
Government, Globalization and Governance Impacts on Business Start-ups: Evidence from a Classified Panel Data Analysis

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Using an unbalanced panel data set covering 98 countries and the period 2004-2012, this paper aims to ascertain the extent to which the governmental, globalization and governance factors affect the formal business start-ups.

We represent government by formal constraints to starting a new business while KOF indices that measure the economic, social and political dimensions of globalization are the proxies for globalization. Governance indicators are those of the World Bank's well-known six worldwide governance clusters.

Moreover, we include unemployment rate in the model to control for macroeconomic stability and business cycle effects. Panel regression results reveal that formal procedures hamper the business start-ups in all country groups while unemployment has negative impacts for the global panel and high-income countries.

Globalization indicators, except economic globalization, have no significant effect and the influence of governance varies among its dimensions and country groups. Overall findings infer that people who start their businesses need a credible government that makes the things easier without any political pressures, but not that regulatory monitoring, controlling and directing the business environment strictly.

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JEL Classification: *C33, F62, M13, O16*

Introduction

Creating new enterprises and enhancing business start-ups are among the most important activities for all countries regardless of their development or income levels. Small and medium-sized enterprises (SMEs) are seen the backbone for their job creation and inclusive development benefits. Therefore, governments have started to design policies and strategies increasingly and rapidly for stimulating the overall entrepreneurial activities.

Forming a new business has two stages. The first stage is about the entrepreneurial activities comprising the decision to set a new business, and organizing/planning the resources. The second stage is the action process that consists of dealing with the formal procedures. In their life cycles, firms are created with a purposive organization of the resources and at start-up, they develop a business plan and employ workers. In getting location, they deal with construction permits, getting electricity, registering property, etc. While operating, they also require external finance and get credit from financial institutions. When things go wrong they enforce contracts and resolve insolvency. Moreover, in daily operations, they involve in paying taxes and trade cross-border [1]. In every stage, firms deal with the formal regulations that governmental institutions set. There is vast empirical evidence indicating that institutional environments have a direct effect on the new business formations and current SMEs.

Numbers of new start-ups considerably vary over countries and regions. World Bank Group's entrepreneurship survey data [2] show that in 2014, the number of new businesses registered per a million people aged between 15 and 64 (working age) was only around 40 in Pakistan, roughly four hundred times fewer than that of in New Zealand where the number was 16,630. The average numbers were 553 in low-income countries and 5,540 in high-income OECD countries. These observations come up with a

question: What enhance and constrain business start-up activities in countries? Some studies focus on the human and physical capital stocks while some studies approach the issue financially and underline the differences in investment possibilities among countries. Recently, there is a growing body of literature dealing with the issue with a holistic approach taking all these factors and more into consideration. The multi-country studies change this question a little and ask what explain the differences in business start-up activities among countries? In these studies, those common factors are centering on the governmental and non-governmental institutions together with governance qualities. In this aspect, corruption is one of the main interest fields about the factors affecting new start-ups and existing SMEs' performances.

One reality is the dramatically and rapidly increasing globalization that have resulted in not only economic integration due to immense cross-border flows of production, foreign direct investment (FDI), capital and even labor, but also it has brought a cultural convergence that is called social globalization. Moreover, globalization has forced national states to international collaborations that have triggered the political globalization. All these developments have been affecting business activities in countries. As indicated by Norback et al. [3] as well, globalization has interactions with ease of doing business and entry barriers, entrepreneurial motivations, internal competition, governance and governmental institutions.

According to the KOF globalization indices provided by the Swiss Federal Institute of Technology [4], in 2013, economic and social globalization indices were respectively 40.20, and 36.14 in Pakistan, far behind of the indices 81.05 and 73.81 of New Zealand, even the political globalization index of Pakistan (88.84) was higher than that of New Zealand (80.30). Moreover, there are huge differences in governance indicators between these countries that Pakistan's worldwide governance structure is much worse than those of New Zealand seen in Worldwide Governance Indicator data [5]. Recent Doing Business [6] data reveal that New Zealand is among the best performers while Pakistan is in the bottom line in terms of ease of doing business. These individual examples can be extended that for all these indicators considerable vary across income levels that both governance and globalization indicators tend to be higher in high-income countries especially from Europe and North America.

It has been long argued that globalization should motivate countries to adopt a common and most efficient set of the ideal governance practices, which in consequently contributes to creating a pro-business environment encouraging new business start-ups. However, such convergence and mechanism do not seem to be occurring in practice because of various domestic issues. Besides this contemporary debate based on country heterogeneity, it is empirically well-supported that both globalization and good governance improve the business environment, which is also seen a key pillar for well-functioning SMEs based global supply chains in that SMEs from all around the world are contributing together with multinational enterprises (MNEs) in a complementarity cooperation.

Starting from these arguments, this study purposes to investigate how government, globalization, and governance, that we call three-Gs, affect the formal business start-ups among countries, classified by their income levels, using an unbalanced panel data set of 98 countries for a nine-year period of 2004-2012. We represent the government by formal constraints to starting a new business while KOF indices that measure the economic, social and political dimensions of globalization are the proxies of globalization indicators. Governance indicators are those of the World Bank's six worldwide governance clusters, namely voice and accountability; political stability and absence of violence/terrorism; government effectiveness; regulatory quality; the rule of law; and control of corruption that somewhat capture both governance quality and government effectiveness. Moreover, we include unemployment rate to control for macroeconomic stability and the business cycle. In the remainder of the paper, we continue with a brief overview of the determinants of business start-ups and entrepreneurial activities together with some evidence. Then, the determinants of business start-ups are detailed by introducing the variables and data within the study motivation. After presenting model, method and results, respectively, the study concludes with a discussion of noteworthy findings.

Determinants of Business Start-ups

Individual Characteristics of Entrepreneurship

The linkage between start-ups and entrepreneurial activities dates back to the assumption that the people who start a business are, in fact,

entrepreneurs as earlier suggested by Schumpeter [7] who underlined the importance of innovative business activities of creative entrepreneurs for economic growth.

There is a longstanding debate on whether entrepreneurial activities are based on the individual characteristics or environmental conditions. Individual factors are physical capabilities, educational background, personalities, individual or family resources, and psychological factors like intelligence, independence, the need for achievement, the locus of control, innovativeness, risk-taking, etc. Using a sample of 14,846 individuals, Beugelsdijk and Noorderhaven [8] found that entrepreneurs differ from the general population and wage- and salary-earners. They are more individually oriented, and individual responsibility and effort are distinguishing characteristics of them. Supporting this evidence, a recent study of Lee-Ross [9] compared the self-employed people with waged and salaried employees and the general population in terms of entrepreneurial personality characteristics like the need for achievement, the locus of control, innovation, risk-taking and competitive aggression based on the World Values Survey data set. The findings reveal that entrepreneurs are different in terms of their psychological characteristics. Moreover, some studies have started to examine the relationship between cognitive skills, including IQ tests and national entrepreneurial activities. For example, Jones and Hafer [10] showed that higher national average of IQ reliably predicts entrepreneurship developments measured by various indicators in countries. These kinds of studies are seen over-concentrated on personal characteristics combining individual innovation, creativeness, and entrepreneurship capabilities.

Environmental Conditions of Business Start-ups

Environmental conditions are a complex set of economic, politic, institutional and cultural factors that interact reciprocally. The economic factors center on the development stages of the countries. Moreover, some studies distinguish between supply-side and demand-side entrepreneurship. In this approach, the supply-side of the entrepreneurship addresses the impacts of demographic characteristics of the population, resources availability to individuals along with their abilities and personal attributes towards entrepreneurship. Demand side entrepreneurship highlights the

conditions of entrepreneurial opportunities created by market dynamics, economic development, and globalization together with technological progress and innovation capabilities [11]. With respect to income levels Noorderhaven et al. [12] for example, found a negative and significant impact of per capita income on self-employment levels proxied by business ownership using a data of 15 European countries for the period of 1978-2000. Leading sociologic factors are institutional ones. Institutions consist of composite interactions between traditions, beliefs, religions, values, norms and roles in a society that individuals socialize by learning these structures. Institutions have both formal (rules, laws, and regulations), and informal dynamics (culture) that affect entrepreneurship. Using social capital and good culture interchangeably, Percoco [13] found that social capital is an important driver of entrepreneurship in the case of Italy. Related to the effects of the formal institution, using a micro data set of 37 developed and developing countries, Ardagna and Lusardi [14] showed that regulations play a critical role, particularly for those individuals who become entrepreneurs to pursue a business opportunity.

A new business formation is process comprising of complex activities that include collecting and evaluating information about business opportunities; forecasting the possible changes that new technologies and globalization bring, and organizing the resources and managing them progressively. The formal and informal institutions acknowledged by the societies affect the personal capabilities. In this study, we focus on the impacts of formal institutional framework taking government, governance, and globalization (three-Gs) based factors affecting actual and formal business start-ups into consideration.

Study Motivation and Variables

Our dependent variable is the business start-ups (BUST) density measured by the number of new businesses (limited liability corporations, LLC) registered in the calendar year. In order to make the data comparable among countries, we transform the numbers into per 1,000 people aged between 15 and 64, i.e. the working age. This variable is a good indicator for the density of 'formal' SMEs in a country. The data are taken from the World Bank Group's Entrepreneurship Survey and database [2]. Because firm formation and entrepreneurial intentions do not necessarily mean firm

registration, we use this variable, which captures the actualized and formal business start-ups rather than potentials, intentions, or nascent activities and informal businesses. One of the reasons for ambiguous evidence in the related literature on the determinants of entrepreneurial or business activities originates from this distinction besides the method, sample, and time span differences. The World Bank Group's database is commonly used by studies with different purposes. Related to our case, for example, Klapper et al. [15] explored a strong relationship between entrepreneurship and a better business environment based on the number of total and newly registered corporations for 100 countries over an eight-year period (2000-2007). Moreover, their results underlined the importance of electronic registration procedures to make the things easier and encourage greater business registrations.

Additionally, in order to control the relationship for macroeconomic stability, we include the unemployment rate (UNEMP) in the model as the share of unemployed people in the total labor force (all population aged 15 and older) [2]. The pairwise relationship, however, is not clear that, on the one hand, unemployment stimulates entrepreneurial and business start-up activities; on the other hand higher level of entrepreneurship reduces unemployment. Audretsch et al. [16] termed these linkages as 'refugee effect' and 'Schumpeter effect' respectively. In our case, the high unemployment rate is expected to discourage business start-ups. Consequently, this variable allows us to assess how the business cycles affect people's involvement in the new business formations. Fritsch et al. [17] concluded that there was a positive relationship between unemployment rates and start-up activities in case of Germany. Their results also revealed that new business formation was higher during recessions than in boom periods. These linkages are predicted to vary depending on the business regulations.

Constraints to Starting a Business: The Government Factor

Data from different surveys ([18],[6]) administered globally among entrepreneurs indicate a worldwide agreement that those who start a business, have various problems in dealing with the states. Case studies show that regulatory governmental institutions somehow tend to hamper the development of the private sector, particularly SMEs. The issues are

including but not limited to the predictability of laws and policies, the reliability of the judiciary, corruption in bureaucracies, security of property rights, getting the state-delivered services and paying taxes and other liabilities. This legal environment can influence the economic growth and employment through regulating new businesses start-ups since SMEs, from their setting and growth to competition paths and closures are sensitive to the rules and regulations in a country. Besides, restrictive regulation can also lead entrepreneurs to the corruption deals. Using a large sample of countries, Klapper et al. [15] empirically suggested that greater ease in starting a business and better governance are associated with increased entrepreneurial activities. They specifically highlighted that quick, efficient, and cost-effective business registration process fosters the formal entrepreneurship.

Starting from the fact that when the rules and regulations are burdensome, they discourage the current and potential entrepreneurs to form and start their businesses, the Doing Business project [6] highlights the important roles of the government and government policies in the day-to-day life of SMEs, based on the questionnaires administered to more than 11,400 local experts. Because we focus on the constraints to the new business start-ups, we take the 'starting a business' dimension of the 'ease of doing business' data. Starting a business aspect, initiated by Djankov et al. [19], takes procedures (numbers), time (days), cost (percentage of income per capita) and paid-in minimum capital (percentage of income per capita) to start a limited liability company into consideration. The Doing Business surveys are administrated in the largest business city of each country. The data for countries where the surveys were conducted in the two largest cities are the population-weighted average of these cities.

We used the distance to frontier (DTF) measurement of the starting a business (BSDTF). The DTF scores of countries range between 0 and 100 that represent the lowest and best (frontier) performances, respectively. The DTF score allows us to see both the gap between a particular economy's performance and the best performance at any point in time and to assess the absolute change in the economy's regulatory environment over time.

For starting a business, recent data of survey, completed in June 2015, show that Macedonia and New Zealand have only 1 procedure required that can be fulfilled in a half day in New Zealand. Slovenia has no cost and more than 100 countries have no paid-in minimum capital requirement. On

the other hand, for starting a business again, Equatorial Guinea has 18 different procedures that can be fulfilled in 135 days. In South Sudan, the cost is greater than 330% of income per capita. In Central African Republic, paid-in minimum capital requirement is greater than 540% of income per capita. General trends show that even countries individually have made some progress towards pro-entrepreneurship and start-up oriented business environment, there has been not a considerable convergence observed among countries. These observations and empirical evidence on these data bring a question: Does government size affect the new business activities? The following Figure 1 shows that as a proxy for the government size, general government final consumption expenditure is not strongly associated with the constraints to starting a business. Rather, the relationship between the costs of business start-up procedures and the government size is weak but negative.

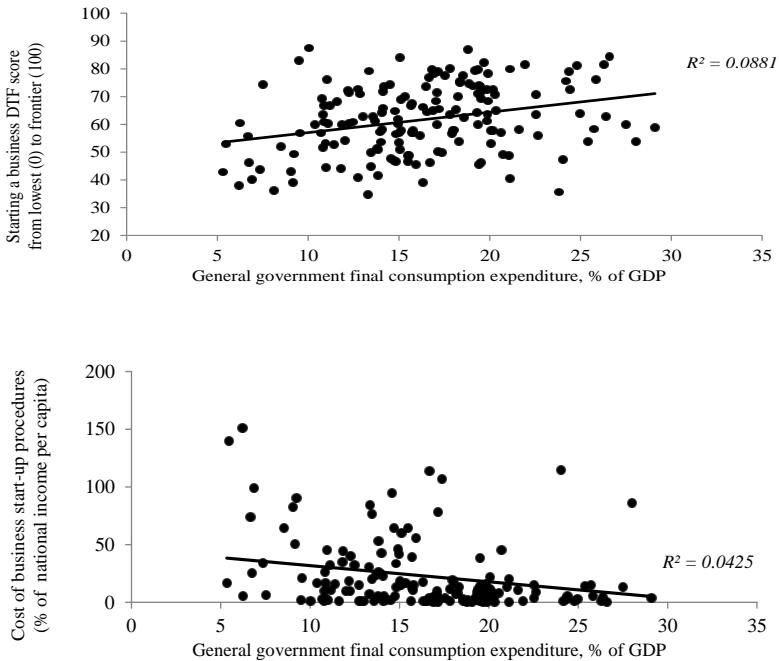


Figure 1. Doing Business Performances and Government Size, 2014, 164 Countries

(Source: Authors' computations from Doing Business, [6] and WB-WDI [2].)

This study is not about the debate arguing for ‘with’ or ‘without’ government. In fact, the practices and experiences underline the necessity of reconciling the approaches that separately suggests active and inactive governments for motivating the private business start-up activities. The lacks of financial sources, technical capacities, and logistics that many developing countries have been exposed, point to the conditionality of governmental initiatives about creating an entrepreneurship and start-up led business environment. However, excessive interventions can create an adverse effect through a corruption-dominated structure in countries; especially those are closed to the world and have relatively weak governance. In this process, integration into the world and good governance practices of countries matter for their pro-entrepreneurship policies.

What Have Globalization Brought for Domestic Entrepreneurs?

Globalization is a phenomenon hard to define since it has many dimensions that can be broadly grouped into economic, social and political contexts. It is triggered by the spread of cheaper communication and transportation technologies. Globalization is commonly used to refer to the economic aspect comprising cross-border flows of trade, investment, and labor. Its social dimension implies the cultural proximity. Political globalization is involvement in the international cooperation and characterized by reducing or eliminating state-enforced restrictions on the worldwide interactivities between local and international agents. Consistently, Steger [20] listed six core claims that underline the ideologies of globalization: i) globalization is about the liberalization and integration of markets, ii) it is inevitable and irreversible and iii) nobody is individually responsible for it. Moreover, iv) globalization benefits everyone and v) fosters the spread of democracy in the world, but vi) requires a global war on terror that is the major constraints on getting benefit of globalization especially for the countries experiencing political instability, violence, and terrorism.

During the last two decades, multinational enterprises (MNEs) that carry their both production and production stages to all around the world according to the international division of labor and specialization, have been playing important roles in this process. In order to get the benefit of knowledge, innovation, technology, and consequently productivity spillovers, many countries have enforced liberal policies to attract the MNEs

that are managing the global supply chains. On the other hand, in most countries, SMEs account for the larger part of the domestic business sector and they are acknowledged as the backbone of the economies for innovation, job creation, economic growth and inclusive development.

While globalization brings new business opportunities for SMEs to spread into international markets and to participate in the global supply chains, but it also exposes competitive pressures for domestic SMEs. In parallel, there is a concern about SME growth and globalization dominated by MNEs. This so-called inconsistency underlines that national policies need to take the international dimension of business into account since globalization changes the business environment in which, SMEs and MNEs operate together. In this context, supporting SME capacities, making them aware of each other and supporting the business linkages between them are seen the key priorities of policies supporting both SMEs and MNEs activities concurrently. Such initiatives can associate a positive relationship between globalization and SMEs that leads to increases in new business entries and start-ups. Consistently, using the World Bank's Doing Business data for a large sample of countries, Norback et al. [3] highlight that globalization leads to more pro-entrepreneurial policies since it becomes difficult to protect domestic incumbents when markets become integrated. Their findings support the evidence that international openness is negatively correlated with entry barriers that would encourage new business start-ups. In this study, we use the KOF indices of globalization [21] that measure the three dimensions of the globalization with different weights (in the parentheses) as shown in Table 1. The KOF indices range from almost 0 to almost 100. As seen in the table, the economic globalization (ECGL) is about the liberalization of trade, FDI, and capital flows. Social globalization (SOGL) captures how the societies converge with respect to international connections that enhance cultural proximity while political globalization (POGL) is an indicator to what extents the national governments involve in international collaborations. Using the panel data of these indices for more than 120 countries and for a period of 1970-2000 Dreher's study [21] showed that the overall index of and sub-indexes (except political integration) promotes economic growth. In our study, we also check this seemingly well-supported evidence for its business start-ups mechanism.

Table 1: KOF Indices, Explanations, and Weights

I. Economic Globalization-ECGL (36%)		
i. Actual Flows (50%) -trade, percent of GDP (22%) -foreign direct investment stocks, percent of GDP (27%) -portfolio investment, percent of GDP (%24) -income payments to foreign nationals, percent of GDP (27%)	ii. Restrictions (50%) -hidden import barriers (23%) -mean tariff rate (28%) -taxes on international trade, percent of current revenue (26%) -capital account restrictions (23%)	
II. Social Globalization-SOGL (37%)		
i) Data on Personal Contact (%33) -telephone traffic (26%) -transfers, percent of GDP, (2%) -international tourism (26%) -foreign population (percent of total population) (21%) -international letters (per capita) (%25)	ii) Data on Information Flows (%35) -internet users, per 1000 people (36%) -television, per 1000 people, (38%) -trade in newspapers, percent of GDP (26%)	iii) Data on Cultural Proximity (%32) -number of McDonald's restaurants, per capita, (46%) -number of IKEA, per capita, (46%) -trade in books, percent of GDP (7%)
III. Political Globalization-POGL (27%)		
-embassies in country (25%); -membership in international organizations (27%); -participation in U.N. Security Council Missions (22%); -international treaties (26%)		

Sources: [4],[21].

Worldwide Governance Indicators: The Ambiguous Linkages

Various influences of governance indicators on entrepreneurship and start-ups, or business environment in a broader view, have received a great deal of attention in the literature. One of the data sources for multi-county studies is the Worldwide Governance Indicators that report on six broad dimensions of governance for more than 200 countries since 1996 ([22],[5]). The estimated values of governance range from approximately -2.5 (weak) to 2.5 (strong). The aggregate indicators are based on several hundred individual variables, taken from a wide variety of existing data sources,

together with a large number of experts from different fields. The aggregate indicators, together with the underlying aspects are as follows: i) Voice and accountability (VA) dimension capture the ability of citizens to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. ii) Political stability and absence of violence/terrorism (PSAVT) measures the likelihood of political instability and/or politically motivated violence, including terrorism. iii) Government effectiveness (GOEF) assess the perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. iv) Regulatory quality (RQ) captures the perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. v) Rule of law (ROL) gauges the extent to which agents have confidence in and abide by the rules of society and, in particular, the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Finally, vi) Control of corruption (CCOR) measures the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests.

Besides the vast empirical evidence revealing that good governance, while important itself, have also dynamic contributions to economic growth and development from different channels (e.g. [23]), there are also studies concluding with positive relationship between business environment or entrepreneurial activities and good governance (e.g. [24]). Against the general acknowledgment of these positive nexuses, there is another strand of studies showing the discouraging effect of the quality governance, in particular, control of corruption dimension. Zhang and Arvey [25] discuss that many entrepreneurs tend to be rule-breaker to succeed in their venturing processes. In these controversial findings, formal and informal classification of start-up activities becomes determinative. Formal activities are expected to be motivated by control of corruption that also comprises preventing unregistered firms while 'informal entrepreneurship' tends to be discouraged by the fight against corruption ([26],[27]).

Because we have data of only formal business start-ups, we do not expect any adverse effect arising from the quality of governance. Moreover,

good governance also encourages the informal sectors to join the formal sectors unless there is not that much burdensome to shift to the formal sector (formalization). Klapper et al. [28] found the evidence supporting the contribution of governance quality to entrepreneurial activities, together with economic development and the quality of the regulatory environment. Using the World Bank Group’s data of a large sample of countries for the period 2007-2012, Grosanu et al., [24] point to the complex relationships between governance (especially the control of corruption), economic development and ease of doing business. Moreover, they emphasize that the efforts to foster entrepreneurship will be more effective in a stable political environment ensured by a pro-business government that promotes private sector by implementing sound policies and regulations in order to make it easier to enter the market for the new start-ups. In the literature, one specific aspect of the governance is control of bribery and other corruption deals; particularly the corruption that is related to the governments at all levels (national, regional, and municipal). In Table 2, it is seen that government-related corruption tends to exist worldwide but with a varying prevalence.

Table 2: Prevalence of Corruption across Country Groups

Country groups	Bribery incidence (percent of firms experiencing at least one <small>– bribery payment request</small> transactions where a gift or informal payment was	Percent of firms expected to give gifts in meetings with tax officials	Percent of firms expected to give gifts to get an operating license	Percent of firms expected to give gifts to get an import license	Percent of firms expected to give gifts to public officials to <small>get things done</small>	Percent of firms identifying corruption as a major constraint	
All Countries	17.4	13.5	12.7	14.7	14.1	18	33.2
East Asia and Pacific	38.9	31.2	29.8	39.1	41.6	32	18.3
Eastern Europe and Central Asia	17.4	13.6	13.4	14.6	10.5	19.5	22.4
High income: non-OECD	7.6	5.6	4.5	9.5	6.4	11.6	22.7
High income: OECD	1.7	1.2	0.7	2.8	1.5	8.4	10.8

Latin America and Caribbean	10.4	7.1	6.4	7.8	6.3	11.3	43.9
Middle East and North Africa	24	20.7	18.9	21.5	21.2	18.7	53.2
South Asia	24.8	21	19.6	25.3	27.4	25.5	40.1
Sub-Saharan Africa	25	19	18.1	17.1	19.1	23.9	37.9

Notes: Regional and all countries aggregations are the simple averages of indicators based on the surveys posted during the period 2010-2016.

Source: The World Bank Group’s Enterprise Surveys [18].

Table 2 depicts that bribery related corruption is an important and global obstacle for the business environment. Strikingly, more than half of firms interviewed within Enterprise Surveys project in the Middle East and North Africa report that they identify corruption as a major constraint. Besides business environment in this region has many financial, economic, social disadvantages as well as political issues including violence and terrorism, it is seen that they, on the other hand, have to deal with the governmental corruption. The noteworthy observation is the difference between bribery deals experiences and the constraint perception in East Asia and Pacific region. Even the bribery involvements of the firms are highest, the share of firms that think the corruption as a major constraint is relatively low (18.3%) in this region. There are also symptoms for positive effects of international collaboration and income growth that in general OECD countries have relatively better governance than other regional aggregations and high-income OECD countries have much better indicators than the other OECD countries and regions. These variations underline the importance of classifying countries while investigating the relationships.

Model, Method, and Results

The regression model in equation 1, associates a relationship between formal business start-ups (*BUST*) density and the indicators of three-Gs, namely government, globalization and governance indicators. As previously defined, government factor is proxied by the starting a business distance to frontier (*SBDTF*) score while economic globalization (*ECGL*), social globalization (*SOGL*) and political globalization (*POGL*) represent globalization effect. Governance is included through its six dimensions consisting of voice and accountability (*VA*), political stability and absence of violence/terrorism (*PSAVT*), government effectiveness (*GOEF*), and regulatory quality (*RQ*), the

rule of law (*ROL*) and control of corruption (*CCOR*). Finally, besides its individual effect, in order to control for macroeconomic stability, we included unemployment rate (*UNEMP*) in the model. *UNEMP* also allows us to capture business cycle effects on the start-up activities.

$$\ln BUST_{it} = \beta_0 + \beta_1 \ln SBDTF_{it} + \beta_2 \ln UNEMP + \beta_3 \ln ECGL_{it} + \beta_4 \ln SOGL_{it} + \beta_5 \ln POGL_{it} + \beta_6 VA_{it} + \beta_7 PSAVT_{it} + \beta_8 GOEF_{it} + \beta_9 RQ_{it} + \beta_{10} ROL_{it} + \beta_{11} CCOR_{it} + u_{it} \quad (1)$$

($i_{\text{global}}=1,\dots,98$; $i_{\text{high-income}}=1,\dots,37$; $i_{\text{middle-income}}=1,\dots,48$; $i_{\text{low-income}}=1,\dots,13$); $t=2004,\dots,2012=T$)

In equation 1, *i* and *t* refer to the cross-section units (countries) and time units (years), respectively, while β_0 is a country-specific intercept. The composite error term, ϵ_{it} , consists of specific group effects, time effects, and an error term, therefore it embodies cross-sectional and temporal influences of all other factors not included in the model. Variables, except six governance indicators, are in the natural logarithmic (*ln*) forms. The study uses a data set of 98 countries (see Appendix 1) from all around the world over a nine-year period spanning from 2004 to 2012. Because of 81 missing values of several years and countries, we have an unbalanced panel data set with 801 observations instead of 882. Starting from the premise that prosperity matters for the relationship, we distinguish three groups of countries by their income levels, namely high-, middle- (both lower middle and upper middle income) and low-income countries.

In order to robust the regression; we checked each series for normality through kurtosis and skewness values. For a perfectly normal distribution, the values of skewness and kurtosis are required to be zero. However, in the literature, there are different thresholds used: In a lax approach, the values between 2 and 7 for skewness and kurtosis respectively, are considered acceptable [29]. In our samples, the values were between the tolerances confirming no serious deviations from the normality. The pairwise correlations between the dependent variable (*lnBUST*) and the explanatory variables are shown in Table 3.

Table 3: Correlations of Business Start-ups (*lnBUST*) by Country Groups

	Global panel (98 countries)	High-income (37 countries)	Middle-income (48 countries)	Low-income (13 countries)
<i>lnSBDTF</i>	0.647*	0.479*	0.418*	0.637*
<i>lnUNEMP</i>	0.174	-0.132	0.267*	-0.384*

<i>lnECGL</i>	0.721*	0.413*	0.627*	0.147
<i>lnSOGL</i>	0.743*	0.191	0.607*	0.153
<i>lnPOGL</i>	0.191	-0.094	-0.077	0.020
<i>VA</i>	0.609*	0.161	0.446*	0.175
<i>PSAVT</i>	0.574*	0.101	0.442*	0.069
<i>GOEF</i>	0.644*	0.280*	0.421*	0.354*
<i>RQ</i>	0.714*	0.400*	0.641*	0.416*
<i>ROL</i>	0.586*	0.345*	0.322*	0.177
<i>CCOR</i>	0.567*	0.285*	0.384*	0.265*

Notes: Variables with 'ln' are in the natural logarithmic forms. *: significant at 10% level

Within a panel data framework, least square estimation can be performed based on pooled, fixed effect and random effect regression models. ([30];[31]). In order to determine the appropriate one, the effects test (the F-test) compare fixed effect to pooled regressions. The Hausman test is worldwide accepted to compare fixed and random effect models. We found F-test and Hausman test statistics verifying fixed effect models were the appropriate method to estimate the model for all country clusters. Because the Durbin-Watson statistics and residual test statistics indicated the autocorrelation and heteroscedasticity, respectively, we estimated linear regressions with panel-corrected standard errors (PCSE).

Since the explanatory variables in the model are disaggregated dimensions of globalization and governance, we checked for multicollinearity problem that refers to a situation in which two or more explanatory variables are highly and linearly related. Multicollinearity can be identified by checking the variance inflation factors of coefficients. The variance inflation factors (VIFs) infer whether a predictor has a strong linear relationship with the other predictor(s). Although there are not certain criteria, some studies suggest that a value of 10 is the upper threshold to worry about the multicollinearity [32]. Even we consent the lax value of 10, some regressors were still detected to be related highly and linearly. For the cases in which some variables can be used interchangeably, we held one and dropped others from the model. The decisions about which one to be held were made according to the principal factor (component) loading rates that the variable with the highest rate under the principal component remained in the model while the others determined by the VIFs were dropped from

the model. Since all the multicollinearity cases occurred within (not between) globalization and governance indicators the remainder intuitively represents the dropped one(s). Consequently, for the global panel, two globalization dimensions *lnECGL*, *lnPOGL* and four governance variables *GOEF*, *RQ*, *ROL*, and *CCOR* are found causing serious multicollinearity. According to principal component analysis results, *GOEF* remained as representative of itself and *RQ*, *ROL*, and *CCOR* that were subtracted from the model while *lnECGL* represents *lnPOGL*. For the high-income countries, *GOEF* was dropped and *RQ* remained. There was no serious multicollinearity for the middle-income sample. For the low-income country cluster, *GOEF* also represents *CCOR*. Consequently, the estimated results are reported¹ in Table 4.

Table 4: Results of Panel Least Square Estimation, Dependent variable: *lnBUST*

Variables	Estimated coefficients			
	<i>Global panel</i>	<i>High-income</i>	<i>Middle-income</i>	<i>Low-income</i>
<i>lnSBDTF</i>	0.754 [7.675]***	0.5134 [3.011]***	0.574 [4.012]***	1.109 [2.470]**
<i>lnUNEMP</i>	-0.164 [-2.962]***	-0.260 [-4.949]***	-0.162 [-1.509]	0.058 [0.271]
<i>lnECGL</i>	0.822 [4.330]***	0.785 [2.219]**	0.905 [3.121]***	0.744 [1.476]
<i>lnSOGL</i>	-0.191 [-0.616]	-0.079 [-0.127]	-0.327 [-0.878]	-0.920 [-0.578]
<i>lnPOGL</i>	---	0.107 [0.731]	0.155 [0.722]	0.948 [1.036]
<i>VA</i>	0.211 [1.895]*	-0.564 [-3.744]***	0.275 [1.734]*	0.838 [2.304]**
<i>PSAVT</i>	0.105 [1.748]	-0.030 [-0.363]	0.045 [0.558]	0.459 [1.663]*
<i>GOEF</i>	0.360 [3.478]***	---	0.571 [3.546]***	0.976 [2.300]*

¹ Additional results are not reported in the study to save space but are available from the authors upon request.

<i>RQ</i>	---	0.221 [1.729]*	-0.125 [-0.790]	0.289 [0.538]
<i>ROL</i>	---	0.040 [0.312]	-0.690 [-3.524]***	-1.154 [-1.963]*
<i>CCOR</i>	---	0.0272 [0.261]	0.091 [0.588]	---
<i>F-statistic</i>	266.104 (0.00)	137.363 (0.00)	186.449 (0.00)	46.668 (0.00)
<i>Effects (F) test</i>	84.687 (0.00)	91.062 (0.00)	74.628 (0.00)	23.674 (0.00)
<i>Hausman χ^2</i>	42.830 (0.00)	17.794 (0.05)	53.028 (0.00)	38.257 (0.00)
<i>Cross-section</i>	98	37	48	13
<i>Obs.</i>	801	314	206	88

Notes: ***, ** and * indicate statistical significance at 1%, 5% and 10% levels, respectively. t-statistics are in [brackets] and probabilities are in (parentheses).

In Table 4, significant coefficients, in general, indicate that government, globalization, and governance factors somehow matter for business start-ups in all country groups, but with changing magnitudes and sometimes differently in the governance dimensions. Starting a business distance to frontier (SBDTF) is found promoting new business start-ups (BUST) for all country groups, regardless of their income levels as expected. Unemployment rate (UNEMP) seems to be hampering the start-up activities for the global panel and high-income countries. Economic globalization (ECGL) is positively associated with BUST for the country groups; however, the coefficient is insignificant for the low-income cluster. Related to governance indicators, voice and accountability (VA) seems to be hindering business start-up activities in high-income countries, while it enhances the start-ups for other country groups. The variable rule of law (ROL) is found hindering the potential entrepreneurs to start their business for middle- and low-income country groups. When considered government effectiveness (GOEF) and control of corruption (CCOR) variables can be somewhat used interchangeably (because of strong collinearity), CCOR can be inferred to be contributing to the new business start-ups for global and low-income panels. Government effectiveness (GOEF) has positive impacts for all groups

(for high-income group RQ also represents GOEF statistically). Finally, political stability and absence of violence/terrorism (PSAVT) is found mattering for the low-income countries for their business start-up activities.

Conclusions

Small and medium-sized enterprises (SMEs) account for the larger part of the domestic business sectors and they are widely acknowledged as the backbones of the economies for their integrated benefits such as innovation, job creation, economic diversification and flexibility, trade, economic growth and inclusive development. Therefore, enhancing new business start-ups plays a crucial role for the sustainability of SME-dominant dynamic market structure. Consistently, creating new enterprises and promoting business start-ups are among the most important priorities of countries that many governments have already started to re-design policies and strategies for better stimulating the overall entrepreneurial activities.

Formal institutions have direct effects on the business environment that at their formations, firms have to deal with formal rules and laws set by governmental institutions. Good governance, while important itself, have also dynamic contributions to the formal business environment or entrepreneurial activities. Moreover, there is a reality that dramatically and rapidly increasing globalization process has been affecting business and start-up activities in all countries through multinational enterprises (MNEs) and SMEs linkages, competition, and market entry. The spread of the globalization to the social and political dimensions, besides the economic aspect, also interacts between government and governance reciprocally.

It has been long argued that globalization should motivate countries to adopt a common and most efficient set of the ideal governance practices, which consequently contributes to creating a pro-business environment encouraging new business start-ups. However, such convergence does not seem to be occurring in practice because of various domestic issues. Besides the empirical debate based on country heterogeneity, it is theoretically predicted that both globalization and good governance improve the business environment, which is also seen a key pillar of well-functioning global supply chains in those domestically operating SMEs and globally operating MNEs are contributing together.

The mutual interactions and different effects among countries motivated this study to investigate how government, globalization, and governance affect the formal business start-ups in countries. To this end, we analyzed an unbalanced panel data set covering 98 countries, classified by income level, over a nine-year period of 2004-2012. We represented the government by formal constraints to starting a new business while KOF indices that measure the economic, social and political dimensions of globalization were the proxies of globalization phenomenon. Governance indicators were those of the World Bank's six worldwide governance clusters that somewhat captured both governance quality and government effectiveness together. Moreover, we included unemployment rate to control for the effects of macroeconomic stability and the business cycle.

Results, in general, indicate that government, globalization and governance factors somehow matter for business start-ups in all country groups, but with changing magnitudes and sometimes differently in governance dimensions. The noteworthy findings can be summarized as follows: i) Pro-entrepreneurship progress by means of easing the procedures that is represented by the starting a business distance to frontier score is found promoting new business start-ups for all country groups. ii) The unemployment rate, besides it is an important factor on its own, represented the macroeconomic stability seems to be deterring the start-up activities for the global panel and high-income countries. Therefore, there is not a support for the premise suggesting higher unemployment pushes the potential entrepreneurs to start their own businesses. iii) For the globalization factor, economic globalization and business start-ups are positively associated, that means globalization contributes to the start-ups through economic mechanisms for the country groups except low-income cluster. iv) Related to governance indicators, voice and accountability seem to be enhancing business start-up activities for the global panel, middle-income, and low-income countries while it has a negative influence in high-income countries. The rule of law is found preventing the potential entrepreneurs to start their business for middle- and low-income country groups. Some empirical studies in the related literature reveal that entrepreneurs and those who are planning to start their own business tend to be involved in corruption deals. There is no support for this suggestion in our study. Rather, when considered government effectiveness and control of corruption variables can be somewhat used interchangeably (because of the

strong collinearity) for global and low-income panels, control of corruption can be inferred to be contributing to the new business start-ups. There is a strong evidence for all country groups that effective government can induce start-ups. Political instability and existence of violence and terrorism are found deterring people to start their businesses in the low-income countries. In conclusion, overall results can be interpreted that the people who start their own businesses need a credible government that provides quality public and civil services without any political pressures, but not that ruler monitoring and controlling the business environment strictly. This fact has some policy implications that need to be refined and featured by both policymaking and business environment according to country- and business-specific characteristics.

Further studies are recommended to take the informal activities into account as well. Besides, considered the country-specific effects, confirmed by our study, we suggest examining individual countries that will allow researchers to assess the net effect of the variables since aggregated samples tend to miss. Some accurate effects, in fact, can be lost because the negative effect of variables for some countries can be defeated by the larger positive effects for the others in the same group and vice versa. Finally, because we focused on the density of new start-ups we did not consider the SME closures in the same period. Further studies are suggested to include the net number of the start-ups subtracting business failures and closures.

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Appendix 1: Country Sample by Income Levels, Atlas Method, N=98

High-income (37)	Middle-income (48)	Low-income (13)
<p><i>Argentina, Australia, Austria, Belgium, Canada, Chile, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Japan, Korea Rep., Latvia, Netherlands, New Zealand, Norway, Oman, Poland, Portugal, Russian Federation, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Arab Emirates, United Kingdom, Uruguay</i></p>	<p><i>Upper-middle-income: Albania, Algeria, Belarus, Botswana, Brazil, Bulgaria, Colombia, Costa Rica, Dominican Republic, Jamaica, Jordan, Kazakhstan, Macedonia, Malaysia, Mexico, Namibia, Panama, Peru, Romania, Serbia, South Africa, Thailand, Tunisia, Turkey</i></p> <p><i>Upper-middle-income: Armenia, Bangladesh, Bhutan, Bolivia, Egypt, El Salvador, Georgia, Ghana, Guatemala, India, Indonesia, Kenya, Kyrgyz Republic, Lesotho, Moldova, Morocco, Nigeria, Pakistan, Philippines, Senegal, Sri Lanka, Syria, Ukraine, Zambia.</i></p>	<p><i>Burkina Faso, Cambodia, Congo Dem. Rep., Ethiopia, Haiti, Madagascar, Malawi, Nepal, Niger, Rwanda, Sierra Leone, Togo, Uganda</i></p>