

Disentangling Institutional Determinants of Entrepreneurship

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Abstract

This paper attempts to empirically disentangle the institutional determinants of several aspects of entrepreneurship. Recent literature independently links both formal and informal institutions to entrepreneurship but both types should be incorporated in the analysis. Economic freedom proxies for formal institutions. Informal institutions include trust and respect, obedience, social status of entrepreneurs, locus of control, and attitudes toward markets. The results suggest that various aspects of both informal institutions and economic freedom are important for entrepreneurial activity depending on the type of entrepreneurship under investigation. This analysis provides deeper insight into the relative importance of formal and informal rules for entrepreneurship as well as provides specifics on which institutions determine what types of entrepreneurship.

JEL Codes: O43, P50, Z1

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1. Introduction

“Simply put, economic growth, driven by entrepreneurship, cannot be explained without reference to institutions.”

Boettke and Coyne (2003: 3)

It is widely accepted that entrepreneurship and innovation are catalysts of economic progress. For example, previous research suggests that differences in entrepreneurship explain between one-third to one-half of differences in growth rates (Reynolds et al. 1999; Zacharakis et al. 2000). Therefore, understanding the underlying mechanisms that promote or inhibit entrepreneurship is critically important for explaining cross-country income differences.

Entrepreneurship is present in all societies and can best described as a discovery process where individuals are alert to profit opportunities (Schumpeter 1934; Mises 1949; Kirzner 1973). The type of entrepreneurship, productive versus unproductive, is determined by a society’s institutional structure (Baumol 1990; Boettke 2001, Boettke and Coyne 2003, Coyne and Leeson 2004, Sobel 2008). As stated in Boettke and Coyne (2003), “entrepreneurship cannot be the cause of development, but rather, that the type of entrepreneurship associated with economic development is a consequence of it” (p. 3). Development is caused by the adoption of certain institutions that encourage wealth-creating entrepreneurship. A lack of development is due to the absence of institutions that channel productive entrepreneurship.

My paper empirically assesses this claim by analyzing how different institutional structures, including both formal and informal institutions, affect various aspects of entrepreneurship. Formal economic institutions include the codified or written rules typically enforced by government, whereas informal institutions capture social norms,

attitudes and culture enforced by social custom. North (2005) argues that formal institutions are reflective of the informal rules; thus, the formal and informal would have self-reinforcing effects. However, when certain formal institutions are lacking—say contract enforcement—informal norms, such as trust, could act as a substitute (see Williamson 2012). Also, McCloskey (2010) argues that cultural norms are the primary motivator behind entrepreneurial decisions; however, she also argues that these norms need to be embedded in economic liberties. Therefore, it is not clear how to conceptually sort between formal and informal rules as the main force surrounding entrepreneurship, as both appear to be theoretically important.

Following this logic, both formal economic institutions and informal institutions need to be included when analyzing institutional determinants of entrepreneurship, as it is theoretically ambiguous. Recent literature (discussed in detail below) independently links formal and informal institutions to entrepreneurship. However, the results are somewhat contradictory, as economic freedom is not robustly related to entrepreneurship—depending on how it is measured. The same is true for cultural relations with entrepreneurship where the results are inconsistent. Given that both the theoretical and empirical literature is unclear, this paper provides an empirical investigation of the relative impact from formal and informal rules and entrepreneurship rates—an area that is mostly unexplored.

I build off previous studies by incorporating both formal institutions, measured by economic freedom, and informal institutions captured by five different indices including social status of entrepreneurs, locus of control, obedience, trust and respect, and attitudes towards markets. To capture entrepreneurship, I do not limit the analysis to one

measurement as it is somewhat unclear how to precisely measure entrepreneurship. Instead, I analyze five different facets of entrepreneurial activity including total early stage entrepreneurship, opportunity driven entrepreneurship, established business owners, intentions to start a business, and investment decisions in other businesses.

Theoretically, each of these aspects of entrepreneurship could be affected differently by diverse formal and informal institutional arrangements. For example, social status may be more important in determining early stage entrepreneurship than for investment decisions. Including a range of both formal and informal institutions in the analysis provides a broader context highlighting which institutions matter for different types of entrepreneurship.

To measure economic freedom, I utilize the Fraser Institute's Economic Freedom of the World index. Entrepreneurship variables are measured by survey data collected by the Global Entrepreneurship Monitor (GEM). GEM is the largest annual cross-country assessment of entrepreneurial activities and attitudes surveying at least 2,000 individuals per country. To capture the five different informal institutions, I use World Values Survey (WVS) data as well as GEM. By utilizing both GEM and WVS, I am able to create a cross sectional dataset of approximately 60 countries. Previous studies typically include 23 countries at most. To investigate the institutional determinants of entrepreneurship, robust regression analysis with iteratively reweighted least squares (RLS) is performed on a cross section of approximately 60 countries depending on the model specification.

The results suggest that, independently, economic freedom positively and significantly impacts early stage entrepreneurship, opportunity driven entrepreneurs, and

investment decisions. Social status of entrepreneurs has a positive and significant effect on early stage and established entrepreneurs as well as entrepreneurial intention. Locus of control positively and significantly impacts all measures of entrepreneurship except entrepreneurial opportunity. Obedience is positive with all aspects of entrepreneurship but is significant only with early stage and intention. Trust and respect positively and significantly affect opportunity seekers, established business owners, and investors. Somewhat surprisingly, the market attitudes index is always insignificant.

When controlling for both formal and informal institutions, the results are mixed. Depending on the regression specification, sometimes only the formal or the informal institution is significant; however there are cases where both remain significant. For example, both social status and locus of control with economic freedom are positively and significantly related to early stage business ownership. Economic freedom dominates all aspects of informal institutions for opportunity driven and investment entrepreneurs. Informal attitudes dominate economic freedom for established business owners and intention to start a business. Collectively, the results suggest that the relative effects between formal and informal is dependent on the type of entrepreneurship under analysis. By incorporating a variety of measurements of entrepreneurship and cultural norms, the analysis provides a more comprehensive perspective.

Before moving to a full model specification, plotting the basic data (definitions explained in detail below) provides interesting insight.

[Insert Figures 1, 2 and 3 About Here]

Figures 1, 2, and 3 plot economic freedom and two measures of informal institutions (either social status of entrepreneurs or locus of control) with two measures of entrepreneurship, total early stage or opportunity driven entrepreneurship. Comparing early stage business ownership with opportunity driven entrepreneurship illustrates a possible difference between necessity versus opportunity seekers. If good institutions are lacking, individuals may be self-employed as there are no other alternatives for work whereas opportunity entrepreneurs represent true profit seekers.

Figure 1 shows that economic freedom displays a strong negative correlation with early stage entrepreneurship but a strong positive relationship with opportunity driven entrepreneurship (this is the same correlation that trust and respect have with both measures of entrepreneurship). This result implies that economic freedom is negatively related to early stage business ownership but does encourage entrepreneurs to seize an opportunity. This is not too surprising as business ownership could be driven from necessity instead of profit seeking.

Figure 2 illustrates the opposite where social status has a positive correlation with total early stage entrepreneurship but a slightly negative correlation with opportunity driven entrepreneurs. This implies that individuals care about their social status as a business owner whereas opportunity driven entrepreneurs are less concerned with social praise. Lastly, Figure 3 shows that locus of control has a positive relationship with both measures of entrepreneurship suggesting that the feeling that one has control over his or her life is important for business ownership and opportunity driven entrepreneurs. By examining the basic scatterplots with a few of the key variables of interest it is evident

that institutions do indeed matter for entrepreneurship but figuring out precisely how and which institutions matter needs further theoretical grounding and empirical analysis.

2. Theoretical Underpinnings

2.1 *Economic Freedom as Formal Institutions*

Relating good institutions to entrepreneurship is similar to making the basic claim that institutions are important for economic development. When countries have sound formal economic institutions, such as secure property rights, impartial rule of law, contract enforcement, constraints on taxation and redistribution, minimal regulations, individuals have a stronger incentive to be entrepreneurial. This can take a variety of forms including starting a business, creating a new product, or providing financing for someone else's innovative idea. When these institutions are lacking, the incentive to seize a profit opportunity or to create a new product is much lower as individuals do not believe they will be able to reap the benefits of their work. Instead, creative individuals may turn their energies toward unproductive political entrepreneurship by rent seeking and lobbying for wealth transfers.¹ The relative decisions are shaped by differing political, economic, and social institutions that structure corresponding rates of returns to various activities.

Recent scholars highlight the importance of economic freedom for entrepreneurship (Ovaska and Sobel 2005; Freytag and Thurik 2007; Sobel, Clark, and Lee 2007; Bjornskov and Foss 2008; Nystrom 2008).² Freytag and Thurik (2007) find

¹ See Baumol (1990) for a theoretical discussion distinguishing between productive, positive-sum activities and unproductive, zero or negative-sum activities. Sobel (2008) tests and confirms Baumol's theory by examining how differing institutional qualities affect differing types of entrepreneurship.

² In a related study, Stel, Storey, and Thurik (2007) examine the relationship between the institutional environment and rates of entrepreneurship using the World Bank's *Doing Business* report and the GEM data. They find that minimum capital requirements and labor market regulations lower entrepreneurship rates across.

that economic freedom explains preferences for self-employment but is not significantly related to actual self-employment rates in 25 E.U. countries. Sobel, Clark, and Lee (2007) show that economic freedom, specifically smaller government and less regulation, is a strong determinant of entrepreneurship for a cross-section of 21 OECD countries. Nystrom (2008) finds that a smaller size of government, better legal structure and security of property rights, and less regulation of credit, labor, and business all increase rates of entrepreneurship using panel data from 1972-2002 for 23 OECD countries. Bjornskov and Foss (2008) also examine the disaggregated economic freedom index and relate it to opportunity versus necessity-driven entrepreneurship across 29 countries. They consistently find that a smaller size of government and higher scores for sound money positively impact both types of entrepreneurship.

2.2 *Informal Institutions*

An emerging literature suggests that informal norms and cultural attitudes shape economic outcomes (North 1990, 2005; Knack and Keefer 1995; Grier 1997; Barro and McCleary 2003; Pejovich 2003; Guiso et al. 2006; Licht et al. 2007; Boettke, Coyne, and Leeson 2008; Williamson and Kerekes 2011). For example, Tabellini (2008a,b; 2010) finds a strong causal relationship between culture, including trust, respect, locus of control and a lack of obedience, and economic development across different European countries. In addition, Licht et al. (2007) and C. Williamson and Kerekes (2011) empirically demonstrate that culture indirectly promotes economic prosperity by affecting a country's institutional structure.

One mechanism through which informal rules may affect economic development is by shaping entrepreneurial activity. This argument is not new as Weber's (1905) 'spirit of capitalism' embodies the idea that certain attitudes will encourage profit seeking for its own sake. More recently, McCloskey (2010) states that the main cause of the industrial revolution is an increase in entrepreneurship brought about by a change in social status of entrepreneurs. The main driver behind the dramatic increase in wealth is a change in the way people talked about entrepreneurship— giving social praise to innovation, trade, and business owners—channeling entrepreneurship into wealth creating activities.³

Empirically, several papers attempt to address the role of informal institutions, such as culture, in explaining differences in entrepreneurship. The results are somewhat mixed. For example, media coverage of entrepreneurs is positively related to the number of new business start-ups (Hindle and Klyver 2007). Lee and Peterson (2000) and Mueller and Thomas (2000) find that more individualistic cultures are more entrepreneurial. However, Singh, DeNoble, and Ehrlich (2004) do not find any significant relationship between individualism and total entrepreneurial activity. Entrepreneurship rates in the United States are attributed to values and beliefs that support freedom, independence, achievement, individualism and materialism (Morris et al. 1994; Spence 1985), while Noorderhaven et al (2004) illustrate that countries with high scores on uncertainty avoidance have lower levels of entrepreneurship.

Extrapolating from the 'culture matters' literature, I identify several aspects of informal institutions that should promote or inhibit entrepreneurial behavior. There are

³ Moykr (1996, 2010) also argues that social status of entrepreneurs was critical in shaping the Industrial Revolution. Baumol (1990) also attributes a lack of incentives for entrepreneurship in Ancient Rome to social status as a stigma surrounded commercial activities.

five broad categories that are incorporated in the analysis. This includes trust and respect, social status of entrepreneurs, obedience, locus of control, and attitudes towards markets.

Higher levels of trust should promote entrepreneurship as trust decreases transactions costs, encourages market activity, and supports contract enforcement.⁴ Respect can be viewed as a measure of generalized versus limited morality, where higher levels of respect capture generalized morality and limit opportunistic behavior beyond an individual's small group (Platteau 2000). It follows that higher levels of trust and respect should increase entrepreneurship.

Social status of entrepreneurs directly follows from the McCloskey framework where individuals also derive a psychic cost or benefit based on how their peers view entrepreneurial activities, including business ownership. It directly follows that an increase in social status will lead to more entrepreneurship.

The effect of obedience on entrepreneurship is somewhat more ambiguous than other informal institutions. Harper (2003) argues that if children are taught to be obedient, people may be less likely to engage in the risk-taking essential for entrepreneurship. Due to its negative impact on individual autonomy and risk-taking, high levels of obedience may result in less economic interaction. However, more obedience may reduce opportunistic behavior and increase trust among group members increasing market transactions and encouraging entrepreneurial activity.

Locus of control refers to the amount of control people feel they have over individual choices and their lives. If individuals view economic success or failure as a

⁴ The link between higher trust societies and economic outcomes is well-documented, citing the impact on transaction and monitoring costs as one of the main mechanisms through which trust matters (see Fukuyama 1996; Knack and Keefer 1997; Zak and Knack 2001; Beugelsdijk, de Groot, and van Schaik 2004; Francois and Zabojnik 2005; Berggren, Elinder, and Jordahl 2008; Bjørnskov 2009a,b).

result of their own efforts, they will work harder in order to earn a greater payoff for their productivity and increase their welfare. According to this line of reasoning, the greater an individual's 'locus of control,' the greater the overall level of entrepreneurial activities (Banfield 1958; Harper 1998).

Attitudes towards markets capture views on individualism versus collectivism. A more individualistic orientation relates to the Protestant ethic through the ideals of personal accountability and hard work. It follows that individualism will lead to a greater respect for market activities and promote entrepreneurship.

2.3 Incorporating both Formal and Informal Institutions

Both the formal and informal rules structure the relative payoff to engaging in entrepreneurial and commercial activities. A mix of the formal and informal provides economic profits, while the informal drives 'psychic' profit. The only study that I am aware of that incorporates both economic freedom and informal institutions to explain entrepreneurship is Powell and Rodet (forthcoming); thus, my paper is most similar to their approach. They specifically analyze how praise for entrepreneurs (one of my aspect of informal institutions) and economic freedom determine early stage entrepreneurship across 21 countries. They conclude that both social status and economic freedom significantly explain differences in entrepreneurial activity.

While I am attempting to address a similar question, my approach is quite different. For example, my measure of social status of entrepreneurs is derived from different questions. I do include several of the questions in their 'culture index' in what I call market attitudes index (explained in detail below). Also, I compare economic

freedom and a range of informal institutions to not only early stage entrepreneurship but to a variety of entrepreneurial activity.

As discussed above, both informal and formal institutions independently affect entrepreneurship. Economic freedom, trust and respect, favorable attitudes towards markets, social praise, and locus of control should be positively related to entrepreneurship while the possible effect from obedience is conceptually unclear. Building from the individual links, this paper explores the relative comparison between formal versus informal rules. Once both are included in the same regression three outcomes are possible: 1) both measures of institutions are significant, 2) neither measure is significant, or 3) either the formal or the informal measure will dominate remaining significant.⁵ Next, I turn to empirical investigation to shed light on the relative impact of each.

3. Data

In order to maximize the number of countries included in the analysis, a cross sectional dataset is constructed. While panel analysis may be preferable, data limitations prevent such a possibility. However, this is common in the institutional literature.

To measure cross-country rates of entrepreneurship I rely on the 2011 Global Entrepreneurship Monitor (Kelley et al 2012). It is the main data source for entrepreneurial comparison across countries (Sobel, Clark and Lee 2007; Bjornskov and Foss 2008; Powell and Rodet forthcoming).

⁵ Analyzing the feedback between formal and informal is beyond the scope of this paper. For studies showing that culture enhances economic freedom and vice versa see Berggren and Jordahl 2006, Tabellini 2008b, and Mathers and Williamson (2011).

Given the difficulty of defining and subsequently measuring entrepreneurship and the possibility that different aspects of institutions will affect entrepreneurship in various ways, I rely on five different measures for entrepreneurship. This includes 1) Total early stage entrepreneurial activity, 2) opportunity seeking entrepreneurs, 3) established entrepreneurs, 4) entrepreneurial intention (Intend), and 5) entrepreneurial investments.

The first measure is total early stage entrepreneurial activity (TEA) defined as the percentage of the adult population that are currently involved in setting up a business which is less than 3 months old plus the percentage of the adult population who owns a business between 3 and 42 months. The second measure captures the percentage of TEA entrepreneurs who claim to be seizing an opportunity (Opportunity). Respondents who are opportunity-seeking entrepreneurs express (1) to be driven by opportunity instead of no other alternative to work and (2) that the purpose of the business is to increase income and gain independence. This measure of entrepreneurship is perhaps more aligned with a Kirznerian definition. The third measure is the percentage of the adult population who are owner/manager of a business for more than 42 months (Established). The fourth measure captures entrepreneurial intention as the percentage of the adult population who intend to start a business in the next three years (Intend). Lastly, as financing can be considered part of entrepreneurship, I included the percentage of the adult population who has personally provided funds for a new business started by someone else in the last three years (Invest). In order to maximize sample size, each measure is averaged from 2000-2010 from the annual survey data.

To measure economic freedom, I rely on the well-established Economic Freedom of the World Index compiled by the Fraser Institute (Gwartney et al. 2011). The index

measures the level of economic freedom on a scale from zero to ten, with ten representing a greater degree of freedom. These components can be grouped in five broad categories: size of government, legal structure and security of private property rights, freedom to trade with foreigners, regulation of credit, labor, and business, and access to sound money.

To capture informal institutions and cultural attitudes, data is collected from GEM and from the World Values Surveys (WVS). WVS captures individual beliefs and values reflecting local norms and customs (World Values Survey 2009). All variables are averaged across all years for which data is available.⁶ Recall that informal institutions and culture are broken down into five different facets.

First, one aspect of informal institutions is captured by the level of trust and the level of respect in a country. One question from WVS is identified that is most closely correlated with each trait. Trust is measured as the percentage of respondents answering ‘most can be trusted’ to the question, “Generally speaking, would you say that most people can be trusted or that you can’t be too careful in dealing with people?” To measure respect, the following question is used: “Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five.” The percentage of those surveyed that chose “tolerance and respect for other people” is used to measure respect. I aggregate the responses to each question into an overall trust and respect index by extracting the first principal component and scaling between 0 and 1 with 1 representing greater levels of trust and respect.

⁶ GEM data is averaged from 2000-2010 and WVS data is averaged from 1981-2008.

The same question used to measure respect is also used to measure obedience, but in this case, the percentage of those surveyed that chose obedience as being an important trait for children learning at home is coded. A higher score indicates a higher level of obedience.

Locus of control is measured using the question, “Some people feel they have completely free choice and control over what happens to them. Please use this scale (from 1 to 10) where 1 means ‘none at all’ and 10 means ‘a great deal’ to indicate how much freedom of choice and control in life you have over the way your life turns out.” An aggregate control index is created by averaging all the individual responses and multiplying by ten where a higher score indicates more self-control.

An aggregate attitudes towards markets index is constructed based off of two market oriented questions taken from WVS. Individualism versus collectivism is measured using the statement “People should take more responsibility to provide for themselves versus the government should take more responsibility to ensure that everyone is provided for.” Respondents used a scale from 1 to 10 to indicate their views with 1 representing government should take more responsibility and 10 people should take more responsibility. Views toward competition are captured by the statement “Competition is good. It stimulates people to work hard and develop new ideas versus competition is harmful.” Respondents used a scale from 1 to 10 to indicate their views with 1 representing competition is harmful and 10 representing competition is good.⁷ A market index is constructed by extracting the first principal component and scaled between 0 and 1 with 1 representing more pro-market attitudes.

⁷ I inverted the scale from the original in the survey to capture more market friendly views with an increasing scale.

Lastly, a status of entrepreneurs index is created by aggregating three questions from GEM. The first measures the percent of the adult population who believe that most people in their country think starting a business is a desirable outcome. The second question measures the percentage that agrees with the statement that in their country successful entrepreneurs receive high status. The third question captures the percentage that agrees with the statement that in their country you will often see stories in the public media about successful new businesses. Again, principal component analysis is used to extract the common variation between these three questions to create an overall status index scaled between 0 and 1 with 1 representing higher status for entrepreneurs.

In addition to economic freedom and informal institutions, a variety of controls are also included that may affect entrepreneurship and have been included in previous studies (La Porta et al 1999; Sobel, Clark and Lee 2007; Bjornskov and Foss 2008; Powell and Rodet forthcoming). This includes GDP per capita (log), female population (% of total), domestic credit to the private sector (% of GDP), foreign direct investment (% of GDP), educational attainment (1960), ethnic diversity, religion, legal origin, and latitude as a geographic control. Appendix 1 shows the summary statistics for all data used in the analysis. Appendix 2 provides a detailed description as well as data sources.

4. Empirical Analysis and Results

To investigate the institutional determinants of entrepreneurship, robust regression analysis with iteratively reweighted least squares (RLS) is performed on a cross section of approximately 60 countries depending on the model specification. This methodology is preferred over traditional ordinary least squares as the dataset is likely to be strongly

influenced by the presence of outliers (see scatterplots above). RLS minimizes the sensitivity to outliers by weighting and reweighting observations. All regressions in the analysis are of this form. All regressions also control for log GDP per capita.

The basic economic relationship this paper attempts to capture is as follows:

$$Y_i = \mu + \beta EFW_i + \alpha I_i + Z_i \delta + \varepsilon_i$$

where Y represents one of the five measures of entrepreneurship, EFW is the economic freedom index, I represents the five different measures of informal institutions, and Z is the vector of control variables including log GDP per capita. Recall, there are five dependent variables and six main independent variables of interest. The dependent variables are 1) Total early stage entrepreneurial activity (TEA), 2) opportunity seeking entrepreneurs (Opportunity), 3) established entrepreneurs (Established), 4) entrepreneurial intention (Intend), and 5) entrepreneurial investments (Invest).

The six institutional variables of interest are 1) economic freedom (EFW), 2) status of entrepreneurs (Status Index), 3) locus of control (Control), 4) obedience (Obed), 5) trust and respect (TrustResp Index), and 6) attitudes towards markets (Market Index).

4.1 Benchmark Specification

I first show the basic relationship between each measure of entrepreneurship and each institutional variable. Next, I show a basic bivariate regression between each measure of entrepreneurship, while controlling for economic freedom with each of the five informal institutional variables entering separately. This provides a baseline for comparison as we build into a more complete model specification.

[Insert Table 1 About Here]

Each cell in the table represents a separate regression. Each regression controls for log GDP per capita as well as one institutional variable. Economic freedom positively and significantly impacts 3 out of the 5 different measures of entrepreneurship (TEA, Opportunity, and Invest). Status has a positive and significant impact on TEA, established entrepreneurs and entrepreneurial intention. Control positively and significantly impacts all measures of entrepreneurship except entrepreneurial opportunity. Obedience is positive with all aspects of entrepreneurship but is significant only with TEA and Intend. Trust and respect positively and significantly affect opportunity seekers, established business owners, and investors. Somewhat surprisingly, the attitudes towards market index is insignificant in all five regression specifications. Taken collectively, these baseline results imply that institutional factors matter a great deal for entrepreneurship; however, each institutional constraint impacts different facets of entrepreneurial incentives.

[Insert Tables 2 and 3 About Here]

Next, I control for economic freedom in each specification (as well as log GDP per capita) and include one of the five different informal institutional measures. Economic freedom remains statistically important for TEA, Opportunity, and Invest. In fact, it is the only institutional variable that is significant for opportunity seeking entrepreneurs as trust and respect loses its significance. This implies that, on average, a

one standard deviation increase in economic freedom increases opportunity driven entrepreneurship by almost 4 percentage points (which is a 1/3 standard deviation increase).

After controlling for economic freedom, status, locus of control, and obedience retain a positive and significant relationship with TEA. A one standard deviation increase in the status index, locus of control, and obedience increases early stage entrepreneurship by 1.89 percentage points, 3.35 percentage points, and 2.16 percentage points, respectively.

Economic freedom has a positive and significant impact in 2 out of 5 regressions with established entrepreneurs while 3 out of 5 informal constraints (Status, Control, TrustResp Index) positively impact established entrepreneurs. Entrepreneurial intention depends on economic freedom, status, locus of control, and obedience. As the results in Table 3 column (3) suggest a one standard deviation increase in economic freedom and in obedience increases intention to start a business by approximately 2.5 percentage points and 3.4 percentage points, respectively.

Economic freedom appears to be a larger driver in entrepreneurial investment decisions as EFW is positive and significant in all five regression specifications. On average, a one standard deviation increase in economic freedom increases investor entrepreneurs by roughly 2 percentage points (which is about 1/2 a standard deviation). Control and obedience are also positive and significant (see Table 3 columns 7 and 8).

It is worth noting that this regression specification, controlling for economic freedom and one informal measure, explains a significant amount of the variation with total entrepreneurial activity, intention to start a business, and investment decisions (R-

squareds are, on average, 0.64, 0.74, and 0.70, respectively). However, less of the variation is explained for opportunity and established entrepreneurs (on average 0.43 and 0.35, respectively).

4.2 *Main Model Specification*

The main model specification builds off of the benchmark by including all institutional variables simultaneously as well as introducing two separate control vectors. This is done to minimize multicollinearity as many of these variables are correlated with each as well as to retain as many observations as possible. The first control vector is based off of the entrepreneurship literature and includes female population (% of total), domestic credit to the private sector (% of GDP), and foreign direct investment (% of GDP). The second set of controls is based off of the institutional and cultural literature and includes educational attainment (1960), ethnic diversity, religion, legal origin, and latitude.

[Insert Table 4 About Here]

Status and locus of control are positive and significant in all three regressions and EFW is positive and significant in 2 out of 3 regressions. EFW loses its significance in column (3), which may not be surprising as these controls stem from the institutional literature and are highly correlated with economic freedom (for example, education and EFW have a significant correlation of 0.48). Based on these results, if the economic freedom index increased by 5 units (the difference between the least free country, Angola, and the most free country, Hong Kong), early stage entrepreneurship would increase by

almost 9 percentage points. An increase from the lowest to the highest on the status index and for control would increase TEA by approximately 4.7 percentage points and 10 percentage points, respectively. EFW and control having approximately the same size economic effect and status has about half of the effect.

As the results in columns (4-6) suggest, economic freedom also determines the rate of entrepreneurial activities based on opportunities. Status is only important in the last regression specification. Control and obedience are also significant in this specification; however, they now both have a negative sign. I do not place much weight on this result again due to possible endogeneity. A one standard deviation increase in EFW increases opportunity-seeking entrepreneurship by 5 percentage points and an increase by the total span of the index increases Opportunity by almost 3 standard deviations. These results suggest that the most important institutional factor determining the willingness to take advantage of an entrepreneurial opportunity is economic freedom.

This is also the result we find in columns (13)-(15) where Invest is the dependent variable. Economic freedom is the only significant institutional variable. I do not believe this undermines the importance of informal norms--only suggests differing thresholds between formal and informal importance.

For established business owners, the most important factor is status. If the status index is increased from the lowest to the highest, the difference between Japan and Ghana, established business owners would increase by about 7 percentage points. Comparing the initial results to the full model specification, this relationship holds even when not controlling for economic freedom (see Table 1 above). This can be interpreted

as were the formal business climate to change, entrepreneurs would be less swayed than if the social status decreased, supporting McCloskey's viewpoint.

The intention to start a business also seems to be driven by the informal instead of the formal institutions as economic freedom is insignificant in all 3 regressions and status, control, and obedience are significant in at least 2 of 3 specifications. This can possibly be interpreted as individuals first consider cultural constraints when asked about career decisions. The formal business climate appears to be less of a concern when contemplating entrepreneurial action. However, this question is interesting because it highlights a situation based on what people perceive not based on any action.

4.3 *Sensitivity Analysis*

I redo the main regression specification controlling for all institutional variables based on two subsamples. I only report the results for TEA as the dependent variable. The first subsample splits countries roughly into rich and poor based on the mean of GDP per capita (\$17,110). The second subsample separates countries into free and unfree based on the mean of EFW (6.89).

[Insert Table 5 About Here]

Economic freedom and status of entrepreneurs determine early stage entrepreneurship in rich countries supporting the results from before. However, in poor countries, the informal institutions dominate EFW as it is no longer significant. Status, control, and obedience are all positively and significantly related to TEA. A one standard

deviation increase in status increases early stage entrepreneurship by approximately 3 percentage points.

For both free and unfree countries, locus of control is positive and significant while status is only significant in unfree countries. In countries lacking freedom, respect from their peers as well as the belief that an individual has control over his or her life is important for early stage entrepreneurship. This suggests that even if the formal rules in a country cannot be changed, entrepreneurship can be increased if attitudes and beliefs regarding such activities are changed—again supporting McCloskey’s argument.

As additional robustness, I rerun the basic regression specification in three different ways. First, I replace the aggregate economic freedom index with the five sub-indices (size of government, rule of law, sound money, international trade, and regulation). Next, I replace control, obedience, and the market index with an aggregate Hofstede index or with an aggregate Schwartz index (these results are not reported to save space). Both of these indices capture individualism versus collectivism, attitudes toward hierarchy, locus of control, as well as several other cultural aspects (see Appendix 2 for detailed description).

(Insert Table 6 About Here)

When controlling for all five areas of economic freedom and the five informal institutions, sound money appears to be the most important aspect of economic freedom as it has a positive and significant relationship with all areas of entrepreneurship except opportunity driven entrepreneurs. Status and locus of control remain significant for total

early stage entrepreneurship (similar to the main results). For opportunity driven entrepreneurs, rule of law and freedom from regulation are positive and significant as is status for entrepreneurs. For established business owners, an interesting result emerges. Sound money and status is positive and significant but international trade is negative and significant. This could be interpreted as a creative destruction process where imports replace the products that established business owners would have sold. Sound money, status, control, and obedience are all positive and significant with intention to start a business. For investment, sound money is the only institutional control that is significant.

The Hofstede index and the Schwartz index are insignificant in all regression specifications when controlling for economic freedom, status, and trust and respect. Economic freedom retains its significant relationship with the same aspect of entrepreneurship as before (TEA, Opportunity, and Invest). Status of entrepreneurs also continues to matter in the way as before having a positive and significant relationship with TEA, established business owners, and intention to start a business (as well as investment in the Hofstede specification).

5. Conclusion

This paper attempts to empirically disentangle the institutional determinants of several aspects of entrepreneurship. The entrepreneurial activities under investigation include total early stage entrepreneurship, opportunity driven entrepreneurship, established business ownership, intention to start a business, and investment decisions. Both formal and informal institutions are included in the analysis. The formal institutions are measured by the Fraser Institute's Economic Freedom of the World Index. The informal

institutions include trust and respect, obedience, social status of entrepreneurs, locus of control, and attitudes toward markets.

In comparing the relative effects from formal versus informal rules, three outcomes are possible: 1) both can remain significant, 2) neither may appear significant, or 3) either formal or informal will dominate remaining significant. For example, economic freedom dominates all aspects of informal institutions for opportunity driven entrepreneurs and investment entrepreneurs. However, informal attitudes dominate in the regressions for established business owners and intention to start a business. This suggest that the most important factor determining each end of the spectrum for entrepreneurship—planning to start a business and long-term business ownership— is driven by social praise and the belief that the individual maintains control over his or her success in life.

Together these results suggest that when asking, ‘What matters more for entrepreneurship: formal or informal rules?’ the answer depends. It depends on the type of entrepreneurship under investigation and which aspect of culture is being examined. This paper serves mainly as a first (empirical) look at the relative effects from formal versus informal rules and entrepreneurship rates. The seemingly inconsistent findings demonstrate the need for a more concise theoretical argument surrounding the specifics as to which institutions determine what types of entrepreneurship and why.

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Appendix 1: Summary Statistics

Variable	Observ.	Mean	Std. Dev.	Min	Max
TEA	77	11.64	7.73	2.93	34.20
Opportunity	76	48.70	11.99	18.00	79.00
Established	77	8.09	5.17	1.47	35.50
Intend	77	20.92	15.64	2.03	68.80
Invest	74	5.42	4.33	0.50	20.60
EFW	77	6.89	0.83	4.03	8.91
Status	77	0.50	0.29	0.00	1.00
Control	63	68.43	7.11	46.80	81.35
Obed	64	37.53	17.01	2.24	81.74
TrustResp	64	0.50	0.30	0.00	1.00
Market	63	0.50	0.30	0.00	1.00
Female pop (%)	76	50.31	2.42	31.49	54.06
Dom. Credit	76	84.27	59.65	6.15	309.74
FDI	76	4.67	4.48	0.21	27.87
Ethnic	68	0.37	0.24	0.01	0.93
Prot	73	13.91	24.77	0.00	97.80
Cath	73	39.63	39.28	0.00	96.90
Muslim	73	17.40	33.07	0.00	99.40
Latitude	73	0.36	0.20	0.01	0.72
Edu (1960)	66	63.25	27.91	7.20	98.00
Legal Origin	68	2.49	1.20	1.00	5.00
Log GDP pc	77	9.38	0.95	6.84	10.79
GDP pc	77	17,110	13,013	931	48,548

Appendix 2: Data Description and Sources

Variables	Definition	Source
Entrepreneurship Measures		
TEA	Total early stage entrepreneurial activity is defined as the percentage of the adult population that are currently involved in setting up a business which is less than 3 months old plus the percentage of the adult population who owns a business between 3 and 42 months. Averaged 2001-2010.	2011 Global Entrepreneurship Monitor
Opportunity	Captures the percentage of TEA entrepreneurs who claim to be seizing an opportunity. Respondents who are opportunity-seeking entrepreneurs express (1) to be driven by opportunity instead of no other alternative to work and (2) that the purpose of the business is to increase income and gain independence. Averaged from 2005 to 2010.	2011 Global Entrepreneurship Monitor
Established	Percentage of the adult population who are owner/manager of a business for more than 42 months. Averaged from 2001 to 2010.	2011 Global Entrepreneurship Monitor
Intend	Captures entrepreneurial intention as the percentage of the adult population who intend to start a business in the next three years. Averaged from 2002 to 2010.	2011 Global Entrepreneurship Monitor
Invest	Percentage of the adult population who has personally provided funds for a new business started by someone else in the last three years. Averaged from 2001 to 2010.	2011 Global Entrepreneurship Monitor
Economic Freedom		
EFW	Economic freedom of the World is compiled by the Fraser Institute and measures the level of economic freedom on a scale from zero to ten, with ten representing a greater degree of freedom. The index is grouped in five broad categories: size of government, monetary policy and price stability, legal structure and security of private ownership, freedom to trade with foreigners, and regulation of credit, business, and labor. The index is averaged from 2001 to 2009.	Fraser Institute, <i>Economic Freedom on the World</i>

Informal Institutions

A status of entrepreneurs index is created by aggregating three questions from GEM. The first measures the percent of the adult population who believe that most people in their country think starting a business is a desirable outcome. The second question measures the percentage that agrees with the statement that in their country successful entrepreneurs receive high status. The third question captures the percentage that agrees with the statement that in their country you will often see stories in the public media about successful new businesses. Averaged from 2003-2010. Principal component analysis is used to extract the common variation between these three questions to create an overall status index scaled between 0 and 1 with 1 representing higher status for entrepreneurs in a country.

Status Index

2011 Global Entrepreneurship Monitor

Control is measured as the unconditional average response (multiplied by 10) to the question asking to indicate how much freedom of choice and control in your life you have over the way your life turns out. Averaged from 1981-2007.

Control Index

World Values Survey 2009

Obedience is the percentage of respondents that mentioned obedience as being important. Averaged from 1981-2007.

Obedience Index

World Values Survey 2009

Trust is measured as the percentage of respondents who answered that "Most people can be trusted," respect is measured as the percentage of respondents that mentioned the quality "tolerance and respect for other people" as being important. Averaged from 1981-2007. The aggregate index is constructed by extracting the first principal component and rescaled between 0 and 1 with 1 representing more trust and respect.

TrustResp Index

World Values Survey 2009

First principal component extracted from 2 questions regarding attitudes towards markets: (1) “People should take more responsibility to provide for themselves versus the government should take more responsibility to ensure that everyone is provided for.” Respondents used a scale from 1 to 10 to indicate their views with 1 representing government should take more responsibility and 10 people should take more responsibility. (2) “Competition is good. It stimulates people to work hard and develop new ideas versus competition is harmful.” Respondents used a scale from 1 to 10 to indicate their views with 1 representing competition is harmful and 10 representing competition is good. Averaged from 1981-2007. A market index is constructed by extracting the first principal component and scaled between 0 and 1 with 1 representing more pro-market attitudes.

Market Index

World Values Survey 2009

The first principal component of (1) individualism: measures the degree to which individuals are integrated into groups; (2) power distance: Measures the degree to which less powerful group members accept or expect power to be distributed unevenly; (3) uncertainty avoidance: measures the degree to which a society tolerates uncertainty; captures how comfortable a group member is with unstructured situations; (4) masculinity: refers to the distribution of roles between the genders. This dimension ranges from assertive and competitive (masculine) to modest and caring (feminine).

Hofstede Index

Aggregated index scaled between 0-10.

Hofstede (1980, 2001)

The first principal component of (1) embeddedness: Captures the emphasis on the individual as part of group and committed to maintaining group solidarity and traditional order. Higher score implies greater group embeddedness instead of individual autonomy; (2) harmony: Refers to the relationship between mankind and the natural and social world. Higher score suggests an emphasis on accepting the world as is, instead of trying to change it; (3) hierarchy: Measures cultural emphasis on obeying rules and traditional roles within society. Higher score suggest a great hierarchical society. Aggregated index scaled between 0-10.

Schwartz Index

Schwartz (1994, 1999)

Controls

GDP PC (log)	Logarithm of GDP per capita, PPP basis, constant 2005 international dollars. Averaged from 2001 to 2009.	2011 World Development Indicators
Pop (% female)	Percentage of the total population that is female. Averaged from 2001 to 2009.	2011 World Development Indicators
Domestic Credit	Domestic credit provided to the private sector as a percentage of GDP. Averaged from 2001 to 2009.	2011 World Development Indicators
FDI	Foreign direct investment, net inflows at a percentage of GDP. Averaged from 2001 to 2009.	2011 World Development Indicators
Ethnic Diversity	Average value of five different indices of ethnolinguistic fractionalization. Its value ranges from 0 to 1. The five component indices are: (1) probability that two randomly selected people from a given country will not belong to the same ethnolinguistic group (2) probability of two randomly selected individuals speaking different languages; (3) probability of two randomly selected individuals do not speak the same language; (4) percent of the population not speaking the official language; and (5) percent of the population not speaking the most widely used language.	La Porta, Lopez-de-Silanes, Shleifer, and Vishny 1999
Protestant	Measured as the percentage of population in 1980 (or for 1990-1995 for countries formed more recently) that belonged to Protestant religion.	La Porta, Lopez-de-Silanes, Shleifer, and Vishny 1999
Catholic	Measured as the percentage of population in 1980 (or for 1990-1995 for countries formed more recently) that belonged to Roman Catholic religion.	La Porta, Lopez-de-Silanes, Shleifer, and Vishny 1999
Muslim	Measured as the percentage of population in 1980 (or for 1990-1995 for countries formed more recently) that belonged to Muslim religion.	La Porta, Lopez-de-Silanes, Shleifer, and Vishny 1999
Education 1960	Percentage of the population that completed primary plus secondary education in 1960.	2011 World Development Indicators
Legal Origin	Ranges between 1-5 where 1 represents English, 2 represents French, 3 represents German, 4 represents Scanidavian and 5 is socialist legal origins.	La Porta, Lopez-de-Silanes, Shleifer, and Vishny 1999
Geography	Measured as the absolute value of the latitude of the country, scaled to values	La Porta, Lopez-de-Silanes, Shleifer, and Vishny 1999

Figure 1: Entrepreneurship and Economic Freedom

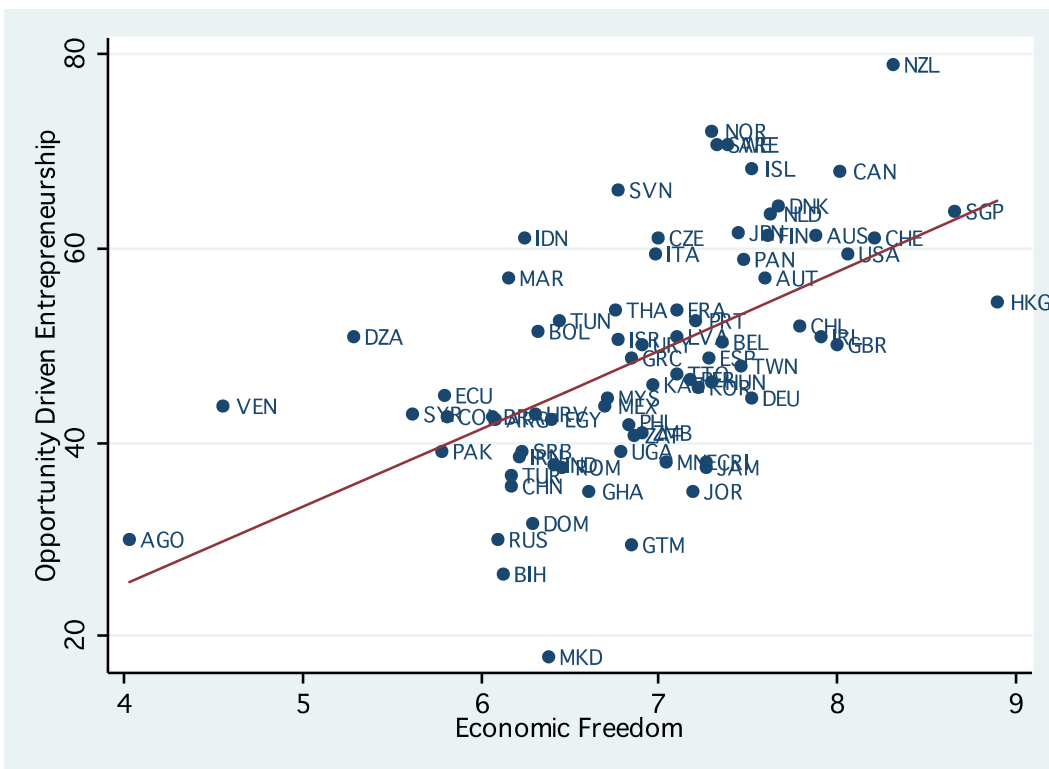
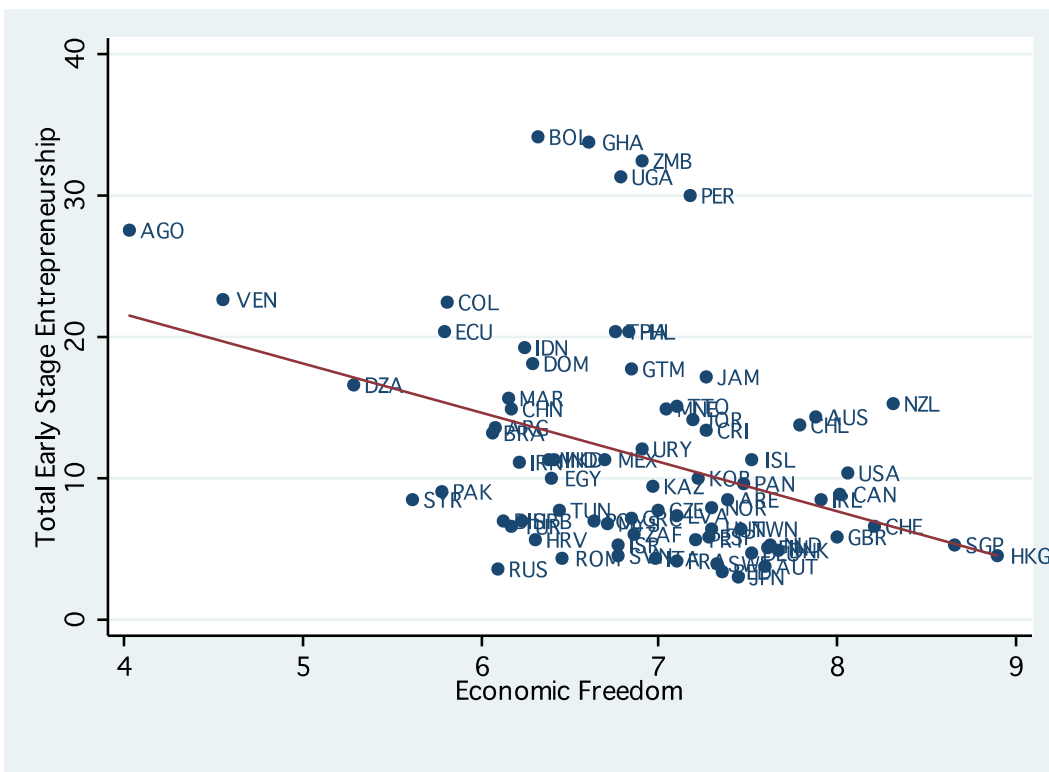


Figure 2: Entrepreneurship and Informal Institutions: Social Status

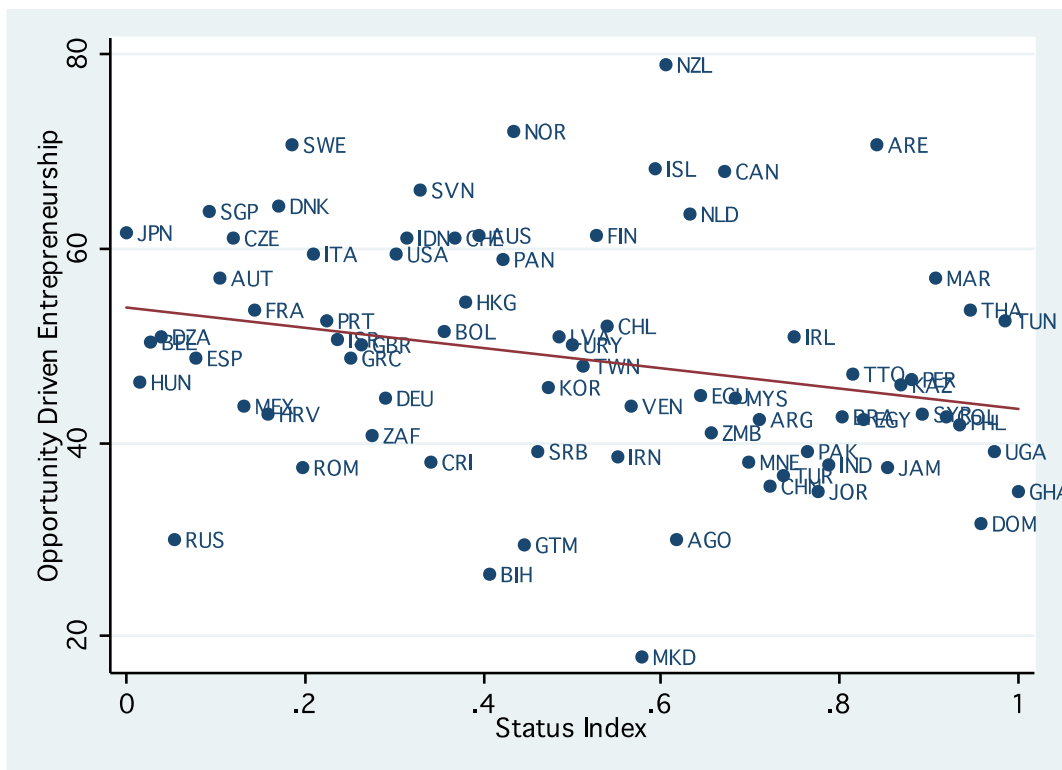
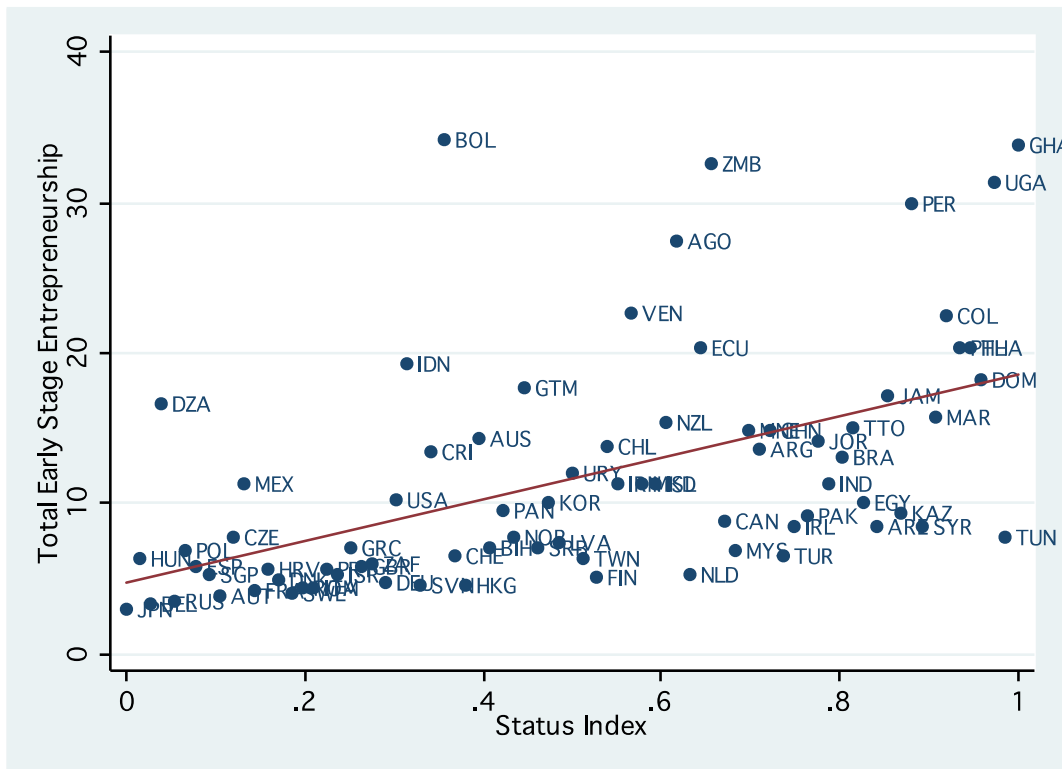


Figure 3: Entrepreneurship and Informal Institutions: Locus of Control

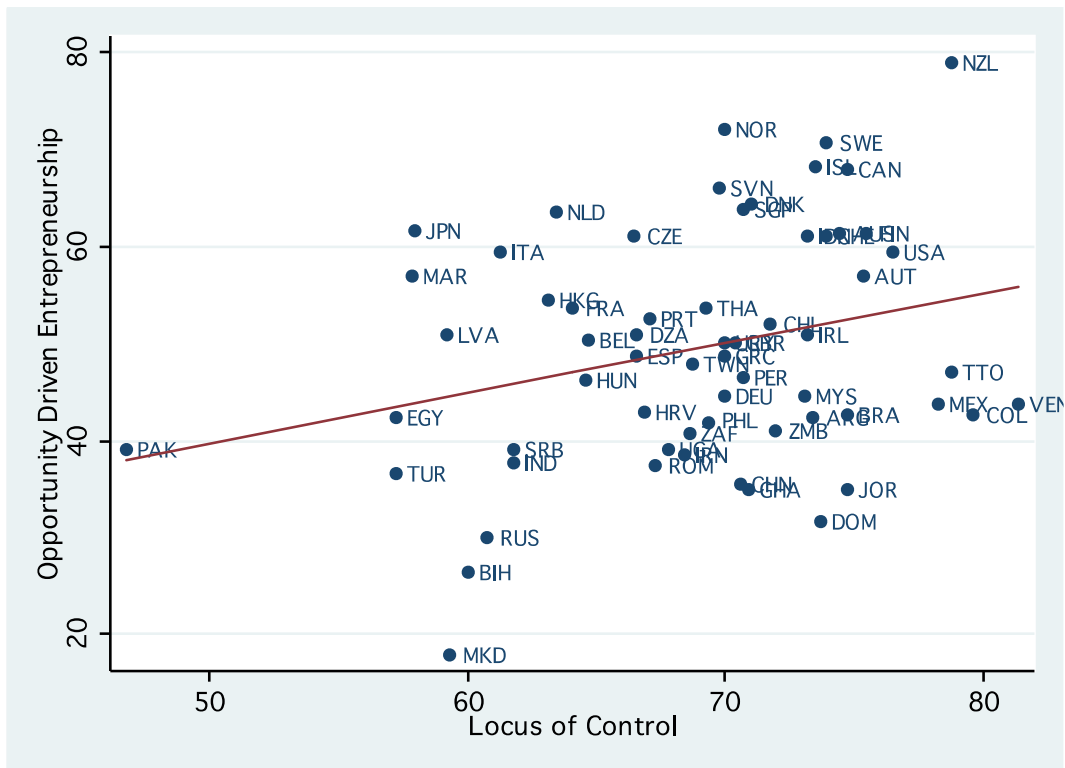
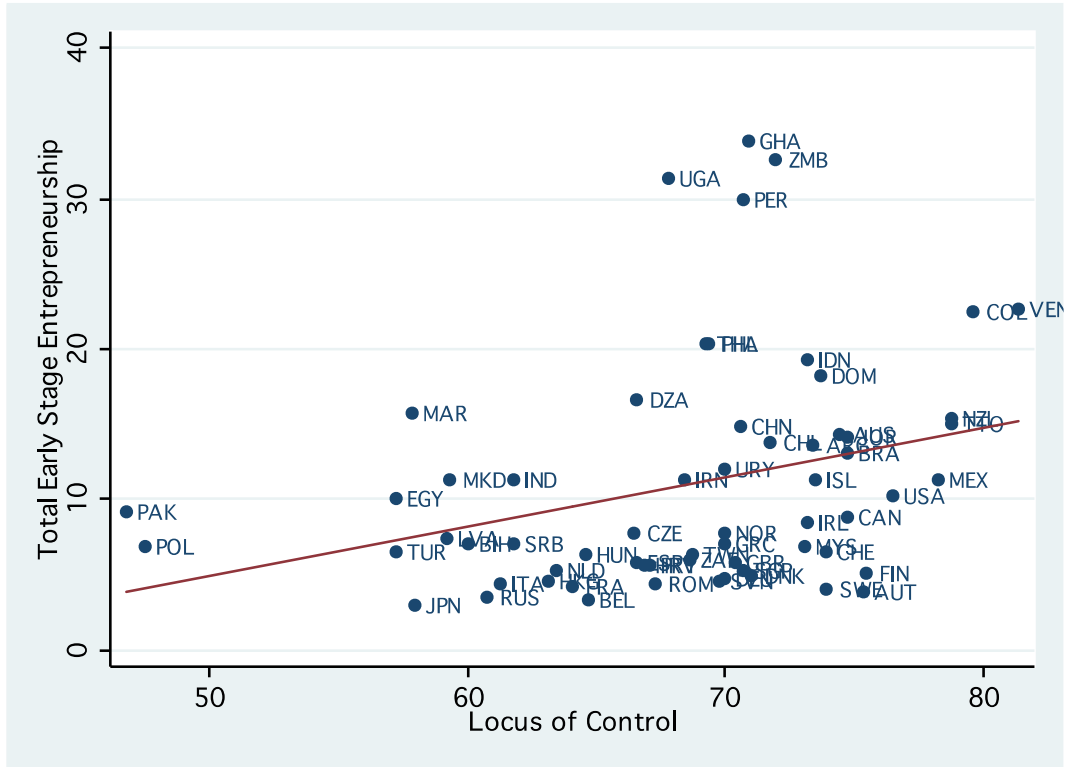


Table 1: Univariate Robust Regressions (RLS)

Dep Var:	Independent Var:					
	EFW	Status Index	Control	Obed	TrustResp Index	Market Index
TEA	2.751** (0.884)	7.285** (2.252)	0.484*** (0.072)	0.148** (0.046)	2.999 (2.734)	-2.900 (2.673)
Observations	77	77	63	64	64	63
Adj. R-squared	0.506	0.512	0.703	0.577	0.465	0.470
Opportunity	3.722** (1.606)	4.986 (4.424)	0.182 (0.192)	0.042 (0.089)	9.774** (4.846)	-2.046 (4.979)
Observations	76	76	62	63	63	62
Adj. R-squared	0.411	0.388	0.363	0.361	0.393	0.363
Established	1.013 (0.639)	6.778*** (1.232)	0.199** (0.058)	0.027 (0.034)	3.961** (1.757)	0.437 (1.843)
Observations	77	77	62	63	64	63
Adj. R-squared	0.246	0.381	0.357	0.214	0.300	0.190
Intend	0.359 (1.575)	16.741*** (3.757)	0.434** (0.127)	0.223** (0.069)	-0.008 (3.944)	0.985 (3.925)
Observations	77	77	63	64	64	63
Adj. R-squared	0.651	0.714	0.766	0.750	0.706	0.684
Invest	2.201*** (0.455)	1.677 (1.394)	0.116** (0.045)	0.041 (0.028)	2.365* (1.263)	1.173 (1.494)
Observations	74	74	62	63	63	61
Adj. R-squared	0.617	0.391	0.244	0.453	0.200	0.396

Note: Standard errors are in parentheses. Significance level: *** at 1%, ** at 5%, * at 10%. Log GDP per capita is included each regression as well as a constant term.

Table 2: Bivariate Robust Regressions (RLS)

	Dep. Variable: TEA					Dep. Variable: Opportunity					Dep. Variable: Established				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
EFW	2.956*** (0.784)	1.255 (0.795)	2.924** (0.901)	3.680*** (0.949)	4.952*** (1.128)	3.637** (1.612)	4.639** (1.876)	4.568** (1.832)	4.120** (1.812)	6.077** (1.999)	0.269 (0.472)	1.246* (0.635)	1.302* (0.711)	1.037 (0.696)	1.203 (0.816)
Status Index	6.438** (2.081)					4.399 (4.350)					6.660*** (1.253)				
Control		0.472*** (0.072)					0.155 (0.185)					0.201*** (0.058)			
Obed			0.127** (0.042)					0.005 (0.086)					0.023 (0.033)		
TrustResp Index				2.670 (2.471)					7.842 (4.743)					3.349* (1.811)	
Market Index					-1.476 (2.228)					-1.193 (4.603)					0.085 (1.860)
Log GDP pc	-5.375*** (0.786)	-6.671*** (0.649)	-5.727*** (0.881)	-7.780*** (0.829)	-7.817*** (0.798)	6.664*** (1.617)	5.077** (1.538)	5.304** (1.792)	4.094** (1.574)	4.917** (1.594)	-0.442 (0.473)	-3.428*** (0.518)	-2.871*** (0.695)	-3.568*** (0.607)	-2.764*** (0.654)
Constant	37.468*** (6.667)	32.822*** (6.401)	39.657*** (8.124)	56.827*** (6.889)	50.368*** (7.866)	41.234** (13.797)	41.790** (15.632)	32.912* (16.483)	-21.801 (13.137)	39.461** (15.520)	6.070 (4.015)	17.750*** (5.114)	24.920*** (6.415)	32.507*** (5.049)	25.521*** (6.312)
Observations	77	63	64	64	62	76	62	63	63	62	77	63	64	64	63
Adj. R-squared	0.581	0.716	0.641	0.611	0.638	0.421	0.422	0.417	0.446	0.458	0.373	0.460	0.324	0.360	0.250

Note: Standard errors are in parentheses. Significance level: *** at 1%, ** at 5%, * at 10%.

Table 3: Bivariate Robust Regressions (RLS)

	Dep. Variable: Intend					Dep. Variable: Invest				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
EFW	-1.509 (1.419)	2.279 (1.443)	3.015** (1.449)	3.766** (1.539)	4.645** (1.721)	2.163*** (0.465)	2.369*** (0.457)	2.388*** (0.448)	2.383*** (0.475)	2.871*** (0.504)
Status Index	17.687*** (3.768)					0.856 (1.236)				
Control		0.423** (0.131)					0.097** (0.044)			
Obed			0.205** (0.068)					0.037* (0.021)		
TrustResp Index				-1.689 (4.004)					0.727 (1.235)	
Market Index					1.612 (3.924)					0.848 (1.152)
Log GDP pc	-8.743*** (1.423)	-14.612*** (1.178)	-12.193*** (1.417)	-14.370*** (1.343)	-14.289*** (1.379)	-4.173*** (0.477)	-4.671*** (0.376)	-4.267*** (0.449)	-4.775*** (0.417)	-4.662*** (0.414)
Constant	104.087*** (12.067)	112.113*** (11.621)	105.340*** (13.076)	129.067*** (11.163)	120.072*** (13.312)	29.291*** (4.035)	26.352*** (4.028)	27.735*** (4.225)	33.556*** (3.519)	29.016*** (4.020)
Observations	77	63	64	64	63	74	62	63	63	61
Adj. R-squared	0.706	0.767	0.762	0.735	0.713	0.611	0.725	0.734	0.711	0.727

Note: Standard errors are in parentheses. Significance level: *** at 1%, ** at 5%, * at 10%.

Table 4: Robust Regressions with Controls (RLS)

	Dep. Var: TEA			Dep. Var: Opprt.			Dep. Var: Established			Dep. Var: Intend			Dep. Var: Invest		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
EFW	1.742*	1.844*	-0.415	6.904**	7.652**	3.768**	0.790	0.313	1.601*	1.870	2.072	2.770	2.489***	2.150***	3.451***
	(0.876)	(1.075)	(0.865)	(2.126)	(2.547)	(1.763)	(0.628)	(0.714)	(0.932)	(1.567)	(1.517)	(1.666)	(0.551)	(0.532)	(0.618)
Status Index	4.732**	5.233**	4.138*	7.857	7.300	8.652*	7.443***	6.881***	7.264**	8.724**	8.046**	8.025*	0.589	0.737	-0.660
	(2.212)	(2.529)	(2.324)	(5.384)	(6.076)	(4.680)	(1.584)	(1.680)	(2.502)	(3.957)	(3.569)	(4.474)	(1.403)	(1.413)	(1.456)
Control	0.360***	0.364***	0.185**	0.052	0.007	-0.398*	0.069	0.070	0.115	0.335**	0.212*	0.130	0.065	-0.021	0.042
	(0.075)	(0.082)	(0.090)	(0.199)	(0.219)	(0.201)	(0.054)	(0.055)	(0.097)	(0.135)	(0.116)	(0.174)	(0.051)	(0.060)	(0.051)
Obed	0.054	0.062	0.062	-0.137	-0.106	-0.183*	-0.033	-0.026	0.002	0.151**	0.072	0.208**	0.030	0.067**	0.015
	(0.040)	(0.044)	(0.050)	(0.098)	(0.107)	(0.101)	(0.028)	(0.029)	(0.054)	(0.071)	(0.062)	(0.097)	(0.025)	(0.032)	(0.025)
TrustResp Index	0.102	0.244	2.705	3.451	2.474	6.303	0.154	0.145	0.190	-5.678	-6.053*	-7.013	0.290	-1.014	-0.111
	(2.264)	(2.548)	(2.447)	(5.621)	(6.334)	(5.101)	(1.622)	(1.693)	(2.636)	(4.050)	(3.595)	(4.712)	(1.423)	(1.487)	(1.465)
Market Index	-1.336	-1.509	1.170	1.462	2.785	2.333	0.039	0.524	-1.899	0.260	-1.473	1.226	0.944	1.366	0.573
	(1.936)	(2.157)	(2.147)	(4.735)	(5.231)	(4.287)	(1.387)	(1.433)	(2.312)	(3.464)	(3.044)	(4.135)	(1.219)	(1.305)	(1.244)
Pop (% female)		0.389			-0.164			-0.111			-	2.453**			-0.621*
		(0.602)			(1.430)			(0.400)				(0.850)			(0.356)
Domestic Credit		-0.006			-0.004			0.007			-0.035*				-0.017**
		(0.013)			(0.031)			(0.008)			(0.018)				(0.007)
FDI		-0.090			-0.353			0.033			-0.112				-0.192*
		(0.184)			(0.436)			(0.122)			(0.259)				(0.106)
Ethnic Diversity			-0.674			0.122			-1.833			-0.129		2.328	
			(3.127)			(6.254)			(3.368)			(6.021)		(1.909)	
Protestant			0.042			0.131*			-0.050			0.039		0.035	
			(0.033)			(0.067)			(0.036)			(0.064)		(0.022)	

Catholic			-0.003 (0.021)			0.021 (0.042)			-0.033 (0.022)			0.011 (0.040)		0.002 (0.013)	
Muslim			-0.10** (0.035)			-0.15** (0.070)			-0.019 (0.038)			0.009 (0.068)		-0.015 (0.023)	
Education 1960			-0.018 (0.047)			-0.147 (0.094)			0.017 (0.051)			0.084 (0.091)		-0.006 (0.029)	
Legal Origin			-0.816 (0.603)			0.528 (1.219)			1.051 (0.650)			1.493 (1.162)		0.369 (0.385)	
Geography			-4.740 (4.181)			-10.587 (8.354)			-3.028 (4.502)			-10.358 (8.049)		0.504 (2.541)	
Observations	61	60	50	60	59	49	61	60	50	61	60	50	60	49	59
Adj. R- squared	0.750	0.722	0.844	0.493	0.471	0.683	0.485	0.449	0.410	0.806	0.840	0.827	0.723	0.833	0.740

Note: Standard errors are in parentheses. Significance level: *** at 1%, ** at 5%, * at 10%. Log GDP per capita is included each regression as well as a constant term.

Table 5: Robust Regressions (RLS) Subsamples

	Dep. Var: TEA			
	Rich	Poor	Free	Unfree
	(1)	(2)	(3)	(4)
EFW	3.699* (2.114)	0.352 (1.851)		
Status Index	5.365* (2.991)	10.076** (4.058)	3.557 (2.777)	6.984** (3.315)
Control	0.186 (0.126)	0.292** (0.132)	0.302** (0.122)	0.545*** (0.093)
Obed	0.034 (0.043)	0.229** (0.073)	0.050 (0.049)	0.053 (0.061)
TrustResp Index	-6.190* (3.095)	-4.363 (4.847)	3.186 (3.175)	-1.815 (3.574)
Market Index	4.040 (2.390)	-1.932 (4.055)	2.796 (1.969)	-1.599 (3.053)
Log GDP per capita			-6.552*** (1.008)	-5.969** (1.602)
Observations	26	34	32	29
Adj. R-squared	0.508	0.546	0.832	0.808

Note: Standard errors are in parentheses. Significance level: *** at 1%, ** at 5%, * at 10%. Constant term is included each regression.

Table 6: Robust Regressions (RLS) Economic Freedom Sub-indices

	Dep. Var: TEA		Dep. Var: Opprt.		Dep. Var: Established		Dep. Var: Intend		Dep. Var: Invest	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Gov. Size	1.252** (0.466)	0.188 (0.529)	-0.144 (0.839)	-0.524 (1.176)	0.411 (0.297)	0.114 (0.362)	0.289 (0.870)	0.257 (0.916)	0.373 (0.327)	0.275 (0.235)
Rule of Law	0.324 (0.657)	-0.433 (0.599)	2.852** (1.183)	3.097** (1.345)	0.643 (0.419)	0.296 (0.410)	-0.280 (1.227)	-1.217 (1.036)	0.494 (0.370)	-0.005 (0.331)
Sound Money	0.869 (0.657)	1.389** (0.656)	0.700 (1.183)	2.296 (1.459)	0.022 (0.418)	1.542** (0.449)	0.221 (1.226)	3.062** (1.135)	0.934** (0.408)	0.912** (0.336)
Int. Trade	0.104 (0.936)	-1.301 (0.893)	-1.399 (1.681)	-3.093 (1.987)	-1.202** (0.596)	-1.162* (0.612)	-0.526 (1.747)	-1.618 (1.545)	-0.212 (0.552)	0.304 (0.470)
Regulation	0.680 (0.977)	1.250 (0.827)	0.865 (1.754)	3.404* (1.834)	-0.019 (0.623)	-0.167 (0.566)	0.488 (1.825)	0.548 (1.430)	0.767 (0.521)	0.935* (0.495)
Status Index		5.022** (2.339)		9.739* (5.240)		7.541*** (1.602)		11.078** (4.046)	0.752 (1.448)	
Control		0.375*** (0.077)		0.019 (0.188)		0.067 (0.052)		0.326** (0.133)	0.068 (0.051)	
Obed		0.064 (0.042)		-0.066 (0.095)		-0.032 (0.028)		0.136* (0.072)	0.030 (0.026)	
TrustResp Index		-0.097 (2.577)		-6.505 (5.896)		-1.451 (1.764)		-3.517 (4.457)	0.037 (1.589)	
Market Index		-3.014 (2.022)		0.615 (4.592)		0.305 (1.384)		-0.061 (3.498)	0.739 (1.251)	
Observations	77	61	76	60	77	61	77	61	60	74
Adj. R-squared	0.491	0.747	0.448	0.561	0.119	0.536	0.623	0.807	0.723	0.644

Note: Standard errors are in parentheses. Significance level: *** at 1%, ** at 5%, * at 10%. Log GDP per capita is included each regression as well as a constant term.