Economic Freedom and Entrepreneurship in the Developing World

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ABSTRACT

Entrepreneurship has been found to be a prime driver of economic growth in both the developing and developed world. In recent years, a number of empirical papers have found a link between economic freedom and entrepreneurship in the developed world. In this paper we discuss this literature and apply it to the developing world. In many developing countries the regulatory environment can discourage entrepreneurship. We empirically estimate the relationship between the Economic Freedom of the World index and entrepreneurial intentions and outcomes for a sample of developing countries. We focus on the role that size of government, secure property rights and the rule of law, openness to trade, and regulation play on entrepreneurial orientation and outcomes. We try to investigate whether improving the regulatory environment leads to more latent entrepreneurs to start their own business.

Keywords: entrepreneurship; entrepreneurial intention; economic freedom

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Introduction

Entrepreneurship is an important part of the economic development process, with differences in entrepreneurship rates across countries explaining up to fifty percent of the differences in economic growth (Zacharakis et al. 2000). Entrepreneurship is particularly important for developing countries as entrepreneurs utilize local knowledge to create employment opportunities in an economy transitioning away from rural agriculture. Economic freedom is also crucial to the process of economic development as good 'rules of the game' allow entrepreneurs to create value for others through the market economy (Gwartney et al. 2016). A number of papers have shown that economic freedom has a major influence on entrepreneurial activity and thus affects economic growth (Ovaska and Sobel 2005; Kreft and Sobel 2005; Hall and Sobel 2008).

A number of recent papers have looked closer at the link between economic freedom and entrepreneurship. Bjørnskov and Foss (2008) use economic freedom data from the Economic Freedom of the World (EFW) report by Gwartney et al. (2016) to explain cross-country differences in early stage entrepreneurial rates. Nyström (2008) looked at the association between economic freedom and self-employment for 23 OECD member countries. Sobel et al. (2007) verified the relation between entrepreneurial activity and economic freedom for a sample of OECD countries for the year 2002. Ghosh (2017) looks at the effect of economic freedom – specifically its regulatory component – on entrepreneurial intention for a larger sample of countries. This literature, while important, focuses primarily on the role of economic freedom in explaining existing levels of entrepreneurship in the developed world.

In this paper we build upon this literature by focusing on developing countries. We focus on developing countries as the components of economic freedom might have different effects on entrepreneurs in low-income countries compared to high-income ones. Ghosh's (2017) work, in particular, suggests that entrepreneurship is a survival strategy in developing countries but not in

developed ones. We proceed as follows. In the second section we discuss the data on entrepreneurial intentions and economic freedom. We then present our basic empirical results and robustness checks in the third section. We conclude our analysis in Section 4 with some thoughts for future research.

Data on Entrepreneurial Intentions and Economic Freedom

We use the highly-cited *Global Entrepreneurship Monitor* (GEM) for our data on entrepreneurial intentions. The GEM is one of the world's most exhaustive studies for entrepreneurship (Bosma 2013). The survey was initiated in 1999 as a cooperative effort between Babson College (USA) and London Business School (UK) in order to understand the association between entrepreneurship and economic development (Reynolds et al. 1999). The GEM survey initially covered just 16 countries, but as of 2014 the GEM Consortium includes 100 countries. Not every country participates every year, with only 73 participating in the 2014 survey. The GEM differs from other contemporary measures of entrepreneurship in that, in addition to looking at established businesses, it also looks at individual attributes, attitudes, perceptions and intentions of entrepreneurs and potential entrepreneurs. In this way GEM focuses on the phases of an individual from being a potential entrepreneur to taking up entrepreneurship as a desirable career choice.

An understudied part of entrepreneurship, especially in cross-country analyses focusing on the developing world, is entrepreneurial intentions, or what some call 'latent' entrepreneurship. According to the 2014 GEM report (Singer et al. 2015), latent entrepreneurs are largest in number in factor-driven economies, i.e., mainly the developing countries rich in unskilled labor. The fact that factor-driven countries like India, Iran, Botswana, Uganda, Cameroon, etc. exhibit higher entrepreneurial intentions compared to developed countries like those in the OECD indicate more necessity-based entrepreneurship. Individuals in developing countries are more oriented to take up entrepreneurship as career choice because other options for earning livelihood are limited.

We use entrepreneurial intention from GEM as our dependent variable. It is measured as the percentage of 18-64 year old people who are planning to start their business in next three years, excluding those who are already in the business. It is measured on an annual basis. The question asked during the survey to measure entrepreneurial intention is, “Are you, alone or with others, expecting to start a new business, including any type of self-employment, within the next three years?” The “yes” responses are aggregated and taken as a percentage of the total sample of 18-64 years old people in that particular country.

One of the main concerns when using entrepreneurial intentions is it might not actually translate into businesses actually being started. It might be the case that individuals who think of themselves as potential entrepreneurs might drop their plan to start a business more in some countries than others. In order to have an idea about the number of latent entrepreneurs who actually progress towards starting their own business, we also calculate the ratio of entrepreneurial intentions to nascent entrepreneurship. GEM defines the nascent entrepreneurship rate as the percentage of 18-64 year olds who are trying to set up a business. The business should be in its very early stage which implies that the business should not be paying salaries, wages or any other payments to the owners for more than three months.

The survey questions used to measure nascent entrepreneurs are: (1) “Are you, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others?” and (2) “Are you, alone or with others, currently trying to start a new business or a new venture for your employer as part of your normal work?” In order to be listed as a nascent entrepreneur the individual is required to do some concrete activities towards starting a new business over past 12 months. If any financial payments have been made into the firm for more than three months during the time of survey then the business owner is classified as an owner of an existing business rather than a nascent entrepreneur.

Our primarily independent variable of interest is economic freedom, measured by the EFW index, produced annually by Gwartney et al. (2016). Across countries, the EFW index has been shown to be a good indicator of whether a country's economic policies are conducive to entrepreneurs being able to enter and compete in markets (Bjørnskov and Foss 2008). The EFW index is a widely used political economy indicator that has been used in hundreds of empirical studies (Hall and Lawson 2014). The EFW index measures the degree of economic freedom of countries based on 42 distinct variables obtained from third-party sources such as the World Bank and IMF. Given the strong relationship between economic freedom and economic growth (Hall et al. 2010; Rode and Coll 2012; Cebula et al. 2013), it is not surprising that most developing countries have low levels of economic freedom.

The EFW index has annual data since the year 2000, and in five-year intervals from 1970 to 2000. Countries are rated on a 0 to 10 scale based on the 42 different components, with higher numbers representing higher levels of economic freedom. In 2016, the EFW index rates and ranks 157 countries, with the highest ranked countries being Hong Kong, Singapore, New Zealand, Switzerland, and Canada (Gwartney et al. 2016). The bottom five ranked countries for 2014 are Venezuela, Libya, Republic of Congo, Argentina, and Central African Republic. While a handful of prominent countries are not included due to lack of data (for example, Cuba, Lichtenstein, North Korea), the EFW index covers over 90 percent of the world's population.

Within the EFW index, the authors break down economic freedom into five areas: size of government, legal system and security of property rights, access to sound money, freedom to trade internationally, and regulation of credit, labor, and business. Each country is rated on a 0-10 scale within each area and those ratings are then averaged to get a country's overall score. While the area scores tend to be positively correlated (Beaulier et al. 2016), it is possible for countries to do well in some areas but not in others. For example, in 2014 Bangladesh was ranked second in size of government, but 153 out of 157 in legal system and property rights.

Looking at the areas of the EFW index highlights the many ways that economic freedom might be related to entrepreneurship. For example, the size of government area attempts to measure the extent to which government commands resources. The more resources governments control, ceteris paribus, we would expect there to be fewer resources for individuals to use to start businesses. Similarly, protection of property rights and the rule of law is important to providing entrepreneurs with ability to gather resources necessary to start a business as well as the knowledge that they will likely be able to personally benefit should their business be successful. Countries with sound monetary regimes (low inflation, freedom to have foreign currency bank accounts) increase the cost of long-term contracts. Freedom to trade internationally is important for several reasons, including the fact that the division of labor is limited by the extent of the market (Chaney and Ossa 2013). Lastly, regulations on credit, labor, and business directly affect the commercial sector, possibly deterring potential entrepreneurs who are interested in starting a business in the formal sector.

As stated earlier, we focus on developing countries in our analysis. We use the definition of developing country defined in the *World Economic Situation and Prospects Report* (United Nations Department of Economic and Social Affairs 2014). A list of the 43 developing countries included in our analysis is provided in Appendix Table 1. Rather than look at the overall economic freedom score of a country, we use each of the five areas of the EFW index in our analysis to see which of the five areas might influence entrepreneurial intention. While GEM and EFW data is available annually from 2001-2012, each country is not surveyed by GEM every year. As a result, we use an unbalanced panel data of 41 developing countries. Table 1 presents summary statistics of entrepreneurial intentions, the nascent entrepreneurship rate, the EFW variables, and other control variables that are standard in the cross-country economic freedom and entrepreneurship literature (see, for example, Nyström (2008)).

Table 1: Summary Statistics

VARIABLES	(1) N	(2) Mean	(3) St Dev	(4) Min	(5) Max
Entrepreneurial intention	160	29.77	17.23	5.060	90.95
Nascent entrepreneurship rate	166	8.793	5.770	0.880	31.30
Ratio	160	0.329	0.167	0.043	1.170
Size of government	166	6.767	1.201	2.800	8.800
Legal system and property rights	166	5.404	1.155	4.300	8.600
Sound money	166	7.907	1.206	4.100	9.700
Freedom to trade internationally	166	7.316	0.898	3.880	9.400
Credit market regulations	166	8.179	1.288	2.800	10
Labor market regulations	166	5.921	1.309	2.770	9.200
Business regulations	166	5.861	0.962	3.400	8.900
Regulation	166	6.667	0.880	4.500	8.900
Primary school enrollment	123	110.2	8.460	92.29	141.3
Secondary school enrollment	129	80.85	19.67	18.97	109.0
Population 15 to 64	166	63.92	5.609	47.91	74.35
GDP per capita (constant 2005)	164	6,559	6,810	262.4	36,483

The maximum value of entrepreneurial intention in our sample (90.95%) is Nigeria. The country year with the minimum level of entrepreneurial intention is Malaysia in 2009 at 5.06%. The average rate of entrepreneurial intention (29.77%) is almost three times the average nascent entrepreneurship rate (8.79%).

Empirical Approach and Results

We begin our empirical analysis by estimating the following equation:

$$y_{it} = \alpha 0 + \alpha 1 REGULATION_{it} + \alpha 2 SIZE\_GOVERNMENT_{it} + \alpha 3 LEGALSYSTEM_{it} + \alpha 4 SOUNDMONEY_{it} + \alpha 5\ TRADE_{it} + \varepsilon_{it}, \quad (1)$$

where *y* is a measure of entrepreneurial intention; *REGULATION* denotes Area 5 of the EFW index (i.e., a summary index which indicates the conditions in domestic credit market, labor market restrictions and business activity regulations); *SIZE_GOVERNMENT* indicates the overall degree of government intervention into economic affairs as measured by Area 1 of the EFW; *LEGAL SYSTEM* is Area 2 of the EFW; *SOUNDMONEY* denotes freedom from government interference in the monetary system through inflation or restricting access to foreign currency; and *TRADE* denotes freedom to trade internationally (also from the EFW), and ε denotes the error term. As our available data is in panel format, we have run

a fixed effect (FE) model with country fixed effects. (A Hausman test confirms that the fixed effect model is more appropriate than the random effects model.)

The results from the above regression are presented in Column 1 of Table 2. The overlap between the GEM data and EFW is not totally identical, thus Table 2 only contains 159 observations. The most interesting results from this regression are that freedom to trade internationally is associated with *lower* levels of entrepreneurial orientation in our sample of developing countries. This suggests that individuals in these countries are less likely to be oriented towards entrepreneurship when their country is open to trade with other countries. A likely mechanism through which freedom to trade internationally influences entrepreneurial orientation is through foreign direct investment and the presence of large multinational firms as a source of employment. The other notable finding in the parsimonious regression in Column 1 is that less regulations as measured by Area 5 of the EFW index are positively associated with higher entrepreneurial orientation in a country.

Table 2: Effect of economic freedom on entrepreneurial intention

	(1)	(2)
VARIABLES	FE Model	FE Model_2
Size of government	0.608	0.115
	(1.942)	(1.744)
Legal System and property rights	5.756	7.460*
	(3.940)	(3.732)
Sound Money	0.537	1.005
	(1.702)	(1.383)
Freedom to trade internationally	-5.549**	-5.958**
	(2.376)	(2.368)
Credit market regulations		4.463***
		(1.470)
Labor market regulations		-4.045*
		(2.194)
Business regulation		2.175
		(4.313)
Regulations	8.203**	
	(3.577)	
Constant	-23.95	-1.032
	(44.30)	(41.14)
Observations	159	159
R-squared	0.124	0.179

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

In Column 2 of Table 2 we further explore the relationship between regulations and entrepreneurial intentions. The EFW measure of regulations is comprised of three areas of regulation: credit market regulations, labor market regulations, and regulations on business. We replace regulations with these three sub-areas in Column 2 and find not all regulations are created equal in terms of entrepreneurial intention. Freedom to trade internationally is still negatively related to entrepreneurial intentions and legal system and property right freedoms are now statistically significant at the 10% level. Credit market regulations and business regulations are positively related to entrepreneurial intentions, although business regulations are not statistically significant at conventional levels.

Labor market regulations, however, are negatively related to entrepreneurial intention. Since most labor market regulations apply to individuals working for businesses it is not surprising that fewer labor market regulations are negatively associated with the intent to become an entrepreneur. Countries with low scores in labor regulations are likely to be those with few opportunities in other firms, providing a strong incentive to start one's own business. This finding is consistent with the literature showing that countries with more labor market freedom have better labor market outcomes such as lower unemployment and higher labor force participation rates (Feldmann 2006; Feldmann 2007; Feldmann 2009).

Table 3 includes all of the EFW measures from Table 2 but also includes a number of control variables standard in the entrepreneurship and institutions literature. These variables try to capture education or school enrollment, age profile of the country, and level of development. Recall that we limited our sample to developing countries, so the range of GDP per capita in our sample is more limited than it would be in a wider range of countries. Inclusion of these controls drops the number of observations to 115 in Column 1 of Table 3 and 108 in Column 2.

Looking at the estimates, freedom to trade internationally is still negatively associated with entrepreneurial intention in both specifications once controls are included. Similarly, the legal system

and property rights, which was statistically significant only in column 2 of Table 2, is positively associated with entrepreneurial intention in a statistically significant manner in both specifications in Table 3. More secure property rights and the rule of law leads individuals in developing countries to be more oriented towards starting their own business.

Table 3: Effect of economic freedom on entrepreneurial intention including controls

VARIABLES	(1) FE Model	(2) FE Model_2
Size of government	-0.377	-0.577
	(1.677)	(1.659)
Legal system and property rights	6.790*	8.218*
	(3.851)	(4.174)
Sound Money	-0.791	0.991
	(1.176)	(1.200)
Freedom to trade internationally	-7.396**	-10.92***
	(2.896)	(2.971)
Credit market regulations		0.944
		(1.368)
Labor market regulations		-8.458***
		(2.226)
Business regulations		6.652
		(4.063)
Regulations	1.980	
	(4.263)	
Primary school enrollment	-0.473*	-0.371*
	(0.260)	(0.214)
Secondary school enrollment		-0.196
		(0.228)
Population of age 15 to 64 years	0.991	1.641
	(1.630)	(1.467)
GDP per capita at constant 2005	-0.000397	-0.000198
	(0.00193)	(0.00175)
Constant	34.21	15.87
	(76.69)	(67.30)
Observations	115	108
R-squared	0.195	0.296

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Turning our attention towards the regulatory variables, in Column 1, overall regulations are no longer statistically significant once we include controls. Disaggregating regulation in Column 2 shows that the effect of labor market regulation on entrepreneurial intention increased in both statistical and

economic significance. Credit market regulation, however, is no longer statistically significant at conventional levels. This should not be too surprising given how credit market regulations are associated with the level of development, which we are now controlling for with GDP per capita. In terms of our controls, the only statistically significant variable is primary school enrollment, which is negatively associated with entrepreneurial intentions at the 10% level in both specifications in Table 3.

In Table 4, we estimate the exact same specifications as in Table 3, but now with the ratio between nascent entrepreneurs and entrepreneurial intention at the dependent variable. Recall that this variable is an attempt to see how many individuals who report that they intend to start a business actually take steps towards doing so and become nascent entrepreneurs. Before discussing the results, we would highlight that due to the change in the dependent variable, all the expected signs from the previous tables are reversed. That is, labor market regulation freedom is expected to be positively related to this ratio since more labor market freedom not only reduces entrepreneurial intentions, but it likely positively influences nascent entrepreneurship, leading to it being associated with a higher ratio of intended entrepreneurs to nascent entrepreneurs.

Our results are largely in line with the previous two tables. Legal system and property rights has a negative and statistically significant effect on the ratio. Recall that in Table 3, legal system and property rights is associated with an increase in entrepreneurial intentions. This negative sign in Table 4 suggests that economic freedom in the legal system and property rights area has more of a positive effect on entrepreneurial orientation than on nascent entrepreneurship. Labor market regulations are positively related to the ratio at the 5% level of statistical significance. Primary school enrollment has positive significant effect on the dependent variable, suggesting it not only reduces entrepreneurial orientation (Table 3), but also affects nascent entrepreneurship.

Table 4: Effect of economic freedom on ratio between nascent entrepreneurs and entrepreneurial intention

VARIABLES	(1) FE Model	(2) FE Model_2
Size of government	0.00593	-0.00608
	(0.0270)	(0.0333)
Legal system property rights	-0.105**	-0.115**
	(0.0470)	(0.0513)
Sound money	0.0321	0.0104
	(0.0379)	(0.0275)
Freedom to trade internationally	0.0132	-0.0258
	(0.0463)	(0.0495)
Credit market regulations		-0.0269
		(0.0208)
Labor market regulations		0.123**
		(0.0536)
Business Regulation		0.133
		(0.120)
Regulations	0.0413	
	(0.0441)	
Primary school enrollment	0.00662*	0.00907*
	(0.00334)	(0.00454)
Secondary school enrollment		-0.00831
		(0.00673)
Population 15 to 64	-0.00466	-0.00915
	(0.0220)	(0.0299)
GDP per capita at constant 2005	-1.89e-05	-1.38e-05
	(2.90e-05)	(3.69e-05)
Constant	-0.0917	0.178
	(1.263)	(1.572)
Observations	115	108
R-squared	0.080	0.158

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Finally, freedom to trade internationally is not related to the ratio between nascent entrepreneurship and entrepreneurial intentions in a statistically significant manner. Given the results from Tables 2 and 3 showing freedom to trade internationally being negatively associated with entrepreneurial intentions, this finding would be consistent with freedom to trade internationally affecting nascent entrepreneurship at the same rate as entrepreneurial intentions (thus the ratio would not change).

Concluding Thoughts

Our empirical results highlight several important things about the relationship between economic freedom and entrepreneurial intention in developing countries. First, the intention to engage in entrepreneurship in developing countries is often a result of the lack of formal opportunities created by poor quality economic institutions. For that reason, countries in our sample with higher quality institutions tend to have fewer individuals with entrepreneurial intentions. This can be seen in our finding that fewer labor regulations (as measured by a higher labor regulations score in the EFW index) is associated with lower levels of entrepreneurial intentions. Similarly, higher levels of freedom to trade internationally are associated with reduced entrepreneurial intentions. This is largely consistent with the findings of Ghosh (2017).

Our results suggest, however, that higher quality legal systems and security of property rights are associated with higher levels of entrepreneurial intention. Well defined property rights imply that it is more secure to undertake entrepreneurial incentives (Bjørnskov and Foss 2008). We do find that countries with more secure property rights witnessed lower conversion of entrepreneurial intention into nascent entrepreneurs, but this could merely reflect that the effect is stronger for entrepreneurial intention than for nascent entrepreneurship. Our findings confirm that developing countries with more flexible labor regulations show both higher levels of entrepreneurial intention and more of those intentions turned into nascent entrepreneurial ventures. This finding is consistent with Nyström (2008) and Bjørnskov and Foss (2008) who observed that less restrictive regulation is associated with high entrepreneurial activity.

References

Beaulier, S., Elder, R., Han, C., & Hall, J. (2016). An ordinal ranking of economic institutions. *Applied Economics*, *48*(26), 2482-2490.

Bosma, N. (2013). The Global Entrepreneurship Monitor (GEM) and its impact on entrepreneurship research. *Foundations and Trends in Entrepreneurship*, *9*(2), 143-248.

Bjørnskov, C., Foss, N. (2008). Economic freedom and entrepreneurial activity: Some cross-country evidence. *Public Choice*, 134(3-4): pp. 307-328.

Cebula, R., Clark, J.R., & Mixon, F.G., Jr. (2013). The impact of economic freedom on per capita real GDP: A study of OECD nations. *Journal of Regional Analysis & Policy*, *43*(1): 34-41.

Chaney, T., & Ossa, R. (2013). Market size, division of labor, and firm productivity. *Journal of International Economics*, *90*(1), 177-180.

Feldmann, H. (2006). Credit market regulation and labor market performance around the world. *Kyklos*, *59*(4), 497-525.

Feldmann, H. (2007). Economic freedom and unemployment around the world. *Southern Economic Journal*, *74*(1), 158-176.

Feldmann, H. (2009). The unemployment effects of labor regulation around the world. *Journal of Comparative Economics*, *37*(1), 76-90.

Ghosh, S. (2017). Regulation and entrepreneurial intention: Cross-country evidence. *Journal of Entrepreneurship and Public Policy*, *6*(2), 193-205.

Gwartney, J., Lawson, R. & Hall, J. (2016) *Economic freedom of the world: 2016 annual report*. Vancouver: Fraser Institute.

Hall, J., & Sobel, R. (2008). Institutions, entrepreneurship, and regional differences in economic growth. *Southern Journal of Entrepreneurship*, *1*(1), 69-96.

Hall, J., & Lawson, R. (2014). Economic freedom of the world: An accounting of the literature. *Contemporary Economic Policy*, *32*(1), 1-19.

Hall, J., Sobel, R., & Crowley, G. (2010). Institutions, capital, and growth. *Southern Economic Journal*, *77*(2), 385-405.

Kreft, S., & Sobel, R. (2005). Public policy, entrepreneurship, and economic freedom. *Cato Journal*, *25*(3), 595-616.

Nyström, K. (2008). The institutions of economic freedom and entrepreneurship: Evidence from panel data. *Public Choice*, *136*(3-4), 269-282.

Ovaska, T., & Sobel, R. (2005). Entrepreneurship in post-socialist economies. *Journal of Private Enterprise*, *21*(1), 8-28.

Reynolds, P., Hay, M., & Camp, S.M. (1999). *Global entrepreneurship monitor*. Kansas City,: Kauffman Center for Entrepreneurial Leadership.

Rode, M., & Coll, S. (2012). Economic freedom and growth: Which policies matter the most? *Constitutional Political Economy*, *23*(2), 95-133.

Singer, S., Amorós, J.E., & Arreola, D.M. (2015). *Global entrepreneurship monitor: 2014 global report*. London: Global Entrepreneurship Research Association.

Sobel, R., Clark, J., & Lee, D. (2007). Freedom, barriers to entry, entrepreneurship, and economic progress. *Review of Austrian Economics*, *20*(4), 221-236.

United Nations Department of Economic and Social Affairs (2014) *World economic situation and prospects*. New York: United Nations.

Zacharakis, A., Shepherd, D. and Bygrave, W. (2000) *Global entrepreneurship monitor: National entrepreneurship assessment*. Kansas City: Kauffman Center for Entrepreneurial Leadership.

Appendix

Table 1
List of Countries Included in the Analysis

Algeria	Ethiopia	Nigeria
Angola	Ghana	Pakistan
Argentina	Guatemala	Panama
Bangladesh	India	Peru
Barbados	Indonesia	Philippines
Bolivia	Israel	Singapore
Botswana	Jamaica	Slovenia
Brazil	Jordan	South Africa
Chile	Malawi	Tunisia
China	Malaysia	Turkey
Colombia	Mexico	Uganda
Costa Rica	Montenegro	Uruguay
Ecuador	Morocco	Zambia
El Salvador	Namibia	