Chapter 2. An Updated Quantitative Assessment of Kerlin’s Macro-Institutional Social Enterprise Framework

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Introduction

The social enterprise sector shows variation in terms of shape and size across nations, making cross-country comparative research crucially important for our understanding of these organizations (Borzaga & Defourny, 2001; Chell et al., 2010; Gidron & Hasenfeld, 2012). Among various attempts to explain this variance is the use of institutional theory (North, 1990), which proposes explanations for the current state and growth patterns of social enterprises based on formal and informal institutional contexts in each country (Defourny and Nyssens, 2010, 2016; Estrin et al., 2013; Kerlin, 2009, 2013; Puumalainen et al., 2015; Stephan et al., 2015). Kerlin’s Macro-Institutional Social Enterprise (MISE) framework is a prominent example of the use of historical institutional theory to shed light on inter-country differences of social enterprises (Kerlin, 2013).

Kerlin’s MISE framework (2013) aims to establish a conceptual understanding of the social enterprise sector by examining how the national institutional context affects the development and current shape of social enterprise. To that end she draws on the theory of historical institutionalism (Thelen, 1999), and proposes that formal and informal institutions create historical causal feedback loops, which both sustain the present setting and also influence the formation of future institutions. The framework contains formal national institutional variables (economy, government, civil society), as well as informal ones (culture, social classes) to develop a comparative macro-level understanding of social enterprises across countries. The informal and formal institutions affect each other and together they shape the power structures that underlie the development of the social enterprise sector over time.

Most of the former assessments of the framework have been qualitative case studies such as those included in this volume. An early quantitative analysis of Kerlin’s MISE framework tested its implications by employing a hierarchical linear modelling technique with the 2009 Global Entrepreneurship Monitor dataset along with country-level institutional variables (Monroe-White, Kerlin, & Zook, 2015). It found that there is significant between-country variance in the size of the social enterprise sector some of which can be attributed to the national institutional factors included in the analysis; which are economic competitiveness rank, size of welfare state and collectivist culture to be specific (Monroe-White et al., 2015). A crucial limitation of this study was the exclusion of civil society from the empirical testing due to the lack of sufficient civil society data. Moreover, the study only included two culture variables to capture the effect of informal institutions, one of which had to be dropped from the original model and tested separately given the high correlation between them. Here we build on this previous quantitative critique of Kerlin’s MISE framework.

This study extends the former analysis by including a variety of additional culture variables to better test informal institutional effects on social enterprise variation across countries. We also update testing of formal institutional influences by including civil society with the help of newly available civil society data. Moreover, the previous study does not mention the interplay between the two types of institutions, formal and informal. Here we improve the analysis to account for the relative effects of each of these institutional components, to test the importance of institutional configurations and how they relate to variation in social enterprise on a national level (Stephan et al., 2015).
Methodology

Similar to the early version of this study (Monroe-White et al., 2015) we use hierarchical linear modeling. This advanced type of regression analysis allows us to analyze the effects of higher level factors (institutional country characteristics) on the lower level variables (social enterprise organizations) where data are nested, meaning that organizations in the first level are clustered in countries at the second level of analysis. Likewise, we continue to use the same estimation method, logistic hierarchical generalized linear model assuming a binomial distribution over the dependent variable, social enterprise, which was constructed as a binary variable. This logistic regression model uses binomial distribution to predict a binary response for the dependent variable at the lower level of analysis based on both lower and higher level explanatory variables.

The hierarchical model used in the analysis consists of two levels, with social enterprise organizations assigned to Level-1 and countries to Level-2. In a multilevel model, it is suggested that there are at least 30 to 50 observations for each variable at the Level-2 in order to obtain optimal results (Maas and Hox, 2004; Hox and Maas, 2002; Snijders and Bosker, 2012), because if the level-2 sample size is lower one risks having hypothesis tests which are uninterpretable within the likelihood framework (Bowers and Drake, 2005). In the original study, although most of the country-level institutional variables had at least 40 observations, some institutional variables were problematic as they were missing values for several countries, thereby reducing the number of complete cases (i.e. n < 30). This problem was overcome by imputing values for the missing cases for the cultural variables. However, the civil society variable had to be removed from the empirical analysis due to a large number of missing cases (it had values for only 25 countries). Here, instead of using the civil society models we approximate civil society via a civil society participation index produced by V-Dem (Bernhard et al., 2015; Coppedge et al., 2016a, 2016b).

Therefore, this current analysis is an improvement over the original by allowing us to test for the effect of civil society at the country level as it solves the problem of missing cases in Level-2 for that variable. Yet, we still have a low sample size problem with some culture variables introduced in the analysis.

The updated analysis is based on the original dataset used in the initial version consisting of individual level survey results to measure organizations and national level institutional variables for 54 countries. Social enterprise activity, the dependent variable, is coded from the 2009 Global Entrepreneurship Monitor (GEM) Adult Population Survey, “which captures, among other things, existing national differences in entrepreneurial behavior and characteristics of the entrepreneurs aged 18 to 64” (Monroe-White et al., 2015). National-level independent variables come from various data sources described below in detail.

Data

Dependent variable

Social enterprise. In this study, social enterprise organizations are broadly defined as “the use of nongovernmental, market-based approaches to address social issues” (Kerlin, 2013, 84). In addition to legal distinctions (i.e. for-profit, nonprofit and low-profit), Figure 2 outlines a spectrum of organizational forms and focus, where organizations vary according to their key objectives, mission or goals (Alter, 2007). Although most enterprise research has focused on profit maximizing firms where the bottom line is measured in terms of increasing profits, organizations with nonprofit or social goals using business principles are increasingly common.

On the right side of the spectrum are for-profits including conventional for-profit organizations and firms practicing corporate social responsibility. On the left are nonprofit organizations including conventional nonprofits and nonprofits that generate earned income. For-profit firms have profitability (economic value

1 This section is for the most part excerpted from the initial version of this study published in the Social Enterprise Journal (Monroe-White, Kerlin, and Zook, 2015).
creation) as their primary motive where they are under some obligation to redistribute that profit among shareholders. Nonprofits have social mission (social value creation) as their primary motive is dictated by their stakeholders. The value orientation (i.e. economic, social and/or environmental) of an organization reflects the extent to which achieving impact in that area determines the success of the organization, and it is also what attracts and retains talent, customers and investors (Hull and Lio, 2006; McDonald, 2007). Moving from left to right, organizations become increasingly reliant on market revenue (i.e. sales of goods and services).

Using Alter’s (2007) spectrum and the 2009 GEM data, three types of organizations were identified: conventional business, social organization and social enterprise. Five GEM variables were used to determine organization type. These variables relate to the organization’s value orientation, ownership status and amount of income generated through sales (see Lepoutre et al., 2013). Conventional businesses are defined as those which sold goods and/or services without an explicit social purpose. Social organizations are defined as traditional nonprofits, nonprofit equivalents or social organizations with an explicit social purpose, which do not generate revenue from sales (equivalent to traditional nonprofits in Alter’s spectrum, see Figure 2). Thirdly, social enterprises are organizations with an explicit social purpose that also generate revenue from sales. Using the definition of social enterprise from Kerlin (2013), an organization is defined as a social enterprise if the respondent indicated that their organization generated revenue from sales and that they are the current founder and/or owner–manager of an existing organization with an explicit social purpose. In this way, responses from nascent entrepreneurs were excluded from the analyses.

In the GEM data, social and/or environmental goal orientation is the primary indicator of social enterprise. Percent sales revenue is used as a secondary indicator of social enterprise because both for-profit firms and social enterprises could potentially generate up to 100 per cent revenue from sales. These two measures were combined to determine if an organization is a social enterprise. To further clarify, there were two ways to classify social enterprise in the GEM data: implicit social enterprise and explicit social enterprise. Implicit social enterprise refers to any business entity (an organization that sells goods or services) with 50 per cent or greater social and/or environmental goals. There were approximately 7,000 social enterprises under this classification. Explicit social enterprise on the other hand refers to all social

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2 The GEM variables used are: sestart, seowndif, seonincm, seonsale and ownmge
organizations (defined as any kind of activity, organization or initiative that has a particularly social, environmental or community objective) that also generate sales revenue. There were approximately 1,200 social enterprises under this classification. We chose to restrict the dataset to explicit social enterprise to ensure that the organizations have a deliberate social mission. This operationalization also restricts “social enterprises” to the two maybe three categories on the left hand side of Alter’s spectrum: nonprofit organizations with income generating activity, social enterprise and borderline social businesses (in instances where social and/or environmental goals are equal to 50 per cent).

In several instances, respondents either did not indicate if their social organization generated earned income, or the information provided was conflicting. If there was no way to confidently determine whether or not the respondent owned or managed a social organization or social enterprise, the organization was dropped from the sample. This resulted in the loss of approximately 300 un-classifiable social entities. Likewise, in the case of serial entrepreneurs, if respondents indicated that they currently owned—managed multiple businesses, they were asked to speak to the organization for which they were the most familiar. However, in a small number of cases, managers of existing social businesses were also managers of existing conventional businesses. If the two organizations were different or unknown, subsequent responses on sales revenue and goal orientation could have pertained to either the social or the conventional business; therefore, these entities were also excluded from the analyses.

**Independent variables - National-level data**

The national-level predictor variables in this study came from the global indicators outlined by Kerlin (2009, 2013). The number of countries with available data varied between each indicator, making cross-country comparisons a challenge. Missing values were avoided as much as possible by using the closest available yearly data (prior to 2009). Three variables in this study derive from the World Bank’s World Development Index (WDI) (Lee, 2012). The WDI is the source of the World Bank’s annual compilation of data about development. Data are derived primarily from official registers, national accounts or based on household, health or labor force surveys. Additional sources include the World Economic Forum’s Global Competitiveness Index, the Global Leadership and Organizational Behavior Effectiveness Research Program (GLOBE) survey on culture, the Varieties of Democracy (V-Dem) Institute’s civil society indicators, The Hofstede Centre, the World Values Survey (WVS), and the Organization for Economic Co-operation and Development (OECD) Development Assistance Committee’s (DAC) data on international aid by country.

**Civil Society:** The most significant improvement of this paper over the original version is the inclusion of a civil society variable in the empirical analysis. In the earlier version this important element of the macro-institutional framework had to be excluded from the analysis due to lack of data. The preliminary data consisted of civil society model identification for 30 countries based on five categories created by Salamon and Sokolowski (2009). However, the number of countries with available data further decreased with the addition of each variable in the estimation models, which made multilevel modelling problematic. Therefore, the civil society variable had to be dropped from the analysis. Here we restore a civil society variable to the empirical analysis by using a recently released dataset by the Varieties of Democracy (V-Dem) Institute.

The V-Dem project aggregates independent subjective ratings from country experts to measure latent (not directly measurable) country characteristics to produce indicators related to democratic governance and institutions. These experts’ ratings are aggregated into point estimates by employing Bayesian item response theory models to detect and correct for rater disagreement patterns and random error caused by the difference between raters’ perceptions and the true value of the variable or coding mistakes (Pemstein et al., 2015). The new V-Dem Dataset (2016) contains ten civil society indicators, each based on a distinct question measuring different aspects of civil society, which makes it possible to do comprehensive comparative analysis about the state and development trajectory of civil society between countries and over time (Bernhard et al., 2015). Information about each index, with its underlying question
and corresponding responses described in detail, can be found in the V-Dem Codebook (Coppedge et al., 2016a, 235-242).

Among these ten civil society indicators in the V-Dem dataset we choose to use the civil society participatory environment indicator (v2csprcpt) developed to measure the level of citizen involvement in civil society organizations (CSOs) in a country (Bernhard et al., 2015). We selected this citizen participation indicator particularly for our analysis because we expect that the level of public involvement in civil society reflects the strength of the civil society in a given country. We hypothesize a positive effect wherein the more participatory the civil society environment, the more social entrepreneurship activity; leading to a larger social enterprise sector.

With the civil society participation indicator, the degree of citizen engagement in CSOs in a country is assessed by asking the experts to assign a rating from zero to three, with zero meaning most organizations are state-sponsored and participation is not completely voluntary and three indicating the existence of many diverse CSOs and citizens who are occasionally participate in at least one of them (Bernhard et al., 2015). Detailed information about the indicator question and rating responses can be found in the Appendix Table A1.

**Welfare state.** Two variables are combined to create the welfare state construct identified by Kerlin (2009, 2013): expenditure on public health and public education. Public education expenditure captures the percent of gross national income spent on public education operating expenditures including wages and salaries at all levels of government. It also includes subsidies provided to households or private entities for education related spending. These data come from the UNESCO Institute or Statistics and are gathered from ministries of education or related entities within each country. Public health expenditure is calculated as recurrent and capital spending including donations from international agencies or NGOs. Data on health expenditure came from the World Health Organization’s (WHO’s) Global Health Expenditure Database.

**Economy.** The World Economic Forum’s GCI ranks countries according to a weighted system of pillars and indicators. They define competitiveness as “the set of institutions, policies, and factors that determine the level of productivity of a country” (Schwab and Sala-i-Martin, 2011, p. 4). The GCI identifies twelve pillars which drive productivity: institutions, infrastructure, macroeconomic stability, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market sophistication, technological readiness, market size, business sophistication and innovation. These pillars are used to develop scores which are in turn used to determine three broad stages of national economic growth: factor-driven (FD), efficiency-driven (ED) and innovation-driven (ID) economies (Schwab and Sala-i-Martin, 2011). FD economies are predominantly extractive in nature (i.e. mining, fossil fuels, etc.) and have low levels of infrastructure. Subsequently, entrepreneurship in FD economies is mostly necessity-based, as workers create self-employment opportunities for survival. ED countries are characterized by their higher education focus and training of personnel, resulting in a large small- and medium-sized manufacturing industry. Lastly, the ID stage is characterized by greater amounts of wealth and by enterprises that compete through the introduction of innovative goods and processes. The lower the GCI rank, the more competitive a country is, which should promote social entrepreneurship, so we expect a negative coefficient for this variable.

**Culture.** The GLOBE (Global Leadership and Organizational Behavior Effectiveness) database, developed by House et al. (2004, p. 15), established nine dimensions of culture used to compare similarities and differences in norms, values, beliefs and practices among various societies. The authors defined culture as “shared motives, values, beliefs, identifies, and interpretations of meanings of significant events that result from common experiences of members of collectives that are transmitted across generations.” In the case of multicultural countries, GLOBE researchers sampled the subculture with the greatest amount of commercial activity. However, in certain countries more than one subculture was surveyed. For example, in South Africa, both White and Black South Africans were surveyed.
Although GLOBE identifies nine core dimensions of culture, Kerlin (2013) restricted the dimensions of culture to the two which appeared to be the most directly related to entrepreneurship: uncertainty avoidance and in-group collectivism. Uncertainty avoidance is defined as the extent to which a society, organization or group relies on social norms, rules, and procedures to alleviate unpredictability of future events. In-group collectivism measures the degree to which individuals express pride, loyalty and cohesiveness in their organizations or families (House et al., 2004). Since these two variables are highly correlated in the GLOBE dataset they cause multicollinearity problems; so in the updated analysis we replace the in-group collectivism variable with Hofstede’s individualism variable (1980). In fact, the GLOBE in-group collectivism variable shows a strong negative correlation with Hofstede’s individualism (1980), justifying our decision.

Here we extend the culture component in our analysis by including two of the Hofstede’s six cultural dimensions (1980), specifically we use power distance (PDI) and individualism versus collectivism (IDV) data as published in Cultures and Organizations 3rd edition (Hofstede, Hofstede, and Minkov, 2010). The power distance index measures the attitude of members of a society who have a lower position in the power hierarchy and their views on the unequal distribution of power, that is inequality in the society. The higher the Power Distance measure, the more hierarchically structured the social order in which everybody knows their position and nobody questions it. The lower this index is, a more equal distribution of power is desired in the society and inequalities need to be justified on some legitimate basis. The individualism versus collectivism index, on the other hand, measures preferences of members of a society in extending their care beyond themselves and their first-degree relatives. A higher individualism (IDV) score indicates that individuals prefer to tend for themselves and their immediate family members in ‘a loosely-knit society’. A lower IDV score that indicates collectivism, shows the opposite case where members of the society are expected to care for relatives beyond immediate families as well as particular group members, thus a ‘tightly-knit society’ (Hofstede, 2001).

We further investigate the culture aspect of the framework by including two additional variables from the World Values Survey (2013), namely postmaterialism and trust-in-others. The postmaterialism variable is calculated from the 4-item version of Inglehart’s postmaterialist index (1997) as percentage of total cases identified as postmaterialist in each country. Similarly, the trust variable is calculated as the percentage of total cases in each country who have opted to say “Most people can be trusted” rather than “Need to be very careful” (WVS, 2013). We use the World Values Survey (WVS) Wave 5 data collected from 1995 through 2008 to compute these two variables.

*International aid.* Net official development assistance per capita captures the flow of official and private financial contributions from the members of the OECD DAC to developing economies divided by mid-year population. DAC members report this information directly to the DAC secretariat. Official assistance includes aid from state, local and executive agencies aimed at promoting economic development and welfare. Figures include resource flows through cash and commodities, including those aimed at augmenting the stock of human capital. Values do not reflect aid given by recipients to other developing nations and excludes aid for military assistance.

**Analysis**

A multilevel mixed-effects binomial logistic regression was conducted to assess whether and to what extend national level formal institutional variables, specifically economic competitiveness (GCI Rank), welfare state, civil society, and international aid, as well as informal institutional variables, uncertainty avoidance (UNCRTA), individualism (IDV), power distance (PDI), postmaterialism (POSTMTR), and trust have an effect on the probability of an organization being a social enterprise, controlling for total country population. Given the small sample size (i.e. fewer than 100 country cases), a Satterthwaite approximation is useful when Level-2 units vary considerably in size. Specifically, it corrects for calculating degrees of freedom providing a more conservative estimate of standard errors.

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3 A Satterthwaite approximation is useful when Level-2 units vary considerably in size. Specifically, it corrects for calculating degrees of freedom providing a more conservative estimate of standard errors.
approximation was used, along with a robust estimation of the fixed effects, which is useful in smaller sample sizes (Heck et al., 2012). The use of a multilevel model estimation method is justified by estimating an initial empty model which suggests that 46.7 percent of the variance in organization type can be accounted for by country differences\(^4\). Thus, there is significant variance in the average probability of an organization being a social enterprise and therefore social enterprise does vary by country.

**Informal institutional fixed-effects:**

Given the variation in social enterprise from the empty model, we then examined if this variation could be explained by informal institutions only. A series of models with national-level culture predictors were estimated by considering each culture variable separately as well as in combinations. An estimation result is also provided showing all culture variables in one regression. In each of these models, culture effects are controlled for GDP and population, and all variables are centered around the grand mean (Enders and Tofighi, 2007).

Estimation results for informal institutions in Table I show that the variation of the intercept is significant in all cases, meaning that there still remains between-country variance in organization type after controlling for the effect of culture variables. We see in the individual culture fixed-effects estimations that each culture variable, except Power Distance (PDI), by itself explains a significant amount of the variance in organization type among countries\(^5\), though postmaterialism and trust are only significant when controlling for population.

We observe that each unit increase in individualism (IDV) by itself increases the likelihood of an organization being a social enterprise by a multiple of 1.029, whereas the similar effect of uncertainty avoidance is a multiple of .232 which means a negative effect on the probability of an organization being social enterprise. This supports our hypothesis that individualism affects the size of social enterprise sector positively and uncertainty avoidance affects it negatively. Similarly, postmaterialism and trust have a positive influence on the odds of having a social enterprise as opposed to another organization. However, one needs to be cautious in interpreting the size of these coefficients because each variable is in its own scale and a unit increase in one does not necessarily correspond to a unit increase in another.\(^6\)

<table>
<thead>
<tr>
<th>Culture Fixed Effects</th>
<th>UNC</th>
<th>IDV</th>
<th>PDI</th>
<th>POS†</th>
<th>TRST†</th>
<th>IDV</th>
<th>IDV</th>
<th>IDV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PDI</td>
<td>PDI</td>
<td>PDI</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>UNC</td>
<td>UNC</td>
<td>UNC</td>
</tr>
<tr>
<td>GDP</td>
<td>1.000</td>
<td>1.000</td>
<td>**1.000</td>
<td></td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>IDV</td>
<td></td>
<td>**1.029</td>
<td></td>
<td></td>
<td>**1.038</td>
<td>*1.029</td>
<td>*1.036</td>
<td></td>
</tr>
<tr>
<td>PDI</td>
<td>.997</td>
<td>1.020</td>
<td>1.014</td>
<td>1.026</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

\(^4\) In multilevel modelling, an empty (unconditional) model estimation is run to assess if any of the variance in the dependent variable (in this case organization type, i.e. whether a business or organization is a social enterprise or not) is due to nesting by level-2 clusters (in this case countries) (Raudenbush and Bryk, 2002). Results showed an estimate of 2.89 for the variance in the random intercept of the empty model, resulting in an intraclass correlation coefficient (ICC) of 0.467.

\(^5\) Because Level 1 variance is fixed at 3.29 for binary and ordinal logistic models, the percentage accounted for between two different models is not comparable. That is, the percentage is rescaled for each model.

\(^6\) The very large coefficient on the postmaterialism variable is due to scaling, and does not mean a comparable effect size.
Quantitative Assessment of Kerlin’s Macro-Institutional Social Enterprise Framework

Table I. Informal Institutional fixed-effects models

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>z-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncrta</td>
<td>**.232</td>
<td>.837</td>
<td>.747</td>
<td>.918</td>
</tr>
<tr>
<td>Postmtr</td>
<td>**8217.9</td>
<td>138.95</td>
<td>1350.6</td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>*11.72</td>
<td>21.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>popl.</td>
<td>**.860</td>
<td>.844</td>
<td>.888</td>
<td>.953</td>
</tr>
<tr>
<td>Intrcpt</td>
<td>***.015</td>
<td>***.025</td>
<td>***.021</td>
<td>***.024</td>
</tr>
</tbody>
</table>

Variance in intercept: 2.346 1.740 1.908 1.418 1.705 1.815 1.521 1.512
Number of Countries: 52 38 38 30 30 38 27 27

<table>
<thead>
<tr>
<th>Coefficients (Odds Ratio): &gt;1 means positive effect, =1 neutral effect, &lt;1 negative effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>***p&lt;.01, **p&lt;.05, *p&lt;.10</td>
</tr>
</tbody>
</table>

Note: All variables are grand-mean centered.
Note2: All variances in intercepts are significant.
†Postmaterialism and trust are significant only with population.

Another important result shown in the Table I is that when individualism (IDV) is included in the model along with the other culture variables it dominates over them, that is it remains the only culture variable with a significant effect on organization type, leaving other culture variables insignificant. This shows that individualism is the strongest cultural value overall, a fact that justifies its prominent inclusion in Kerlin’s MISE framework.

Formal institutional fixed-effects

After running the analysis with informal institutions that is the culture variables, we turned to the effect of formal institutions on organization type. First we included formal institutional variables in the model along with culture variables, then we estimated the model only with formal institutions in order to determine their isolated effect. In this way we were able to interpret the relative effect of each type of institutions on the likelihood of an organization being a social enterprise. To begin with a cautionary remark, we could not include GDP as a control variable in the models with formal institutions due to severe multicollinearity between GDP and GCI-rank.7 As such, GDP is excluded from the models that include formal institutional fixed-effects.

Country-level formal institutional variables include economic competitiveness (GCI-rank), welfare state, civil society participatory environment, and international aid. Using grand mean centering, we estimated models including formal institutions alongside informal institutions and also only with formal institutions in isolated form. The first regression in Table II includes all formal institutional variables and the most prominent culture variable, individualism. We observe that individualism loses its significance and two formal institutions, economic competitiveness and government welfare remain with a significant effect on organization type. Similarly, in a second regression, power distance and uncertainty avoidance are added to the model and overall the culture variables are insignificant, except power distance which is only

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7 Pearson correlation coefficient between GDP and economic competitiveness was -0.83, with VIF score of GDP=9.88. Likewise, correlation between GDP and government welfare spending was 0.85.
significant at the 10% level. On the other hand, the formal institutions of government welfare and civil society participation have a strong significant effect in this model. If we include the other two culture variables, postmaterialism and trust, they do not have a significant effect, and most formal variables lose their significance as well. This is due to two reasons; first a high correlation between variables becomes more problematic as we include more variables in the model, and secondly missing data for latter culture variables reduces the number of countries in the multilevel model to 26 which causes serious estimation problems making confidence intervals and significance uninterpretable (Bowers and Drake, 2005; Maas and Hox, 2004; Hox and Maas, 2002; Snijders and Bosker, 2012).

Overall, culture variables lose their significance once economic competitiveness, welfare state and civil society variables are included in the model. All these findings suggest that effect of culture variables are embedded in the economic institutional aspects such that their direct effect on social enterprise organizations remain insignificant when we control for formal institutional factors. This supports the relationship as implied by Kerlin’s framework (2013) and also mentioned by other researchers (Puumalainen et al., 2015) that these informal institutions like social behavioral patterns and cultural values and norms, are deeply engrained and play a profound role in shaping formal institutions like economic and regulatory frameworks (Hofstede, 2001; Salimath & Cullen, 2010). Therefore, we conclude that the culture variables without any loss of explanatory power can be excluded from models involving formal institutional variables.

The model including formal institutional variables was re-run without the culture variables so that 43 total countries were retained with data on 20,874 organizations (both social and conventional). Results of the model showed an estimate of 0.997 (z=3.156, p=0.002) for the variance in the random intercept of the model. This suggests that 23.2 percent of the variance in organization type can be accounted for by country differences as we are controlling for the effect of formal institutions.

The reduced model showed a significant effect for economic competitiveness, welfare state, and civil society participatory environment variables. The significant negative intercept coefficient suggests that a business or organization in a country with an average economic competitiveness rank, average size welfare state (i.e. spending on public health and education), average civil society participation rate, average levels of international aid and an average population size is 50.00 times more likely to not be a social enterprise than to be a social enterprise.

The effect of economic competitiveness is, contrary what we expected, in the negative direction. For every additional unit increase in national economic competitiveness (GCI Rank), the likelihood of an organization being a social enterprise is multiplied by 1.02. The more economically competitive a country (GCI rank=1 is the most competitive), the smaller the social enterprise sector will be. Effect of government welfare spending on social enterprise is positive as expected. For every one unit increase in welfare state (i.e. the amount of funding dedicated to public education and public health), the likelihood of an organization being a social enterprise is multiplied by 1.55. Finally, our newly included civil society participation variable has the expected positive effect on the size of the social enterprise sector. For each additional civil society participation national rating increase, the likelihood of an organization in that country being a social enterprise is multiplied by 1.58. International aid variable does not have a significant effect in any formal and mixed institutional fixed-effects models tested. The results of this reduced model are presented in Table II.
Quantitative Assessment of Kerlin’s Macro-Institutional Social Enterprise Framework

<table>
<thead>
<tr>
<th>Formal/ Informal</th>
<th>Formal and</th>
<th>Formal,</th>
<th>Formal,</th>
<th>Formal and</th>
<th>Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Effects</td>
<td>IDV</td>
<td>IDV, PDI, UNCT</td>
<td>IDV, PDI, UNCT, POST</td>
<td>and Informal</td>
<td>Formal</td>
</tr>
<tr>
<td>GCI-rank</td>
<td>1.019 *</td>
<td>1.016 *</td>
<td>1.023 *</td>
<td>1.023 **</td>
<td>1.023 **</td>
</tr>
<tr>
<td>Welfare</td>
<td>1.556 **</td>
<td>1.506 **</td>
<td>1.379</td>
<td>1.379 **</td>
<td>1.547 ***</td>
</tr>
<tr>
<td>CSPART</td>
<td>1.520 **</td>
<td>1.793 **</td>
<td>1.514</td>
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Coefficients (Odds Ratio): >1 means positive effect, =1 neutral effect, <1 negative effect
***p<.01, **p<.05, *p<.10
Note: All variables are centered around grand mean.
Note2: All variances in intercepts are significant.

Table II: Reduced model with institutional variables predicting social enterprise

Discussion and conclusion

Kerlin’s macro-institutional social enterprise framework aims to explain inter-country differences in social enterprise sectors from the perspective of the theory of historical institutionalism (2013). This framework develops a comprehensive understanding of how formal and informal institutional contexts in combination shape organizational maps of social enterprise across nations, hence producing a typology of social enterprise models in different countries. We built on an initial quantitative critique of Kerlin’s MISE framework to extend the empirical analysis to include the civil society aspect as well as performed additional tests for new informal institutional variables, by drawing on the GEM dataset and several global quantitative indices. We extend the original analysis by adding new country level institutional variables pertaining to culture and civil society. We also further discuss the interplay between the effects of formal institutions (economic competitiveness, welfare state, civil society) and informal institutions (culture) on social enterprise.
We tested the MISE framework by evaluating the effect of informal institutional variables (uncertainty avoidance, individualism, power distance, postmaterialism, and trust) as well as formal institutional variables (i.e., economic competitiveness, welfare state, civil society, and international aid) on social enterprise (controlling for total population). Analysis results showed that informal cultural institutions have a significant effect on the number of social enterprises in a country only when each is separately included in the model. When culture variables are included in the model together only individualism remains significant crowding out other culture variables. This suggests that when conducting cross-country analyses it may be sufficient to consider the individualism dimension of culture to account for informal institutions. Our result for culture contrasts with the findings of previous studies that find a significant effect for other culture variables when controlling for formal institutions (Stephan et al., 2015; Puumalainen et al., 2015); this is mostly due to their selection of countries and variables to account for formal institutions.

Furthermore, we analyzed culture variables along with formal institutional variables in the same regression analyses. These models showed that informal institutional variables lose their significance when they are tested in the same model with formal institution variables. This finding suggests that formal institutions absorb the influence of cultural values thus providing support for our assertion and that of the institutional literature that cultural values undergird and shape formal institutions (North, 1990). Overall, we therefore propose that cultural values are still important even though they are not significant when run with formal institutions.

When formal institutional variables are run by themselves on the other hand, they emerge as meaningful distinct influences because organization type significantly varied by economic competitiveness, size of the welfare state, and civil society participation level. In particular, the less economically competitive a country, the larger the welfare state, the more participatory the civil society environment, the more likely a business/organization is to be a social enterprise leading to a larger sector size. Collectively, these findings suggest that countries that spend more on public welfare (education and health care), are more individualistic in their cultural orientation, less economically competitive and allow more voluntary involvement in civil society are more likely to have larger social enterprise sectors. One should be careful however, not to interpret the economic competitiveness rank of a country as a proxy for wealth; it is rather a ranking based on an aggregation of sub-indices. One should also note that these results relate only to the macro-institutional contexts and should be interpreted accordingly. Overall our findings are in line with what Kerlin’s MISE framework proposes about effect of national institutional context on the development of social enterprise.

**Limitations**

Similar to other country-level comparative studies, our findings establish correlational links between variables rather than causal determinations. Moreover, even though drawing on various data sources provides opportunities to explore more relationships, care should be given to methodological differences between data collection process and measurement scales. Furthermore, there are some limitations with the GEM data, such as issues about the validity of responses in GEM data (Reynolds et al., 2005) and representativeness issues. The countries of the Global South are underrepresented in the GEM data set which makes it hard to generalize findings over that region. Another issue about the GEM data is related to a lack of consensus on the definition of social enterprise (Hoogendoorn & Hartog, 2011), therefore constructing a social enterprise variable which is consistent across all countries is difficult and an inhibition to making comparisons.
References:


**Appendix Table A1:**

**CSO participatory environment (C) (v2csprtcpt, *_osp, *_ord)**

*Project manager:* Michael Bernhard

*Question:* Which of these best describes the involvement of people in civil society organizations (CSOs)?

*Responses:*

0: Most associations are state-sponsored, and although a large number of people may be active in them, their participation is not purely voluntary.

1: Voluntary CSOs exist but few people are active in them.

2: There are many diverse CSOs, but popular involvement is minimal.

3: There are many diverse CSOs and it is considered normal for people to be at least occasionally active in at least one of them.

*Scale:* Ordinal, converted to interval by the measurement model.