

Poverty Alleviation and Business Deregulation: A Contemporary Worldwide Correlation Enlightening Heavily Regulated Poor Economies.

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ABSTRACT: The paper investigates the empirical relationships between the deregulation of small businesses, measured as Ease of Doing Business (DB) scores, and poverty levels, quantified as Gross National Income (GNI) per capita, purchasing power parity (PPP), of all the economies in the world in the recent past. Specifically, the study analyzes the correlation and the association between the EDB Scores and the GNI Per Capita, PPP of all economies in 2019. The research is a cross-sectional, triangulation of correlational, associational, hypothesis-testing & comparative analysis of empirical relationships between the key variables of the study. Data on DB Scores and GNI Per Capita, PPP are provided by the World Bank's Doing Business 2020 report and development Indicators respectively. The study results show that there are significant positive relationships between the DB scores and the GNI Per Capita, PPP of all the economies of the world. Hence, Economies with relatively higher DB Scores, generally have more GNI Per Capita, PPP than their counterparts. It is, therefore, recommendable for all economies to resolutely reform business policies (deregulation) and apply other measures that facilitate the growth of their small enterprises as a strategy for alleviating poverty.

KEY WORDS: Business-Deregulation, Gross-National-Income, Poverty, Small-Medium- Enterprise.

I. Introduction

1.1 Framework and Stimulus of the Study

Small and Medium Enterprises (SMEs) are generally regarded as the backbones of most economies as they considerably mitigate poverty through various means such as generating considerable employment opportunities, facilitate redistribution of incomes, and availability of social-economic goods and services^[1]. Several economies reduce poverty, unemployment and other socio-economic hardships through the growth and prosperity of their SMEs [2][3]. However, in numerous economies, and especially the low and middle-income countries, the growth of SMEs is constrained by various factors that include stringent business policies and regulations^[4]. This is despite the facts that Economic freedom to do business goes hand in hand with economic development and a thriving private sector, and these in turn underpin poverty elimination and the pursuit of shared prosperity^[4]. Also, widely noted is that cumbersome red tape holds businesses as well as an economy's ability to grow sustainably^[4].

An overview of Doing Business reports that annually presented by the World Bank indicates that most of the countries with heavy business regulations for SMEs, measured as Overall Ease of Doing Business (DB) scores, are those categorized as the low and middle income (poor) countries^[4]. This implies that, apparently, there is significant relationship between the regulation of SMEs and the levels of poverty (measured as Gross National Income (GNI) Per Capita, Purchasing Power Parity (PPP)¹), that needs to be investigated at a worldwide level. There are several previous works/studies that show a relationship between poverty levels and business

regulations^{[2][5] [6] [7] [8] [9]}. However, these previous studies are not premised on research variables, time and geographical scopes, units of analysis, and approaches that differ from what motivates this study. Therefore, this study analyzes the empirical relationship business regulations, measured as DB scores, that affect SMEs and the poverty levels, measured as GNI Per Capita, PPP, of all the economies of the world in the recent past.

1.2 Research Problem Statement

Many economies considerably mitigate poverty and unemployment and other social-economic hardships through the growth of their small and medium enterprises (SMEs) as a strategy of [2][3]. However, SMEs face several business regulations that, apparently constrain their prosperity in several economies, and especially the low and middle income countries. Economies with heavy business regulations (measured as Overall Ease of Doing Business (DB) Scores^[4]), apparently have higher poverty levels (measured as GNI Per Capita, PPP^[10]) than their counterparts. This implies that possibly there is an empirical relationship between business deregulation (i.e. DB Scores) and poverty eradication levels (i.e. GNI Per capita, PPP) of all economies in the world. Some previous studies have indicated a relationship between business regulations and poverty levels but those earlier studies' units of analysis, research variables, time and geographical scopes, and methodologies substantively differ from the motivation, focus and premises of this study^{[2] [5] [6] [7] [8] [9]}. Therefore, this study analyzes the empirical relationship between business deregulation (i.e. DB Scores) and poverty levels (i.e. GNI Per capita, PPP) of all economies in the world during 2019.

1.3 Purpose and Objectives of the Study

The purpose of the study is to analyze the empirical relationships between the levels of business deregulation (indicated by Ease of Doing Business (DB) scores) and poverty all eviation (measured as GNI Per Capita, PPP) of all the economies in the world for the year 2019.

The key research question galvanizing the study, therefore, is: "Is there a significant relationship between the levels of business deregulation (gauged as DB scores) and poverty alleviation (quantified as GNI Per Capita, PPP) of all the economies in the world for the year 2019?"

This key research question transmutes into the following main null hypothesis- H_0 : "There is no significant relationship between the levels of business deregulation (measured DB scores) and poverty alleviation (rated as GNI Per Capita, PPP) of all the economies in the world for the year 2019."

The specific objectives of the study are:

- To evaluate the correlation between the DB Scores and the GNI Per Capita, PPP of all the economies in 2019.
- To assess the association (regression) between the DB Scores and the GNI Per Capita, PPP of all the economies in 2019.

The specific objectives stated above transform into and are concurrently addressed with a focus on the following specific null hypotheses:

H_{01} : There is the no statistically significant correlation between the DB Scores and the GNI Per Capita, PPP of all the economies in 2019.

H_{02} : There is no statistically significant association (regression) between the DB Scores and the GNI Per Capita, PPP of all the economies in 2019.

1.4 Contribution and Significance of the paper

The study informs and guides the making and development of policies related to the alleviation of poverty and the growth and development of small and medium businesses for all the economies in the world.

The paper imparts constructive and real-world guidance for all economies, and particularly the heavily regulated poor economies, on how to reform policies that affect their SMEs as a stratagem of alleviating poverty. The study also divulges the adverse effects of onerous business regulations on the growth and development of SMEs and their subsequent benefits such as increased employment opportunities in every economy of the world.

The paper considerably and practically contributes to the realization of the Sustainable Development Goal number one, which is the alleviation of poverty at a universal level.

The study also provides a valuable foundation and locus for further research, strategy articulation and academic works that are especially related to alleviation of poverty and business deregulation or policy reforms for growing especially small businesses.

1.5 Contextual and Operational Definitions of Core Concepts and Terms

The core concepts and terms of the study are contextually and/or operationally defined as follows:

Business Deregulation: This is the act of freeing (i.e. easing/liberating) businesses, especially SMEs, from governmental regulations. It means making governmental regulations (policies) more business-friendly to particularly SMEs. In the context of this study, business deregulation specifically refers to policy and/or regulatory reforms that facilitate the establishment, operation and growths of SMEs in any economy. Business deregulation is synonymous with policy reforms for easing the establishment, running and development of businesses with a focus on SMEs.

Ease of Doing Business (EDB) Scores: The ease of doing business scores benchmark economies with respect to regulatory best practice, showing the proximity to the best regulatory performance (i.e. official cost, procedures and time) on each of the following 10 *Doing Business* indicators: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency^[4]. When compared across years, the ease of doing business score shows how much the regulatory environment for local entrepreneurs (SMEs) in an economy has changed over time in absolute terms. The EDB Scores are presented annually by the World Bank quantified grading of economies basing on their respective rules, policies and regulations affecting a SMEs from inception through operation to wind-down.

Small and Medium Enterprises (SMEs): There are various definitions of SMEs. However, in the context of this paper, small *enterprises refer to* those businesses that employ between 5 and 19 people while medium *Enterprises* are those businesses employing between twenty and ninety-nine people. This definition has been drawn from the World Bank, which is also the principle source of the data for this study^[4].

Gross National Income (GNI) Per Capita, Purchasing Power Parity (PPP): In the context of this paper GNI Per Capita is defined as the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad and that sum divided by the population of the country^[11]. The Purchasing Power Parity (PPP) is the measurement of prices in different economies that uses the prices of specific goods to compare the absolute purchasing power of the economies' currencies. Accordingly, the PPP conversion factor is a spatial price deflator and currency converter that eliminates the effects of the differences in price levels between economies. Therefore, GNI Per Capita, PPP is succinctly defined as the average GNI measured in terms of Purchasing Power Parity.

Poverty: The most widely held and understood definition of absolute poverty measures poverty strictly in economic terms — earning less than US \$1.90 a day. However, for the context of this study, poverty is holistically defined as: “a condition, financial or non-financial, that exposes and/or subjects one

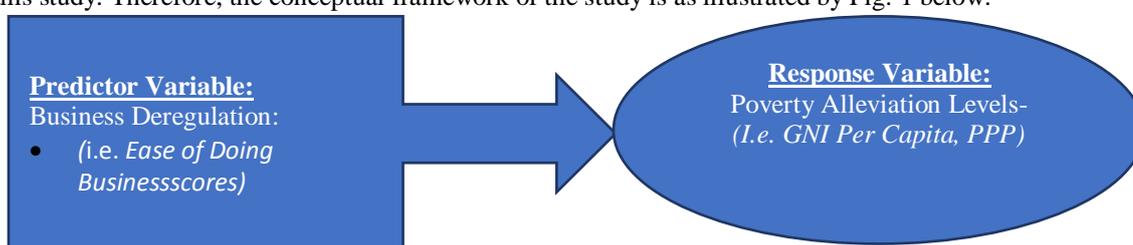
to: hunger, lack of shelter, being sick and not being able to see a doctor, not having access to school and not knowing how to read, not having a job, fear for the future, living one day at a time, losing a child to illness brought about by unclean water, powerlessness, and lack of representation and freedom." This holistic definition is adopted from the World Bank and it encompasses living conditions, an inability to meet basic needs because food, clean drinking water, proper sanitation, education, health care and other social services are inaccessible^[4]. Because this broader measure of poverty expands the contributors and causes of poverty, the World Bank developed indicators to assess the non-income facets of poverty as well. These indicators include education, health, vulnerability, access to social services, social exclusion, and access to social capital. Thus, poverty is a complex problem with many aspects, faces and causes.

1.6 Conceptual and theoretical framework

The conceptual and theoretical framework of the paper arises from an investigative, comparative and correlational analysis of the GNI Per Capita, PPP and the DB scores for all the economies in the world as respectively presented by the World Bank's Doing Business reports and Development Indicators. The theoretical framework is also substantially informed and corroborated by the previous works/studies on the relationship between business regulation and poverty^{[2] [4] [5] [6] [7] [8] [9] [11]}.

A worldwide comparative analysis of the variations in the DB Scores and the Per Capita GNI (PPP) indicates that economies with low DB Scores apparently have lower GNI Per Capita, PPP than their counterparts. Thus, the severity of business regulations of the various economies, as indicated by their respective DB scores^[4], ostensibly has a significant causal relationship (and positive correlation) with their poverty levels as reflected by their respective GNI Per Capita, PPP^[10]. It is generally observed that economies that score well on Doing Business indicators benefit from a higher level of entrepreneurial activity. This in turn generates better employment, greater government revenue and higher incomes thus less poverty^[4].

The conceptual framework of the study is derived from a supposition that any country's degree of regulating SMEs, as indicated by its DB scores, has a significant explanatory (causal) relationship with the same country's levels of poverty. Ostensibly, this relationship has not been globally analysed in the recent past basing on the units of analysis, geographical scope and key research variables that motivate this study. Therefore, the conceptual framework of the study is as illustrated by Fig. 1 below:



Source: A worldwide comparative analysis of the data on GNI Per Capita, PPP and Ease of Doing Business Scores for 2019 as presented by the World Bank.

Figure 1: Conceptual framework of the study

Fig. 1 shows the assimilation of the key variables that are conceptualized to be crucial to the dynamics of the interrelationships that are analyzed in this paper. The predictor and response variables illustrated in Fig. 1 are respectively derived from the *Doing Business* reports and *Development Indicators* that are annually published by the World Bank^{[3] [4] [10]}.

II. Methodology

The study is designed as a cross-sectional, desk-top triangulation of correlational, associational, hypothesis-testing, comparative and analytical approaches to investigate the empirical relationships between business deregulation (i.e. DB Scores) and poverty alleviation levels (i.e. GNI Per Capita, PPP) for all the economies in the World during 2019. The units of analysis are the autonomous and semi-autonomous economies as recognized by the World Bank during the year 2019.

Data on business deregulation is drawn from the Doing Business report of 2020 that is published by the World Bank for the DB scores of the year 2019 while data on poverty alleviation is derived from *Development Indicators* that are also presented by the World Bank as GNI Per Capita, PPP of all economies in the world for 2019. Data for 2019 was preferred to that of 2020 as the most recent referral statistics because the global effects of the Corona virus/Corvid 19 pandemic greatly upset the socio-economic status of most economies in the world. The main data for the study was primarily quantitative.

The targeted study population and universal sample size is 178 economies, which were purposively selected to cover all the economies in the world with the relevant and complete data sets, in order to attain the most comprehensive worldwide comparative analysis of the key variables for the year 2019.

The key study variables are measured exactly according to their respective sources. The DB scores used as the predictor variables for the study are precisely quantified as determined and presented by the World Bank in its annual *Doing Business* report 2020 for the data of the year 2019^[4]. Similarly, the GNI Per Capita, PPP regarded as the response variable is measured exactly as given by *Development Indicators* that are presented by the World Bank for the year 2019^[10]. The reliability and validity of the study are drawn from utilizing and relying on the most pertinent forms of empirical data that have been professionally, scientifically, rigorously, and ethically gathered, compiled and authenticated by the World Bank, which is a credible and reliable organization.

Analysis of data was effected using predominantly quantitative techniques and applying the Statistical Package for Social Scientists (SPSS) computer software to come up with descriptive and inferential statistics. Being principally quantitative, the study is essentially affiliated to the POSITIVISM paradigm.

III. Presentation, Analysis and Discussion of Results

The study findings are analysed and discussed in form of descriptive statistics, correlations and regressions as presented below.

3.1 Descriptive Statistics

Descriptive statistics were applied to illustrate the relationships between the study variables and the results generally show that economies with relatively high DB Scores, on average, have significantly higher GNI Per Capita, PPP than their counterparts. These results are illustrated by Table 1, Fig. 2 and Fig. 3 below.

Table 1: Average GNI Per Capita, PPP and DB Scores for the 10 Most and 10 Least Deregulated Economies in 2019.

10 Most Deregulated Economies in 2019			10 Least Deregulated Economies in 2019		
Country	DB Score	GNI Per Capita, PPP in US\$	Country	DB Score	GNI Per Capita, PPP in US\$
New Zealand	86.8	42710	Libya	32.7	16130
Singapore	86.2	92270	Central African Republic	35.6	1060
Denmark	85.3	61960	Congo, Dem. Rep.	36.2	1110
Hong Kong SAR, China	85.3	65730	Chad	36.9	1620
Korea, Rep.	84.0	43520	Timor-Leste	39.4	4970
United States	84.0	66080	Congo, Rep.	39.5	2980
Georgia	83.7	15260	Haiti	40.7	3040
United Kingdom	83.5	47880	Equatorial Guinea	41.1	14640
Norway	82.6	69610	Angola	41.3	6380
Sweden	82.0	57220	Liberia	43.2	1320
Averages	84.3	56,224	Averages	38.7	5,325

Source: *Doing Business Report* and *Development Indicators* published by the World Bank for the year 2019

Table 1 above shows that, on average, the 10 economies with the highest DB scores (i.e. averaging 84.3) have significantly higher GNI Per Capita, PPP (i.e. averaging US\$ 56,224) than their counterparts with the lowest DB Scores (i.e. averaging 38.7) whose average GNI Per Capita, PPP is merely US\$ 5,325. This disparity is likewise, globally presented by Table 2 and graphically illustrated by Fig.2 and Fig.3 below.

Table 2 below shows that most of the economies (over 95% of the economies) with DB scores that are below the global average DB score of 62.4 also have GNI Per capita, PPP that is below the global average of US\$ 20,921. This, too, implies that there is a considerable relationship between the DB scores (i.e. business deregulation) and GNI Per Capita, PPP (i.e. poverty alleviation levels) as indicated by the conceptual framework of the study.

Table 2. A Global Comparison of DB Scores & GNI Per Capita,PPP for 178 Economies 2019 (in a descending order of DB Scores)

Worldwide Comparison of EaseofDoingBusinessscores & GNI Per Capita, PPP for 178 Economies in 2019								
Economy	DBscore	GNI PPP	Economy	DBscore	GNI PPP	Economy	DBscore	GNI PPP
New Zealand	86.8	42710	Ukraine	70.2	13750	Iran, Islamic Rep.	58.5	12950
Singapore	86.2	92270	Brunei Darussalam	70.1	66590	Barbados	57.9	15770
Denmark	85.3	61960	Colombia	70.1	15150	Ecuador	57.7	11540
Hong Kong SAR,	85.3	65730	Puerto Rico (U.S.)	70.1	24300	St. Vincent and the	57.1	12930
Korea, Rep.	84.0	43520	Oman	70.0	26210	Nigeria	56.9	5190
United States	84.0	66080	Uzbekistan	69.9	7420	Niger	56.8	1330
Georgia	83.7	15260	Vietnam	69.8	7910	Honduras	56.3	5530
United Kingdom	83.5	47880	Jamaica	69.7	9940	Belize	55.5	6700
Norway	82.6	69610	Indonesia	69.6	11970	Guyana	55.5	13540
Sweden	82.0	57220	Luxembourg	69.6	77570	Solomon Islands	55.3	2750
Lithuania	81.6	37170	Costa Rica	69.2	19250	Cabo Verde	55.0	7330
Malaysia	81.5	28830	Jordan	69.0	10520	Mozambique	55.0	1310
Mauritius	81.5	26840	Peru	68.7	12790	St. Kitts and Nevis	54.6	26360
Australia	81.2	51760	Qatar	68.7	91670	Tanzania	54.5	2700
United Arab	80.9	70430	Tunisia	68.7	10850	Zimbabwe	54.5	2740
North Macedonia	80.7	16790	Greece	68.4	30470	Nicaragua	54.4	5440
Estonia	80.6	38030	Kyrgyz Republic	67.8	5080	Lebanon	54.3	14920
Latvia	80.3	31740	Mongolia	67.8	11420	Cambodia	53.8	4320
Finland	80.2	51670	Albania	67.7	14300	Palau	53.7	19580
Thailand	80.1	18570	South Africa	67.0	12670	Grenada	53.4	16080
Germany	79.7	57810	Zambia	66.9	3560	Maldives	53.3	18380
Canada	79.6	50810	Panama	66.6	30690	Mali	52.9	2350
Ireland	79.6	70010	Botswana	66.2	17140	Benin	52.4	3400
Kazakhstan	79.6	24080	Malta	66.1	42770	Bolivia	51.7	8930
Iceland	79.0	61170	Bhutan	66.0	11230	Burkina Faso	51.4	2180
Austria	78.7	59240	Bosnia and	65.4	15870	Mauritania	51.1	5360
Russian Federation	78.2	28270	El Salvador	65.3	8720	Lao PDR	50.8	7980
Japan	78.0	44810	St. Lucia	63.7	15180	Gambia, The	50.3	2280
China	77.9	16790	Nepal	63.2	3610	Guinea	49.4	2650
Spain	77.9	42260	Philippines	62.8	10230	Algeria	48.6	11720
France	76.8	50460	Guatemala	62.6	8870	Ethiopia	48.0	2310
Turkey	76.8	27660	Togo	62.3	1670	Comoros	47.9	3210
Azerbaijan	76.7	14400	Samoa	62.1	6500	Madagascar	47.7	1660
Israel	76.7	41950	Sri Lanka	61.8	13260	Sierra Leone	47.5	1770
Switzerland	76.6	72390	Sevchelles	61.7	29470	Suriname	47.5	15310
Portugal	76.5	35790	Fiji	61.5	13120	Kiribati	46.9	4650
Rwanda	76.5	2250	Uruguay	61.5	21180	Burundi	46.8	790
Slovenia	76.5	40330	Namibia	61.4	9780	Myanmar	46.8	5170
Poland	76.4	33060	Tonga	61.4	7000	Cameroon	46.1	3730
Czech Republic	76.3	40640	Taiikistan	61.3	4110	Bangladesh	45.0	5200
Netherlands	76.1	59790	Trinidad and Tobago	61.3	27140	Gabon	45.0	14350
Bahrain	76.0	44250	Vanuatu	61.1	3320	São Tomé and Príncipe	45.0	4130
Serbia	75.7	17990	Pakistan	61.0	4800	Sudan	44.8	3990
Slovak Republic	75.6	33470	Malawi	60.9	1080	Iraq	44.7	11310
Belgium	75.0	55590	Côte d'ivoire	60.7	5300	Afghanistan	44.1	2190
Armenia	74.5	14500	Diibouti	60.5	5620	Guinea-Bissau	43.2	2230
Moldova	74.4	14330	Dominica	60.5	12250	Liberia	43.2	1320
Belarus	74.3	19400	Antigua and Barbuda	60.3	21780	Angola	41.3	6380
Montenegro	73.8	23270	Egypt, Arab Rep.	60.1	11840	Equatorial Guinea	41.1	14640
Croatia	73.6	29680	Dominican Republic	60.0	18300	Haiti	40.7	3040
Cyprus	73.4	39830	Ghana	60.0	5530	Congo, Rep.	39.5	2980
Hungary	73.4	33580	Uganda	60.0	2220	Timor-Leste	39.4	4970
Morocco	73.4	7680	West Bank and Gaza	60.0	7510	Chad	36.9	1620
Romania	73.3	31840	Bahamas, The	59.9	37420	Congo, Dem. Rep.	36.2	1110
Kenya	73.2	4430	Papua New Guinea	59.8	4360	Central African Republic	35.6	1060
Italy	72.9	44630	Eswatini	59.5	8090	Libya	32.7	16130
Chile	72.6	24140	Lesotho	59.4	3330			
Mexico	72.4	19990	Senegal	59.3	3470	AVERAGES	64.2	20921
Bulgaria	72.0	24390	Brazil	59.1	14890			
Saudi Arabia	71.6	49520	Paraguay	59.1	12790			
India	71.0	6920	Argentina	59.0	22120			

Source:DoingBusinessdatabase and Development Indicators by the World Bank for the year 2019.

Note:The DB Scores

are benchmarked to May 1, 2019, and based on the average of each economy's ease of doing business scores for the 10 topics included in the aggregate ranking. For the economies for which the data cover two cities, scores are population-weighted

averageforthetwocities. Rankingsarecalculatedonthebasisoftheunrounded scores,whilescoreswithonlyonedigitaredisplayedinthetable.

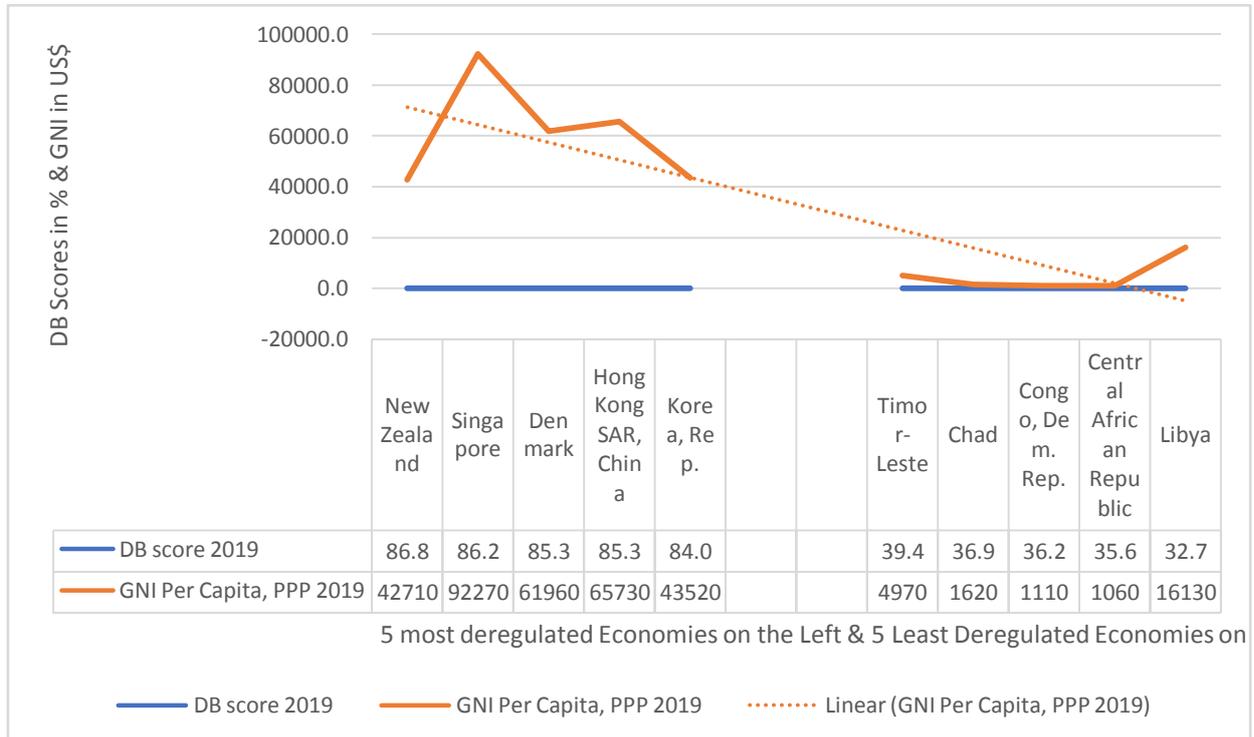


Figure 2The DB Scores and GNI Per Capita, PPP for the 5 Most &5 Least Deregulated Economies for 2019

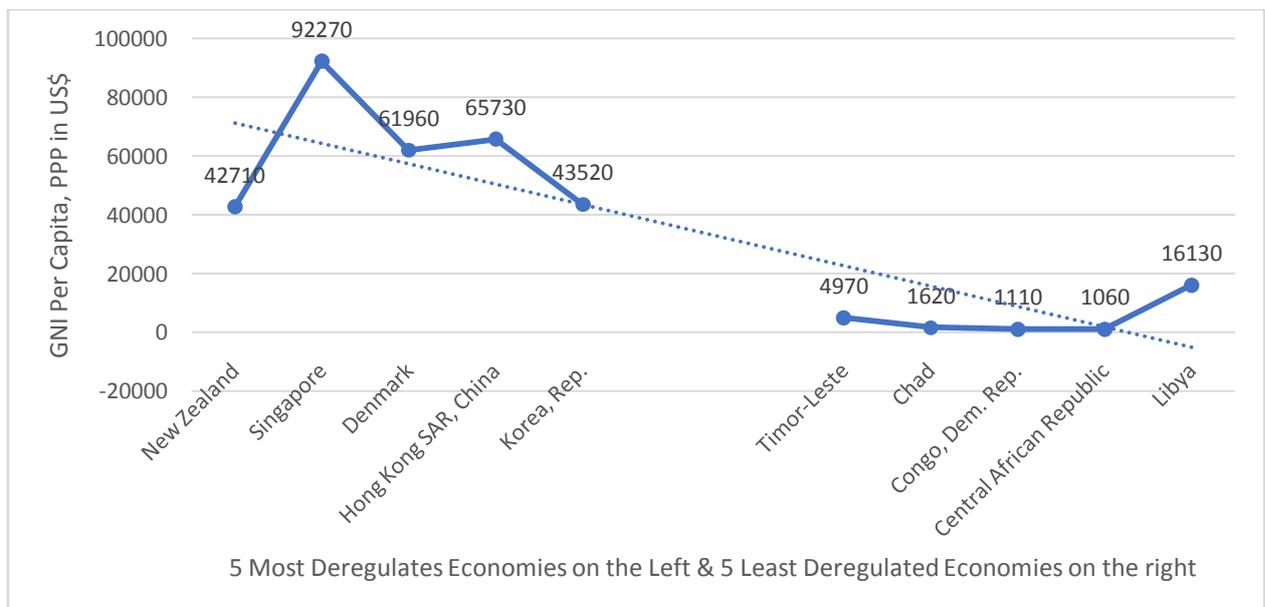


Figure 3 GNI Per Capita, PPP for the 5 Most &5 Least Deregulated Economies for 2019 (in US Dollars)

From Fig. 2 and Fig. 3 above, it is graphically evident that economies with higher DB scores (i.e. greater business deregulation) do generally have significantly more GNI Per Capita, PPP (i.e. sizably

less poverty levels) than their counterparts. This implies that there is a significant relationship between the DB Scores (i.e. business deregulation) and the GNI Per Capita, PPP (i.e. poverty alleviation levels) of all the economies for the year 2019. These results are also in agreement with several earlier studies by various authorities though the key study variables, units of analysis, time and geographical scopes of these earlier studies are different from those of this study^{[5] [6] [7] [8] [9]}. Thus, the results of descriptive statistics justify the rejection of the main null hypothesis H_0 largely but instead affirm the study's conceptual supposition that, all over the world, business deregulation considerably relates and contributes to poverty alleviation.

3.2 Correlations

The relationship between each economy's level of business deregulation (measured as the DB Scores) and poverty alleviation levels (quantified as the GNI Per Capita, PPP) was investigated using a Pearson product-moment correlation coefficient. Preliminary analyses were executed to ensure there is no violation of the assumptions of normality, linearity and homoscedasticity. There was a strong, positive correlation between the two variables [$r = .68, n = 178, p < .01$], with high levels of DB Scores associated with high levels of GNI Per Capita, PPP.

The results attained from this Pearson product-moment correlation are as shown in Table 2 below.

Table 2. Pearson Product-Moment Correlations Between the DB Scores and GNI Per Capita, PPP of 178 Economies in 2019

	GNI Per Capita, PPP	DB Scores
GNI Per Capita, PPP	1.000	
DB Scores	.675**	1.000

** Correlation is significant at the 0.1 level (2-tailed); N= 178

Table 2. above shows that, business deregulation (indicated by the DB Scores) is significantly correlated to poverty alleviation (as shown by the GNI Per Capita, PPP). These results, with a $p < .01$, justify rejection of the study's null hypothesis H_1 which states that there is no significant correlation between the DB Scores and the GNI Per Capita, PPP. This finding is largely similar to the findings of previous works presented by various authors^{[5] [6] [7] [8] [9]} although the focus and bases (i.e. study variables, units of analysis, geographical and time scopes) of these previous differ from those of this study. Hence, economies are bound to mitigate poverty (attain more wealth and affluence) through increasing their GNI Per Capita, PPP as they improve their governance through alleviating corruption.

3.3 Regressions

A simple linear regression was computed to predict the economies' GNI Per Capita, PPP based on their respective DB Scores of all economies sampled by using the model stated below.

$$(1): y = \beta_0 + \beta_1 x + \varepsilon$$

Where: y = the GNI Per Capita, PPP; β_0 = is the y-intercept of the regression line; β_1 = the slope coefficient for the predictor variable; x = DB Scores; and ε = the random disturbance effect. The results of the linear regression are as presented in Table 3 below.

Table 3. Regression Analysis Summary for DB Scores Predicting GNI Per Capita, PPP

Variable	B	95% CI	β	t	p
(Constant)	-48514.19	[-60017.57, -37010.81]		-8.32	0.000
DB Score	1082.55	[906.61, 1258.48]	0.68	12.14	0.000
$R^2 = 0.46$					
$R^2_{\text{adjusted}} = 0.45$					

Number of Observations = 178

Note: CI = Confidence Interval for B

A significant regression equation was found ($F(1,176) = 147.460$, $p < .000$) with an R^2 of .456. As presented in Table 3, the economies' predicted GNI Per Capita, PPP is equal to $-48514.186 + 1082.547$ (Business deregulation level) GNI Per Capita, PPP when business deregulation level is measured in DB Scores. Economies' GNI Per Capita, PPP increased 1082.547 for each DB Score of Corruption Alleviation level. The $p < .000$ means that results to be interpreted therefrom are dependable. The R^2 value of 0.456 attained means that 45.6 percent of the changes in the GNI Per Capita, PPP is explained by a unit change in the DB scores. In other words, the $R^2 = 0.456$ shows that DB Score accounts for some 45.6% of the variance in GNI Per Capita, PPP. That is, DB score predicts GNI Per Capita, PPP fairly well in the study sample. Hence, the results from the regression analysis shows that there is a significant association between the DB Scores and the Per Capita GNI (PPP). With a $p < 0.05$, it means the null hypothesis H_0 and null hypothesis H_{02} of the study are rejected. These findings largely match up to the results of previous works^{[5] [6] [7] [8] [9]} although these earlier studies were based on different sets of study variables, units of analysis, geographical and time scopes. To sum up, results from the regression analysis general show that there is a significant relationship between the deregulation of businesses (i.e. DB Scores) and the poverty levels (i.e. GNI Per Capita, PPP) of all the sampled economies in the world for the year 2019.

IV. Conclusions, Lessons and Recommendations

4.1. Conclusion and Lessons

The result presented in section 3.0 above generally show that there are significant empirical relationships, correlation and association between the levels of business deregulation (measured as DB scores) and the poverty alleviation levels (quantified as GNI Per Capita, PPP) of all the sampled economies in the world during 2019. Thus, all the null hypotheses of the study are rejected. A comparative analysis of empirical data of 178 economies for the year 2019 largely shows that economies with higher DB scores (i.e. relatively greater business deregulation), similarly have higher GNI Per Capita, PPP (i.e. higher poverty alleviation levels) than their counterparts. Therefore, any economy is likely to reduce its poverty levels (i.e. earns more GNI Per Capita, PPP) if and/or when it improves its business deregulation (i.e. attains higher DB Scores). Hence, the highly deregulate economies are very likely to mitigate their respective poverty as they make policy and/or regulatory reforms to ease the management of their respective SMEs.

4.2 Recommendations

Basing on the findings and conclusions of the study, we recommend that all economies, and especially the heavily regulated poor countries, do zealously and conscientiously make policy and regulatory reforms that can facilitate the establishment, operation, growth and winding-down of SMEs as one of the strategies for alleviating poverty. The specific policy and regulatory reforms recommendable for easing SME growth should be focused on reducing the formal procedures, time and cost of: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, resolving insolvency, employing workers, and contracting with the government.

Other recommendable measures for facilitating the management and development of SMEs as a measure to alleviate poverty in every economy include governments' tendency to initiate and facilitate the following:

- SMEs' cooperatives, associations and strategic alliances that eliminate dysfunctional/unhealthy competition among small businesses but generate synergetic

advantages for SMEs such as collective bargaining, marketing, logistics and bulk procurement;

- Mergers, collaborations, networks and partnerships between indigenous SMEs and foreign direct investors that can enable the local SMEs to boost their capacities, acquire new skills and operate better;
- Business development services for SMEs that offer such benefits as training, skilling, capacity-building, empowerment, and technical support to the small businesses of the economy.
- National trade shows, symposia and trade expos that focus on promoting and developing SMEs in the economy through organized marketing and exposures to crucial information;
- Substantial governmental procurements from & trading with local and/or indigenous SMEs.
- Good corporate governance and professional management of SMEs
- Tax-based incentives such as tax exemptions and holidays for budding and extra-ordinary or exceptionally crucial SMEs.
- Encouraging each economy's citizens to prefer buying from, selling to, and or dealing with their respective indigenous SMEs
- Easy access to interest-free finances and/ or credit facilities such as Islamic financing schemes.
- Special governmental ministries, departments and agencies such as commercial courts, registries, finance and economic planning and development departments, and marketing agencies among other governmental entities for facilitating particularly the management and growth of SMEs.

4.3 Limitations of the Study and Recommendations for further research

The paper was limited to a cross-sectional research focusing only the year 2019 although there are options of using time series/ longitudinal approaches. Also the study is limited to a quantitative approach whereas there are options of using qualitative and/or mixed methodologies. The study is also limited in the study variables to analyze the relationship between DB scores and GNI Per Capita, PPP as the only indicators of business deregulation and poverty while there are other indicators/variables that may be considered. Therefore, in order to corroborate, augment, probe, buttress, endorse, validate, contest and/or expand this study, up coming researchers may:

- Investigate relationships between and/or among other variables and sub-variables of business deregulation & poverty alleviation;
- use other methodologies to the investigation such as longitudinal (time series/panel data) analyses, and qualitative or mixed/triangulated approaches.
- Broaden, reduce or alter the geographical scopes and units of analysis and of the study and use other research designs and investigative approaches such as case-studies.

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