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CORRUPTION VS ENTREPRENEURSHIP: EVIDENCE FROM DEVELOPING COUNTRIES

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Abstract

The importance of entrepreneurship as a driver of economic development cannot be denied. Nevertheless, most developing countries still suffer from low and unsatisfactory in entrepreneurship level, partially explained the low economic growth. Given the main attribute of developing countries, which is highly-corrupted, this study empirically investigates the effect of corruption on entrepreneurship in 48 developing countries over nine (9) years from 2008 to 2016. By using the Generalized Methods of Moment (GMM) estimator, the results show that an increase in corruption will promote more new business start-ups. This is because, in highly corrupted countries, individual and potential entrepreneurs observed that "the only way" to start a business is to involve in a corrupted activity such as bribes. Therefore, a proactive role of government as a policy maker in effectively reducing and eventually eliminating corruption as well as promoting a more conducive environment for entrepreneurs to grow up is very critical.

Keywords: Corruption, developing countries, entrepreneurship, GMM.

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1. Introduction

Policymakers, scholars and economists strongly believe that economic growth for both developed and developing countries can be improved by entrepreneurship activities (Urbano & Aparicio, 2016; Stuetzer et al., 2018). Entrepreneurship significantly contributes to a country's development in terms of providing employment opportunities and offering product varieties. Apart from creating new and more jobs, entrepreneurship also promotes social welfare through income distribution, encourage competition and promote technological change due to globalization, which signals increased productivity and economic stimulate (Aparicio et al., 2016; Erken et al., 2016; Angulo-Guerrero et al., 2017). Figure 01 shows a snapshot of entrepreneurship levels in the selected developing countries. The entrepreneurship level is illustrated by the new business density in 2014 and 2016.

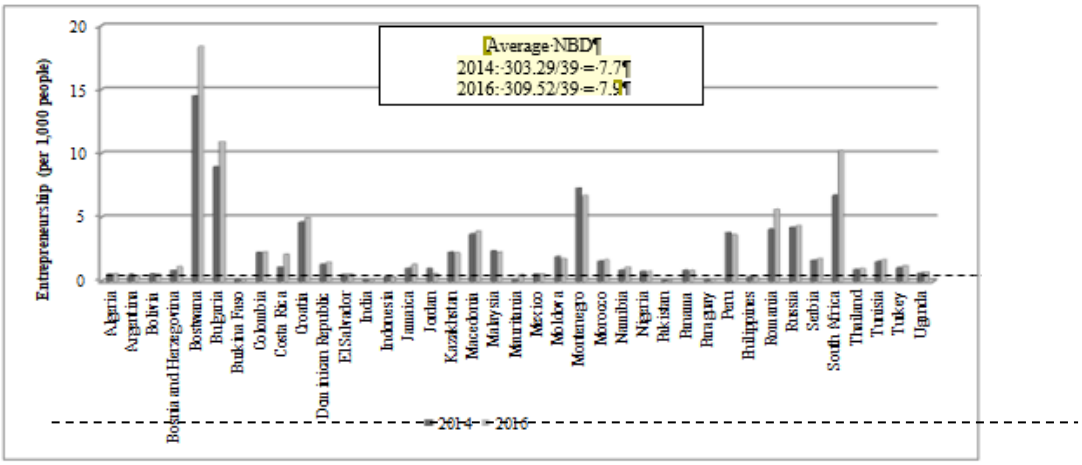

Figure 01. Entrepreneurship in the Selected Developing Countries. Source: World Bank (2017c).

Note: Entrepreneurship is measured by new business density (NBD). New business density is the number of newly registered firms with limited liability per 1,000 working-age people (ages 15-64) per the calendar year. Average NBD-Average new business density for developed countries.

On the positive note, good progress of entrepreneurship in most developing countries can generally be observed, whereby many countries are able to register improvement in terms of the number of new business registration in 2016, as opposed to 2014. For instance, countries such as Botswana, Bulgaria and South Africa have recorded a significant improvement in 2016 as compared to 2014, accompanied by other developing countries such as Croatia, Macedonia, Romania and Russia, which recorded a slight upward trend. The nature of entrepreneurship in developing countries is a bit different from developed countries. Given the lack of uniqueness or less technology-oriented, apart from sensitive to the new entrances, entrepreneurs in developing countries are also susceptible to a sudden changes in the cost of production, particularly those due to corruption. In line with Masron and Nor (2013), several recent past studies have also suggest that lower level, although preferably the absence of corruption can ease promote and encourage more entrepreneurship activities as well as new business start-ups (Avnimelech et al., 2014; Dutta & Sobel, 2016). Also, lower levels of corruption in most developed countries have been cited as among the promoting factors leading to the prosperity of entrepreneurship activities (Avnimelech et al., 2014; Dutta & Sobel, 2016). Most of the developing countries are recording a decline in the corruption level (refer to Figure 02).

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If the declining pattern of corruption level continues in the long-run, it is predicted that corruption will be too low, the business environment will be so conducive and entrepreneurship activities can be automatically and aggressively activated. With the rapid development of entrepreneurship, the nation's end goal of becoming a higher income country with lower income inequality, as well as lower poverty level, can be achieved.

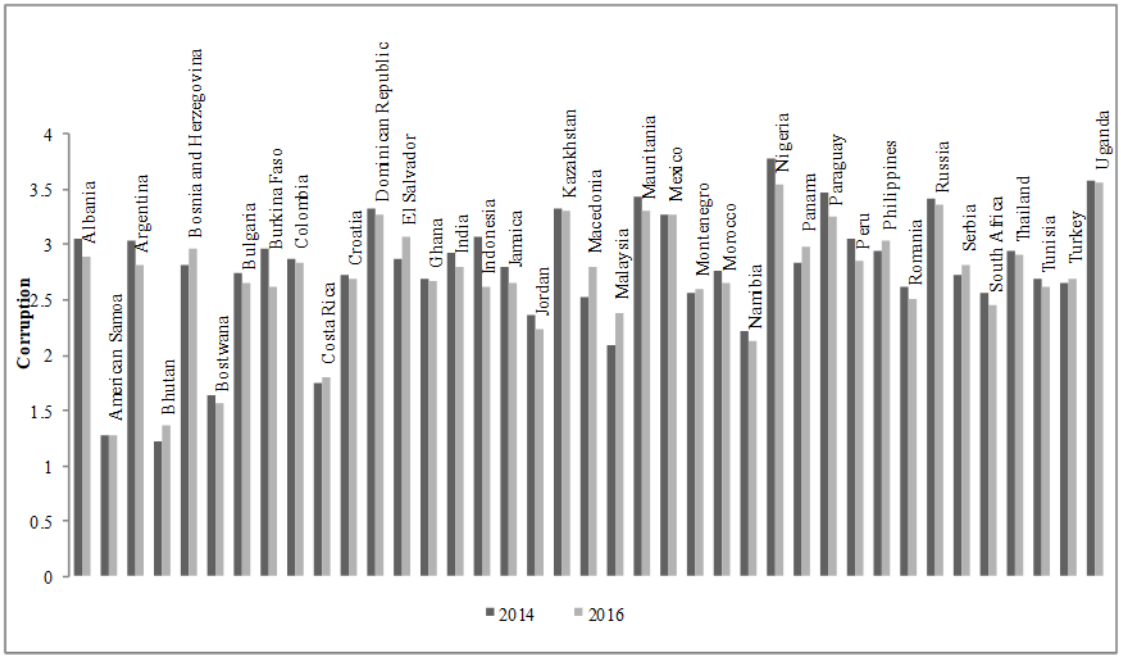

Figure 02. Corruption in the Selected Developing Countries. Source: World Bank (2017b).
Note: The original database for control of corruption provides a range of -2.5 to 2.5 with a higher scores representing lower corruption. For our convenience, the modified score ranges from 0 (the best) to 5 (the worst) using the recalculating formula COR=SCORE*-1+2.5 with a higher score representing greater corruption. Average COR-Average of corruption for developed countries

Currently, some developing countries such as American Samoa and Bhutan are surprisingly capable to be below the average corruption index of developed countries and many others like Botswana, Costa Rica, Malaysia and Namibia are almost at par with the average index of developed countries. Other countries are expected to be able to emulate the experience of these developing countries.

2. Problem Statement

Although entrepreneurship in developing countries shows there is a significant improvement, currently most developing countries suffer low and unsatisfactory in the level of entrepreneurship as compared to developed countries. From Figure 01, only Botswana, Bulgaria and South Africa succeeded in emulating the achievement in entrepreneurship of developed countries. Low entrepreneurship can create many problems that may hinder economic growth such as less diversification of products and services, unemployment, poverty and crime (Fuentelsaz et al., 2015; Dvouletý, 2017). The economy will continue to decline if the entrepreneurship level is low and unprogressive. Therefore, this situation has sparked our interest to investigate the factors which can help to promote entrepreneurship in developing countries.

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3. Research Questions

Figure 02 shows a declining pattern of corruption level, but it still high relative to developed countries. It can become the hidden cost and may expose entrepreneurs to excessive risk. With limited or no access to the established financial market, high corruption will probably dampen entrepreneurship activities in developing countries which are sourced by limited own funds. Interestingly, most of the past studies have focused solely on developed countries and at best mixed countries with developed countries always dominate the sample (Fuentelsaz et al., 2015; Aparicio et al., 2016; Hoogendoorn, 2016; Dvouletý, 2017). Hence, the results could be biased towards developed countries rather than developing countries. In the case of developing countries, the effect of corruption on entrepreneurship has not been purely confirmed by past studies. As suggested by the Institutional Theory, there is a potential reverse effect of corruption on entrepreneurial activities in highly corrupted countries that are against the conventional norms that corruption will negatively affect entrepreneurship. This study aims at complementing the gap by offering an investigation on the adverse effect, albeit the potentially 'positively' significant effect of corruption on entrepreneurship in developing countries. Therefore, this study aims to investigate 'what is the effect of corruption on entrepreneurship in developing countries'?

4. Purpose of the Study

Although there are several past studies deal with the effect of corruption on entrepreneurship, most studies are at best using mixed sample of developed and developing countries. Given the tendency for developing countries to suffer seriously from high corruption, this study predicts that the results could be positive as opposed to commonly obtained results. Hence, this point justifies the need for re-estimation of the effect of corruption in purely developing countries case.

5. Research Methods

The empirical model is based on the Eclectic Theory of Entrepreneurship by Verheul et al. (2002). This study used panel data sample of 48 developing countries from 2008 to 2016 by utilizing the Generalized Method of Moment (GMM) to deal with endogeneity and bias as a result by explanatory variables that are not strictly exogenous (Arellano & Bond, 1991; Arellano & Bover, 1995; Blundell & Bond, 1998). Since the nature of our data has a large number of countries *(n)* than period *(t)*, therefore GMM is the most appropriate estimator including for robustness test. Hence, the detail and summary about the variables and sources used in this study are presented in Table 01.

Table 01. Description and Sources of the Variables

Variables	Definition/Measurement	Source
Global Entrepreneurship Index *(GEI)*	14 entrepreneurship pillars in 3 sub-indices attitudes, abilities and aspirations.	GEDI (2017)
New business density *(NBD)*	New registrations per 1,000 people aged between15-64.	World Bank (2017c)
Education *(EDU)*	Education expenditure as % of GNI.	World Bank (2017a)

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Investment *(INV)*	Gross fixed capital formation (GCFC) as % of GDP.	World Bank (2017a)
GDP per capita *(GDP)*	GDP divided by midyear population.	World Bank (2017a)
Trade *(TRA)*	Trade as % of GDP.	World Bank (2017a)
Unemployment *(UEM)*	Total unemployment as % of total labor force.	World Bank (2017a)
Corruption *(COR)*	The modified score ranges from 0 (the best) to 5 (the worst) and reversed the measure by multiplying by -1. The recalculating formula: COR=SCORE*-1+2.5.	World Bank (2017b)

Notes: GEDI=Global Entrepreneurship Development Institute. Original score for control of corruption is -2.5 (the worst) to 2.5 (the best). SCORE refers to original score.

6. Findings

According to the descriptive analysis indicated in Table 02, the highest number of entrepreneurship levels for new business density *(NBD)* is 18.37 and the lowest is 0.06. Meanwhile, the mean for new business density is 1.95 indicating that entrepreneurship level in most developing countries is currently still low and unsatisfactory. As for global entrepreneurship index *(GEI)*, the highest value of entrepreneurship level is 54.60 and the lowest value is 5.00, while, the mean value is 23.79. These results also suggest that there is a huge discrepancy between the active countries and relatively pessimistic countries in promoting entrepreneurship among the developing countries. Meanwhile, the highest corruption is 3.78 and the lowest is 1.46. In many developing countries, corruption level is still high indicated by mean which of 2.89.

Table 02. Descriptive Analysis

Variables	Obs	Mean	Std. Dev.	Min	Max
New Business Density *(NBD)*	432	1.95	2.74	0.06	18.37
Global Entrepreneurship Index *(GEI)*	432	23.79	8.77	5.00	54.60
Education *(EDU)*	432	4.19	1.74	0.85	9.48
Investment *(INV)*	432	23.96	7.19	8.32	60.02
GDP per capita *(GDP)*	432	5.05	3.60	0.29	14.78
Trade *(TRA)*	432	75.37	30.80	21.12	176.67
Unemployment *(UEM)*	432	9.93	7.43	0.50	37.60
Corruption *(COR)*	432	2.89	0.44	1.46	3.78

Note: All results in original data values. *GEI* and *COR* are in index, *GDP* per capita in thousand and the remaining variables are in units. The score ranges from 0 (the best) and 5 (the worst) for *COR* and 0 (the worst) and 100 (the best) for *GEI*.

Table 03 presents the results of correlation analysis and it can be seen that almost all of the variables have a positive correlation and the values are between 0.01 and 0.5. Also, the correlation values are all below 0.70, suggesting no severe multicollinearity problem.

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Table 03. Correlation Analysis

	NBD	***GEI***	***EDU***	***INV***	***GDP***	***TRA***	***UEM***	***COR***
NBD	1.00							
GEI	0.42	1.00						
EDU	0.29	0.21	1.00					
INV	0.09	-0.02	0.01	1.00				
GDP	0.33	0.62	0.20	-0.04	1.00			
TRA	0.25	0.20	0.35	0.23	0.08	1.00		
UEM	0.36	0.13	0.28	0.07	0.08	0.21	1.00	
COR	-0.41	-0.37	-0.61	-0.13	-0.39	-0.36	-0.33	1.00

This section is meant for emphasizing the findings of this study, which focuses on the effect of corruption on entrepreneurship. To achieve the stated objective, this study has adopted the GMM technique to deal with the potential endogeneity in the models (Choong, Baharumshah, Yusop & Habibullah, 2010).[1] According to the Eclectic Theory, entrepreneurship is influence by many other factors based on demand and supply-side (Verheul et al., 2002). Hence, the results of the regression analysis for corruption and entrepreneurship are shown in Table 04.

Table 04. Regression Results [DV: lnENT]

	Different-GMM		**System-GMM**		Different-GMM		System-GMM	
	1-step	**2-step**	**1-step**	**2-step**	1-step	2-step	1-step	2-step
	Model 1: ln*ENT*=ln*NBD*				**Model 2: ln*ENT*=ln*GEI***			
ln*ENT* $_{(-1)}$	0.25* [2.62]	0.20* [2.86]	0.36* [2.34]	0.32* [2.92]	0.08* [1.95]	0.30* [2.79]	0.38* [2.36]	0.29* [2.93]
ln*EDU*	-0.93* [-2.3]	-0.38* [-1.82]	-0.13* [-2.44]	-0.13* [-1.72]	-0.43* [-2.07]	-2.63* [-2.13]	-0.10* [-1.97]	-0.13* [-1.73]
ln*INV*	0.59* [1.69]	0.36* [1.84]	0.08* [2.65]	0.22* [1.71]	0.37* [1.72]	0.38* [1.69]	0.19* [1.81]	0.09* [1.69]
ln*GDP*	0.56* [1.97]	0.72* [1.65]	0.06* [1.80]	0.08* [1.68]	0.61* [2.54]	0.69* [2.03]	0.11* [2.89]	0.17* [2.89]
ln*TRA*	0.13* [2.11]	0.38* [2.53]	0.24* [2.37]	0.24* [2.33]	0.04* [1.88]	0.08* [1.84]	0.09* [2.30]	0.07* [2.40]
ln*UEM*	0.54* [2.57]	0.05* [2.16]	0.02* [1.80]	0.06* [1.85]	0.04* [2.43]	0.05* [2.14]	0.04* [2.43]	0.06* [2.17]
ln*COR*	0.84* [1.82]	0.22* [2.19]	0.12* [1.90]	0.44* [2.39]	0.42* [1.89]	0.21* [2.19]	0.23* [1.69]	1.33* [2.27]
Model Criteria								
AR(1)	0.07	0.07	0.01	0.02	0.00	0.01	0.00	0.00
AR(2)	0.83	0.69	0.64	0.63	0.88	0.83	0.24	0.21
Hansen Test	0.71	0.98	0.95	0.95	0.67	0.67	0.99	0.99
Dif-Sar	-	-	0.94	0.79	-	-	0.65	0.87
Obs.	432	432	432	432	432	432	432	432

[1] This study notices that there is a potential for endogeneity issues to occur as the 2 dependent variables and 6 explanatory variables included in the analysis can influence each other. For instance, the variable entrepreneurship *(ENT)* and income *(GDP)* might be having bi-directional causality and hence, results in an endogeneity problem. *ENT* is a significant factor of *GDP*, while *GDP* itself may also determine the changes in *ENT.* Koellinger and Thurik (2012) and Galindo and Mendez (2014) indicate that a two-way (bi-directional) relationship between entrepreneurship and GDP exists. Therefore, GMM is applied to accomplish the stated objective and to deal with the econometric problems such as endogeneity which have been suspected as inherent in the static panel analysis (Choong et al., 2010).

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Note: Asterisk * denotes significant at least at 10% critical value. Figures in [ ] stand for t-statistics. The values of the Hansen and AR tests stand for the p-value. The model is estimated using the robust estimation.

Before interpreting the results of GMM, it is necessary to check the four specification tests, namely, lagged variable, first-order autocorrelation or AR(1), second-order autocorrelation or AR(2) and the Hansen test for the appropriateness of GMM estimator (Arellano & Bond, 1991). The lagged dependent variables remain significant and positive across regression confirming the dynamic character of model specification. The AR(1) rejects the null hypothesis of no autocorrelation, the AR(2) fails to reject the null hypothesis of no autocorrelation and the Hansen test fails to reject the null hypothesis of no over-identification of restriction in all regressions implying that the instruments are valid. Hence, the Model in Table 04 is a reliable model. Besides that, the results of the difference-sargan (Dif-Sar) statistics are also reported as a test of the additional moment conditions used in the system-GMM estimators relative to the corresponding first difference-GMM estimator. Failure to reject the null hypothesis of the validity of the level of moment conditions confirms the validity of the system-GMM (Blundell & Bond, 1998). System-GMM which achieved greater efficiency than the first difference-GMM for the model can be examined by the p-value of Dif-Sar. Since the results of Dif-Sar cannot reject the null hypothesis, system-GMM is preferred. Due to that, the discussion of the result is based on the 2-step system-GMM.

The discussion will start with the effect of lagged entrepreneurship. The lagged entrepreneurship is found to be highly significant and have a positive effect on entrepreneurship. Apart from justifying the appropriateness of the dynamic panel model, the results also highlight the importance of past entrepreneurship in determining the current entrepreneurship in developing countries. Since we have difficulty to find the natural culture index at the national level, which varies across years, lagged entrepreneurship could be a good proxy. Past culture of entrepreneurship will have a strong bearing on today's decision by the rest to be entrepreneurs (Kristjánsdóttir et al., 2017; Shirokova et al., 2018).

Based on 2-step system-GMM, the coefficient of corruption *(COR)* is positive. It indicates that 1 percent increase in corruption level is associated with about 0.44 percent increase in new business density and 1.33 percent increase in global entrepreneurship index. These results confirm the findings of Dreher and Gassebner (2013) and Bologna and Ross (2015) that corruption is "the only way" for potential entrepreneurs to start a business in highly corrupted countries. A possible explanation for this finding might be because corrupted activities such as bribes have become a common phenomenon and normal norm which causes giving and receiving bribes to be generally accepted and high in practice among the nations in developing countries. Individual in developing countries who have intentions to involve in entrepreneurial activities have no choice other than to be involved in bribery, although they do it unwillingly to get started and progress in the businesses. Since corruption is likely unavoidable in highly corrupted countries, potential entrepreneurs are forced to pay some "extra charges" by public officers. These practices make them to not be able to run away but to go through this process. For instance, bribes can happen throughout the entrepreneurial process such as getting license, permit, location and business approval (Dreher & Gassebner, 2013; Bologna & Ross, 2015). These results further support the idea of previous studies which claimed that corruption has a specific role to act as a *'speed of money'* or *'grease the wheels'* by favourable

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them to enter into entrepreneurship and develop business much faster (Bologna & Ross, 2015; Dreher & Gassebner, 2013).

For the other factors, the discussion will start with the result of education *(EDU)* on entrepreneurship. What is striking about this relationship is negative result and found consistent with Graevenitz et al. (2010) and Oosterbeek et al. (2010). There are several factors could explain this relationship. Firstly, negative result is probably influence by the increase in industrialization or formal sectors and individual are more attracted to become a wage-earner employee since it is more attractive rather than becoming an entrepreneur. Secondly, some people might think that they do not have a natural ability, skills and confidence to be an entrepreneur considering the risk-bearing causes. Thirdly, there is a possibility that fewer expenditures putting on education by government resulted in education are unable to provide a positive outcome.

Investment *(INV)* provides positive impact, which implies that investment can spur entrepreneurship in developing countries. These results are also found to be in line with those obtained by past studies which suggest that public and private sectors investment will help in creating more business opportunities to potential entrepreneurs and enhance entrepreneurial activities (Dvouletý, 2017; Erken et al., 2016; Ghani et al., 2014). Income *(GDP)* also has significant and positive relationship on entrepreneurship. An increase in GDP will encourage more new business formation since individual have more income to start a business. Then, an increase in GDP also enhances individual's interest to take advantage of these opportunities to create, carry out and enlarge their business activities (Galindo & Mendez, 2014).

There is a significant and positive relationship between trade *(TRA)* and entrepreneurship that is in line with Bloom et al. (2016), Erken et al. (2016) and De Loecker et al. (2016). Trade can help domestic entrepreneurship in several circumstances. The diversity of consumers' demand in terms of products and services because of trade involvement can spark the ideas of collaboration between local entrepreneurs and business abroad to create a new business in response to unmet needs and wants in the market. Secondly, trade enables entrepreneurs to expand their business and create business subsidiaries. In developing countries, entrepreneurial activities are relatively small and limited. For instance, the handicraft industry can be considered as a unique product in the international arena. When the handicraft industry is marketable in international trade, it will spur the development of the more handicraft-based industry as a whole.

Finally, unemployment *(UEM)* is also significant and positively affects entrepreneurship, which implies that unemployment can encourage more entrepreneurship. Several studies share the same support to this finding such as Fritsch et al. (2014), Simon-Moya et al. (2014), Thai and Turkina (2014), Cueto et al. (2015), Fuentelsaz et al. (2015) and Dvouletý (2017). Unemployment due to the limitation of jobs often pushes or force people to engage in entrepreneurial activities to survive and escape from being unemployed.

For further analysis, a robustness test is performed to confirm the findings. The most basic robustness tests initially with two different proxies of entrepreneurship and corruption being the only factor as shown in Table 05.

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Table 05. Robustness Test [DV: lnENT]

	Different-GMM		**System-GMM**		**Different-GMM**		**System-GMM**	
	1-step	**2-step**	**1-step**	**2-step**	**1-step**	**2-step**	**1-step**	**2-step**
	Robust Model 1: ln*ENT*=ln*NBD*				**Robust Model 2 ln*ENT*=ln*GEI***			
ln*ENT* $_{(-1)}$	0.42*	0.11*	0.78*	0.91**	0.12*	0.12*	0.11*	0.56*
	[1.86]	[1.66]	[2.19]	[2.83]	[1.87]	[1.88]	[1.66]	[2.03]
ln*COR*	0.29*	0.25*	0.55*	0.53*	0.08*	0.10*	0.41*	0.98*
	[1.83]	[2.29]	[1.89]	[2.06]	[2.33]	[2.34]	[1.72]	[1.69]
Model Criteria								
AR(1)	0.00	0.00	0.06	0.08	0.00	0.00	0.01	0.00
AR(2)	0.17	0.16	0.25	0.27	0.19	0.21	0.21	0.13
Hansen Test	0.16	0.16	0.39	0.39	0.195	0.195	0.26	0.26
Dif-Sar	-	-	0.93	0.94	-	-	0.97	0.97
Obs.	432	432	432	432	432	432	432	432

Note: Asterisk * denotes significant at least at 10% critical value. Figures in [ ] stand for t-statistics. The values of the Hansen and AR tests stand for the p-value. The model is estimated using the robust estimation.

Based on the findings in Table 05, corruption *(COR)* has consistently exerted a significant and positive impact with the results presented in Table 04. The result suggests that in highly- corrupted county to form a business, individual or potential entrepreneurs are forced to involve in bribery (Bologna & Ross, 2015; Dreher & Gassebner, 2013). Giving and receiving bribe could happen in the process of early business start-ups and post-entry business progress. Apart from different proxies of entrepreneurship, we also consider the other five factors as suggested by eclectic theory and additional number of countries to both samples, which are available for either of measurement new business density or global entrepreneurship index, but not both, over the same period from 2008 to 2016. The list of countries and additional countries use in this study can refer to Appendix. Hence, Table 06 presents the result of augmented robustness test, which includes education, investment, GDP, trade and unemployment with an expansion in the number of countries.

Table 06. Augmented Robustness Test [DV: lnENT]

	Different-GMM		**System-GMM**		**Different-GMM**		**System-GMM**	
	1-step	**2-step**	**1-step**	**2-step**	**1-step**	**2-step**	**1-step**	**2-step**
	Augmented Robust Model 1: ln*ENT* =ln*NBD*				**Augmented Robust Model 2: ln*ENT* =ln*GEI***			
ln*ENT (-1)*	0.15*	0.30*	0.30*	0.15*	0.13*	0.18*	0.40*	0.37*
	[2.23]	[2.47]	[2.59]	[2.31]	[2.13]	[2.20)	[3.91]	[3.38]
ln*EDU*	-0.14*	-0.70	-0.14*	-0.15*	-2.39*	-0.58	-0.41*	-0.08*
	[-1.95]	[-1.33]	[-2.94]	[-1.88]	[-1.81]	[-1.47]	[-1.99]	[-2.59]
ln*INV*	0.07*	0.12*	0.11*	0.06*	0.83*	0.56	0.08*	0.91*
	[1.96]	[1.85]	[1.99]	[1.87]	[2.36]	[1.44]	[1.75]	[2.15]
ln*GDP*	1.75*	1.78*	0.07*	0.06*	0.84*	0.69*	0.09*	0.11*
	[1.78]	[2.27]	[2.65]	[2.23]	[1.90]	[2.05]	[2.65]	[2.84]
ln*TRA*	0.14*	0.18*	0.23*	0.24*	0.16*	0.09*	0.14*	0.18*
	[1.94]	[2.22]	[2.49]	[2.36]	[2.17]	[2.20]	[2.12]	[2.30]
ln*UEM*	0.07*	0.06*	0.02*	0.04*	0.08*	0.11*	0.05*	0.04*
	[2.37]	[2.54]	[2.06]	[1.91]	[1.96]	[2.17]	[2.01]	[2.65]
ln*COR*	0.91*	0.15*	0.29*	0.18*	1.12*	2.68*	0.10*	0.44*

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	[1.76]	[1.97]	[2.25]	[2.15]	[2.48]	[2.08]	[1.84]	[1.96]
Model Criteria								
AR(1)	0.01*	0.05*	0.00*	0.00*	0.01*	0.01*	0.01*	0.00*
AR(2)	0.12	0.10	0.49	0.48	0.62	0.86	0.37	0.45
Hansen Test	0.99	0.99	0.99	0.99	0.24	0.24	0.74	0.74
Dif-Sar	-	-	0.88	0.78	-	-	0.46	0.70
Obs.	693	693	693	693	585	585	585	585

Notes: Asterisk * denotes significant at least at 10% critical value. Figures in [ ] stand for t-statistics. The values of the Hansen and AR tests stand for the p-value. The model is estimated using the robust estimation.

Based on the 2-step system-GMM, notable similar findings for other factors such as education, investment, GDP, trade and unemployment are statistically significant determinants of entrepreneurship as presented in Table 04. For our core variable, the sign and significance of the coefficient of corruption are retained in both specifications.

7. Conclusion

While the results may misleadingly suggest that corruption is good, corruption remains not only a cost to entrepreneurs, but also creates uncertainty for their business. The positive effect simply suggests that the level of corruption is so critical and instead, it may hamper many attempts to be an entrepreneur. While the successful entrepreneurs might be there, the unsuccessful entrepreneurs could be more than those successful particularly to those with extremely limited capital to start with. The results stress the need to fight corruption to encourage entrepreneurship in the most conducive way. This study reinstates several policy recommendations to reduce corruption such as strengthening rule of law and regulatory quality as well as strategies towards developing higher individual integrity by such as conducting moral-related and value-enhancing programs, seeking to increase individual accountability and awareness as well as purify inner behaviour.

7.1. Appendix

a. List of countries having both NBD and GEI indicators (n=48): Albania Algeria, Argentina, Bangladesh, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Burkina Faso, Colombia, Costa Rica, Croatia, Dominican Republic, El Salvador, Ethiopia, Ghana, Guatemala, India, Indonesia, Jamaica Jordan, Kazakhstan, Kenya, Madagascar, Macedonia, Malaysia, Malawi, Mauritania, Mexico, Moldova, Morocco, Montenegro, Namibia, Nigeria, Pakistan, Panama, Paraguay, Peru, the Philippines, Romania, Russia, Serbia, South Africa, Thailand, Tunisia, Turkey and Uganda.

b. List of countries with only NBD indicator (n=29): Armenia, Azerbaijan, Belarus, Belize, Bhutan, Congo Democratic Republic, Gabon, Georgia, Guinea, Haiti, Kyrgyz Republic, Laos, Lesotho, Mauritius, Mongolia, Nepal, Niger, Rwanda, Senegal, Sierra Leone, Sri Lanka, Suriname, Tajikistan, Timor-Leste, Togo, Tonga, Ukraine, Uzbekistan, Vanuatu and Zambia.

c. List of countries with only GEI indicator (n=17): Albania, Algeria, Angola, Benin, Botswana, Burundi, Cameroon, Chad, China, Cote D'Ivoire, Ecuador, Egypt, Gambia, Honduras, Iran, Lebanon, Liberia, Mali, Mozambique, Nicaragua, and Venezuela.

d.List of countries for BLS indicator (n=18): Argentina, Brazil, Bulgaria, Colombia, Croatia, India, Indonesia, Jordan, Kazakhstan, Malaysia, Mexico, Peru, Philippines, Romania, Russia, South Africa, Thailand and Turkey.

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