provide either adequate or accurate coverage, whether through time or across countries. They introduced measures of the inequality of manufacturing pay, based on UNIDO's Industrial Statistics. These provide indicators of pay inequality that are more stable, more reliable and in their view also more comparable across countries than the D&S.

The EHII2.3 data are estimates of gross household income inequality, computed from a regression relationship between the Deininger & Squire

[1] www. utip.gov.utexas.edu/data/EHIIv23.xls

inequality measures and the UTIP-UNIDO pay inequality measures, controlling for the source characteristics in the D&S data and for the share of manufacturing in total employment. For comparative time-series analysis, the UTIP-UNIDO manufacturing pay inequality dataset was also used.

The real GDP per capita data were taken from the **Penn World Table (PWT)**[2], which displays a set of national accounts economic time series covering many countries. Its expenditure entries are denominated in a common set of prices in a common currency so that real quantity comparisons can be made, both between countries and over time. The table is produced by The Center for International Comparisons at the University of Pennsylvania. This article uses primarily data from PWT 6.2, which combines 2002 benchmark data for 30 OECD countries, updates for the other 138 countries in PWT 6.1, and adds 20 additional countries; the base year is 2000. In this article the 24 countries have been selected which covers LDCs, developing countries and developed countries, covering a time period of 37 years from 1963 to 1999.

V. METHODOLOGY

This article first undertakes Autoregressive AR(1) time series analysis for each country and tries to ascertain which model, log quadratic or level form, is superior in terms of statistical significance. It simultaneously tries to identify presence of any first degree Serial correlation (as similar problems have been identified in previous researches) through Durbin Watson test. If there are any serial autocorrelation then the analysis is repeated to estimate the parameter values using Yule-Walker method to correct for the serial correlation. Once the adjustment is done then the statistical significance of the estimated parameter values is assessed. All the coefficients in the equation have to be statistically significant at 95% confidence level, otherwise the model is assumed to be linear. The sign of the estimated parameter value for the second regressor, $(\ln Y)^2$ and Y^2, will determine the nature of the curve. If the observations provide enough statistical "dispersion" to enable the full Kuznets-curve being captured, we expect the usual pattern and predict β_1 to be positive and β_2 to be negative. If, however, the estimates capture β_1 to be negative while β_2 is zero or negative or even mildly positive so long as its positive effect is dominated by the negative component from β_1, it can either imply that the model captures only the declining segment of the curve or that the curve is U-shaped.

After the time series analysis, a comparative time series analysis is carried out using both EHII2.3 and UTIP-UNIDO manufacturing pay inequality measures.

[2] http://pwt.econ.upenn.edu/php_site/pwt62/pwt62_form.php

Although it has been shown in previous research (Galbraith and Kum 2004) that the manufacturing pay inequality measure is superior to simple D&S inequality dataset, it will be of interest to compare the findings between EHII2.3 (augmented D&S) and UTIP-UNIDO manufacturing pay inequality measures. The superiority of the dataset is measured in terms of which one of the data sets yields better results, based on adjusted R^2 value, after taking into account for serial correlation.

Following the time series analysis, the models are used for assessing the Kuznets hypothesis from cross-country data. But two aspects of such a procedure are particularly worrisome. First, while the Kuznets paradigm is basically a statement about the intra-country evolution of income inequality during the course of modern economic growth, the data on income and inequality come from different countries, and it is not obvious that one is obtaining an estimate of the expected pattern for a typical country. Another concern, which is related to the first, is that the level of income (development) is not the only determinant of inequality, and there are several other variables, including country-specific public policies and historical and institutional factors, that affect inequality in a country. If these are not taken into consideration, the effect of cross-country variations in income could be confused with the effect of such factors. In order to mitigate the problem the fixed effect model is used to bring about country specific affect. The shape of the curve is again determined by the statistical significance and nature of the estimated parameter value for the second regressor, $(\ln Y)^2$ and Y^2. The model that has larger R^2 value is considered to be the better model given the data set used in this article.

VI. FINDINGS FROM TIME SERIES ANALYSIS

In this research the primary tool used for statistical and econometric analysis was SAS computer package, and on a limited scale Microsoft Excel was used. Appendix Table A.I provides a summary of the initial autoregressive time series analysis, which does not correct for serial correlation.

The table indicates that in all the estimation the Durbin Watson test showed the existence of positive serial correlation, thus the error term is not independent through time. Instead, the errors are *serially correlated* or *autocorrelated*. If the error term is autocorrelated or serially correlated, the efficiency of ordinary least-squares (OLS) parameter estimates is adversely affected and standard error estimates are biased. Hence, the R^2 values are likely to be overestimated and the statistical significance of both the parameter can no longer be used. However, we can see that apart from Bangladesh, India, Chile and UK all the countries have a positive β_2 value which goes against the Kuznet Hypothesis. And even those with negative β_2 have values which are very small and hence regressor one is likely to dominate and determine the shape of the curve, making it linear.

Appendix Table A.II shows the estimated value of parameter for both log and level model after correcting for serial correlation using Yule-Walker estimation procedure. In appendix Table A.II the total R^2 is used instead of model R^2. The total R^2 is a measure of how well the next value can be predicted using the structural part of the model and the past values of the residuals. Whereas model R^2 is a measure of the fit of the structural part of the model after transforming for the autocorrelation. The model R^2 and the total R^2 should be the same when there is no autocorrelation correction (OLS regression). A higher value of total R^2 reflects the improved fit from the use of past residuals to help predict the next value of the independent variable.

It was seen (not presented in Appendix Table A.II) that the model R^2 is smaller than the model R^2 of the table in Appendix A.I (unadjusted findings) for the same country, which shows that without correction for serial correlation the R^2 value is overestimated. Also, the fact that total R^2 is higher than model R^2 in appendix Table A.II suggests that serial correlation exists and better fit/estimation can be obtained by using AR(1) procedure than OLS.

It is interesting to note that after adjusting for serial correlation, the estimates for the models, log and level form for Bangladesh, Chile, Colombia, Denmark, Japan, Netherlands and Spain were found to be insignificant. In other cases namely Canada, Egypt, India, Korea, Norway, Turkey, United Kingdom and United States, the estimates from one model were found to be statistically insignificant. Two things become clear from the above table which are that there is a high degree of serial correlation in almost all the cases and there can be no strict preference for Log or Level quadratic model, as both were in some of the cases found to be insignificant. Also, the difference in R^2 value is insignificant to merit any strict preference for any specific form/model.

In terms of the nature of the shape of the curve, we see that in most of the cases $\beta1$ is negative and β_2 is positive and on top of that β_1 is likely to dominate. Hence, the shape of the curve is either linearly negatively sloped or U-shaped. Thus the conclusion can be two fold: (1) that the relatively advanced economies may be on the second leg of an inverted U-curve, consistent with the Kuznets hypothesis (2) that using the current data set the estimates suggest that income inequality shows an uninverted-U pattern, where initially inequality drops as economy grows and then after the turning point is reached inequality begins to rise with economic growth. Only in case of India, Ireland and UK, has there been the presence of Inverted U shape curve, in accordance with Kuznets Hypothesis. The result is very much consistent with previous research (Ram 1997, 1991, Galbraith and Kum 2003, Augustin 1993).

VII. FINDINGS FROM COMPARATIVE TIME SERIES ANALYSIS

When the UTIP-UNIDO manufacturing pay inequality data set is used under the same framework, interesting results emerge. The result is given in Appendix Table A.III and the comparison between the findings from EHII2.3 data and findings from UTIP-UNIDO manufacturing pay inequality data are given in Appendix Table A.IV. The last column of Appendix Table A.IV shows which one of the data set yields better results, based on R^2 value i.e. higher R^2 value means the particular data set is superior for the autoregressive model for that particular country under that particular level or log model. It must be noted that the R^2 value used in all the tables are derived after correcting for serial correlation. Twenty two data set were missing in the UTIP-UNIDO manufacturing pay inequality data set. To mitigate this problem extrapolation[3] was used and in other cases inequality for the missing period[4] was assumed to be equal to the inequality data for the next available period.

Two scatter plot graphs of the inequality data over the years for both the data sets for selected countries are also presented. Table I shows the standard deviation of inequality (for both dataset), σ_i, for each country as a percentage of country's mean inequality.

$$\text{Dispersion of Inequality} = \left\{ \frac{\sigma_i}{\mu_i} \right\} \text{X } 100$$

The table clearly shows that the EHII2.3 data is much less erratic in comparison to the UTIP-UNIDO manufacturing pay inequality. Figure 1 and Figure 2, for selected countries, reinforce the finding. The erratic nature of the UTIP UNIDO data does, under the current assessment, seem to preclude the possibility of testing Kuznets Hypothesis, whereas the EHII2.3 data set shows high degree of stability. However, only after undertaking the AR(1) autoregressive analysis, adjusting for serial correlation, one can conclusively assess which dataset is superior.

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[3] OLS was employed based on previous year's data for the country whose data was missing.

[4] Sala-i-Martin (2002), when only a single observation was available, assumed that no change occurred over the whole time period under study.

TABLE I

DISPERSION OF THE INEQUALITIES OF TWO DATASET FOR INDIVIDUAL COUNTRIES AS PERCENTAGE OF COUNTRY MEAN

(In Percentage)

Country	EHII.2.3	UTIP UNIDO	Country	EHII.2.3	UTIP UNIDO
Australia	10.23	28.34	United Kingdom	10.65	14.05
Austria	3.68	29.74	Greece	3.65	30.48
Bangladesh	10.48	62.39	India	3.06	24.27
Canada	3.91	19.49	Ireland	5.60	59.21
Chile	5.49	37.71	Japan	5.46	43.98
Colombia	1.67	13.47	Korea	6.81	26.84
Cyprus	6.33	29.32	Netherlands	4.88	24.52
Denmark	2.75	13.59	Norway	4.31	11.28
Ecuador	5.82	46.75	Singapore	10.76	46.72
Egypt	7.10	61.27	Sweden	10.70	114.95
Spain	3.42	28.90	Turkey	4.83	44.02
Finland	4.18	12.01	United States	5.45	41.91

Figure 1: Inequality Using Manufacturing Pay

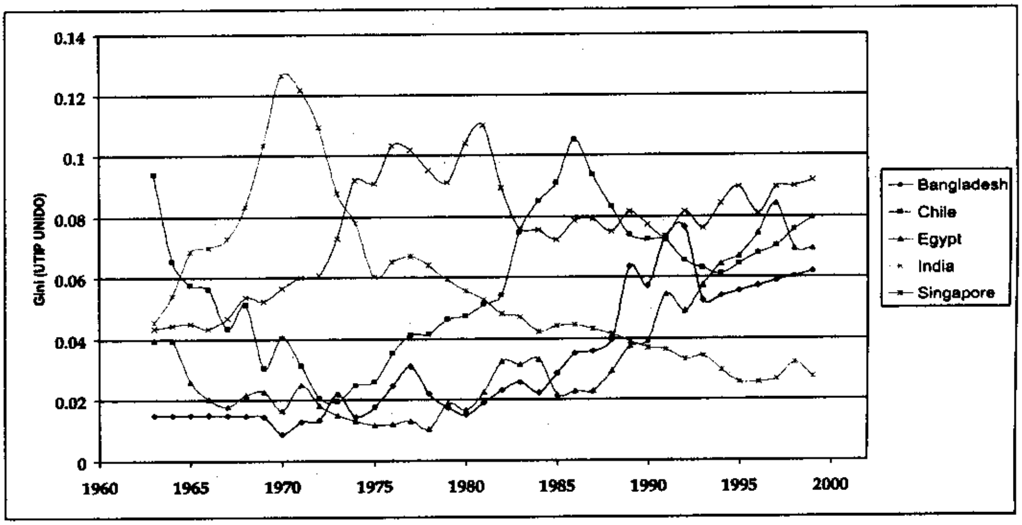
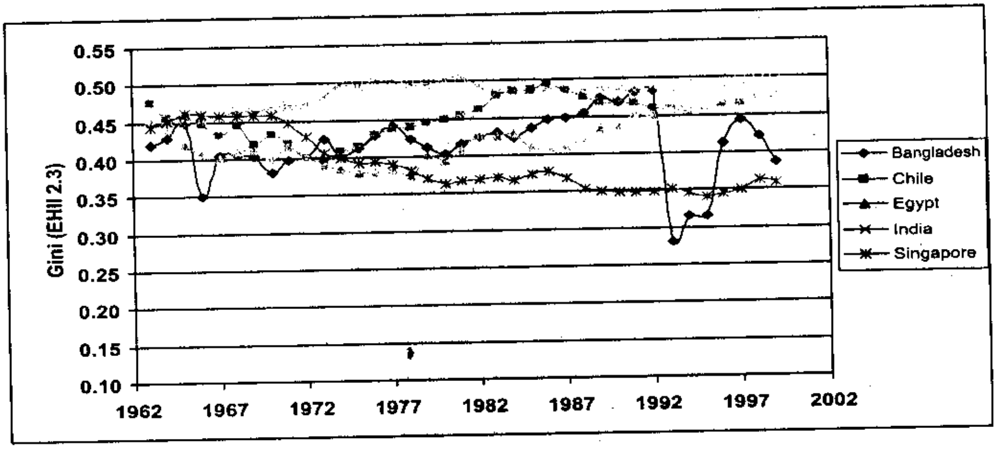
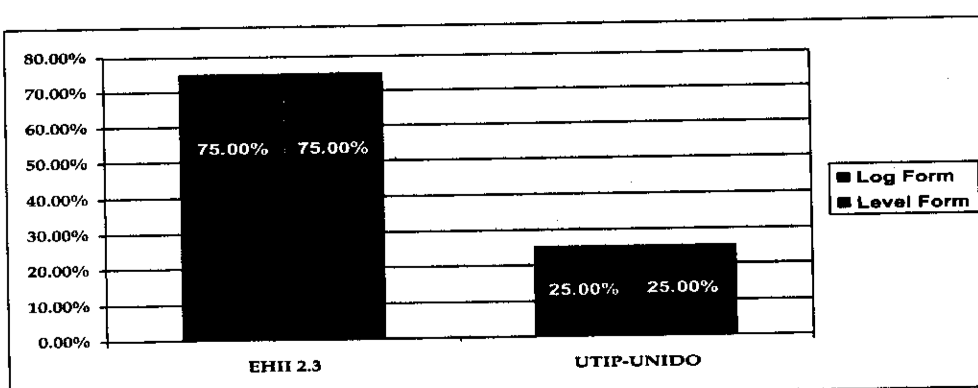


Figure 2: Inequality Using EHII



The table and the figure show that the UTIP-UNIDO Manufacturing Pay inequality dataset does not provide results that are markedly different from those obtained under EHII2.3 dataset. Appendix Table A.IV shows the actual comparison between EHII2.3 dataset and UTIP-UNIDO Manufacturing Pay inequality dataset. Only in the case of 6 countries (surprisingly for both, log and level, models) namely Bangladesh, Denmark, Egypt, Ireland, Spain, and Turkey, UTIP-UNIDO data provided better result. But even then for the result were insignificant for level model in Bangladesh, both level and log model in Denmark, log model in Spain, and level model for Turkey. In all the other cases EHII data fared better than the UTIP-UNIDO data set.

Figure 3: Comparison of Performance Between EHII 2.3 and UTIP-UNIDO Manufacturing Pay



So from this analysis one can conclude that under the current methodology and the scope, EHII2.3 dataset yields better result in comparison to UTIP-UNIDO dataset. The findings are represented in Figure 3. Out of 24 counts for both level and log form, in 18 cases EHII 2.3 dataset performs better than UTIP-UNIDO dataset.

VIII. FINDINGS FROM PANEL DATA ANALYSIS

Initially, Fixed One effect specification was conducted and then fixed two effect specification was conducted to identify the existence of country specific effect and time specific effect. Both the models, log and level form, were found to be statistically significant in the case of Fixed One and in the case of Fixed two effect.

TABLE II
F VALUE OF MODELS UNDER FIXED ONE AND FIXED TWO EFFECT

	Level Quadratic (p-value) [R^2]	Log Quadratic (p-value) [R^2]
Fixed One	149.90 (<.0001) [0.8461]	137.40 (<.0001) [0.8374]
Fixed Two	65.94 <.0001) [0.8653]	100.15 (<.0001) [0.9069]

Thus based on the above table, we can conduct the following hypothesis testing. The first test will be on the level quadratic model and then on the log quadratic model.

<u>Level quadratic model</u>

H_o: $\alpha_1 = \alpha_2 = \alpha_3 .... \alpha_n$
H_1: At least one pair is not equal

From the output we find that the F test $_{(23,862)}$ value is 149.90 which is greater than the critical value with df $_{(23,862)}$. Thus the Null hypothesis is rejected and so we can conclude that there is fixed country effect in the model.

Degrees of Freedom:

N-1 = 23
N(T-1)-k = 862
H_o: $\alpha_1 = \alpha_2 = \alpha_3 .... \alpha_n$
$\lambda_1 = \lambda_2 = \lambda_3 .... \lambda_t$
H_1: At least one pair is not equal

From the output we find that the F test $_{(59,826)}$ value is 65.94 which is greater than the critical value with df $_{(59,826)}$. Thus the Null hypothesis is rejected and so we can conclude that there exists individual and/or time effect in the model.

Degrees of Freedom:

N+T-2 = 59
NT-(N-1)-(T-1)-k-1 = 826

Log quadratic model

H_o: $\alpha_1 = \alpha_2 = \alpha_3$.................................... α_n
H_1: At least one pair is not equal

From the output we find that the F test $_{(23,862)}$ value is 137.40 which is greater than the critical value with df $_{(23,862)}$. Thus the Null hypothesis is rejected and so we can conclude that there is fixed country effect in the model.

Degrees of Freedom:

N-1 = 23
N(T-1)-k = 862

H_o: $\alpha_1 = \alpha_2 = \alpha_3$.................................... α_n
$\lambda_1 = \lambda_2 = \lambda_3$.................................... λ_t
H_1: At least one pair is not equal

From the output we find that the F test $_{(59,826)}$ value is 100.15 which is greater than the critical value with df $_{(59,826)}$. Thus the Null hypothesis is rejected and so we can conclude that there exists individual and/or time effect in the model.

Degrees of Freedom:

N+T-2 = 59
NT-(N-1)-(T-1)-k-1 = 826

Based on the above analysis we can reach the conclusion that Fixed Two effect is superior to fixed one effect and so there exists both country specific and time effect.

Based on the country Specific Fixed Affect (α_i) value, taken from Fixed Two effect of Level quadratic model output, we can see that Bangladesh, Chile, Colombia, Cyprus, Ecuador, Egypt, Greece, India, Ireland, Korea, Singapore, Spain and Turkey have $\alpha_i < 0$; hence, the country specific affect of these countries on dependent variable is less than the country specific affect of the dropped country, which is USA. While for Australia, Austria, Canada, Denmark, Finland, Japan, Netherlands, Norway and Sweden who have $\alpha_i > 0$ country specific effect of on dependent variable is greater than the country specific effect of the dropped country, which is USA.

Based on the country Specific Fixed Effect (α_i) value, taken from Fixed two effect of Log quadratic model output, we can see that all the countries have $\alpha_i < 0$ hence the country specific effect of these countries on dependent variable is less than the country specific affect of the dropped country, which is USA.

Table III was developed based on fixed two output for the two model.

TABLE III
THE PARAMETER ESTIMATE

	Parameter Estimate Regressor ONE (p-value)	Parameter Estimate Regressor TWO (p-value)
Level Quadratic Model	-0.00062 (<.0001)	1.897E-8 (<.0001)
Log Quadratic Model	-10.712 (<.0001)	0.153449 (0.0022)

The above table also predicts a U shaped or negatively sloping linear curve and not the expected Inverted U shaped curve hypothesised by Kuznet.

IX. CONCLUSION

The main theme pursued in this work is to model the relation between income inequality and economic growth in terms of Kuznets's hypothesis, and to make yet another empirical assessment of the model. The point of departure of the work from previous studies is the use of good data that span about 37 years, use of both log and non-log quadratic model, use of both autoregressive time series and panel data analysis, inclusion of countries of different economic levels, the usage of better inequality data (Galbraith and Kum 2003) and a comparative analysis of two sets of recently developed dataset (UTIP-UNIDO and EHII2.3)

The panel data analysis captures a general pattern that can either imply a U-shaped curve (as $\beta_1 < 0$ and $\beta_2 > 0$) , in which inequality first decreases, reaches a trough and then increases with economic growth, or it could imply that the analysis is capturing the second leg of an inverted U-curve, consistent with the Kuznets hypothesis. The second hypothesis can be true for developed countries given the extended period of time used in this analysis; however, it should not be applicable for developing countries (like Ecuador, Cyprus, Egypt, Turkey, Chile, Greece) or for the newly industrialised countries like Singapore.

The estimates from time series analysis also suggest that income inequality shows an uninverted-U pattern contrary to Kuznet Hypothesis, in most of the cases. Only in the case of Ireland, India and UK was there presence of Inverted U-shaped curve as predicted by Kuznet.

The comparative time series analysis suggests that the EHII2.3 dataset yields much better result in comparison to UTIP-UNIDO dataset. It can be hypothesised that since EHII2.3 is built on the foundation of D&S and UTIP-UNIDO dataset, it has the stability of the first and the accuracy and breadth of the dataset of the second. However, the current study shows that within its methodology and scope, EHII2.3 data is superior to UTIP-UNIDO dataset.

The overall lesson appears to be that even the broad course of intracountry (time series) and intercountry (panel data analysis) income inequality might be more complex than what the Kuznets-hypothesis suggests. While a sizable proportion of the development literature seems to question the inevitability, and even the existence, of the inverted-U pattern, this work makes it difficult to support, at least for a period of about 37 years, that there exists an inverted U shape curve. It is more likely that there exists an uninverted U shape curve where inequality decreases with growth, initially and then rises. Hence, the findings are very much consistent with similar previous research (Ram 1991, 1997, Galbraith and Kum 2003, Angeles-Castro 2006).

The findings of this study, although interesting and illuminating, must be interpreted cautiously. The study was exploratory in nature and hence the model employed, specifically for time series analysis, was very simplistic. Future study might be carried out in order to ascertain better tools for the study. One might find need for the usage more than one lag period AR(2) estimation techniques or lag dependent variable model.

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ppendices

Table A.I: Unadjusted Autoregressive Table

Country	Model	R^2	Parameter Estimate Regressor ONE (p-value)	Parameter Estimate Regressor TWO (p-value)	Autocorrelation Durbin-Watson Test (p-value for positive Autocorrelation)
Australia	Quadratic Level	0..9490	-0.000169 (0.0555)	2.4705E-8 (<.0001)	1.2591(.0031)
	Quadratic Log	0.9161	-71.4329(<0.0001)	4.1796 (<.0001)	0.9042 (<.0001)
Austria	Quadratic Level	0.7555	-0.000331(<.0001)	1.6844E-8 (<.0001)	0.4267(<.0001)
	Quadratic Log	0.7220	-31.9713 (<.0001)	1.8249 (<.0001)	0.4386 (<.0001)
Bangladesh	Quadratic Level	0.1157	0.0140 (0.0522)	-7.511E-6 (0.0434)	1.1977 (0.0016)
	Quadratic Log	0.0674	44.9441(0.1281)	-3.4386 (0.1297)	1.1398 (0.0008)
Canada	Quadratic Level	0.8482	0.0000462 (0.45600)	5.3859E-9 (0.0324)	0.5342 (<.0001)
	Quadratic Log	0.8651	-24.7804 (<.0001)	1.4647 (<.0001)	0.6052 (<.0001)
Chile	Quadratic Level	0.3279	0.001570 (0.0055)	-1.024E-7 (0.0291)	0.2678 (<.0001)
	Quadratic Log	0.2717	2.3216 (0.8729)	-0.0260 (0.9765)	0.2381 (<.0001)
Colombia	Quadratic Level	0.4534	-0.000202 (0.3843)	7.1822E-8 (0.0510)	0.9574 (<.0001)
	Quadratic Log	0.4188	-9.0188 (0.0122)	0.6275 (0.0084)	0.9121 (<.0001)
Cyprus	Quadratic Level	0.8990	-0.001345 (<.0001)	5.6599E-8 (<.0001)	0.6669 (<.0001)
	Quadratic Log	0.9245	-19.1095 (<.0001)	1.0032 (<.0001)	0.8370 (<.0001)
Denmark	Quadratic Level	0.0730	-0.000081 (0.3567)	3.7359E-9 (0.2377)	0.8619 (<.0001)
	Quadratic Log	0.0369	2.5541 (0.6930)	-0.1287(0.7175)	0.8534 (<.0001)
Ecuador	Quadratic Level	0.8044	-0.009955 (<.0001)	2.1487E-6 (<.0001)	1.2150 (0.0020)
	Quadratic Log	0.5861	-105.1331 (<.0001)	7.0820 (<.0001)	0.5067 (<.0001)
Egypt	Quadratic Level	0.7013	-0.001777 (0.0865)	8.5893E-7 (0.0006)	0.5044 (<.0001)
	Quadratic Log	0.8760	-75.0950 (<.0001)	5.3654 (<.0001)	1.1139 (0.0006)
Finland	Quadratic Level	0.8139	-0.000650 (<.0001)	3.5092E-8 (<.0001)	0.7693 (<.0001)
	Quadratic Log	0.7019	-41.6631 (<.0001)	2.3899 (<.0001)	0.7693 (<.0001)
Greece	Quadratic Level	0.8611	-0.001154 (<.0001)	1.0086E-7 (<.0001)	0.5961 (<.0001)
	Quadratic Log	0.6745	-41.4202 (<.0001)	2.5221 (<.0001)	0.3154 (<.0001)
India	Quadratic Level	0.3870	0.004140 (0.0011)	-1.291E-6 (0.0098)	0.2159 (<.0001)
	Quadratic Log	0.7119	21.9343 (<.0001)	-1.5808 (<.0001)	0.4167 (<.0001)
Ireland	Quadratic Level	0.3439	0.000538 (0.0040)	-1.741E-8 (0.0392)	1.3827 (0.0105)
	Quadratic Log	0.2872	-8.3030 (0.3132)	0.5575 (0.2470)	1.4152 (0.0135)
Japan	Quadratic Level	0.7298	-0.000315 (0.0051)	2.0799E-8 (<.0001)	0.5691 (<.0001)
	Quadratic Log	0.6568	-27.7722 (<.0001)	1.6554 (<.0001)	0.4384 (<.0001)
Korea	Quadratic Level	0.9188	-0.001500 (<.0001)	7.4882E-8 (<.0001)	1.0932 (0.0004)
	Quadratic Log	0.9055	-3.8781 (0.0346)	0.1193 (0.2983)	0.8127 (<.0001)
Netherlands	Quadratic Level	0.7779	-0.000029 (0.7304)	8.945E-9 (0.0092)	0.4657 (<.0001)
	Quadratic Log	0.7070	-19.8479 (0.0040)	1.2001 (0.0019)	0.3740 (<.0001)
Norway	Quadratic Level	0.7960	0.000132 (0.0203)	7.07E-10 (0.7124)	0.7523 (<.0001)
	Quadratic Log	0.8165	-17.5738 (<.0001)	1.0534 (<.0001)	0.8408 (<.0001)
Singapore	Quadratic Level	0.8840	-0.001272 (<.0001)	3.4011E-8 (<.0001)	0.2868 (<.0001)
	Quadratic Log	0.9408	-16.4135 (<.0001)	0.7498 (0.0002)	0.3844 (<.0001)
Spain	Quadratic Level	0.3771	-0.000663 (<.0001)	3.2754E-8 (0.0002)	0.5019 (<.0001)
	Quadratic Log	0.3308	-17.4873 (0.0062)	0.9788 (0.0083)	0.4656 (<.0001)
Sweden	Quadratic Level	0.8483	-0.001122 (<.0001)	5.7753E-8 (<.0001)	0.3460 (<.0001)
	Quadratic Log	0.6532	-95.0945 (<.0001)	5.3885 (<.0001)	0.2012 (<.0001)
Turkey	Quadratic Level	0.3986	0.000359 (0.6469)	7.7163E-8 (0.5623)	0.7864 (<.0001)
	Quadratic Log	0.4429	-24.4781(0.0110)	1.7359 (0.0072)	0.8488 (<.0001)
UK	Quadratic Level	0.9023	0.001059 (<.0001)	-2.561E-8 (<.0001)	0.9418 (<.0001)
	Quadratic Log	0.9101	8.4827 (0.2502)	-0.2356 (0.5659)	1.0315 (0.0002)
USA	Quadratic Level	0.8494	0.0000612 (0.3402)	4.0465E-9 (0.0387)	0.3644 (<.0001)
	Quadratic Log	0.8178	-22.5483 (0.0009)	1.3418 (0.0003)	0.3570 (<.0001)

Table A.II: Adjusted Autoregressive

Country	Model	R^2	Parameter Estimate Regressor ONE (p-value)	Parameter Estimate Regressor TWO (p-value)	Shape of the Curve
Australia	Quadratic Level	0.9529	-0.000202 (0.0635)	2.6243E-8 (<.0001)	U/Linear
	Quadratic Log	0.9274	-73.8989 (<.0001)	4.3230 (<.0001)	U/Linear
Austria	Quadratic Level	0.9029	-0.000425 (0.0004)	2.1032E-8 (<.0001)	U/Linear
	Quadratic Log	0.8554	-34.7008 (<.0001)	1.9878 (<.0001)	U/Linear
Bangladesh	Quadratic Level	0.2573	0.0125 (0.2249)	-6.733E-6 (0.1986)	
	Quadratic Log	0.2387	37.7802 (0.3835)	-2.9027 (0.3837)	
Canada	Quadratic Level	0.9291	5.8889E-7 (0.9957)	6.606E-9 (0.1172)	
	Quadratic Log	0.9304	-25.5942 (0.0011)	1.5071 (.0006)	U/Linear
Chile	Quadratic Level	0.8242	0.000350 (0.6770)	-1.082E-8 (0.8724)	
	Quadratic Log	0.8311	-12.7988 (0.5625)	0.8285 (0.5392)	
Colombia	Quadratic Level	0.5985	-0.000148 (0.6957)	6.2435E-8 (0.2858)	
	Quadratic Log	0.5867	-7.2447 (0.2014)	0.5117 (0.1716)	
Cyprus	Quadratic Level	0.9379	-0.001347 (<.0001)	5.5157E-8 (<.0001)	U/Linear
	Quadratic Log	0.9493	-19.5489 (<.0001)	1.0295 (0.0003)	U/Linear
Denmark	Quadratic Level	0.2391	-0.000133 (0.2501)	6.0752E-9 (0.1431)	
	Quadratic Log	0.1584	-0.4279 (0.9576)	0.0394 (0.9291)	
Ecuador	Quadratic Level	0.8186	-0.009513 (<.0001)	2.063E-6 (<.0001)	U/Linear
	Quadratic Log	0.7856	-85.7352 (0.0007)	5.8052 (0.0006)	U/Linear
Egypt	Quadratic Level	0.8505	-0.001290 (0.4112)	6.677E-7 (0.0555)	
	Quadratic Log	0.8961	-73.0198 (<.0001)	5.2140 (<.0001)	U/Linear
Finland	Quadratic Level	0.8880	-0.000550 (<.0001)	2.9921E-8 (<.0001)	U/Linear
	Quadratic Log	0.8742	-36.0546 (<.0001)	2.0810 (<.0001)	U/Linear
Greece	Quadratic Level	0.9292	-0.001087 (<.0001)	9.6935E-8 (<.0001)	U/Linear
	Quadratic Log	0.8926	-38.3711 (<.0001)	2.3647 (<.0001)	U/Linear
India	Quadratic Level	0.8753	0.003013 (0.1269)	-6.741E-7 (0.3157)	
	Quadratic Log	0.8908	17.2341 (0.0113)	-1.2106 (0.0185)	Inverted U
Ireland	Quadratic Level	0.3520	0.000577 (0.0045)	-1.97E-8 (0.0309)	Inverted U/Linear
	Quadratic Log	0.2896	-9.0133 (0.2638)	0.6002 (0.2035)	
Japan	Quadratic Level	0.8640	-0.000355 (0.0816)	2.2354E-8 (0.0076)	
	Quadratic Log	0.8596	-28.9677 (0.0025)	1.7313 (0.0018)	U/Linear
Korea	Quadratic Level	0.9359	-0.001432 (<.0001)	6.982E-8 (<.0001)	U/Linear
	Quadratic Log	0.9355	-3.6227 (0.2053)	0.1072 (0.5555)	
Netherlands	Quadratic Level	0.9074	-0.000016 (0.9237)	8.873E-9 (0.1442)	
	Quadratic Log	0.8977	-18.6957 (0.1141)	1.1517 (0.0820)	
Norway	Quadratic Level	0.8753	0.000129 (0.1811)	7.429E-10 (0.8156)	
	Quadratic Log	0.8780	-16.4546 (0.0137)	0.9923 (0.0078)	U/Linear
Singapore	Quadratic Level	0.9736	-0.000918 (<.0001)	1.989E-8 (0.0039)	U/Linear
	Quadratic Log	0.9773	-12.8808 (0.0205)	0.5544 (0.0823)	
Spain	Quadratic Level	0.7270	-0.000482 (0.0859)	2.1781E-8 (0.1218)	
	Quadratic Log	0.7260	-10.0035 (0.3791)	0.5478 (0.4099)	
Sweden	Quadratic Level	0.9505	-0.001231 (<.0001)	6.3107E-8 (<.0001)	U/Linear
	Quadratic Log	0.9189	-109.4715 (<.0001)	6.2342 (<.0001)	U/Linear
Turkey	Quadratic Level	0.5447	0.000553 (0.6146)	2.1999E-8 (0.9046)	U/Linear
	Quadratic Log	0.5507	-20.7647 (0.1006)	1.4766 (0.0808)	
UK	Quadratic Level	0.9272	0.000991 (<.0001)	-2.292E-8 (0.0047)	Inverted U/linear
	Quadratic Log	0.9268	4.7816 (0.6397)	-0.0337 (0.9530)	
USA	Quadratic Level	0.9442	-0.000093 (0.3195)	9.243E-9 (0.0013)	
	Quadratic Log	0.9171	-33.2138 (0.0007)	1.9295 (0.0003)	U/Linear

Table A.III: Using UTIP-UNIDO Manufacturing Pay Inequality Data

Country	Model	R^2	Parameter Estimate Regressor ONE (p-value)	Parameter Estimate Regressor TWO (p-value)
Australia	Quadratic Level	0.8930	1.0966E-7 (0.7429)	7.127E-12 (0.5583)
	Quadratic Log	0.8951	-0.0546 (0.0108)	0.003175 (0.0078)
Austria	Quadratic Level	0.7856	-2.146E-6 (0.0004)	9.98E-11 (<.0001)
	Quadratic Log	0.6641	-0.1279 (0.0015)	0.007317 (0.0012)
Bangladesh	Quadratic Level	0.8905	0.0000288 (0.2333)	3.4042E-9 (0.7774)
	Quadratic Log	0.8941	-0.2250 (0.0173)	0.0193 (0.0086)
Canada	Quadratic Level	0.8967	-4.937E-7 (0.2112)	3.682E-11 (0.0149)
	Quadratic Log	0.8865	-0.0848 (0.0016)	0.004931 (0.0011)
Chile	Quadratic Level	0.7946	1.0691E-6 (0.8887)	5.602E-11 (0.9276)
	Quadratic Log	0.8082	-0.1968 (0.3286)	0.0123 (0.3171)
Colombia	Quadratic Level	0.5227	6.3811E-8 (0.9813)	2.463E-10 (0.5561)
	Quadratic Log	0.5134	-0.0239 (0.5612)	0.001812 (0.5037)
Cyprus	Quadratic Level	0.8587	-5.489E-6 (<.0001)	2.09E-10 (<.0001)
	Quadratic Log	0.8786	-0.0586 (0.0094)	0.002824 (0.0331)
Denmark	Quadratic Level	0.5295	-1.01E-7 (0.3941)	5.632E-12 (0.1837)
	Quadratic Log	0.5114	-0.008293 (0.4199)	0.000483 (0.3941)
Ecuador	Quadratic Level	0.7749	-0.000068 (<.0001)	1.5265E-8 (<.0001)
	Quadratic Log	0.7500	-0.6409 (0.0048)	0.0437 (0.0043)
Egypt	Quadratic Level	0.8949	-0.000010 (0.1637)	5.433E-9 (0.0018)
	Quadratic Log	0.9228	-0.4585 (<.0001)	0.0330 (<.0001)
Finland	Quadratic Level	0.5296	-6.114E-7 (0.0012)	2.625E-11 (0.0020)
	Quadratic Log	0.4133	-0.006322 (0.5784)	0.000333 (0.6065)
Greece	Quadratic Level	0.9139	-6.569E-6 (0.0015)	6.452E-10 (<.0001)
	Quadratic Log	0.8684	-0.2447 (0.0007)	0.0153 (0.0005)
India	Quadratic Level	0.8374	0.0000320 (0.2435)	-6.693E-9 (0.4779)
	Quadratic Log	0.8517	0.2020 (0.0378)	-0.0142 (0.0535)
Ireland	Quadratic Level	0.7478	-7.835E-7 (0.3230)	1.445E-10 (0.0004)
	Quadratic Log	0.7281	-0.1943 (0.0006)	0.0120 (0.0003)
Japan	Quadratic Level	0.8166	-4.101E-6 (0.0039)	2.186E-10 (0.0002)
	Quadratic Log	0.7945	-0.2307 (0.0037)	0.0136 (0.0029)
Korea	Quadratic Level	0.7562	-2.42E-6 (0.0010)	8.416E-11 (0.0761)
	Quadratic Log	0.7646	0.0256 (0.0131)	-0.001942 (0.0039)
Netherlands	Quadratic Level	0.8225	-1.232E-6 (0.0021)	4.911E-11 (0.0009)
	Quadratic Log	0.7789	-0.0525 (0.0686)	0.002926 (0.0684)
Norway	Quadratic Level	0.3252	1.596E-7 (0.1575)	-3.83E-12 (0.3203)
	Quadratic Log	0.3199	0.002109 (0.8047)	-0.000085 (0.8575)
Singapore	Quadratic Level	0.8989	-3.497E-6 (0.0899)	5.518E-11 (0.4284)
	Quadratic Log	0.9072	0.1642 (0.0558)	-0.0104 (0.0387)
Spain	Quadratic Level	0.7865	-3.763E-6 (0.0357)	1.618E-10 (0.0707)
	Quadratic Log	0.7801	-0.006084 (0.9393)	0.0000652 (0.9889)
Sweden	Quadratic Level	0.9074	-4.459E-6 (<.0001)	2.106E-10 (<.0001)
	Quadratic Log	0.8032	-0.2832 (0.0006)	0.0160 (0.0005)
Turkey	Quadratic Level	0.8155	3.0112E-6 (0.6981)	9.388E-10 (0.4663)
	Quadratic Log	0.8199	-0.2101 (0.0333)	0.015 (0.0223)
UK	Quadratic Level	0.8700	3.2841E-7 (0.1523)	-2.21E-12 (0.8060)
	Quadratic Log	0.8725	-0.0241 (0.0763)	0.001483 (0.0527)
USA	Quadratic Level	0.7999	-2.32E-6 (0.0095)	1.018E-10 (0.0002)
	Quadratic Log	0.6827	-0.2327 (0.0104)	0.0132 (0.0075)

Table A.IV: Comparison EHII Findings and UTIP-UNIDO Inequality Findings

Country	Model	R2	Parameter Estimate Regressor ONE (p-value)	Parameter Estimate Regressor TWO (p-value)	R2	Parameter Estimate Regressor ONE (p-value)	Parameter Estimate Regressor TWO (p-value)	Based on R2
Australia	Quadratic Level	0.9529	-0.000202 (0.0635)	2.6243E-8 (<.0001)	0.893	1.0966E-7 (0.7429)	7.127E-12 (0.5583)	EHII
	Quadratic Log	0.9274	-73.8989 (<.0001)	4.3230 (<.0001)	0.8951	-0.0546 (0.0108)	0.003175 (0.0078)	EHII
Austria	Quadratic Level	0.9029	-0.000425 (0.0004)	2.1032E-8 (<.0001)	0.7856	-2.146E-6 (0.0004)	9.98E-11 (<.0001)	EHII
	Quadratic Log	0.8554	-34.7008 (<.0001)	1.9878 (<.0001)	0.6641	-0.1279 (0.0015)	0.007317 (0.0012)	EHII
Bangladesh	Quadratic Level	0.2573	0.0125 (0.2249)	-6.733E-6 (0.1986)	0.8905	0.0000288 (0.2333)	3.4042E-9 (0.7774)	Manufacturing Pay
	Quadratic Log	0.2387	37.7802 (0.3835)	-2.9027 (0.3837)	0.8941	-0.2250 (0.0173)	0.0193 (0.0086)	Manufacturing Pay
Canada	Quadratic Level	0.9291	5.8889E-7 (0.9957)	6.606E-9 (0.1172)	0.8967	-4.937E-7 (0.2112)	3.682E-11 (0.0149)	EHII
	Quadratic Log	0.9304	-25.5942 (0.0011)	1.5071 (.0006)	0.8865	-0.0848 (0.0016)	0.004931 (0.0011)	EHII
Chile	Quadratic Level	0.8242	0.000350 (0.6770)	-1.082E-8 (0.8724)	0.7946	1.0691E-6 (0.8887)	5.602E-11 (0.9276)	EHII
	Quadratic Log	0.8311	-12.7988 (0.5625)	0.8285 (0.5392)	0.8082	-0.1968 (0.3286)	0.0123 (0.3171)	EHII
Colombia	Quadratic Level	0.5985	-0.000148 (0.6957)	6.2435E-8 (0.2858)	0.5227	6.3811E-8 (0.9813)	2.463E-10 (0.5561)	EHII
	Quadratic Log	0.5867	-7.2447 (0.2014)	0.5117 (0.1716)	0.5134	-0.0239 (0.5612)	0.001812 (0.5037)	EHII

(Contd. Table A.IV)

Country	Model	R2	Parameter Estimate Regressor ONE (p-value)	Parameter Estimate Regressor TWO (p-value)	R2	Parameter Estimate Regressor ONE (p-value)	Parameter Estimate Regressor TWO (p-value)	Based on R2
Cyprus	Quadratic Level	0.9379	-0.001347 (<.0001)	5.5157E-8 <.0001)	0.8587	-5.489E-6 (<.0001)	2.09E-10 (<.0001)	EHII
	Quadratic Log	0.9493	-19.5489 (<.0001)	1.0295 0.0003)	0.8786	-0.0586 (0.0094)	0.002824 (0.0331)	EHII
Denmark	Quadratic Level	0.2391	-0.000133 (0.2501)	6.0752E-9 (0.1431)	0.5295	-1.01E-7 (0.3941)	5.632E-12 (0.1837)	Manufacturing Pay
	Quadratic Log	0.1584	-0.4279 (0.9576)	0.0394 (0.9291)	0.5114	-0.008293 (0.4199)	0.000483 (0.3941)	Manufacturing Pay
Ecuador	Quadratic Level	0.8186	-0.009513 (<.0001)	2.063E-6 <.0001)	0.7749	-0.000068 (<.0001)	1.5265E-8 (<.0001)	EHII
	Quadratic Log	0.7856	-85.7352 (0.0007)	5.8052 0.0006)	0.75	-0.6409 (0.0048)	0.0437 (0.0043)	EHII
Egypt	Quadratic Level	0.8505	-0.001290 (0.4112)	6.677E-7 0.0555)	0.8949	-0.000010 (0.1637)	5.433E-9 (0.0018)	Manufacturing Pay
	Quadratic Log	0.8961	-73.0198 (<.0001)	5.2140 (<.0001)	0.9228	-0.4585 (<.0001)	0.0330 (<.0001)	Manufacturing Pay
Finland	Quadratic Level	0.888	-0.000550 (<.0001)	2.9921E-8 <.0001)	0.5296	-6.114E-7 (0.0012)	2.625E-11 (0.0020)	EHII
	Quadratic Log	0.8742	-36.0546 (<.0001)	2.0810 (<.0001)	0.4133	-0.006322 (0.5784)	0.000333 (0.6065)	EHII

(Contd. Table A.IV)

Country	Model	R2	Parameter Estimate Regressor ONE (p-value)	Parameter Estimate Regressor TWO (p-value)		Parameter Estimate Regressor ONE (p-value)	Parameter Estimate Regressor TWO (p-value)	Based on R2
Greece	Quadratic Level	0.9292	-0.001087 (<.0001)	9.6935E-8 (<.0001)	0.9139	-6.569E-6 (0.0015)	6.452E-10 (<.0001)	EHII
	Quadratic Log	0.8926	-38.3711 (<.0001)	2.3647 (<.0001)	0.8684	-0.2447 (0.0007)	0.0153 (0.0005)	EHII
India	Quadratic Level	0.8753	0.003013 (0.1269)	-6.741E-7 (0.3157)	0.8374	0.0000320 (0.2435)	-6.693E-9 (0.4779)	EHII
	Quadratic Log	0.8908	17.2341 (0.0113)	-1.2106 (0.0185)	0.8517	0.2020 (0.0378)	-0.0142 (0.0535)	EHII
Ireland	Quadratic Level	0.352	0.000577 (0.0045)	-1.97E-8 (0.0309)	0.7478	-7.835E-7 (0.3230)	1.445E-10 (0.0004)	Manufacturing Pay
	Quadratic Log	0.2896	-9.0133 (0.2638)	0.6002 (0.2035)	0.7281	-0.1943 (0.0006)	0.0120 (0.0003)	Manufacturing Pay
Japan	Quadratic Level	0.864	-0.000355 (0.0816)	2.2354E-8 (0.0076)	0.8166	-4.101E-6 (0.0039)	2.186E-10 (0.0002)	EHII
	Quadratic Log	0.8596	-28.9677 (0.0025)	1.7313 (0.0018)	0.7945	-0.2307 (0.0037)	0.0136 (0.0029)	EHII
Korea	Quadratic Level	0.9359	-0.001432 (<.0001)	6.982E-8 (<.0001)	0.7562	-2.42E-6 (0.0010)	8.416E-11 (0.0761)	EHII
	Quadratic Log	0.9355	-3.6227 (0.2053)	0.1072 (0.5555)	0.7646	0.0256 (0.0131)	-0.001942 (0.0039)	EHII

(Contd. Table A.IV)

Country	Model	R2	Parameter Estimate Regressor ONE (p-value)	Parameter Estimate Regressor TWO (p-value)		Parameter Estimate Regressor ONE (p-value)	Parameter Estimate Regressor TWO (p-value)	Based on R2
Netherlands	Quadratic Level	0.9074	-0.000016 (0.9237)	8.873E-9 (0.1442)	0.8225	-1.232E-6 (0.0021)	4.911E-11 (0.0009)	EHII
	Quadratic Log	0.8977	-18.6957 (0.1141)	1.1517 (0.0820)	0.7789	-0.0525 (0.0686)	0.002926 (0.0684)	EHII
Norway	Quadratic Level	0.8753	0.000129 (0.1811)	7.429E-10 (0.8156)	0.3252	1.596E-7 (0.1575)	-3.83E-12 (0.3203)	EHII
	Quadratic Log	0.878	-16.4546 (0.0137)	0.9923 (0.0078)	0.3199	0.002109 (0.8047)	-0.000085 (0.8575)	EHII
Singapore	Quadratic Level	0.9736	-0.000918 (<.0001)	1.989E-8 (0.0039)	0.8989	-3.497E-6 (0.0899)	5.518E-11 (0.4284)	EHII
	Quadratic Log	0.9773	-12.8808 (0.0205)	0.5544 (0.0823)	0.9072	0.1642 (0.0558)	-0.0104 (0.0387)	EHII
Spain	Quadratic Level	0.727	-0.000482 (0.0859)	2.1781E-8 (0.1218)	0.7865	-3.763E-6 (0.0357)	1.618E-10 (0.0707)	Manufacturing Pay
	Quadratic Log	0.726	-10.0035 (0.3791)	0.5478 (0.4099)	0.7801	-0.006084 (0.9393)	0.0000652 (0.9889)	Manufacturing Pay
Sweden	Quadratic Level	0.9505	-0.001231 (<.0001)	6.3107E-8 (<.0001)	0.9074	-4.459E-6 (<.0001)	2.106E-10 (<.0001)	EHII
	Quadratic Log	0.9189	-109.4715 (<.0001)	6.2342 (<.0001)	0.8032	-0.2832 (0.0006)	0.0160 (0.0005)	EHII

(Contd. Table A.IV)

Country	Model	R2	Parameter Estimate Regressor ONE (p-value)	Parameter Estimate Regressor TWO (p-value)		Parameter Estimate Regressor ONE (p-value)	Parameter Estimate Regressor TWO (p-value)	Based on R2
Turkey	Quadratic Level	0.5447	0.000553 (0.6146)	2.1999E-8 (0.9046)	0.8155	3.0112E-6 (0.6981)	9.388E-10 (0.4663)	Manufacturing Pay
	Quadratic Log	0.5507	-20.7647 (0.1006)	1.4766 (0.0808)	0.8199	-0.2101 (0.0333)	0.0151 (0.0223)	Manufacturing Pay
United Kingdom	Quadratic Level	0.9272	0.000991 (<.0001)	-2.292E-8 (0.0047)	0.87	3.2841E-7 (0.1523)	-2.21E-12 (0.8060)	EHII
	Quadratic Log	0.9268	4.7816 (0.6397)	-0.0337 (0.9530)	0.8725	-0.0241 (0.0763)	0.001483 (0.0527)	EHII
United States	Quadratic Level	0.9442	-0.000093 (0.3195)	9.243E-9 (0.0013)	0.7999	-2.32E-6 (0.0095)	1.018E-10 (0.0002)	EHII
	Quadratic Log	0.9171	-33.2138 (0.0007)	1.9295 (0.0003)	0.6827	-0.2327 (0.0104)	0.0132 (0.0075)	EHII