



THE IMPACT OF NATIONAL SOCIAL CAPITAL ON BUSINESS CREATION RATES IN THE FORMAL VS. INFORMAL SECTORS

Journal:	<i>International Journal of Entrepreneurial Behavior & Research</i>
Manuscript ID	IJEBR-02-2020-0071.R3
Manuscript Type:	Research Paper
Keywords:	Social Capital, Entrepreneurship, Networking

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Abstract

Purpose

Through utilising social capital as an overarching concept, the purpose of this article is to investigate cross-country rates of business formation in the formal-vs-informal sectors. *Plus*, empirically assess the impact of social capital constructs on the national rates of entrepreneurship.

Design/Methodology/Approach

Adopting a regression-oriented methodology, Partial Least Squares, the study used a sample comprising 50 nations. National rates of registered and non-registered business creation were utilised as endogenous variables. To determine the indigenous variables, constructs of social capital were measured which is consistent with the World Value Survey (WVS).

Findings

The results of this study show that in the formal and the informal sectors, social networking enables business creation with varying levels of impact. It establishes that: institutional trust has a negative effect on informal business creation and a positive effect on business registration; interpersonal trust drives entrepreneurship in the informal sector but has less impact on business registration; norms of trustworthiness are related to business registration than informal business creation.

Implications

The findings of this research have theoretical and practical implications. They stimulate academic debate on the application of social capital constructs at the national level. The indications that social capital promotes business formation in both the informal and formal sectors can influence entrepreneurship policy development in many countries.

Originality/value

The originality of the results of this study lies in how it conceptualises social capital as having direct impact on business creation in the informal vs. formal sector. Thus, the findings elevated the conceptualisation of social capital to the national level thereby enhancing knowledge on the entrepreneurship process as well as developmental economics.

Keywords: social capital, trust, formal and informal business sectors, entrepreneurship, networking.

INTRODUCTION

It is widely acknowledged that regulated business systems as well as informal settings do promote entrepreneurial activity (Thai & Turkina, 2012). This is particularly explained by the varying degrees of entrepreneurship across different nations (Ács, Autio, & Szerb, 2014; Bosma and Schutjens, 2009; Lepoutre et al. 2013). Such cross-country diversity in entrepreneurial activity has attracted attention from entrepreneurship scholars resulting in the rise of studies that have examined the determinants of entrepreneurship in the formal vs. informal sectors (see for example: Bruton, et al., 2012; Efendic et al., 2015; Epstein, 1993; Godfrey, 2011; Ram, et al., 2017; Williams and Kedir, 2018).

Notwithstanding studies that have focused on the country-level determinants of business registration, knowledge about the underlying national factors motivating entrepreneurs to legitimise their businesses by formally declaring their existence or for opting to operate informally across different nations (Williams and Kedir, 2018) still remain patchy. Thai and Turkina (2012) explained that understanding the reasons why businesses are created in the formal vs. informal economy does not only enrich the literature on entrepreneurship, but it also assists policymakers to formulate macro-level measures for country-level entrepreneurship policy development. As much as research that focusses on informal businesses within the corporate sector is available (see for example: Baucus and Baucus, 1997; Fadahunsi and Rosa, 2002; Morris and Pitt, 1995; Moser, 1994; Simba and Ojong, 2018) it is a comparatively small literature. Perhaps the lack of research on the informal sector prompted the Academy of Management (AOM) to make the formal vs. informal business subject a central theme at its 2012 annual conference (see Bruton et al., 2012; McGahan, 2012).

Regardless of the AOM's call several years ago, literature that focuses on formal vs. informal sectors business formation is still limited. Thus, we refresh their call by stressing that, the more entrepreneurship scholars devote attention to the factors that drive new business creation in the formal and informal sectors, particularly national social capital, the more we can understand the underlying mechanisms that explain why some entrepreneurs formalise their operations while others opt to remain informal. Insights that can be generated from such an inquiry can have profound implications for entrepreneurship policy development in many countries.

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3 A major concern with much of the literature on social drivers of entrepreneurship at the
4 national level is that; it is largely conceptual (see for example: Canal and Luoma-aho, 2018;
5 Dana et al., 2019; Lappe et al., 1997; Warburton et al., 2013; Westlund, 2003; Yee, 2015).
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7 Therefore, considering that our understanding of the effects of social capital on entrepreneurship
8 at the macro-level is still limited due to a lack of empirical cross-country studies, this article is
9 timely in its advancement of the research on the impact of national social capital on
10 entrepreneurial activity in the informal and the formal sectors across different countries. The
11 research it presents draws on the theory of social capital (Nahapiet and Ghoshal, 1998) as a
12 framework for examining national rates of new business formation within these two different
13 sectors. In doing so, the article makes two major contributions: (i) it extends the application of
14 social capital theory from the individual and community levels to macro-level (national)
15 entrepreneurship and (ii) it empirically assesses the impacts of social capital and its components
16 on the national rates of entrepreneurship. Thus, its novelty lies in the way it conducts country
17 level data analysis *plus* its completion of a joint test which extends both theory and method.
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28 **THEORETICAL BACKGROUND**

29 **Social capital Theory**

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31 Social capital is defined as the “sum of actual and potential resources embedded within,
32 available through, and derived from the network of relationships possessed by individuals or
33 social units” (Nahapiet & Ghoshal, 1998, p. 243). It is considered a public good that accrues not
34 just to the individuals but to the community at large (Kwon, Heflin, & Ruef, 2013). Social capital
35 is often conceptualized as a set of resources embedded in relationships (Burt, 1992, 2019) and
36 the norms and values associated with them (Coleman, 1990). As these resources stem from
37 relationships among individuals or collectives, social capital is influenced by frequency of
38 interaction, kinship and number/strength of ties (Ahuja, 2000; Gedajlovic, Honig, Moore, Payne,
39 & Wright, 2013; Ojong and Simba, 2019).
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49 At the national level, the structural dimension of social capital is reflected in the national
50 level of networking, defined by Putnam (1993) as the level of participation in social networks.
51 It shows to whom people reach out (Burt, 1992) and embodies social interactions among people
52 within a given network (Ahuja, 2000; Adler & Kwon, 2002).
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3 This form of capital defines the potential or possibilities for entrepreneurs to access critical
4 information, resources and support, and therefore affects their ability to launch new businesses
5 (Burt, 2019; Larson, 1991).
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9 On the relational dimension, national social capital is represented by interpersonal trust,
10 which governs the mechanisms for embedded relationships (Fukuyama, 2001; Uzzi, 1996;
11 Putnam et al., 1993; Putnam, 2000) and induces joint efforts (Ring & Van de Ven, 1994). With
12 a higher degree of trustworthiness, entrepreneurs are able to develop new associations, create
13 strong ties and leverage their relationships to their advantage (Sanner, 1997). When trust is
14 damaged, however, people react and withdraw their commitment (Maxwell & Lévesque, 2010).
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20 The third dimension of social capital is cognitive in nature in that it represents resources
21 that produce shared representations, interpretations and systems of meaning among parties
22 (Nahapiet & Ghoshal, 1998). National cognitive social capital is reflected in national norms of
23 trustworthiness (defined by Ostrom (1990) as disapproval of unethical behaviors) and
24 institutional trust (defined by Paxton (1999) as confidence in institutions).
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29 **Social capital influence on entrepreneurship**

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31 The literature describing the influence of social capital on entrepreneurship is quite
32 extensive, and it converges on the notion that the acquisition of social capital is dependent on
33 the habituation of the moral norms of a community and their virtues (Aldrich and Meyer, 2015;
34 Fukuyama, 1995; Jiang et al., 2018; Newell et al., 2004). Several studies (see for example:
35 Aldrich & Martinez, 2010; Neumeyer et al. 2018; Stam, et al., 2014; Stenholm et al., 2013;
36 Thornton & Flynn, 2003; Wakkee et al., 2018) recognise that social capital is one of the most
37 important determinants that drives entrepreneurship. Considering that entrepreneurial activities
38 are actions that are embedded in a social structure, it is to be expected that the social context will
39 have a strong impact on the main economic actors (Aldrich & Zimmer, 1986; Sorensen, 2007;
40 Alvarez, Barney, McBride, & Wuebker, 2014). Social capital entails a pool of resources that
41 entrepreneurial individuals tap into in order to launch, run and develop their ventures (García-
42 Villaverde et al., 2018). Through their social interactions, entrepreneurial individuals access
43 tangible and virtual resources embedded in their deliberate social structures (Bourdieu, 1996;
44 Fukuyama, 1995; Nahapiet & Ghoshal, 1998; Portes, 1999; Putman, 1995).
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3 On the other hand, social capital predetermines entrepreneurs' access to complementary
4 resources including information, capital and labour necessary to produce and deliver
5 goods/services (Aldrich & Zimmer, 1986, Cooper, Folta, & Carolyn, 1995; Greve & Salaff,
6 2003; Theodoraki et al., 2018). In cases where trust, reciprocity and benevolence exist, either in
7 social or business networks, the process of sharing and exchanging pooled resources is often
8 enhanced (Birendra et al., 2019; Şengün & Önder, 2011; Tsai & Ghoshal, 1998). Indeed, pooled
9 resources that are embedded in networks of relationships have a positive effect on the ability for
10 entrepreneurs to recognise and exploit opportunities as well as develop and hone new business
11 ideas (Burt, 2019; Casson & Della, 2007; Mosey and Wright, 2007; Zimmer, 1986). The
12 literature delineates that social capital and entrepreneurial outcomes are interconnected not only
13 at the individual but also at the collective level (see Figure 1) (Cassar and Wydick, 2010; Cope
14 et al., 2007; Gedajlovic et al., 2013). Collective social capital influences both individual and
15 collective entrepreneurial outcomes while individual entrepreneurial outcomes interact with
16 collective entrepreneurial outcomes (Gedajlovic et al., 2013).

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31 Although yet to fully develop, literature on collective social capital is starting to emerge
32 showing that national social capital influences and alters social structures (Alvarez et al., 2014;
33 Burt, 2019). A number of studies highlight that institutional arrangements and the amounts and
34 types of social capital in a particular institutional context influence entrepreneurial choices (e.g.
35 Stenholm, Acs, & Wuebker, 2013; Estrin, Mickiewicz, & Stephan, 2013; Gedajlovic et al., 2013;
36 Estrin, Korosteleva, & Mickiewicz, 2013). To date, the literature shows contrasting predictions
37 about the influence of social capital on entrepreneurship. The controversy is seen even within
38 two major streams of literature that examines the phenomenon: bonding and bridging
39 perspectives.

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41 From a bonding perspective, social capital is a collective good (i.e., information, trust
42 and norms) that results in increased sharing and solidarity among actors in a network (Gedajlovic
43 et al., 2013). Referred to as the cohesion and strong ties within groups (Ahuja, 2000; Coleman,
44 1988), social capital functions as an intermediary between the webs of relationships and the
45 recognition of opportunities, financing of ventures, innovative discoveries, or new market
46 prospects.

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3 Explained differently, social capital encourages entrepreneurship since strong, repeated social
4 connections result in norms of reciprocity yielding interpersonal trust (DeWever et al., 2005,
5 Welter, 2012; Gedajlovic et al., 2013). On the other hand, several scholars (see for example:
6 Gargiulo & Benassi, 1999; Portes & Landolt, 2000; Keefer & Knack, 2008) have shown that
7 bonding social capital can hamper entrepreneurial activities. Their thesis is that social capital can
8 limit individual freedom and may lead to the exclusion of outsiders, even to hostility toward
9 them due to the rigid enforcement of social norms (Portes & Landolt, 2000). Furthermore, strong
10 solidarity with in-group members often causes over-embeddedness which invariably hinders the
11 flow of new ideas into the group, resulting in parochialism and inertia (Kern, 1998; Gargiulo &
12 Benassi, 1999).
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21 From a bridging perspective, quality exchanges involving social capital are known to
22 take place in weak as opposed to strong ties (Burt, 2019; Ahuja, 2000; Granovetter, 1973; Ojong
23 and Simba, 2019). *Plus*, the radius of trust in weak ties (Fukuyama, 2001) often leads to
24 productive interactions among members of diverse and previously unconnected groups
25 (Rousseau, Sitkin, Burt, & Camerer, 1998, Burt, 2000). In the context of national social capital
26 entrepreneurs tend to benefit from an array of positive externalities (Estrin *et al.*, 2013). Indeed,
27 this form of social capital enhances mobility and can mitigate social exclusion, enabling more
28 entrepreneurial individuals to access new opportunities and resources (Estrin, Mickiewicz, et al.,
29 2013). Moreover, the construction of stable, broad-based social networks, at the national level,
30 enable the transnational circulation of resources (Portes & Landolt, 2000). Within that, a growing
31 radius of trust can effectively facilitate the internalisation of external effects thereby yielding
32 societal norms of cooperation (Stephan & Uhlaner, 2010). The external connections of a focal
33 actor, at national level, often lead to non-redundant resources while the presence of far-reaching
34 weak ties within a nation lowers transaction costs by facilitating access to new and more valuable
35 information and other resources (Kwon & Arenius, 2010). This perspective suggests that social
36 capital encourages entrepreneurship. Nonetheless, Light and Dana (2013) stressed that social
37 capital is not always a catalyst for entrepreneurship but it can be a suppressive force. As
38 relationships in networks have reputational or signalling content (Hoang & Antoncic, 2003), the
39 type of networks with which entrepreneurs associate with can influence their legitimacy in
40 entrepreneurship.
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Entrepreneurship in the informal economy

The term informal economy covers an array of social-related disciplines including sociology, economics and anthropology and it describes a set of unregulated and yet legitimate activities through which informal economy entrepreneurs recognise market opportunities (Ram, 2017; Siqueira et al. 2016; Webb et al., 2009) and they establish a new venture to take advantage of them. In other words, it defines those firms that are not registered with a recognised institution in a given country (De Castro et al., 2014; Williams, 2007; Siqueira et al. 2016). According to Webb et al. (2009) entrepreneurial activities that take place in the informal economy fall within the informal institutional boundaries comprising norms values and beliefs of a group of society, i.e. meso institutions. But, because of a lack of explicit rules as in macro institutional environments, the boundaries of meso institutional environments are often porous and highly responsive (Helmke and Levitsky, 2004). In such context social capital constructs may explain how businesses established by informal economy entrepreneurs are legitimised in some portions of the society (Simba, 2013; Zimmer, 1986).

Indeed, porous boundaries assist economic actors (Schumpeter, 1934) present in the meso (informal) environment to effectively capture market resources including information about changes in the macro institutional environment as they diffuse across the institutional landscape (De Castro et al., 2014). Crucially, informal economy entrepreneurs effectively utilise the resources originating from the meso and macro institutional environments to engage in entrepreneurial and sensemaking processes (Estrin et al., 2012; McGahan, 2012) and they create opportunities for their new ventures. Thus, complementary meso and macro institutions reduce their liability of newness and size (Zimmer, 1986). From that perspective, social capital/pooled resources (Nahapiet and Ghoshal, 1998) that originate from both the meso and macro institutional environments provide the locus for informal economy entrepreneur's identity and solidarity with their community and they reinforce their informality (De Castro et al., 2014; Webb et al., 2009). In other words, social capitals at the national level enable informal economy entrepreneurs and their new ventures to take advantage of the pool of resources embedded in their immediate connections as well as the macro (formal) institutions.

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3 In short, the literature from both perspectives suggests that different aspects of social capital
4 have different influences on national rates of entrepreneurship (Boudreaux et al., 2018) and that
5 it is necessary to delve into the rates in the formal vs informal economy to understand the true
6 nature of social capital influence. Indeed, it can be expected that different aspects of social capital
7 can influence the selection processes entrepreneurs go through with regards to the form of their
8 business (table 1). In other words, they influence the choice between formal/informal economy,
9 i.e. creating a registered or non-registered business. Thus, by considering the concurrent effect
10 of social capital on registered versus non-registered entrepreneurship, which can be a large
11 portion of national entrepreneurship in certain countries (Autio and Fu, 2015; Sharma, 2014;
12 William et al., 2017), we can develop an in-depth understanding of the level of influence it has
13 on business creation at national level.
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26 **PROCEDURE FOR HYPOTHESIS DEVELOPMENT**

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28 In keeping with earlier studies, we examined national social capital along its three dimensions.
29 Following Tsai and Ghoshal (1998) as well as Gedajlovic et al. (2013), we developed our
30 hypotheses (graphically represented in Figure 2) while taking into account the impact of national
31 social capital on collective actions and on aggregated individual actions. In the following
32 sections, we first present our hypotheses on the associations among these dimensions of national
33 social capital and then the impact of each type of national social capital on national rates of
34 business creation in the formal versus informal sectors.
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43 **Interrelated dimensions of national social capital**

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46 *Networking, interpersonal trust and norms of trustworthiness:* Group membership is an
47 affective context for trust development because it creates a platform for members to interact and
48 learn about each other (Ojong and Simba, 2019; Ojong, 2018; Williams, 2001). This builds on
49 Granovetter's (1985) dated but influential argument that social interactions allow trust-based
50 relationships to develop.
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Indeed, frequent and close social interactions allow actors to share information and create a common point of view, thereby contributing to the enhancement of interpersonal trust (Ahuja, 2000; Golembiewski & McConkie, 1975; Manolova et al., 2007). This argument is strongly supported by the network literature on the strength of social ties, which documents significant implications of interactive ties for trust building (Nelson, 1989; Gulati, 1995). Furthermore, associations of various kinds are viewed as a key mechanism for providing a framework within which cooperative action facilitates the emergence of consensus and shared social norms and values (De Castro et al., 2014; Putnam et al., 1993; Coleman, 1988, Coleman, 1990). For instance, Putnam (1993) shows how, in northern Italy, the density and scope of local civic organizations facilitate civic connectedness and the widespread dissemination of information and enhance the norms of trustworthiness and social trust among community members, thereby creating conditions for good governance, economic development and democracy. People in extensive social networks feel greater social pressure for sharing, reinforcing mutually-beneficial activities and developing subjective norms (Burt, 2017; Chow & Chan, 2008; Zaheer and Bell, 2005). Therefore, networking stimulates the norms of trustworthiness.

On the basis of the above conceptualisations of networking, interpersonal trust and norms of trustworthiness above, we propose the following:

Hypothesis 1a: Networking is positively associated with interpersonal trust.

Hypothesis 1b: Networking is positively associated with norms of trustworthiness.

Institutional & interpersonal trust, networking, and norms of trustworthiness: Institutional trust is embodied in confidence in institutions, which can include several organizations ranging from the church to the education system, the press, trade unions, the police and the government (Paxton, 1999). When people trust these institutions, they are willing to share their points of view and invest in collective action (Braithwaite, 1998). As people come to believe in the effectiveness of rules and laws, free-riding and corrupt behaviors can be minimized (Kramer & Tyler, 1996). Determinants of institutional trust are both endogenous and exogenous (Hudson, 2006) where the former refers to institutional performance: the higher the levels of institutional trust generated, the better they perform (Schilke, Oliver, and Cook, 2013; Welter, 2012).

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3 Generally, it is expected that people join well-managed and better performing networks
4 than poorly organised ones because members of organised networks can expect that it is
5 worthwhile to invest time and resources into them (Cooke, 2001; Breschi and Malebra, 2005).
6 Several studies (see for example: Park, 1996; Provan & Kenis, 2008; Ospina & Saz-Carranza,
7 2010) suggest that institutional trust is an effective mechanism for network governance. Trusting
8 institutions induce people to join associations and freely communicate with a wide variety of
9 people, thereby increasing their level of networking (Hardin, 2002; Zimmer, 1986).

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16 Common values and a shared vision encourage the development of interpersonal trust
17 because trusting relationships are rooted in value congruence (Gambetta, 2000; Sitkin & Roth,
18 1993; Tsai & Ghoshal, 1998). Norms of trustworthiness provide the harmony of interest that
19 limits the possibility of opportunistic behaviors (Ojong and Simba, 2019; Ouchi, 1980). They
20 create imperatives for cooperation, thereby encouraging people to interact with and learn about
21 one another (Hardin, 2002). As a result, norms of trustworthiness stimulate interpersonal trust
22 (Lee et al., 2019; Ojong, 2018). Related to that, Yamagishi and Yamagishi's (1994) study
23 demonstrated that Japanese people trust other members of their society because they are aware
24 of the social sanctions that induce its members to behave in a trustworthy manner.

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32 Considering the sensitivities associated with institutional & interpersonal trust,
33 networking, and norms of trustworthiness we propose that:

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36 *Hypothesis 1c: Institutional trust is positively associated with norms of trustworthiness.*

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38 *Hypothesis 1d: Institutional trust is positively associated with networking.*

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41 *Hypothesis 1e: Norms of trustworthiness are positively associated with interpersonal
42 trust.*

43 **Social capital and new venture creation**

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46 **Networking:** Malecki (2012) demonstrates that networking promotes regional learning
47 both within a region and beyond, reinforces openness to the ideas of others, and thus promotes
48 entrepreneurship. The level of networking in a region (Cooke, 2001) reflects the stock of social
49 contacts which is "a resource that, once accumulated, can be drawn on or accessed as needed"
50 (Boisjoly, Duncan, & Hofferth, 1995, p. 609).
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3 Societies with rich networks have a better capacity for sharing knowledge and expertise
4 (Galasso & Ravallion, 2001), fostering innovation (Lowe, 1995), alleviating poverty (Moser,
5 1996; Kozel & Parker, 2000) and resolving conflicts (Schafft & Borwn, 2000) because dense
6 social linkages help connect people with access to different information, resources, knowledge
7 and opportunities for the collective good of citizens (Wasserman & Galaskiewicz, 1994).
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12 Networking generates coordinated actions and activities towards meeting common goals
13 (Johanson, 1989; Axelsson, 1992). New venture creation is often associated with intense
14 networking (Casson & Della, 2007). Networks act as a conduit for information (Steier &
15 Greenwood, 1995) and extend the entrepreneur's potential resource base (Birley, 1986; Aldrich
16 & Zimmer, 1986; Johannisson, Alexanderson, Nowicki, & Senneseth, 1994). Strong social ties
17 ensure venture survival and improve the possibilities of new venture success (Hansen, 1995;
18 Brüderl & Preisendörfer, 1998; Jack, Dodd, & Anderson, 2004).
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25 Entrepreneurs tend to rely exclusively on informal networks such as family and friends
26 and exploit both formal networks such as business associations and informal networks (Birley,
27 1986; Tjosvold & Weicker, 1993; Pistaferri, 1999; Mollona, 2005). Furthermore, membership
28 in organizations connected to the larger community is associated with higher levels of self-
29 employment, but membership in isolated organizations that lack connections to the larger
30 community is associated with lower levels of self-employment (Kwon et al., 2013). Indeed, the
31 extant literature acknowledges that informal entrepreneurs rely on extensive networking (Nyoni,
32 2012; C. Williams & Round, 2007; García-Garza, 2009; Justin W. Webb, Bruton, Tihanyi, &
33 Ireland, 2013; Siqueira, Webb, & Bruton, 2016). Therefore, national level of networking
34 promotes both forms of entrepreneurship.
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43 *Hypothesis 2a: Networking is positively associated with creation of registered businesses*
44 *Hypothesis 2b: Networking is positively associated with creation of non-registered*
45 *businesses.*
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48 **Interpersonal trust:** Kwon et al.'s (2013) study reveals that individuals in communities with
49 high levels of trust are more likely to be self-employed compared to individuals in communities
50 with lower levels of trust. Interpersonal trust is not only the prerequisite for flows of exchanges
51 of goods and services, but also a critical condition for entrepreneurial development.
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3 It reduces transaction costs and enhances collaboration, mutual supportiveness, and shared
4 norms and values (Fukuyama, 1995; Simmel, 1950). Interpersonal trust allows for high tolerance
5 of uncertainty and risk-taking (Welch et al., 2005). It also creates a favourable impression of
6 society and mitigates the fear of failure (Newton, 1999). Since these factors are critical for
7 entrepreneurs, interpersonal trust is expected to encourage entrepreneurship (Liao & Welsch,
8 2005). Interpersonal trust runs underneath and parallel to formal administrative rules (Lomnitz,
9 1988). It is the root of informality (Lomnitz & Sheinbaum, 2004). It cements the production
10 system together and allows co-ordination to proceed without the expense of formal
11 administrative procedures or time-consuming negotiations (1990). Interpersonal trust enables the
12 informal economy to function outside of formal contracts (Roberts, 1994). Through the
13 configuration of social networks, trust allows for an informal economy to emerge and flourish
14 in complex societies (Castells & Portes, 1989). In fact, recent studies from different countries
15 (e.g. Nyoni, 2012; Williams & Youssef, 2013; Chavdarova, 2014; Siqueira, Mariano, Moraes,
16 & Cox, 2014) provide evidence that interpersonal trust is a facilitator of informal entrepreneurial
17 activities. Therefore, interpersonal trust is expected to encourage entrepreneurship in both formal
18 and informal sectors.
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31 *Hypothesis 3a: Interpersonal trust is positively associated with creation of registered*
32 *businesses*

33 *Hypothesis 3b: Interpersonal trust is positively associated with creation of non-*
34 *registered businesses.*
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38 ***Institutional trust:*** The literature on formal institutions acknowledges that government is the
39 sole source of trust among strangers. As such, formal institutions lend credibility to exchanges
40 that otherwise would not occur (Keefer & Knack, 2008). Good institutions reduce transaction
41 costs by providing information and a means to enforce contracts, thereby diminishing the
42 possibility of opportunistic behavior (Welter & Smallbone, 2006). Several studies (e.g.,
43 Fuentelsaz et al., 2019; Havrylyshyn, 2001; Kaufmann, Kraay, & Mastruzzi, 2006) demonstrate
44 that institutional trust resulting from transparent legal frameworks, property rights protection,
45 efficient regulation of the economy and so on fosters entrepreneurial activities. Institutional trust
46 also encourages entrepreneurs to register their businesses with the government to benefit from
47 public services (e.g., legal protection and contract enforcement) unavailable to informal firms
48 (Straub, 2005; Amaral & Quintin, 2006).
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Entrepreneurial behavior is institutionally embedded (Dickson, 2008), and institutional trust is likely to drive entrepreneurship. De Soto (1990; 2002) shows that bureaucratic barriers to legal property ownership and the lack of legal structures that recognize and encourage ownership of assets force people to keep to underground activities. Furthermore, several studies reveal that non-compliance is a direct consequence of a breakdown of trust between the state and its citizens (Ayres & Braithwaite, 1992; Tom R Tyler, 1997; European Commission, 2007; Wahl, Kastlunger, & Kirchler, 2010). However, as institutional trust is improved, entrepreneurs will be enticed to move from the informal to the formal sector (Hernando de Soto, 2006; C. C. Williams, 2015). In fact, good formal institutions can make informal norms unnecessary (Keefer & Knack, 2008).

Hypothesis 4a: Institutional trust is positively associated with creation of registered businesses

Hypothesis 4b: Institutional trust is negatively associated with creation of non-registered businesses.

Norms of trustworthiness: Norms are important determinants of decisions by rational actors because they affect the costs and benefits that individuals take into account when making choices as a function of potential rewards for compliance or punishments for non-compliance (J. Coleman, 1987). The national norm of trustworthiness is civic cooperation (Knack & Keefer, 1997) in which individuals internalize the value of laws and regulations even when the probability of detection for violation is negligible (Keefer & Knack, 2008). A strong norm of trustworthiness leads to effective institutional sanctions and mutual-monitoring systems (Yamagishi, 1986). It exerts pressure to ensure credible commitments in economic and political transactions, enhance government effectiveness, and reduce enforcement costs (Drobak, 1998; Gambetta, 1988; Ménard & Shirley, 2008). Furthermore, a set of moral values shared within communities that creates an expectation of regular and honest behavior provides a mechanism for reducing the internal complexity of social interaction, thereby enabling actors to establish mutual expectations of future behavior (Hardin, 2006). In societies characterized by wide radius of trustworthiness, individuals can be relied upon to act in the interest of others at some expense to themselves or incurring the costs of providing a public good (Keefer & Knack, 2008). In such societies, the radius of trust can be larger than the group itself (Fukuyama, 2001).

Moreover, honesty in a given society provides people with assurances that they can count on fair treatment and objectivity in business transactions (Bhide & Stevenson, 1990). Therefore, entrepreneurs have more resources available for innovation and investment since they devote fewer resources to protecting themselves from unlawful (criminal) violations of their property rights (Zak & Knack, 2001; Keefer & Knack, 2008). As norms of trustworthiness ensure credibility and predictability, they encourage long-term commitments and, as such, entrepreneurial success (Putnam et al., 1993; Makhbul & Hasun, 2010; Welter, 2012).

Several empirical studies confirm that trustworthiness in the society reduces transaction costs, enhance business performance, and encourage investments (Dyer & Chu, 2003; Kwon & Arenius, 2010; Ding, Au, & Chiang, 2015). Therefore, one can expect vibrant entrepreneurship in environments with strong norms of trustworthiness. Entrepreneurs face uniquely complex moral problems related to basic fairness, personnel and customer relationships, distribution dilemmas, and other challenges (Hannafey, 2003). These problems tend to be more serious in the informal sector (Epstein, 1993). With strong norms of trustworthiness, people are inclined to avoid situations or activities that support unethical practices (Ostrom, 1990; Putnam, 1993).

This suggests that such people prefer to deal with businesses subject to control mechanisms to minimize the chance of engaging in unethical behavior and, as such, prefer registered businesses over informal ones. Furthermore, government officials in societies with strong norms of trustworthiness are compelled to engage in trustworthy governance, making it more attractive for businesses to be under their control and protection (Valerie Braithwaite & Levi, 2003). For these reasons, entrepreneurs in societies with strong norms of trustworthiness are encouraged to register their business rather than operate outside the regulatory system.

Hypothesis 5a: Norms of trustworthiness are negatively associated with creation of non-registered businesses

Hypothesis 5b: Norms of trustworthiness are positively associated with creation of registered businesses.

METHODOLOGY AND DATA ANALYSIS

Sample

The information for the variables employed in this study is derived from a dataset comprising 50 countries.

The dataset provides detailed information about the national rates of business creation in both formal and informal sectors, as well as information about our independent variables. For each continent, the sample includes the largest countries in terms of population and territory (i.e., Russia, the US, India, and Australia). The selected countries display marked socio-cultural diversities, thereby providing a good basis for exploring the effects of these different national contexts on entrepreneurial activity levels. Table 2 presents the list of countries in our analysis.

Insert Table 2 about here

Variables

Endogenous variables: national rates of registered and non-registered business creation

We followed existing reliable approaches to measuring national rates of business creation (c/f Acs, Desai, & Klapper, 2008; Desai, 2009). Consistent with similar studies on entrepreneurship in the formal sector (e.g. Klapper, Amit, Guillén, & Quesada, 2008, p.3) we relied on World Bank's cross-country data on registered business creation rates (the number of newly-registered firms as a percentage of the country's population).

As far as the rates of non-registered business creation is concerned, we distracted registered business creation rates from total business creation rates based on data provided by the Global Entrepreneurship Monitor (GEM) which measure activities by people "actively engaged in starting a business or is the owner/manager of a business that is less than 42 months old who participates in the paid production and sale of goods and services that are legitimate in all respects besides the fact that they are unregistered by, or hidden from the state for tax and/or benefit purposes" (Williams & Nadin, 2010, p. 363). This measure is consistent with prior studies which termed non-registered business creation rate as informal entrepreneurship (see for example: Thai & Turkina, 2014; Autio & Fu, 2015).

We adopted the same method Autio and Fu (2015) used to measure informal entrepreneurship. They created an estimate of the yearly entry rate of new entrepreneurs (i.e., the total entry density) that is recorded by GEM as any individual whose business has paid salaries to any person for longer than 3 months but not longer than 42 months. First, they assumed that the entry rate was constant over the past 3.5 years (i.e., 42 months) for a given country.

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3 Second, they assumed the survival rate to take an exponential form, with younger start-ups
4 experiencing higher hazards to survival. Following this approach, they calculated the prevalence
5 rate of new entrepreneurs. Next, they converted the estimated entry rate of new entrepreneurs
6 into an entry rate of new businesses by normalizing the individual-level estimate with the GEM
7 estimate of the average team size of new businesses in the country. This procedure gave them an
8 estimate of the annual entry rate of all kinds of new businesses (both registered and unregistered).
9 As the final step, they estimated the entry rate of informal businesses by subtracting the World
10 Bank rates of business registration. Autio and Fu (2015) conveniently presented their results in
11 a table that indicates the number of formal and informal businesses per 100 adult-age individuals
12 (page 77).
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21 ***Exogenous variables:***

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23 We followed Turkina and Thai's (2013) approach to obtain the four components of social
24 capital, our exogenous variables. In their analysis of the effects of social capital on the general
25 levels of entrepreneurship and high value-added entrepreneurship in OECD countries, they
26 measured the components of social capital based on the World Value Survey (WVS), the
27 world's most comprehensive investigation of political and socio-cultural indicators. Consistent
28 with Turkina and Thai (2013), we employed the same items in the WVS questionnaires and
29 compute country averages of the selected items for the 50 countries in our sample. Table 3
30 presents the WVS items in detail and the theorized structure underlying them.
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37 *Insert Table 3 about here*

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40 The network component is made up of the degree of people's involvement in formal and
41 informal social networks. The interpersonal trust component is trust in people in general and
42 trusting people one knows personally. Trust in a given country's institutions and leadership
43 forms the institutional trust component. Lastly, the degree of agreement with the following four
44 items represent the norms of trustworthiness: (1) it is not acceptable to avoid paying a fare on
45 public transportation; (2) it is not acceptable to cheat on taxes; (3) it is not acceptable to claim
46 government benefits to which you are not entitled; and (4) it is not acceptable to take a bribe in
47 the course of your duties. Table 4 presents the descriptive statistics (means and standard
48 deviations) and correlations for all the indicators analysed in this study.
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Figure 3 presents the distribution of the social capital variables across the regions highlighting the importance of networking in Asia, norms of trustworthiness in Western Europe, interpersonal trust in Latin America, and institutional trust in Western Europe and North America.

Insert Table 4 and Figure 3 about here

Model estimation using Partial Least Squares Approach

First, we check our sampling adequacy with KMO (Kaiser-Meyer-Olkin) and Bartlett's test of sphericity. The KMO value is 0.893 (approximate Chi-Square 6900.011; Sig.000), which indicates the good quality of our sample. Next, we conduct model analysis using the Partial Least Squares (PLS) approach. This approach (C. Fornell & Bookstein, 1982; Lohmoller, 1989; C. Fornell & Cha, 1994) is particularly suited for estimating the causal relationships and the relationships between the variables that consist of several indicators, like in our case. Unlike covariance-based SEM, PLS focuses on maximizing the variance of the dependent variables explained by the independent ones instead of reproducing the empirical covariance matrix (Dijkstra, 2010). Unlike covariance-based SEM, PLS requires neither multivariate normality nor the large sample size necessary for maximum likelihood estimation (Chin & Newsted, 1999). This is convenient in our case as our sample is composed of 50 countries.

PLS is also particularly useful when predictor variables are highly correlated or when the number of predictors exceeds the number of cases (Cassel, Hackl, & Westlund, 1999). Furthermore, using a Monte Carlo simulation, Cassel et al. (1999) show that PLS is quite robust with regard to several inadequacies (e.g., skewness or multicollinearity of the indicators, misspecification of the structural model) and that the latent variable scores always conform to the true values. PLS distinguishes between three components of the path model: inner relationships (the structural part), outer relationships (the measurement part), and weight relationships. Weight relationships define the estimated latent variables (LVs) as the weighted linear aggregates of their manifest variables. PLS operates as a series of interdependent OLS regressions in which inner and outer approximations are iterated until convergence is achieved. Once convergence is achieved, the LV scores are estimated using the weight relationships.

The structural parameters of the model are then estimated with standard path analysis using OLS regression. The resulting coefficients are interpreted as standardized regression coefficients. In PLS, the latent variables are “close to the raw data” in that they are indirectly observed through their weight relationships with the manifest variables. Table 5 provides validity and reliability indicators for our latent constructs: the loadings for each of the measures, the reliability of the LVs and the average variance extracted (AVE) in each LV. AVE indicates the amount of variance captured by the latent variable in relation to the amount of variance due to measurement error. All loadings are greater than .50, and statistically significant (Steenkamp & van Trijp, 1991). The reliability of all LVs is above the recommended level of .70 (Nunnally, 1978). Finally, the AVE for each LV is greater than the cut-off level of .50 suggested by Fornell and Larcker (1981). These results support the validity of our latent constructs.

As far as hypothesis testing is concerned, since PLS involves no distributional assumptions about the data, traditional statistical testing methods are not well suited to the method. The significance of the PLS estimates is conventionally tested by the bootstrapping technique (Ringlet et al., 2005; Hair et al., 2012). The bootstrap procedure in the Smart PLS software enables the calculation of the standard deviation and an approximation of the t-statistic, which allows for the calculation of p-value W. Chin, 1998. We used 5,000 bootstrap samples, and a number of cases equivalent to our number of observations, as recommended by Hair et al. (2011). Figure 4 provides a graphical representation of the estimates of the structural parameters in the model with the levels of statistical significance of coefficients.

Insert Table 5 and Figure 4 about here

Results

Our analysis revealed that ten of the thirteen hypotheses are supported (see Table 6). We found a strong association between the cognitive dimension (represented by institutional trust) and the structural dimension (defined by horizontal networks) of national social capital (H1a). Equally, they show that the structural dimension is positively related to the relational dimension (characterized by interpersonal trust) of national social capital (H1d). Moreover, the results confirm that the relational dimension is positively associated with the cognitive dimension (represented by norms of trustworthiness) of national social capital (H1e). Furthermore, the two components of cognitive dimensions of national social capital are positively correlated (H1c).

Based on these new insights we also argue that varying any of these components of social capital significantly increases the overall level of national social capital. These findings go in line with prior studies on the interlinkages of social capital capitals (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998; Chow and Chan, 2008; Hudson, 2006; etc.).

With regards to the effects of social capital components on national entrepreneurship, we found that institutional trust exerts the strongest impacts on business creation rates in both formal and informal sectors but in opposite directions: Positively on registered business creation rates (H4a) and negatively on non-registered business creation rates (H4b). Networking is found to positively impact both types of business creation (H2a and H2b). Interpersonal trust is found to positively impact only registered business creation rates (H3b) whereas norms of trustworthiness negatively impact only (H5a). The implications of these findings for both theory and practice are discussed at length in the discussion section below.

The data do not support our hypotheses on the relationship between networking and norms of trustworthiness (H1b), the effects of interpersonal trust on registered business creation rates (H3a), and the effect of norms of trustworthiness on non-registered business creation rates (H5b).

Insert Table 6 about here

DISCUSSION OF FINDINGS

Scholarship on entrepreneurship (see for example: Littlewood and Holt, 2018; Friederike Welter, 2011; Wiklund, Davidsson, Audretsch, & Karlsson, 2011) acknowledges that studying social context is important in order to fully comprehend the concept. This literature advances the view that the context in which entrepreneurship takes place provides individuals with opportunities and it sets boundaries for their actions. However, scholarship on national rates of entrepreneurship mainly explore economic and institutional factors (Peng et al. 2009; Shane, 1996; Stenholm et al., 2013). While social capital is acknowledged to be one of the key resources for entrepreneurs (Mosey and Wright, 2007), the use of social capital theory in the entrepreneurship literature has been limited to the micro-level analysis (see for example: Baron and Markman, 2000; Kreiser, Patel and Fiet, 2013; Kim and Aldrich, 2005; Saporito and Coombs, 2013; Simba, 2013; Westland and Bolton, 2003).

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3 Given this knowledge gap, this article makes important contributions to three streams of
4 research: it extends the application of social capital theory by using the national-level context
5 and it significantly advances entrepreneurship and developmental economics research.
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9 The article explores how social capital from a national-level perspective affects business
10 creation rates. In doing so, it draws on the ideas of Nahapiet and Ghoshal (1998), Liao and
11 Welsch (2005) and Gedajlovic et al. (2013) to formulate and conceptualize components of social
12 capital that determine new business creation. Through using a Partial Least Squares approach
13 for analyzing a cross-country dataset, this article confirmed our hypotheses. Specifically, our
14 research established a strong relationship between four key macro-level elements of social
15 capital that included; networking, interpersonal trust, institutional trust and norms of
16 trustworthiness. Moreover, it established that the four macro-level elements mentioned above
17 have a significant positive effect on business creation rates in both the formal and informal
18 sectors. These outcomes have theoretical and practical implications for several stakeholders
19 including; governmental institutions, business practitioners and entrepreneurship scholars.
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28 ***Theoretical Implications***

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31 The research outcomes presented in this article validate the argument that the dimensions
32 of social capital that include; relational, structural and cognitive (Coleman, 1988; Nahapiet and
33 Ghoshal, 1998; Putnam et al., 1993; Tsai & Ghoshal, 1998) are interrelated. Most importantly,
34 they extend the application of these dimensions by statistically demonstrating their
35 interconnectedness at the macro-level. The outcomes of our study provide a strong support for
36 the argument that social capital accelerates national rates of entrepreneurial activity in both the
37 formal and informal sectors. Unlike previous studies, which only examined total
38 entrepreneurship or formal entrepreneurship (e.g. Lee et al., 2019; Wennekers et al., 2005; Zahra,
39 and Wright, 2011), our study explains the situations in which social capital encourages or hinders
40 business creation at national level. *Plus*, it builds on previous studies (e.g. Gedajlovic et al., 2013;
41 McFadyen and Cannella, 2004; Seibert, Kraimer and Linden, 2001) that have focused on social
42 capital emphasizing how different components of social capital exert different levels and
43 directions of influence on registered vs non-registered business creation.
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3 While earlier studies usually consider social capital at the national-level as irrelevant
4 from a policy perspective because it is seen as endowed and rooted in stable cultural traits
5 (Portes, 1998; Fukuyama, 2001; Adler & Kwon, 2002; Westlund & Adam, 2010; Estrin,
6 Mickiewicz, et al., 2013), our study demonstrates that an understanding the constituents of
7 national social capital can significantly contribute to policy development. Thus, the research
8 outcomes are beneficial to policymakers seeking ways to promote entrepreneurial activity,
9 considering that entrepreneurship can have a profound effect on social and economic
10 development in many countries.
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17 ***Practical Implications***

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20 Our research outcomes indicate that institutional trust is both the most significant
21 determinant of registered business creation and the most important deterrent of non-registered
22 business creation. This is consistent with studies that show a positive relationship between
23 institutional trust and compliance with government regulation and civic duty (Tyler, 1990; Letki,
24 2006). Given that institutional trust has the strongest impact on entrepreneurship in both formal
25 and informal sectors of the economy, investing in building trust in government is an effective
26 way of boosting entrepreneurship and encouraging entrepreneurs to conduct their business
27 within the regulatory framework. Institutions provide a regulatory framework and reassurances
28 of the stability, transparency, efficiency and, most importantly, fairness of the regulatory
29 environment. Institutional trust and a favourable institutional climate reduce entrepreneurs'
30 uncertainty and encourage them to take risks.
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39 Crucially, institutional trust creates the perception that transactional costs related to
40 initiating and operating informal businesses are higher than those of formal firms. As such, they
41 are enticed to register their business and comply with regulations. To trust their government,
42 citizens need to believe that political actors and institutions do not act in ways that will do them
43 harm (Newton, 1999). This can be achieved by restructuring institutions, improving governance,
44 enhancing public education and reducing corruption (Blind, 2007; Hakhverdian & Mayne,
45 2012). Furthermore, encouraging the social and political participation of the population and
46 investing in measures for creating positive perceptions of national economic and political
47 performance can have a strong impact on public confidence in government institutions (Espinal
48 et al., 2006).
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3 However, these measures can also be costly, and they can take some time to implement. They
4 could be unrealistic for low-income and developing countries in which entrepreneurship is
5 greatly needed for economic development. Our results show that interpersonal trust is the second
6 most effective motivator for new business creation. Business creation is an important task given
7 that interpersonal trust is an essential component of social fabric.
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11 Interpersonal trust creates a favourable impression of society and mitigates the fear of
12 failure (Newton, 1999), thereby increasing confidence and as a consequence, proactivity and risk
13 taking among nascent entrepreneurs. It also facilitates new business creation because it reduces
14 transaction costs and enhances collaboration (Fukuyama, 1995; Simmel, 1950). Moreover, it
15 involves "confidence in the integrity, ability, character, and truth of a person or thing" (Morris,
16 1991, p.1300). Lewicki et al. (2006) suggested that interpersonal trust can be built on three
17 founding blocks: deterrence (i.e., the potential costs of discontinuing the relationship or the
18 likelihood of retributive action outweighs the short-term advantage of acting in a distrustful
19 way), knowledge (people know and understand others well enough to predict their behavior),
20 and identification (one party fully internalizes the preferences of others).
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30 At the beginning of a relationship, interpersonal trust is calculative trust (Ojong and
31 Simba, 2019) but becomes relational trust over time with a history of interaction (Rousseau et
32 al., 1998). Therefore, rich communication and frequent interactions are required to develop a
33 high level of interpersonal trust in the society. Our analysis indicates that networking encourages
34 business creation in both formal and informal sectors. Furthermore, horizontal networks
35 facilitate knowledge exchanges, expertise (Galasso & Ravallion, 2001) and innovation (Lowe,
36 1995), suggesting that governments should invest in incentives to promote networking.
37 However, there is need to consider that increased networking drives up entrepreneurship in the
38 informal sector more than entrepreneurship in the formal sector. Therefore, if the goal is to
39 promote business registration, it's important that government institutions concurrently
40 implement measures to encourage entrepreneurs to move to the formal economy. Since
41 horizontal networking involves active participation in organizations, governments could create
42 favourable conditions for organizations to form and operate effectively and for potential
43 entrepreneurs to join these organizations. Doing so would provide them with information about
44 existing business opportunities and useful contacts and give them access to the resources
45 necessary to start a business.
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3 Of the four components of national social capital, norms of trustworthiness motivate
4 registered business creation while having no significant impact on non-registered business
5 creation rates. Their effect on registered business creation is stronger than that of horizontal
6 networks, suggesting that efforts to improve norms of trustworthiness are worthwhile. To
7 encourage public disapproval of unethical behaviors, education is necessary to promote
8 awareness of the social cost of unethical practices. Another measure could be investment in
9 accountability systems since the literature shows that external scrutiny in accountability may
10 prevent unethical behaviors (Beu & Buckley, 2001). It is worthwhile to mention the movement
11 of businesses from the informal sector to the formal sector. This causes an increase in the national
12 rates of registered business creation but may not necessarily influence the total rates of new
13 business creation. Prior research shows informality may be a steppingstone to formality for some
14 firms (Fajnzylber et al., 2007; De Castro, Khavul, & Bruton, 2014; Webb, Ireland, & Ketchen,
15 2014; etc.). In many instances, without this stepping stone, formality might never be achieved
16 because formal firms have to bear higher costs of labour and regulatory compliance (Rauch,
17 1991; Loayza, 1996; Bennett, 2010). In low-income and developing countries, however,
18 informal business activities can contribute as much as 70% to GDP (Schneider & Enste, 2000;
19 Friedrich Schneider, Buehn, & Montenegro, 2010), and their percentage of economic
20 contribution continues to rise (World Bank, 2007). Therefore, entrepreneurship development
21 efforts for such countries could be placed first on encouraging informal entrepreneurship and
22 then on motivating entrepreneurs to move to the formal sector.
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38 Our results reveal that interpersonal trust is most effective in this case. To help businesses
39 to transition from the informal sector to the formal sector, policy makers should invest in
40 networking, which is found to positively influence both registered and non-registered business
41 creation. Then to deter informal business creation and encourage people to register their
42 businesses, government should implement measures to influence national social capital along
43 the cognitive dimension (i.e. institutional trust and norms of trustworthiness).
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CONCLUSION

Our study clearly supports the growing argument (e.g., Friederike Welter, 2011, Thornton, Ribeiro-Soriano, & Urbano, 2011) that researchers must account for social factors when explaining variations in entrepreneurship. Indeed, Stephan and Uhlaner (2010) argue that a socially supportive environment is essential for entrepreneurship. The empirical results of this study make important contributions to the literature by offering a better understanding of the role of social context in entrepreneurship. The study's theoretical contribution lies not only in providing a better understanding of the human side of entrepreneurship, which is not yet fully explored in the entrepreneurship literature (Mitchell et al., 2002), but also in confirming the relevance of social capital theories in entrepreneurship research. Indeed, the study extends the application of social capital theory to entrepreneurship studies by revealing a set of macro-level social capital factors and their effects on entrepreneurship in the formal versus informal sectors. It shows that while all macro-level social capital factors accelerate entrepreneurship in the formal sector, only networks and interpersonal trust encourage entrepreneurship in the informal sector. It also indicates that institutional trust is the most critical determinant for boosting formal entrepreneurship while having a negative effect on informal entrepreneurship and yet informal businesses are driving force low-income and developing economies.

Interestingly, while the study highlights the fact that networking is good for entrepreneurship, "too much networking" without other supporting institutions drives entrepreneurs to the informal economy. These findings provide direct support for several studies showing that good institutions are positively related to national rates of newly-registered businesses (e.g., Havrylyshyn, 2001; Kaufmann et al., 2006; Nyström, 2008).

Since our study relied on cross-sectional, single-year data, its findings have certain limitations. Therefore, a longitudinal, comparative study would certainly add invaluable insights into the role of social capital in determining national entrepreneurship rates. Furthermore, future studies should look into the impact of social capital in business development and interactions between the formal and informal sectors since both formal and informal firms participate in the market (Bruton, Ireland, & Ketchen Jr., 2012 forthcoming). Moreover, future inquiries could explore how social capital influences entrepreneurial motivation for high-growth-oriented entrepreneurship versus other types.

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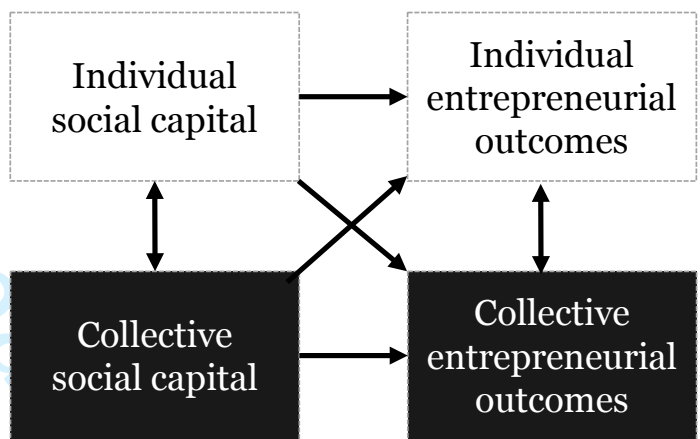
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Figure 1: Social capital influence on Entrepreneurship



Adapted from Gedajlovic et al. (2013, p. 457)

Figure 2: The effects of social capital components on formal and informal entrepreneurship: hypothesized relationships

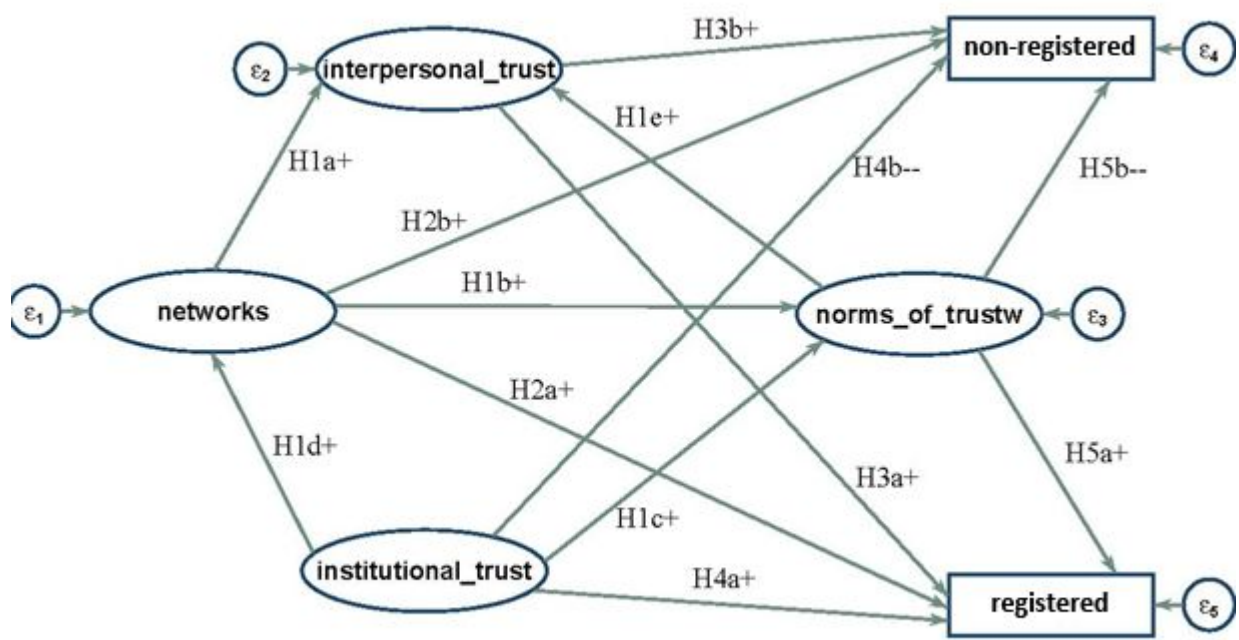


Figure 3: Distribution of social capital variables across regions

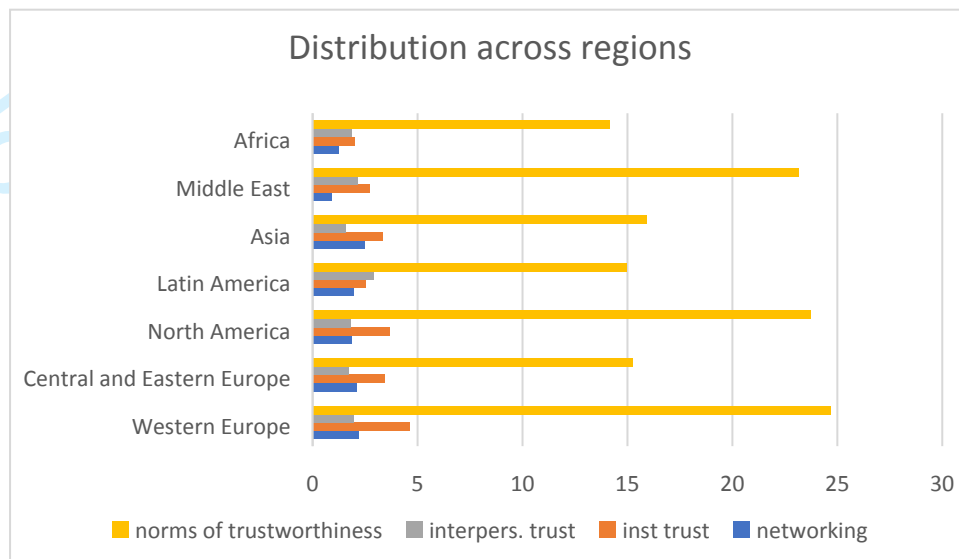
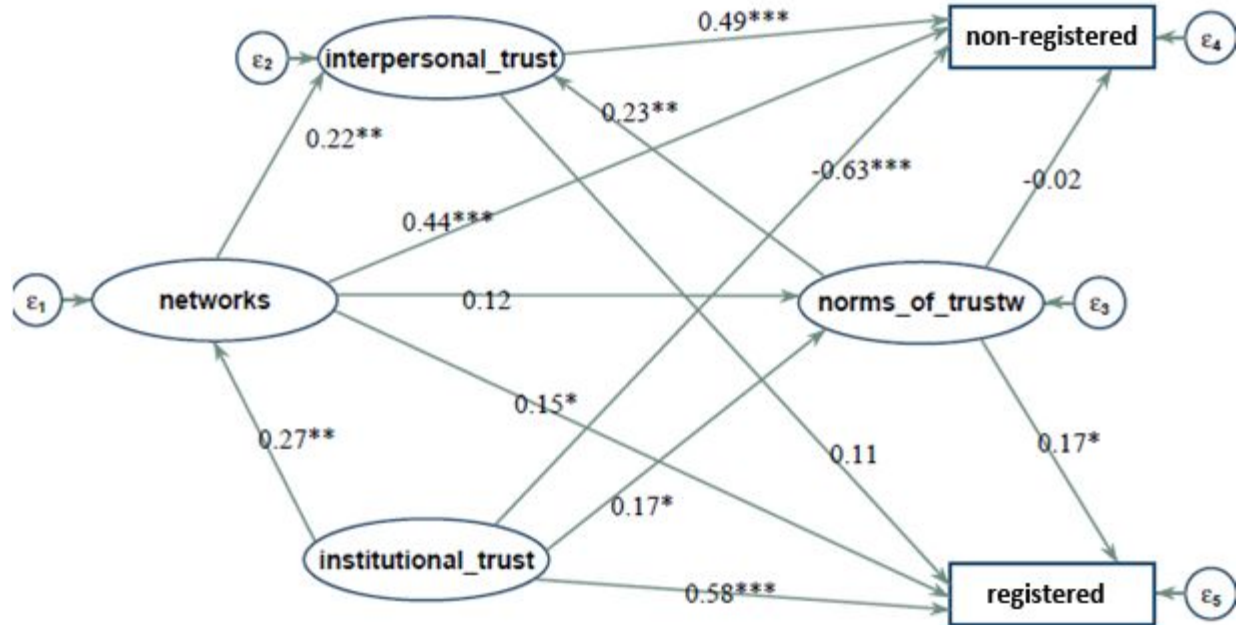


Figure 4: The effects of social capital components on formal and informal entrepreneurship



*p < 0.05, **p < 0.01, ***p < 0.001 (two-tailed)

Table 1: Mechanisms underlying social capital's influence on entrepreneurship

<i>Aspects of social capital</i>	<i>Entrepreneurship process</i>	<i>Entrepreneurship in the informal economy</i>
Structural	-National level of networking -Various stakeholder linkages	-Unregulated cooperative groups -Signalling -Reputational
Relational	- Formalised co-ordination - Existing connections based on trust	-Informal institutions -Collective Identity -Social networks
Cognitive	-Interpretations, -Representations, -Institutional trust	-Norms -Values and -Beliefs of a group of society

Table 2: A list of countries sample for analysis

1. Algeria	14. Guatemala	28. Netherlands	42. Sweden
2. Argentina	15. Hong Kong	29. New Zealand	43. Switzerland
3. Australia	16. Hungary	30. Norway	44. Thailand
4. Bosnia and Herzegovina	17. Israel	31. Pakistan	45. Turkey
5. Brazil	18. India	32. Peru	46. United Kingdom
6. Canada	19. Indonesia	33. Philippines	47. United States
7. Colombia	20. Italy	34. Poland	48. Uganda
8. Chile	21. Japan	35. Romania	49. Uruguay
9. Egypt	22. Jordan	36. Russia	50. Zambia
10. Finland	23. Macedonia	37. Serbia	
11. France	24. Malaysia	38. Singapore	
12. Germany	25. Mexico	39. Slovenia	
13. Ghana	26. Montenegro	40. South Africa	
	27. Morocco	41. Spain	

Table 3: Social capital constructs

WWS items (we use country's averages)	Component
The degree to which a person is an active member of different organizations and associations (formal networking)	Networks
How frequently a person communicates with friends and people around him/her (informal networking)	
The degree to which a person thinks that most people can be trusted	Interpersonal trust
The degree to which a person trusts people he/she knows personally (friends, family, etc.)	
The degree to which a person has confidence in country's institutions (institutions include the education system, the press, television, labour unions, the police, the courts, the government, political parties, parliament, major companies, and NGOs).	Institutional trust
The degree to which a person thinks that the leadership of his/her country is doing enough for people	
The degree to which a person thinks it is not acceptable to avoid paying a fare on public transportation	Norms of trustworthiness
The degree to which a person thinks it is not acceptable to cheat on taxes	
The degree to which a person thinks it is not acceptable to claim government benefits to which you are not entitled	
The degree to which a person thinks it is not acceptable to accept a bribe	

Table 4: Descriptive statistics and Pearson correlations

	1	2	3	4	5	6	7	8	9	10	11	12
1. Formal entrepreneurship												
2. Informal entrepreneurship	-0.18**											
3. Participating in associations and orgs.	0.26***	0.17*										
4. Frequent communication between people	0.27***	0.48***	0.68***									
5. Trust in people in general	0.45***	0.20**	0.24**	0.16*								
6. Trust in people known personally	0.23**	0.29***	0.14*	0.25**	0.74***							
7. Trust in country's institutions	0.49***	-0.58***	0.19*	0.19**	0.02	0.01						
8. Trust in country's leadership	0.35***	-0.36**	0.15*	0.06	0.04	0.03	0.76***					
9. Paying transportation fare	0.06	-0.05	0.02	0.08	0.16*	0.15*	0.28**	0.14*				
10. Not claiming benefits (if entitled)	0.31***	-0.03	0.04	0.07	0.26**	0.17*	0.31***	0.24**	0.72***			
11. Not cheating on taxes	0.29***	-0.04	0.06	0.04	0.23*	0.15*	0.36***	0.23**	0.75***	0.73***		
12. Not accepting bribes	0.40***	-0.22**	0.12	0.08	0.34***	0.37***	0.31***	0.29***	0.78***	0.77***	0.71***	
Mean	0.30	1.65	1.02	0.69	0.55	0.61	2.04	0.49	5.08	5.37	5.15	4.25
S.D.	0.37	1.94	1.09	0.32	0.41	0.26	0.96	0.38	3.26	3.59	3.09	4.67

*p < 0.05, **p < 0.01, ***p < 0.001 (two-tailed)

Table 5: Measurement part of the PLS model

	Factor loading	Construct	Construct reliability	Average extracted variance
Participating in associations and organizations	0.86	Networking	0.855	0.721
Frequent communication with people	0.78			
Trust in people in general	0.93	Interpersonal trust	0.958	0.845
Trust in people known personally	0.87			
Trust in country's institutions	0.91	Institutional trust	0.864	0.726
Trust in country's leadership	0.80			
Paying transportation fare	0.72	Norms of trustworthiness	0.791	0.705
Not claiming benefits to which not entitled	0.87			
Not cheating on taxes	0.89			
Not accepting bribes	0.80			

Table 6: Summary of results

	Supported	Unsupported
Exogenous variables	Positive relationship between networking and interpersonal trust (H1a)	
		Positive relationship between networking and norms of trustworthiness (H1b)
	Positive relationship between institutional trust and norms of trustworthiness (H1c)	
	Positive relationship between institutional trust and networking (H1d)	
	Positive relationship between norms of trustworthiness and interpersonal trust (H1e)	
Effects of social capital components on business creation rates	Positive effects of networking on both registered and non-registered business creation rates (H2a and H2b) – <i>Third strongest</i>	
		Positive effects of interpersonal trust on registered business creation rates (H3a)
	Positive effects of interpersonal trust on non-registered business creation rates (H3b) – <i>Second strongest</i>	
	Positive effects of institutional trust on both registered and non-registered business creation rates (H4a) – <i>Strongest</i>	
	Negative effects of institutional trust on both registered and non-registered business creation rates (H4b) – <i>Strongest</i>	
	Negative effect of norms of trustworthiness on registered business creation rates (H5a) – <i>Least strong of the 4 components</i>	
		Positive effect of norms of trustworthiness on non-registered business creation rates (H5b)

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