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Whether Development Indices Affect Economic Growth: A Cross-Country Analysis

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Abstract

This study aims to examine the relationship between economic growth and highly featured development indices using a cross sectional data of 12 countries from both developed and developing world between the years 2000 and 2013. The indices of corruption, democracy, freedom of press, human development, global competitiveness, economic freedom, and the featured development indicators of World Bank such as average schooling years, life expectancy, female labour force participation rate, health expenditures rate in GDP, export rate of high technology, and employment rate are used to investigate the relationship in between economic growth and development indices. In order to exploit this relationship, all individual indices are reformed to produce form a single index, what we call harmonic index. The findings show that the higher scores of harmonic Index are associated with higher GDP per capita all levels except Saudi Arabia.

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Keywords: Economic growth; development index; development indicator; harmonic index

1. Introduction

Statistical evidence shows us that the most developed countries in the world are indeed those with the highest GDP per capita (htttp://worldbank.org). GDP per capita is calculated by dividing amount of GDP by the number of population and it actually tells us nothing about income distribution or spending among the members of population. In addition, growth in GDP per capita alone doesn't necessarily result in broader social and economic advancements. The weaknesses inherent in the use of GDP as a measure of development have revealed the need of

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creating other development measures. A number of well-known development indices mostly composed of several development indicators and GDP per capita itself provide us a broad range of insight on the social and economic development of the countries.

This study examines the relationship in between economic growth and a number of development indices and highly featured development indicators of World Bank using a cross country data of USA, UK, Germany, Japan, France, Greece, Brazil, Turkey, Russia, India, China, and Saudi Arabia for the years of 2000 and 2013.

In this study, the development indices of human development, corruption, democracy, freedom of press, global competitiveness, economic freedom, and featured development indicators of World Bank such as average schooling years, life expectancy, female labor force participation rate, health expenditures rate in GDP, export rate for high technology, and employment rate are used to explore whether these development indices and indicators affect economic growth. All indices above are re-structured as individual development indices ranging between 0 and 100 and from worse to better. The indices used in this study are all publicly available indices of private institutions. The featured development indicators and GDP per capita are drawn from World Bank database. In order to exploit the relationship in between economic growth and development indices, all indices are initially restructured and the re-structured individual indices are then used to form a single index what we call harmonic index. Later, percentage change in the harmonic index and percentage change in GDP per capita are graphed for all countries investigated in this study to observe their patterns over years. The results demonstrate that all countries are those with high scores of harmonic index and GPD per capita as well, except Saudi Arabia. On the other hand, comparing the trends in percentage change in the harmonic index and percentage change in GDP per capita doesn't present an associated link. Furthermore, the trend graphic of percentage change in the harmonic index between years of 2000-2013 reveals that USA, Germany, Japan, and France contain a steady trend while developing countries, e.g. Saudi Arabia, Turkey, and Russia, show strong fluctuations. Although there is a significant amount of literature examining the relationship of various development indices and indicators with economic growth, this study contributes to the literature revealing this relationship by forming a single composite index including all prominent development indices.

The following section presents the related literature showing supporting evidence for the effect of development indices on the economic growth. The next part explains the content of data, the structure of harmonic index and the format of analysis. The later section presents the empirical findings. The final part pinpoints the results and concludes.

2. Literature Review

Helliwell (1994), has investigated the relationship between democracy and economic growth using data from 125 countries between the years 1960 and 1985. Barro (1996), studied the determinants of economic growth using cross sectional data of 100 countries between the years 1960 and 1990. The findings of the study reveal that the greater GDP growth rate is associated with higher initial schooling, higher life expectancy, lower fertility, lower government consumption, better maintenance of the rule of law, lower inflation, and improvements in the terms of trade. Political freedom doesn't have a strong effect on growth but the study's findings exploit an existence of a nonlinear relation. The results also show that expansion of political rights enhance economic growth but only at low levels. On the other hand, at a moderate level of democracy, expansion of democratic rights reduces growth. Although, democracy has a small effect on economic growth, increase in the standard of living is strongly associated with the country's will to experience democracy. Mo (2001), develops a new point of view on corruption's role in economic growth. The study reveals numeric estimates of the effect of corruption on economic growth and results about the importance of channels used to transmit corruption. According to the results of the study, a 1% increase in the corruption level reduces the growth rate by about 0.72% or, in other words, a one-unit increase in the corruption index reduces the growth rate by 0.545 percentage points. The study shows that political instability, with 53% of the total effect, is the most important transmission channel through that corruption has a strong effect on economic

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