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#### **Research Article**

## Major Determinants That Perform a Predominant Role Globally in the Furtherance of SMEs; ARDL and Bound Testing approach

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#### ABSTRACT

**Purpose-** Our study aims to empirically examine the influence of different economic indicators such as the global GDP growth rate and the global GDP per capita growth rate on the number of small and medium businesses (SMEs) around the world. In this article, we explored the challenges that SMEs face worldwide during the establishment process and various governments provide policies and regulations that promote and secure SME growth and development.

**Design/methodology/approach-** This study presents a combination of time-series statistical analysis and analysis of literature gathered from published sources. A statistical analysis of the number of small and medium-sized businesses around the world is presented in the paper in relation to global GDP (current US dollars), global GDP growth rates (annual percent), and global GDP per capita (annual percent).

**Findings-** Two determinants, Global GDP Growth rate and Global GDP Per Capita growth rate, are found as significant regressors. In addition, the number of SMEs worldwide during the previous year had a significant impact on the current year.

**Research limitations-** limited availability of government sources of data are the biggest hindrance. In this study we relied on the statistics published by STATISTA, knowing that it's a private company that maintains business statistics.

**Practical implications-** SMEs have a significant impact on the economy that cannot be ignored. The government of some countries has commissioned a network of technology centers, tool rooms, and extension centers in collaboration with the private sector and foreign governments. These measures are a collective effort to support SMEs, preserve millions of jobs, and encourage domestic investments which will ultimately sustain the country's economic growth.

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**Originality/value-** In comparison with reviewed literature, this study focuses more on the regressors and regressands using statistical tools and the variables of interest.

*Keywords*: Small and Medium Enterprises, government support, global GDP growth rate, global GDP Per Capita Growth Rate, ARDL

## Background

Small and Medium Enterprises have been the subject of research and general interest, especially in developing countries due to their importance to the global economy. (Muritala et al., 2012)

In business, a small and medium enterprise (SME) is a company with revenues, assets, or employees lower than a certain level. The standards for determining whether a company is an SME vary by country and sometimes by industry. While there is no standard international definition of firm size, many organizations that gather information define it as follows: micro enterprises have 0-9 employees, small enterprises have 10-49 employees, and medium-sized enterprises have 50-249 employees.

In recent years, SMEs have registered a higher growth rate as compared to the global industrial sector. The numbers of SMEs are in the world at the start of 2021, were 5.5 million small businesses (with 0 to 49 employees), 99.2% of the total business. SMEs account for 99.9% of the business population (5.6 million businesses). SMEs account for three-fifths of the employment and around half of the turnover in the UK private sector.

SMEs provide ample job opportunities to people at all levels of society. More than 90% of SMEs in both developing and developed economies improve employment rates, create new job opportunities, and encourage new entrepreneurship. Even when big industries downsize and cut jobs, SMEs keep growing and creating new jobs. In turn, their growth can improve the economy.

The aim of the study is to analyze the impact of global GDP and GDP per capita growth rate on the global estimated number of SMEs over 21 years, i.e. 2000-2020. In order to accomplish our aim, we conducted a literature review and assessed the variables framing various hypotheses. The variables under consideration are of mixed order of integration. Therefore, in this study we used an autoregressive distributed lag (ARDL) model. This model is based on the ordinary least squares (OLS) method which is applicable for both non-stationary time series as well as for times series with mixed order of integration.

## Literature review

The new market scene in transition economies has resulted in a slew of economic issues, including high unemployment, structural changes in the economy, poverty, and existential concerns. In light of these challenges, we can find SMEs as a potentially efficient solution for establishing new businesses, creating new jobs, reducing backwardness, and boosting overall economic development. Small and medium-sized enterprises (SMEs) are vital to the economic survival of the majority of countries around the world. Schlogl asserts that small and medium-sized firms influence highly the economic condition of our countries, but their full potential remains untapped despite their dominance in employment and number of businesses.(Schlogl, 2004)

SMEs contribute up to 45% of total employment and 33% of GDP in emerging economies. When informal businesses are taken into account, SMEs contribute greatly to employment and GDP across most countries regardless of income level. (*IFC-SME-Factsheet2012.Pdf*, n.d.)

SME activity is directly proportional to economic growth in many Asian nations such as Korea, Taiwan, and Japan. It has a great significance in China's rapid industrialization and development, where small businesses account for more than 99% of all enterprises. Together, these small and medium-sized enterprises generate approximately 60% of the total industrial output in China, as well as 40% of the total profit and tax revenue of the various industries. In the US, SMEs contribute more than half of the GDP.

Small and medium-sized enterprises are the main source of employment and income. It is one of the most significant factors in reducing the poverty of a country by contributing to local economic activity. In addition, SMEs generate innovations in the production process, which are widely seen as valuable by consumers (Beck et al., 2005).

The creation of new products and services results from the innovation of SMEs. In the global innovation process, these companies play a critical role because they can use new technology effectively (Almeida, 2004).

Maciej Wozniak and Joanna Dudaa's analyses of the statistics also support the hypothesis. A positive relationship exists between GDP and the number of SMEs. The development of small businesses and GDP, as well as its components, have a positive relationship. GDP and the number of employees in SMEs also exhibit a positive relationship (Woźniak et al., 2019)

Among the factors influencing SMEs' contribution to employment and gross domestic product growth, the study examined factors such as ease of entry and exit from the market, labor law, and access to credit (Hallberg, 2000)

In many studies, authors revealed a significant role played by SMEs in their country's economic development by creating employment and contributing to gross domestic product (GDP) by performing well on the aspects of export-import in the country (Muritala et al., 2012)

In order to identify the significant effects of Small and Medium Scale Enterprises on poverty reduction, job creation, and living standards enhancement in Ekiti State, three null hypotheses were tested. Results show there is a positive and significant relationship between SMEs and poverty reduction, employment generation, and improvement in the standard of living of people in Ekiti State. Further, the results showed an increase of 57% in the number of SMEs in the State between 2009 and 2013. According to the study, reduced interest rates on bank loans can boost the performance of SMEs in Nigeria and Ekiti State by providing access to capital financing. (Opafunso & Adepoju, 2014)

Pakistan's SME segment is the core of Pakistan's economy in terms of its contribution to GDP, work era, and fare improvement. Access to economic resources is a key component in developing the SME sector, which, in turn, improves growth of the economy (Zafar & Mustafa, 2017)

A number of development goals for Arab countries rely on the promotion of small and medium enterprises, including enhancing economic growth opportunities. There is no doubt that small and medium enterprises are playing an increasing role in the economies of developed countries, either in terms of their number or their contributions to employment, thus solving the problem of unemployment or their contribution to the GDP.

In addition to contributing substantially to a country's gross local product, SME's are the main sources of income and employment, as well as the main contributors to reducing poverty in a country. In addition, SMEs generate innovation in the manufacturing process, which consumers value highly (Beck et al., 2005)

#### Problem of the study

Despite their different levels of development, the range of economic systems and concepts they use, and the different stages of their social transformations, small and medium enterprises play a huge role in the economies of all societies. Due to the presence of little or no invested capital for the worker, small and medium enterprises have very wide job opportunities, which helps solve the unemployment problem and maximize output, as well as kickstarting new projects that contribute to economic growth.

Recently, researchers have examined economic growth and development and their drivers from various viewpoints and from varying literary perspectives. Studies have also examined the impact of SME growth and development on GDP.

#### *Objective of the study*

The aim of the study is to evaluate;

a. The Nexus between Change in the estimated number of SMEs in the world during years 2000-2020 with respect to growth rate of various economic indicators such as Global GDP growth rate and Global GDP Per capita growth rate.

- b. The major impediments and hindrances that SMEs face worldwide in its establishment process.
- c. The role that government policies and regulations must play in favor of SMEs establishment so as to secure economic development along with economic growth.

## **Research Question**

What are the determinants that sufficiently influence the economic performance and number of SMEs worldwide? What are the impediments that SMEs face worldwide? What are the roles that government policies and regulations must play in favor of SMEs to secure economic development along with economic growth.

## Hypothesis

The null hypotheses for this study (H0) are:

- 1. GDP and the number of small and mediumsized businesses in the world have no correlation.
- 2. Neither the number of SMEs in the world nor global GDP growth rate are affected by one another.
- 3. A large number of SMEs and global Gross Domestic Product (GDP) per capita has no relation to one another.

The alternative hypotheses (H1) for the study are:

- 1. As SMEs and Global Gross Domestic Product (GDP) are strongly correlated and co-integrated with each other, they have an impact on each other.
- 2. Global Gross Domestic Product (GDP) growth rate and number of SMEs affect each other because the variables are strongly correlated and co-integrated.

The number of SMEs in the world and Global GDP per capita are strongly correlated and co-integrated, so they affect each other.

## Methods

We combine time series statistical analysis and a theoretical analysis of literature collected through published sources to form our working methodology. Statistically, this paper examines the dynamics of the number of small and medium-sized enterprises around the world in relation to global GDP (current US dollars), global GDP growth rates (annual percent) and global GDP per capita (annual percent). Here we are using the World Bank data from 2000 to 2020 and the Statista statistics published by the website Statista. In this study we employ the following empirical tactics: (1) testing for stationarity by unit roots, (2) selection of lag lengths, (3) cointegration analysis, and (4) ARDL and Bound test (Khan & Panjwani, 2021)

All variables are stationary on either a level or first difference level, so that models and lag orders are appropriately specified to observe long-run and short-run relationships. Afterwards, we figured out the causal direction. Furthermore, every model was examined for good fit.

## **Description of Variables**

*Dependent variable*: Based on published data by Statista, we use the estimated number of SMEs globally (X) as a dependent variable.

*Independent variable*: Our independent variables are Global GDP (Current US \$) trillion (Y1), Global GDP Growth rate (annual %) (Y2) and Global GDP Per Capita Growth (annual %) (Y3).

## Econometric Analysis of Time Series

This study analyzes the data using a variety of methods following few steps as below.

- i. Prior to conducting a time series econometric analysis, a detailed statistical analysis is conducted. Our data collection spans 21 years from 2000 to 2020 (see Appendix I for data). Descriptive analysis involves calculating Mean, Median, Mini-Max, Standard Deviation, Skewness, Kurtosis, Jarque-Bera, Probability, etc.
- ii. Using Regression Analysis, we will determine which factors or variables are most important, which can be ignored, and how these factors interact.
- iii. Using time-series data can also result in spurious regressions. A stationary test for all variables is therefore imperative. Using the appropriate difference, we will also convert the series to stationary.

iv. We used Auto-Regressive Distributed Lag Bound Testing during Estimation Strategy study. To perform various functions in the study, we used E-Views software of econometrics.

## **Results and Discussion**

#### Descriptive Analysis

Table 1 provides descriptive statistics on our dependent and independent variables. Here we used our collected data into its original form. All independent variables are negatively skewed. Kurtosis statistics shows that Global GDP growth rate (Y2) as well as Global GDP Per Capita growth rate (Y3) are leptokurtic (long tail or higher) as the value of Kurtosis is very high. Other two variables, Estimated number of SMEs worldwide (X) and Global GDP (Y1)are platykurtic (short tailed or lower peak) as the value of Kurtosis is lower. The value of Jarque-Bera test reveals that Estimated number of SMEs worldwide (X) and Global GDP (Y1)are normally distributed whereas Global GDP growth rate (Y2) as well as Global GDP Per Capita growth rate (Y3) are non-normally distributed. Results of probability are also proving this fact simultaneously.

	SME	Y1GDP	Y2GDPGR	Y2GDPPE
Mean	162.2719	65.15419	2.786429	1.564952
Median	158.9800	73.01800	3.160000	1.925000
Maximum	213.5200	87.55500	4.501000	3.245000
Minimum	121.7800	34.05600	-3.363000	-4.398000
Std. Dev.	28.97380	18.43420	1.914986	1.867878
Skewness	0.324725	-0.561039	-2.007775	-2.013073
Kurtosis	1.969270	1.850685	6.855720	6.785467
Jarque-Bera	1.298665	2.257468	27.11731	26.72216
Probability	0.522394	0.323440	0.000001	0.000002
Sum	3407.710	1368.238	58.51500	32.86400
Sum Sq. Dev.	16789.63	6796.398	73.34341	69.77938

Table 1. Descriptive Statistics

Note: Calculated with E-View

## **Regression Analysis**

(H0: No correlation between dependent and independent variables)

The standard error in Table 2 tells us how much variability there is in estimating the slope coefficient. In T-statistics, the number of standard deviations that the coefficient has from zero is calculated. Here, H0 is accepted in case of dependent variable 'Estimated number of SMEs worldwide' (X) and independent variable 'Global GDP' (Y1) as t-statistics is less than 2 and p-value is also more than 0.05. However, H0 is rejected in case of dependent variable 'Estimated number of SMEs worldwide' (X) and independent variables Global GDP growth rate (Y2) as well as Global GDP Per Capita growth rate (Y3) as t-statistics is above 2. For the same variables, a smaller p-value (less than 0.05) indicates higher confidence in rejecting the null hypothesis. R-square values of 92.6% and adjusted R-squares of 91.3% show that independent variables possess high predictive accuracy, and the model is successful. According to the Fstatistic (70.99) and its p-value (0), the explanatory variables are indispensable to explain the variable. Durbin-Watson stat (0.7938) also confirms that there is a positive autocorrelation in the data set.

Hereafter, we will be considering 'Estimated number of SMEs worldwide' (X) as our dependent variable and Global GDP growth rate (Y2) as well as Global GDP Per Capita growth rate (Y3) as our independent variables.

#### Table 2. Regression Analysis

*Dependent V	ariable: SME
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\*\* Included observations: 21

Variables	<b>Co-efficient</b>	Std. Error	t-Statistic	Prob.
С	509.6998	113.3311	4.497441	0.0003
Y1 GDP	0.475450	0.622432	1.811707	0.0877
Y2 GDP GROWTH RATE	-314.5192	81.65987	-3.851567	0.0013
Y3 GDP PER CAPITA GROWTH RATE	318.2076	83.12870	3.827430	0.0013
R-squared	0.926079	Mean dependent var		162.2719
Adjusted R-squared	0.913035	S.D. dependent var		28.97380
S.E. of regression	8.544346	Akaike info criterion 7		7.298060
Sum squared resid	1241.100	Schwarz criterio	n	7.497017
Log likelihood	-72.62963	Hannan-Quinn c	riter.	7.341239
F-statistic	70.99215	Durbin-Watson	stat	0.793828
Prob(F-statistic)	0.000000			

Note: Calculated with E-View

#### **Empirical Findings**

Unit Root Test Analysis

It is necessary to perform a unit root test for the sequence under consideration in order to identify the number of unit roots. Based on Table 3, we can conclude that our series on I (0) and I (1) are stationary.

#### Table 3. Results of Unit Root Test

Ho: The variable has a unit root

	Augmented Dickey- Fuller test statistic		Augmented Dickey- Fuller test statistic	
Variables	(At Level) I(0)		(At first difference) I(1)	
	t-Statistic	Prob.	t-Statistic	Prob.
SMEs worldwide' (X)	7.368212	1.000	-3.300288	0.0295
Global GDP growth rate (Y2)	-1.683127	0.0866	-4.325531	0.0002
Global GDP Per Capita growth rate (Y3)	-2.101714	0.0371*	-4.306442	0.0002

\*Prob. value is less than 0.05. It shows the series is I(0)

Source: Authors' compilation from E-View results

From here on, we will use our data series of variables X and Y2, which are converted on I (1), as input to further test implementations. As

for Y3, we will not convert it further, because it is stationary at level.

#### Autoregressive Distributed Lag Model (ARDL) Approach to Co-integration Testing or Bound Co-integration Testing Approach ARDL Results for Short Run

Table 4. ARDL Short Run Form

Dependent Variable: SME at I(1) Method: ARDL Dynamic regressors (4 lags, automatic): Y2 GLOBAL GDP GROWTH RATE I(1) Dependent lags maximum: 4 (Automatic selection) R. Khan & SMKA Mihaisi, 2022 / Major Determinants That Perform a Predominant Role Globally in The Furtherance of SMEs

Method of Model selection: Akaike info criterion (AIC)

Fixed regressors: C

Selected Model: ARDL(2, 0)

Variables	<b>Co-efficient</b>	Std. Error	t-Statistic	Prob.*
SME1(-1)	0.742290	0.28330	2.620157	0.0202
SME1(-2)	-0.391132	0.243563	-1.605873	0.1306
Y2 GLOBAL GDP GROWTH RATE I(1)	0.963051	0.331109	2.908559	0.0114
С	3.180498	1.617284	1.966567	0.0694
R-squared	0.460918	Mean dependent var		4.748333
Adjusted R-squared	0.345400	S.D. dependent var		3.020741
S.E. of regression	2.444001	Akaike info criterion		4.818280
Sum squared resid	83.62398	Schwarz criterion		5.016140
Log likelihood	-39.36452	Hannan-Quin	n criter.	4.845562
F-statistic	3.990021	Durbin-Watso	on stat	1.973402
Prob(F-statistic)	0.030172			
SME1 is converted on I(1)				
V2 is CLOBAL CDD CROWTH RATE that	is further conv	arted on I(1)		

Y2 is GLOBAL GDP GROWTH RATE that is further converted on I(1)

Source: Calculated with E-View

Table 5. ARDL Short Run Form

Dependent Variable: SME at I(1) Method: ARDL Dynamic regressors (4 lags, automatic): Y3 GLOBAL GDP PER CAPITA Dependent lags maximum: 4 (Automatic selection)

Method of Model selection: Akaike info criterion (AIC)

Fixed regressors: C Selected Model: ARDL(1, 0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
SME I(1) (-1)	0.539811	0.236002	2.287313	0.0361
Y3 GLOBAL GDP PER CAPITA	1.145972	0.334917	3.421663	0.0035
С	0.296703	1.560846	0.190091	0.8516
R-squared	0.431827	Mean depen	ident var	4.653158
Adjusted R-squared	0.360805	S.D. dependent var		2.964801
S.E. of regression	2.370349	Akaike info criterion		4.707890
Sum squared resid	89.89684	Schwarz criterion		4.857012
Log likelihood	-41.72496	Hannan-Qui	nn criter.	4.733128
F-statistic	6.080211	Durbin-Wat	son stat	1.607858
Prob(F-statistic)	0.010860			
SME1 is converted on I(1)				
Y3 is GLOBAL GDP PER CAPITA				

Source: Calculated with E-View

## **Result Analysis for Short Run**

In all calculations, the independent variables have been examined separately.

• When we focus on auto regression of SMEs (Tables 4 and 5), it regresses itself via the first lag interval. This indicates that the pre-

vious year's number of SMEs in a country really does affect the current number of SMEs in a country.

- R-square and adjusted R-square values for both independent variables (Table 4, 5) demonstrate our model's effectiveness.
- The statistical results of the two independent variables can be interpreted individually;
  - Growth rate of global GDP (Y2) is positively related to number of small and medium-sized enterprises (X); 't' and 'p' statistics are significant as well. (Table 4).
  - Current Global GDP Per Capita growth rate (Y3) correlates positively with Number of SMEs (X). 't' and 'p' statistics illustrate that

#### ARDL Long Run Form and Bound Test *Coefficient Diagnostics:*

the relationship between the two variables is significant here as well. (Table 5)

Using Bounds test, we examined empirically long-term relationships and short-term dynamics between the variables Worldwide Number of SMEs (X), Global GDP Growth rate (Y2), and Global GDP Per Capita growth rate (Y3). If the F-Statistics are greater than upper or lower bounds, we reject the null hypothesis that "no cointegration or long-term relationship exists between our dependent variable and our independent variable.". ARDL is not sufficient in this case, a bound test is also required.

#### Table 6. ARDL Bound test results

Dependent Variable: Worldwide Number of SMEs (X) Independent Variable: Global GDP Growth rate (Y2), Global GDP Per Capita growth rate (Y3) Ho: No long-run relationship exists between dependent and independent variables

Variables	<b>F-statistics</b>	Significance level	I (0)	I (1)
Y2	9.202387	5%	3.62*	4.16*
Y3	9.854677	5%	3.62*	4.16*
	* show signi	ficant value of I(0) and I	(1) where F-sta	tistics > I(0) orI(1)

Source: Authors' compilation from E-View results

#### Table 7. Cointegration equation results

Dependent Variable: Worldwide Number of SMEs (X)					
Independent Variable: Global GDP Growth rate (Y2), Global GDP Per Capita growth rate (Y3)					
Variables	Co-efficient	Standard Error	t-statistics	Prob.	
Y2	1.484261	1.116110	1.329853	0.2048	
Y3	2.49022	1.756773	1.417497	0.1755	
0 1 1	· ·1 · · · · ·	1 1 7 1			

Source: Authors' compilation from E-View results

#### Result Analysis for Bound Test

F-statistics extracted from Table 6 indicate that Ho is rejected. The relationship between Worldwide Number of SMEs (X) and Global GDP Growth rate (Y2), Global GDP Per Capita growth rate (Y3) exists in the long term.

The cointegration equation can also provide a few results (Table 7).

Cointegration equation for both independent variables is positive with high coefficient estimates of 1.484261 and 2.49022. This indicates that long-term balance is changing rapidly. It means that the system is rapidly recovering from its previous state of disequilibrium. Table 7 also supports the results of Table 6 in that there is no long-term correlation between dependent and independent variables due to nonsignificant 't' and 'p' values.

#### **Residual Diagnostics:**

Ho: Residuals are not normal

According to Jarque-Bera, the residuals are normal, as the probability value exceeds the significant value (Table 9).

#### Table 9. Based on Jarque-Bera

Variables	Probability	Ho results		
Y2	0.895997*	Rejected		
Y3	0.840642*	Rejected		
* show the significant value of Prob.(if p > 0.05, Ho is rejected)				
Source: Authors' compilation from E-View results				

#### Breusch-Godfrey Serial Correlation LM Test

Ho: Variables are not free from serial correlation Test results demonstrate the residual derived from the ARDL model is free from serial correlation

Table 10. Breusch-Godfrey Serial Correlation LM Test

Variables	Observed R-square	Probability	Ho results		
Y2	0.427523	0.8075	Rejected		
Y3	2.041004	0.3604	Rejected		
* show the significant value of Prob. (if p > 0.05, Ho is rejected)					

Source: Authors' compilation from E-View results

#### Heteroscedasticity Test

Ho: Residuals are not free from heteroscedasticity. The ARDL model residues are not heteroscedastic according to Breusch-Pagan-Gogfrey.

Table 11.	Breusch-Paaa	n-Goafrev I	Heterosceda	sticity Test
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Variables	Observed R-square	Probability	Ho results		
Y2	0.957914	0.8114	Rejected		
Y3	1.550334	0.4606	Rejected		
* show the significant value of Prob. (if p > 0.05, Ho is rejected)					

Source: Authors' compilation from E-View results

## Stability Diagnostics (CUSUM and CUSUMSQ test):

The results developed by Brown et al were additionally tested for their reliability by performing CUSUM and CUSUM square tests based on the recursive residuals. (Brown et al., 1975)

The plots of CUSUM and CUSUM squares in both independent variables Y2 and Y3 remained between a critical threshold of 5%, proving the parameters' stability.

Table 11. Ran	nsey RESET Test
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Variables	<b>F-Statistics</b>	Probability	Ho results			
Y2	0.90764	0.7680*	Rejected			
Y3	0.000460	0.9832*	Rejected			
* show significant value of Prob. (if p > 0.05, Ho is rejected)						

Source: Authors' compilation from E-View results





Figure 1. Plots of CUSUM and CUSUM squares when Global GDP Growth rate (Y2) is the explanatory variable



Figure 2. Plots of CUSUM and CUSUM squares when Global GDP Per Capita growth rate (Y3) is the explanatory variable

The purpose of this is to determine whether a functional form is appropriate. The probability values of F statistics are clearly suggesting that the model is well specified.

## Conclusion

By using the Bound Testing method, we investigated the effects of the short-run and longrun changes in the number of small and medium-sized businesses (SMEs) worldwide. Based on descriptive statistics, we identified two significant regressors, Global GDP growth rate (Y2) and Global GDP per capita growth rate (Y3), and therefore focused on them explicitly in our study. Results from the ARDL model's empirical analysis suggest there is a short-term relationship between the Number of SMEs worldwide and the Global GDP Growth rate (Y2) and Global GDP Per Capita rate (Y3). This study also confirmed that the previous year's number of SMEs worldwide accounted for a significant chunk of the current year's number of SMEs worldwide. The ARDL and Bound tests also reflect a long-term relationship between independent and dependent variables.

## Major impediments and hindrances that SMEs face worldwide

SME's have a significant impact on the economy which cannot be underestimated. Despite their importance, SMEs face significant barriers to further development.

The most common hindrances are:

- 1. The availability of financing
- 2. Obtaining land access
- 3. A license for a business
- 4. Corrupt practices and crime
- 5. System of Justice
- 6. Trade regulations
- 7. Labor regulation
- 8. Unavailability of infrastructural facilities

- 9. Insufficient Use of Information Technology in SMEs
- 10. Low Level of Business Research and Development in SME Sector
- 11. Lack of education and training support for entrepreneurs
- 12. Political instability
- 13. Macroeconomic instability
- 14. Intensifying Competition
- 15. Tax rates and administration
- 16. Lack of Quality management systems
- 17. Improper planning and poor management
- 18. Weak Networking Structure for international marketing

## Needful Government policies and Regulations for the better establishment of SMEs

- 1. Government and private SME lenders must start Credit guarantee schemes. Hometown investment trust funds must be on easy access for financing risky SMEs and start-up businesses.(Khan & Salam, n.d.)
- 2. It is essential for the government to invest in accounting software packages, marketing tools to distribute monthly newsletters, and project management tools.(Khan & Hakami, 2021)
- 3. Training and other business support services that contribute to enhancing competitive advantage through supporting and facilitating the entrepreneur's learning process are vital to government initiatives.(Khan et al., 2021)
- 4. There is a crucial need of development of SME Database and Credit Risk Analysis of SMEs. Governments of various countries must induce this policy in their national strategic plan.
- 5. Government must promote export by providing grants, contracts, and loans.(Khan, 2019)
- 6. Smart branding comes with many benefits, including greater recognition, improved business value, and a greater likelihood of gaining new customers faster. It is imperative that governments encourage cost-cutting plans, such as remote working, which enable businesses to cut costs and increase efficiency at the same time.(Ruby Khan et al., 2021)

7. Efficient employees must receive Appreciations in cash or kind from government to make them feel valued.

It will be up to governments to create a favorable investment climate through tax incentives, property protections, and other policies that will have a positive impact on the economy as a whole.(Khan, 2020).

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## **APPENDICES I**

Global Economic Indicators; Estimated Number of SMEs, GDP (Current US\$) trillion, GDF	2
Growth rate (annual %), GDP Per Capita Growth (annual %)	

Year	Estimated number of SMEs worldwide (in millions) (X)	Global GDP (Current US \$) trillion (Y1)	GDP Growth rate (annual %) (Y2)	GDP Per Capita Growth (annual %) (Y3)
2000	121.78	34.179	4.501	3.126
2001	124.57	34.056	2	0.723
2002	127.51	35.561	2.338	1.049
2003	130.87	40.185	3.16	1.886
2004	134.97	45.517	4.48	3.174
2005	139.05	49.623	4.049	2.785
2006	140.55	54.228	4.496	3.218
2007	146.2	61.836	4.439	3.171
2008	152.35	68.878	2	0.748
2009	152.72	66.287	-1.308	-2.491
2010	158.98	73.018	4.495	3.245
2011	164.63	81.493	3.34	2.139
2012	169.58	75.356	2.673	1.492
2013	173.67	77.427	2.844	1.667
2014	179.54	79.531	3.118	1.925
2015	181.69	75.101	3.168	1.973
2016	184.31	76.294	2.825	1.621
2017	193.84	81.182	3.395	2.218
2018	204.4	86.251	3.263	2.112
2019	213.52	87.555	2.602	1.481
2020	212.98	84.68	-3.363	-4.398

Source:

Series X; World Bank national accounts data, and OECD National Accounts data files. Series Y1, Y2, Y3;