



Citation:

Economic Expansion and Ease of Doing Business

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Abstract

Using panel data from the World Bank's Doing Business report spanning 2006 to 2016, I calculate the influence of ease of doing business on the per capita growth rate of GDP. To account for out-of-strategy-state dynamics and extra business climate indicators, the study includes supplementary explanatory variables, namely the lagged value of log GDP per capita and the Worldwide Governance Indicators (WGI). I gather critical evidence that the ease of doing business has a statistically significant impact on the annual growth rate of GDP per capita. The estimated coefficients of the Doing Business indicators, on the other hand, had no statistically significant impact on the yearly growth rate of GDP per capita for the entire sample. Subsample indicators, on the other hand, have a statistically significant influence. Furthermore, when the sample was subdivided according to country income group classifications, a diverse range of results appeared. Certain metrics appeared to have an adverse relationship with the pace of growth in per capita GDP. Based on hypothetical growth rates expected for 2006 calculated from the Doing Business indicators for 2016, certain countries have enjoyed economic growth as a result of improvements in the ease of doing business. The findings support the premise that the ease of doing business has a major impact on economic growth; however, the impact varies among country groupings.

Keywords- Economic Expansion and Ease of Doing Business

1.

Introduction

The World Bank's Doing Business reports have become a vital tool and standard for analyzing business environment improvements. They achieve this by providing quantitative indications of rules that affect many aspects of the corporate sector. Since its inception in 2003, the Doing Business report has expanded its coverage to include 32 OECD high-income economies, 48 Sub-Saharan African economies, 32 Latin American and Caribbean economies, 25 East Asian and Pacific economies, 25 European and Central Asian economies, 20 Middle Eastern and North African economies, and 8 South Asian economies. Doing commercial explores domestic small and medium-sized enterprises (SMEs) and the rules that facilitate and obstruct commercial activity. According to the World Bank's Doing commerce website, the Doing Business report's primary goal remains to provide an unbiased framework for understanding and improving the regulatory landscape relevant to international commerce. In this article, the World Bank's Doing Business metrics are used to represent business rules. This study

intends to show fresh findings that validate the assumption that ease of doing business variables significantly and positively influence economic growth by using more robust panel data spanning a longer period of time than past research (e.g., Haidar 2012 and Ani 2015). Furthermore, by categorizing nations based on their wealth level, this study attempts to dig deeper into the relationship between ease of doing business and economic growth. The goal is to determine how indices of business convenience influence these specific income levels. Each of these phases of the research is discussed in further detail in Section 3 of this article. The Doing Business report has recorded over 2,900 regulatory adjustments in 186 economies since 2004. Among these regions, Central Asia and Europe have seen the greatest number of such reforms. In the recent decade, indicators of doing business have been widely used in scholarly works to assess economic consequences and measure the success of reforms (Djankov et al. (2006), Eifert (2009), Jayasuriya (2011), Haidar (2012), and Ani 2015). These studies investigated how the corporate environment effects a wide range of

economic outcomes. In previous studies, Scarpetta et al. (2002) and Desai et al. (2003), among others, investigated the relationship between the business climate and economic growth. Despite the fact that a positive link has been discovered between economic growth and the business environment, correlation does not imply causality. Following studies, such as those of Ani (2015), Djankov et al. (2006), and Haidar (2012), investigated the relationship between the business climate and economic expansion. These causal link studies show pretty solid evidence of the beneficial effects of the business environment on the economic growth of the investigated nations by using the World Bank's Doing Business report as a representation of the business environment. According to academic literature, identifying and implementing changes can hasten a country's economic progress. When taken as a whole, the findings are encouraging and provide strong support for the increased applicability of policy improvements as measured by Doing Business. According to the findings of these studies, the creation of growth policies should prioritize the reform of corporate rules. Alternatively, corporate regulations can have a big impact on

economic situations. Growth can be improved, and nations can improve their economic outcomes by undertaking structural reforms. Nonetheless, more research is needed to confirm the accuracy of this assertion. In this study, no one indicator has a statistically significant impact on the growth rate of GDP per capita throughout the full sample. Furthermore, the study investigates the relationship between the amount of business facilitation and the economic growth of four separate income groups of nations. According to these findings, certain ease of doing business metrics appear to have a negative impact on the economic growth of specific country groupings, whereas others appear to have a positive one. Per capita GDP growth has a negative link with variables such as "protecting minority investors" and "handling construction permits" in both high-income and upper-middle-income economies. Similarly, there is a negative association between per capita GDP growth and "dealing with construction permits" in low-income nations, therefore reform implementation in these sectors requires considerable prudence. Finally, anticipated growth rates for specific economies in 2006 are calculated using the Doing Business index values for 2016.

According to the data, indicators of Doing Business level changes imply that those economies' growth rates have quickened. It is worth noting that the expected implications on those economies are very significant, with Slovenia seeing the biggest impact at 2.63 percentage points and Serbia experiencing the smallest impact at 0.65 percentage points. This work is a scholarly addition since it differs from previous research in several critical ways. This paper investigates not only the impact of the World Bank's Doing Business indicators on economic growth, but also a broader model that includes the Worldwide Governance Indicators (WGI) as control variables to account for other possible business climate-related effects on economic growth. Furthermore, to account for out-of-steady-state dynamics, this analysis integrates the lagged value of log GDP per capita in certain conditions. Furthermore, in contrast to other studies, it spans an eleven-year period. Finally, as previously said, this research attempts to categorize nations based on their wealth level. The following sections of the paper will be structured to aid in this analysis. Section 2 provides a summary of the relevant empirical literature, including recent and historical studies. Section 3 contains in-depth

information about the data sources and definitions. Section 4, on the other hand, defines the empirical specifications. The panel estimation's conclusions and outcomes are discussed in the final two parts, numbered 5 and 6, respectively.

2. LITERATURE REVIEW

This section will provide a thorough examination of a number of notable scholarly books relevant to the subject at hand. Scholars have investigated the ease of doing business and its implications for national economies from several angles. The World Bank's Doing Business Rankings (DBR) and its constituent aspects have influenced the analysis of several research. Djankov et al. (2006) conducted research on the relationship between business activity rules and national economic growth. The study examines business regulations in 135 countries using data from the World Bank's 2004 Doing Business survey. The average annual growth rate of GDP per capita from 1993 to 2002 is the study's dependent variable. They reveal a constant and significant relationship between improved regulations and higher growth rates. The data also imply that the impact of corporate rules on the pace of economic growth is far less

than that of gains in secondary education, primary school enrollment, government spending, and inflation. Haidar (2012) undertakes a thorough examination of the consequences of corporate regulation reforms on economic growth. In contrast to Djankov et al. (2006), the author investigates the relationship between corporate regulation reforms and economic development in 172 nations from 2006 to 2010. The data on microeconomic reforms used in the analysis came from a variety of sources, including Freedom House, World Development Indicators, World Bank Doing Business reports, and Polity IV. The dependent variable is the growth rate of GDP per capita, while the primary explanatory variable is the total number of reforms implemented in each country over the specified period. Similarly, his study includes nine control variables, including government spending, foreign direct investment, average annual growth in gross fixed capital creation, financial freedom, and political stability. Furthermore, Haidar (2012) ran ten separate regressions with the number of regulatory revisions in each category as the key explanatory variable. The findings give reasonably strong and statistically significant support for the idea that business regulatory

reforms boost economic growth. Similarly, Ani (2015) examines the impact of business facilitation on the economic growth of a group of Asian economies in 2014. The study looked at 29 economies in East Asia, Southeast Asia, and South Asia. The World Bank's 10 Doing Business Indicators (DBI) were used as indicators of ease of doing business, while the gross domestic product (GDP) was used as a measure of economic growth. The study performs multiple regression analysis to estimate the influence of business facilitation on economic growth. In general, the findings show that the ease of doing business has a major impact on economic growth. The goal of Jayasuriya's (2011) research is to see if an increase in a country's rating for ease of doing business correlates with an increase in foreign direct investment. The regression analysis was carried out using panel data from 84 countries from 2006 to 2009. The World Bank's Governance Indicators were used as control variables. The correlation is statistically significant when compared to the nation's average population. There is, however, a paucity of data to support the assertion that nations undergoing considerable reforms attract significantly more foreign direct

investment (FDI) on average than countries ranked lower in the Doing Business index. Furthermore, Jayasuriya (2011) emphasizes the relationship between gains in the Doing Business ranking and FDI inflows into nations classified by economic scale. When developing countries are studied individually, Jayasuriya states that the association is minimal; nevertheless, it is vital to note that Jayasuriya's research is based on the average developing country across a four-year period. Bayraktar (2013) conducted a comparable study that encompassed the longer time period of 2004 to 2010. According to Bayraktar (2013), countries with a better reputation for expediting commercial transactions tend to attract more foreign direct investment (FDI). Furthermore, Bayraktar indicates that improving metrics of ease of doing business in developing nations could have a major impact on the size of FDI inflows into these economies. Vogiatzoglou (2016) explores the impact of various business policies on the attraction of foreign direct investment (FDI) among ASEAN member states in a new article. The determinants of intra-ASEAN and extra-ASEAN FDI inflows were explored using an empirical study of a dataset including eight ASEAN nations (Cambodia,

Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand, and Vietnam) from 2003 to 2013. The findings suggest that an effective business regulatory environment is a significant factor influencing foreign direct investment (FDI), with a focus on determining FDI inflow. Klapper, Laeven, and Rajan (2004) conducted research to determine the impact of the business environment on the entry of new enterprises into an economy. The Amadeus database is used to obtain cross-country information about enterprises in Western and Eastern Europe. According to the findings, large regulatory barriers are impeding entry, particularly in sectors that should have low entry costs by definition, such as computer services and communications (telephone, wireless, and so on). They do, however, point out that, while not all regulations have an effect on company entry, excessive bureaucratic entry restriction has a detrimental impact. Eifert's (2009) research seeks to examine the relationship between investment rates, GDP growth, and regulatory reform. He applies an Arellano-Bond dynamic panel estimator to control for unobserved cross-country heterogeneity and the association between reform timing and the

business cycle from 2003 to 2007. His empirical examination of ninety countries over a five-year period shows that regulatory reforms benefit both relatively impoverished (in terms of governance) and relatively well-governed (in terms of income) states. Furthermore, the statistics reveal a significant increase in investment for both groupings of nations the following year.

3. DATA

This analysis is based on panel data from 155 countries, with information on each variable available from 2006 to 2016. Each variable's data is derived from the Worldwide Governance Indicators (WGI), Doing Business annual reports, and the World Bank's World Development Indicators (WDI). Table A1 in the appendix contains a list of the data sources that were used. The World Bank's Doing Business annual report, issued in 2003, provided the independent variables used in this study. The paper examines important business regulation reforms and the implementation of regulatory procedures relevant to the founding and operation of businesses in a variety of economies. The data in the Doing Business report is offered in two formats: the ease of doing business ranking

and the distance to the frontier score. The Distance to Frontier (DTF) score is used to quantify ten factors of business-friendliness in this study. The World Bank produces the DTF score, which measures the overall level of regulatory performance over time by highlighting the nations with the best Doing Business scores across all performance parameters. The DTF score represents the frontier and is measured on a scale of 0 to 100, with 0 indicating the worst performance and 100 representing the best. The frontier represents the economy with the best overall performance across all indicators. According to the World Bank (2017b, 164), "the improvement in the distance to frontier score is used to identify the top improvers because this allows a focus on the absolute improvement in contrast to the relative improvement shown by a change in rankings that economies have made in their regulatory environment for business." However, only one of these indications is discussed in this study. The following specific indicators are used in this context: "contract enforcement," "establishing a business," "obtaining construction permits," "property registration," "obtaining credit," "safeguarding minority investors," and "tax payment." The remaining

two indicators, "obtaining electricity" and "resolving insolvency," are not used. It is worth noting that the indicator "obtaining electricity" was first included in the Doing Business report in 2010. Table A2 details the criteria taken into account by each of the Doing Business indicators. Furthermore, the model takes into account critical control variables, which are the World Bank's six governance aspects. The Worldwide Governance Indicators (WGI) are a set of data gathered by organizations in both developed and developing countries to analyze the nature of governance. Effective governance is expected to improve the government's ability to create and implement appropriate policy improvements. The six composite indicators are "voice and accountability," "political stability and absence of violence/terrorism," "control of corruption," "government effectiveness," "rule of law," and "regulatory quality." The "regulatory quality" metric, for example, "captures perceptions of the government's ability to formulate and

implement sound policies and regulations that permit and promote private sector development" (Kaufmann, Kraay, & Mastruzzi). This indicator's improvement would be a good addition to the "Doing Business" metric. It is worth noting that the inclusion of control variables in the panel dataset limits the number of nations to 154, owing to data scarcity. The percentile ranks are used to examine the six indicators listed below. The percentile rank represents a country's position in respect to the total set of nations covered by the aggregate indicator. On a scale of 0 to 100, zero denotes the lowest rank and 100 represents the greatest rank. Kaufmann, Kraay, and Mastruzzi (2010) provide a thorough explanation of the technique used to construct governance indicators. This analysis, like Mankiw, Romer, and Weil (1992), utilizes the single-lagged value of log GDP per capita (constant 2010 US dollars) to account for dynamics. In other words, the model for this study will explicitly include non-steady-state dynamics.

Table 1:

		Test for Heteroskedasticity	Test for Autocorrelation	Test for Cross-sectional Dependence	Hausman's Test
Full Sample					
Equations:	(1)	120000***	37.319***	79.115***	38.11***
	(2)	75360.60***	34.079***	77.916***	54.63***
	(3)	11622.36***	164.064***	78.019***	207.88***
High Income-Group					
Equations:	(1)	3226.13***	37.581***	55.081***	10.59
	(2)	2761.15***	37.809***	54.101***	16.70
	(3)	2056.61***	73.061***	44.831***	94.44***
Upper-Middle Income-Group					
Equations:	(1)	3379.80***	13.327***	21.938***	60.90***
	(2)	1047.81***	13.493***	21.741***	50.38***
	(3)	649.08***	34.086***	21.912***	73.59***
Low Middle Income-Group					
Equations:	(1)	57064.73***	19.718***	12.102***	10.72
	(2)	15330.39***	16.604***	10.587***	12.80
	(3)	9224.74***	46.081***	11.772***	36.40**
Low Income-Group					
Equations:	(1)	28755.46***	1.80	1.737	23.63***
	(2)	6122***	1.084	1.623	25.55**
	(3)	5069.24***	3.411***	39.578***	41.95***

Results and Discussion

Figure 1 depicts the relationship between annual percentage increase in GDP per capita and the World Bank's aggregate Distance to Frontier (DTF) indicator of ease of doing business for 155 countries from 2010 to 2016. Averaging the Distance to Frontier (DTF) values of all economic indicators yields the Distance to Frontier (DTF). It is crucial to note that the scope of this depiction is confined to 2010 to 2016, because the overall Distance to Frontier (DTF) measure for ease of doing business was not available before to 2010. On the y-axis, the yearly percentage growth rate of GDP per capita (PGDP) is indicated, while the overall Distance to Frontier (DTF) reflects the ease of doing

business. The graph fails to demonstrate a definitive relationship between the GDP per capita percentage growth rate and the total Distance to Frontier (DTF), which evaluates the ease of doing business. An estimated pairwise correlation coefficient of 0.014 supports this result. Nonetheless, in the association between GDP per capita growth and PGDP (20-40-60-100), nations with a higher total DTF for ease of doing business tend to be less vulnerable to negative GDP per capita growth rates (annual percentages). Figure 1 illustrates this. A variety of diagnostic tests were used to analyze the models for multicollinearity, heteroskedasticity, autocorrelation, and cross-sectional dependency. The dataset of Doing Business indicators showed no evidence of

extensive multicollinearity. The pairwise correlation coefficients and supplementary R-squares confirm this result, as the correlation coefficients and Variance Inflation Factors (VIF) for the eight Doing Business measures are all less than 0.6 and 2.4, respectively (see to Tables 2 and 3 for the statistical data). While auxiliary R-squares exceeding 0.8 for some global governance indicators and a condition index of 53.89 suggest that caution should be exercised when attempting to differentiate the effects of these specific variables from one another, these variables are not the primary focus of the analysis, so the strong correlations observed are not cause for concern. Following that, a Wald test is used to determine whether or not there is groupwise heteroskedasticity, and the Wooldridge serial correlation test is used to determine AR(1) autocorrelation. Finally, the Pesaran test is used to determine cross-sectional dependence. The p-values for these tests, as shown in Table 4, are less than the preset significance level of 0.05 for practically all estimated models. This demonstrates the presence of groupwise heteroskedasticity as well as AR(1) autocorrelation. As a result, as previously stated, the predicted standard errors for

nonspherical disturbances are adjusted using Driscoll and Kraay (1998) standard errors.

Summary:

A significant proportion of policymakers are rising to the challenge of extending business regulatory reforms by incorporating business regulatory reform into the formulation of their growth plans. As a result, there is renewed interest in the relationship between ease of doing business and economic growth. Using panel data, this study gives a comprehensive analysis of the impact, relevance, and consequences of various business rules on economic growth during a period of about 155 nations from 2006 to 2016. Overall, the study looked into the impact of variables related to the ease of doing business on the yearly growth rate of per capita GDP. The analysis included the Worldwide Governance Indicators, in addition to the aforementioned economic indicators pertaining to the business climate and economic growth. Finally, certain models adjusted for out-of-steady-state dynamics by incorporating the latent value of the log of GDP per capita. In addition, in contrast to prior studies, the study lasted an extended period of eleven years. Furthermore, countries were divided into subsamples based

on their income group status. The key empirical findings of the research show that, while none of the coefficients related to the ease of doing business have statistically significant values in the pooled sample, they do in the subsamples. The computed coefficients of the Doing Business indicators have no effect on the yearly percentage growth rate of GDP per capita and are statistically insignificant for the full sample, according to individual tests of significance. Despite this, the indicators had statistically significant effects on the subsamples. As a result, this lends credence to the claim that the effects of the Doing Business measures differ between nation groups, and that the effects cancel each other out when data is unduly aggregated. Furthermore, many computed coefficients relevant to global governance variables, including "regulatory quality," "voice and accountability," and "political stability and absence of violence," revealed statistically significant economic growth effects. Furthermore, surprising findings appeared across all four income levels, with the estimated coefficients of the indices of business ease producing mixed outcomes. When the annual growth rate of GDP per capita is taken into account collectively,

certain approximated coefficients show an inverse association, whilst other measures show a positive influence on economic growth. Furthermore, an examination of anticipated growth rates for 2006 that removes the impact of Doing Business indicators reveals that the economies under consideration witnessed a jump in growth rates from 2006 to 2016 as a result of changes in the ease of doing business.

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