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Social capital and entrepreneurial process

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Abstract The paper examines the relationship between social capital and entrepreneurial engagement of individuals in 35 nations from Europe and Asia. To the best of our knowledge, this is the first empirical research that attempts to investigate the influence of three-dimensional social capital concept – trust, networks and norms – on three stages of entrepreneurial process – preference, trial and success – using such large and comprehensive cross-sectional micro data. In general, we find that all three dimensions of social capital matter in the entrepreneurship context, albeit differently. They become beneficial in different ways and at different stages of entrepreneurial involvement. For example, among trust variables, institutional trust in general, and trust in business-oriented and business-supporting actors in particular, exert significant positive effect on entrepreneurial process. Individuals with formal membership in professional associations are more likely to perceive entrepreneurial opportunities, while some close or strong-tie networks might prevent them from progressing in the entrepreneurship ladder. Finally, individual level civic norms appear to be negatively associated with early-stage entrepreneurship, while the success in becoming an entrepreneur is not found to be bound by people's civic norms.

Keywords Entrepreneurial process · Social capital · Trust · Networks · Civic norms · Transition economies

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Introduction

The concept of social capital has crucial implications for advancing our understanding of entrepreneurial process (Liao and Welsch 2005). However, there are relatively

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limited number of studies that have properly dealt with the interaction of social capital and entrepreneurship and how the conceptual framework is explored (for a review, see e.g., Westlund et al. 2014; Gedajlovic et al. 2013; Hoang and Antoncic 2003). Westlund and Bolton (2003), underlined the duality in this interaction, theoretically articulating that, depending on the situation and actors, social capital may positively impact entrepreneurship through its effect on supply costs, innovative ability and revenues, while some facets of social capital such as close-knit families or engagement in small groups may instead restrict the entrepreneurial initiatives.

Although the theory of social capital has made significant inroads into entrepreneurship research, there are, in general, at least three limitations in how these concepts are operationalized and investigated empirically. Firstly, the previous studies focus exclusively on a single-country context and do not provide results that could be generalized in a wider geographical context (e.g., Light and Dana 2013; Puffer et al. 2009; Meek et al. 2009; Martez and Rodriguez 2004; Westlund et al. 2014).[1] However, individual social capital differs largely across countries, and homogeneity does not almost exist (Putnam 2000; Paxton, 2002; Ostrom 2005; Van Oorschot 2006). Furthermore, heterogeneity across country for the extent of entrepreneurial activities also holds true (Acs et al. 2005; Grilo and Irigoyen 2006). Thomas and Mueller (2000) suggest that the individual attributes of entrepreneurs differ drastically across countries, while Batjargal (2010) argue that social capital might operate differently in different institutional environment. Due to these contrasts in social capital and entrepreneurship endowments, their connection may differ considerably across countries.

Secondly, empirical results are controversial due to the definition of social capital and, the fact that the indicators used to depict it are either very limited or incomplete.[2] However, in order to precisely assess the role of social capital in entrepreneurship, there is a need to conceptualize social capital more broadly (Liao and Welsch 2005). There is an extensive body of empirical research which links specific facets of social capital, mainly trust (e.g., Fukuyama, 1995; Hohman and Welter, 2005; Scarbrough et al. 2013), or social networks (e.g., Johannisson and Ramirez-Pasillas 2001; Thornton and Flynn 2003; De Clercq and Arenius 2003; Arenius and Clercq 2005), to entrepreneurship. According to Stam et al. (2014), in the entrepreneurship literature, there are conflicting perspectives even when it comes to a single facet of social capital, such as networks. This limitation partially stems from the non-existence of generally accepted definition of social capital as well as lack of adequate data to capture the social capital concept more precisely (Westlund and Adam 2010). Because of these reasons, empirical researches run the risk of revealing vague and incomplete results with regard to the true role of social capital in entrepreneurial process.

Thirdly, previous literature usually does not distinguish between different stages of the entrepreneurial process, and mainly concentrates on the single

[1] Although some studies such as Kwon and Arenius (2010), De Clercq et al. (2010), Stephan and Uhlaner (2010), Estrin et al. (2013) have looked at the social capital and entrepreneurship relationship in the cross-nation context, their construct of social capital is measured at country level and does not capture the role of individual social capital in entrepreneurship.

[2] Liao and Welsch (2005) and Schenkel et al. (2009) were among a few researchers who attempted to operationalize the social capital construct in a broader context, including three measures: structural (networks); relational (trust); and cognitive (shared norms) social capital. However, they found no significant differences in three forms between entrepreneurs and non-entrepreneurs.

ladder of entrepreneurial process when they study the role of individual social capital in entrepreneurship (e.g., Arenius and Clercq 2005; Davidson and Honig 2003; Shane and Cable 2002; Johannisson and Ramirez-Pasillas 2001). The notable exceptions are studies conducted by Greve and Salaff (2003), Hite and Hesterley (2001) and Batjargal (2010). Greve and Salaff (2003), for example, look at the impact of network activities of entrepreneurs on three phases of establishing a firm. Hite and Hesterley (2001) explore the relationship between social networks and emergence of entrepreneurship, while Batjargal (2010) estimates the effect of network's structural holes on product portfolio and profit growth of early stage ventures. As a matter of fact, these studies, except Greve and Salaff (2003), have limited implications by overlooking the complete or wider stages of entrepreneurial process. However, discrimination between specific stages of entrepreneurial engagement is very important, and the factors determining them may differ significantly (Grilo and Thurik 2006). Overlooking or avoiding different stages of entrepreneurial process may lead to poorer understanding of the distinguished role of social capital and its various dimensions in entrepreneurial activities.

As a consequence of concentration on individual countries, narrower depiction of entrepreneurial process and the absence of unanimously used constructs of social capital, a detailed evaluation of how social capital affects entrepreneurship across various stages and wider range of countries still remains an untapped area in empirical research. Our paper aims to cover these gaps by linking individual level social capital to entrepreneurial process on the following three manners. Firstly, we use high-quality a nationally representative cross-sectional household survey of 35 countries from Europe and Central Asia (involving approximately 1000 households in each country). To the best of our knowledge, this is the largest and most comprehensive cross-sectional micro survey being used in a study of the relationship between individual social capital and entrepreneurship. This allows broadening the perspective of previous studies dealing with social capital and entrepreneurship and shifting the focus to a broader geographical perspective displaying a large variety of differences. Secondly, we distinguish between the three stages of an individual's involvement in entrepreneurial process. These engagement levels range from "preferring to be self-employed", "trying to establish a business" and "succeeding in becoming a venture". This distinction enables accurate assessment of where and how in the entrepreneurial process social capital plays a more significant role. Thirdly, we use a three-dimensional concept of social capital that was originally proposed by Coleman (1988). By doing so, we aim at overcoming the definitional controversy and vagueness, which has haunted previous studies, and demonstrate how these three dimensions of individual-level social capital may serve important conduits through which entrepreneurship activities are boosted.

The rest of the paper proceeds as follows: the next section discusses the concept of social capital and entrepreneurial process, and explains the theoretical framework of the association between these two concepts. Data and empirical method describes the data and empirical methodology; Empirical results presents the empirical results of the relationship between social capital and entrepreneurial process, while Conclusion and discussion concludes with some discussions.

Conceptual framework

Multi-dimensional social capital

The origin of the term "social capital" could be traced back to Bourdieu who defined it as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (Bourdieu 1986, p. 248). For him, social capital is an attribute of an individual, meaning that an individual deliberately devises and implements strategies to invest in social capital in exchange of getting access to various benefits. After Bourdieu (1986), many researchers described social capital as an asset embedded in the relationships of individuals, networks, or societies (Coleman 1988; Smelser and Swedberg 1994; Burt 1997; Nahapiet and Ghoshal 1998). It has been agreed that, as opposed to other types of capitals (e.g. physical, human), social capital cannot build alone and can only persist through cooperation and social association among individuals (Grootaert and Bastelaer 2002).

Coleman (1988) extended the works of Bourdieu by describing the scope of the social capital concept in a broader context. He identified three specific dimensions of social capital as resources which could be accessed: (i) trust and obligations, (ii) networking and information channels and (iii) civic norms and effective sanctions. Nahapiet and Ghoshal (1998) use this perspective and treat the social capital as a multidimensional concept covering relational facets (e.g., trust and obligations), structural configurations (e.g., networks and relationship), and cognitive aspects (e.g., shared values). According to Knack and Keefer (1997, p.1252), "Trust, cooperative norms, and associations within groups each fall within the elastic definitions that most scholars have applied to the term social capital."

In this study, we incorporate the above-discussed work of Bourdieu and Coleman, by assuming the followings: Firstly, as Bourdieu (1986), we assume that social capital is truly "capital" and has quantifiable returns to individuals. Secondly, as Coleman (1988), we define social capital as a resource which could be utilized by individuals and which has three dimensions, namely, (i) trust, (ii) networks, and (iii) civic norms. Although all three dimensions of social capital can be linked with economic outcomes in similar ways, below we briefly discuss the peculiarities of each dimension and give explanation on how in general they interact with economic development.

Trust is an integral part of social capital and as an elusive concept, it lacks a single consensual definition (Welter 2012). However, so far the agreed elements of trust, such as reciprocity and trustworthiness appear in most definitions of the concept. Usually, the literature differentiates between the two types of trust, namely confidence on people and trust in institutions surrounding the people (Paxton 1999). The first type of trust is called "social trust" and refers to the confidence towards both the types of individuals (generalized or collective trust which is not tied to specific known individuals) and a particular fraction of society such as families, friends, neighbors, or other nationalities (particularized trust). Secondly, the so-called "institutional trust" refers to the people's trust in various types of governmental and non-governmental organizations. In general, trust and honesty tend to be the drivers for reducing transaction costs and lowering risk (Höhman and Malieva 2005; Fukuyama 1995). Social trust helps to reduce uncertainty and facilitate communication and transaction (Sako 1992), while trust in institutions

makes the individuals to cooperate with various institutions and organizations, and expect reciprocation (Rousseau et al. 1998).

Network is also an important facet of social capital and constitutes civic engagement through meeting friends, family, and colleagues or by being member of social associations such as trade unions, professional organizations, political parties, or religious organizations. These civic participations provide a solid base for trusting and reciprocal relationship between network members (Saegert et al. 2001). Individuals' involvement in social networks represents the foundations for developing information channels which "constitute a forms of social capital that provides information that facilities action" (Coleman 1988, p. S104). These associational activities facilitate interaction between actors and obtaining more active networks is playing a more critical role in the development by diffusion of information and increase of cooperation, rather than just having membership in certain associations or less frequent resort to interpersonal networks.

The third dimension of social capital, namely civic norms, refers to informal mechanisms that may be reflected in participation in social activities and put emphasize on public values and weight less self-interest (Knack and Keefer 1997). Norms can be defined as habits that help to intuitively distinguish between acceptable and unacceptable behavior (Lyon 2000). Civic norms are unwritten rules of conduct within a group (Elster 1989). According to Meek et al. (2009, p. 496) "Norms are maintained by the unwanted emotions (guilt, embarrassment, and shame) an individual feels when not complying with them." Civic norms, or values that are best for all people, help people to reach consensus and act accordingly. If the punishments of violating a social norm are strong enough, few people will want to violate them in a society (Kandori 1992). As opposed to networks, civic norms do not necessarily seek to maximize the benefits of specific interest group, but look for improving the well-being of a broader society, usually a whole community. According to Woolcock and Narayan (2000, p.16), effective norms can "…encourage responsible citizenship and the collective management of resources".

Taking together all discussions above, in our study, we use the three-dimensional social capital concept and assume that such multidimensional view is useful in a sense that it recognizes and differentiates various forms of social capital. For the trust dimension, we use both social as well as institutional trust aspects, while networking captures a wide range of associational engagement. Our civic norms indicator considers obeying the rules in society. We discuss all the three dimensions in more detail in the proceeding sections of the paper.

Multi-stage entrepreneurial process

Usually, empirical researches differentiate between engagement and no engagement phases in entrepreneurial process when they analyze individual determinants of entrepreneurship (Blanchflower et al. 2001; Vivarelli 2004). However, the road for an entrepreneur is long, meaning that prior to becoming an actual entrepreneur, an individual goes through various stages of entrepreneurial process (Van der Zwan et al. 2012). The so-called "dynamic" or "stage" view on entrepreneurship has been emerged recently, which acknowledges that setting up a business is a process that consists of several phases and organizations develop in an evolutionary manner

(Reynolds 1997). For example, Shane and Venkataraman (2000) argue that entrepreneurship consists of the process of discovery of a business opportunity and its exploitation. As Gartner and Carter (2003) suggested, distinguishing between the stages continues even after a business is being established.

As far as we know, Wilken (1979) was one of the first to recognize various phases in the establishment of enterprises. He identified three phases namely, (i) the motivation phase, (ii) the planning phase, and (iii) the set up phase. This dynamic view of studying entrepreneurial process led to a wave of empirical research and the works of the Entrepreneurship Flash Eurobarometer (EFE) and Global Entrepreneurship Monitor (GEM) are inspired by these studies (Reynolds et al. 2005). For example, Grilo and Thurik (2006) introduced the concept of "engagement levels" to discriminate between the various steps of opening a new business in 24 European Union member states using the EFE survey results. They regarded the individual's preferences and intentions to become an entrepreneur as the first stage of entrepreneurial process and then analyzed the concept of a nascent entrepreneur (individuals that start to take some concrete steps of starting up a new business). For them, the entrepreneurial process ends up with establishing of a new business and becoming an entrepreneur. Van der Zwan et al. (2010) introduce the term "entrepreneurial ladder" and discriminate between five levels of entrepreneurial processes covering the 25 European Union member states and the United States with the conclusion that determinants of entrepreneurship are not necessarily the same across different stages of an entrepreneurial process.

However, empirical studies have been slow to follow the above conceptual developments mainly due to lack of adequate data. In our study, we build on recent theoretical advances in the literature and distinguish between three engagement levels in the entrepreneurial process, from no entrepreneurial involvement to established business ownership and analyze them in the sense that each stage is seen as an increasing degree of involvement in the entrepreneurial process. The first ladder is referring to people's preference of being self-employed, second is considering the people who tried to open a business, and third is covering the individuals who managed to start-up a new business. Some researchers call the individuals who prefer being self employed, our first stage entrepreneurship indicator, as "latent entrepreneurs", while people who are actually taking steps to start a business, our last two-stage variables, called "nascent entrepreneurs" (e.g., Grilo and Thurik 2006; Blanchflower et al. 2001; Bonte and Piegeler 2013). In this study, we will also interchangeably use latent and nascent entrepreneurship vis-a-vis three ladders of entrepreneurial process proposed.

The interaction of social capital and entrepreneurial process

The linkages between individual level social capital and entrepreneurship have attracted less attention than the analysis of macroeconomic aspects. Furthermore, Audretsch et al. (2006) argue that most of the research on social capital and entrepreneurship interaction does not adequately address the subject. Empirical studies are mainly focused on individual countries, use very limited (unidimensional), sometimes irrelevant indicators of social capital. And finally do not distinguish between different stages of entrepreneurial process.

A broader definition of social capital allows several possible links to be identified between individual-level social capital and entrepreneurial process, keeping in mind

that depending on the form of social capital which is crucial in one stage may be more or less valuable at other stages of the entrepreneurial process. Social capital is a dynamic phenomenon; meaning that depending on different needs, the various types of social capital can be activated (Granovetter 1985; Burt 1992). Greve and Salaff (2003) argue that an individual requires different contacts and resources in different phases of an entrepreneurial process.

In general, as suggested by Greve and Salaff (2003), we expect that an early stage of entrepreneurship will require less social capital, as people may explore the possibilities of establishing their own venture within a small circle of close contacts. In addition, one may expect an individual's preference of being an entrepreneur as an initial stage of entrepreneurial process, is hard to predict and it is more prone to personal entrepreneurial spirit (Blanchflower et al. 2001). In very early stages, individuals may rely less on their economic and social endowments, including the social capital, and overestimate their likelihood of success. People may also prefer self-employment to other alternatives mainly due to either no or just a small satisfaction with their prevailing economic and working conditions.

However, social capital through its all three dimensions may become more relevant and useful when it comes to nascent entrepreneurship, namely entrepreneurial trial and success. Once an individual starts to take concrete actions for establishing a new venture, broader resources and relations will be needed to succeed. During the entrepreneurial trial phase, people may not necessarily know what kind of personal resources can help them and therefore, they can end up interacting with a larger set of people and institutions they think would benefit them in the future (Greve and Salaff 2003; Nikolova and Simroth 2013). However, in the success or advanced stage of entrepreneurial process, individuals may act more selectively and focus or foster those facets of social capital that have proven to bring them real benefit.

Taking into account the above-mentioned views, below we discuss further the conceptual interactions between different dimensions of social capital and entrepreneurial process.

Trust and entrepreneurial process

Attitudes of high trust make it easier for individuals to reach effective decisions and implement personal as well as collective actions. It reduces the transaction cost and mitigates the risk or uncertainties associated with the decision making by substituting for as well as complementing the contracts or regulations (Luhmann 2000). Trust-based personal relationships enable individuals to gain greater feedback on their business idea and succeed in entrepreneurship activity (Greve 1995).

High mutual trust, especially in the generalized form, can play a significant role in establishing large-size companies with particularly export-oriented businesses (Fukuyama 1995). Aldrich (2000) argues that trust-building activities during a business creation are particularly important for innovative entrepreneurs. Meanwhile, particularized trust in narrower context (e.g. trust in friends, trust in family) can be more crucial in establishing and operating a small business in order to retain confidentiality and personal control (Bennet and Robson 1999).

In contrast to social as well as particularized trusts, which are apparent mainly in non-commercial relations according to Williamson (1993) and early-stage

entrepreneurship as per Welter (2012), institutional trust can make the individuals deal more confidently with them to become a successful entrepreneur. Doh and Zolnik (2011) found that even negative correlation between generalized trust and self-employment, while trust in institutions had a positive and significant sign. According to Raiser (1999), trust in various institutions and organizations is essential for the efficient operation of a market economy. Institutional trust appears to play a more important role during periods of venture creation and business growth (Höhmann and Welter 2005). Westlund and Adam (2010) argue that it is not the general trust that has an impact on economic performance, but trust in business sphere of society. Thus, low trust in certain institutions such as banks, investors, etc., may lead to an individual's certain irrational or passive relationships with those institutions, which can end up with lower economic performance and entrepreneurship. Nevertheless, institutional trust and social trust are not mutually exclusive and the former in its turn requires the latter to be developed and sustained (Welter and Smallbone 2006).

Based on these arguments, we propose the following hypotheses:

Hypothesis 1a: In general, in contrast to social trust, institutional trust will be a more significant predictor of entrepreneurial process.

Hypothesis 1b: Institutional trust will be more positively related to later stage entrepreneurship (nascent entrepreneurship), while early-stage entrepreneurship will be negatively affected by institutional trust.

Hypothesis 1c: Not all types of institutional trust, but mainly confidence towards business-oriented and-supporting organizations will be positively related to nascent entrepreneurship.

Networks and entrepreneurial process

So far, most related research on the interaction between social capital and entrepreneurship has focused on the importance of social networks for business creation and growth (Hoang and Antoncic 2003). It has been unanimously agreed that an individual's participation in social networks and associations increases the availability and accessibility of information and reduces its costs. The information that relates to good or evolving business opportunities, sources of financing, or successfully registering new business venture can play a critical role in venture gestation. Having access to more accurate information can also result in better business performance and profit margin of already existing entrepreneurs (Fafchamps and Minten 1999). Burt (1992) argues that information benefits stemming from social networks and relations occur in three forms: access, timing, and referrals. Greve and Salaff (2003) mention that social networks have three useful properties for entrepreneurs. These are size (e.g., enlarging their networks), position (e.g., positioning themselves within a network) and relationship structure (e.g., interacting with people through many types of relations). However, it may require time and efforts for people to fully benefit from these peculiarities of social networks.

Network and entrepreneurship relations can vary in nature at different stages of business development (Elfring and Hulsink 2007). Greve and Salaff (2003) have also discriminated between more than two engagement levels of entrepreneurship when explaining the role of social networks in entrepreneurship. They claim that social

networks are not fixed and depending on the actors and circumstances, and that each entrepreneurship phase may require a particular combination of social resources. People can activate different types of social networks through bringing close and distant networks to their business depending on the entrepreneurial needs. According to Butler and Hansen (1991), during the pre-start-up stage, individuals rely largely on strong ties with close networks, while in the later phases, the networks become more business-oriented. Batjargal (2003) and Jack (2005) have also found that strong and close ties play more important role at the emergence phase of entrepreneurship.

There were some further attempts to discriminate between the various stages of entrepreneurial activities when their interaction with social networks is investigated. For example, according to Welter (2012), during the early-stage of entrepreneurship, which mainly refers to an individual's preference on occupational choice and identification of business opportunities, entrepreneurs rely mainly on strong personal network ties and contracts. However, most likely, individuals with more distant networks and civil engagement will be in a central position to access necessary sources and utilize valuable information for the later-stage of entrepreneurial process (Liao and Welsch 2005). The higher the degree of associational membership and business-oriented networks, the more would be the communication channels that are available for use and more likely is the person to enterprise.

Finally, Gedajlovic et al. (2013) argue that social networks do not always lead to positive outcomes with regard to entrepreneurship. Coleman (1988, p. 598) explicitly mentions that, "A given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others." For example, the costs of developing and managing certain network relationships may result in some narrow-shared values and restrictive obligations, which limit the range of opportunities. Furthermore, certain configurations of social networks may also lead to negative outcomes due to the costs associated with the acquisition and management of relationships. Social relationships may also result in the prevalence of monopolies and corruption (Riordion 2004).

Based on these logics, we hypothesize the followings:

Hypothesis 2a: Strong-ties with close personal networks will play a more significant and positive role in latent entrepreneurship than nascent entrepreneurship.

Hypothesis 2b: Distant or weak-tie social networks will play a more significant role in later stages of entrepreneurial process than early stage entrepreneurial process.

Hypothesis 2c: Business-oriented and-supporting social networks can particularly be a positive resource for the entire entrepreneurial process.

Civic norms and entrepreneurial process

Although social norms have rarely been empirically tested in the entrepreneurship literature, some scholars tend to agree that without business supportive habits, commensurate cultural capital and commonly- accepted social norms, an abundance of social capital may fail to yield entrepreneurial consequences (e.g., Gedajlovic et al. 2013; Davidson and Wiklund 1997). In the case of Sweden, Giannetti and Simonov (2004) found that social norms did have positive impact on entrepreneurial entry.

According to Meek et al. (2009), p. 496), "…economic and social perspectives make social norms a valuable variable in bridging our understanding of how entrepreneurial action is impacted by social and economic factors…".

However, empirical findings on interaction between social norms and entrepreneurship are somehow mixed. Social norms can cover a wide range of virtues and values, which can be positive as well as negative for individual productivity and development. Being bound by social norms and values that exist in society might prevent people from acting opportunistically. As suggested by Knack and Keefer (1997), civic norms tend to improve allocative efficiency from a societal point of view, while they can act as constraints on personal interests. Krueger et al. (2000) found no evidence of relationship between social norms and entrepreneurship intention. Coleman (1990) suggests that social capital may yield environments where individual freedom of action is limited because of the rigid enforcement of social norms.

As far as we know, social norms have not been empirically tested, when it comes to the various stages of entrepreneurial process. However, one may assume that an individual's early intention to become an entrepreneur cannot necessarily be bound by social norms and values. People can behave purely opportunistic and since they do not take any concrete actions which can be noticed by broader public, they may not constraint themselves with social norms and values. For example, not telling a truth, or breaking the existing rules in society may exist as a personal behavior of individuals in a certain community which can affect the early-stage entrepreneurship positively. As Knack and Keefer (1997) suggested, civic norms can effectively constrain opportunism. However, taking some concrete actions and progress over the entrepreneurial ladder require more interaction and cooperation, which in turn can lead to considering social norms as binding. Moreover, according to Fukuyama (1995), the sharing values and norms do not necessarily produce social capital. Therefore, one needs to be careful in defining the social norms, since some of them may be wrong (right) ones, although they may influence the entrepreneurship positively (negatively).

Together, these lead to the following hypotheses:

Hypothesis 3a: Civic norms will have a negative association with the early- stage of entrepreneurship (latent entrepreneurship).

Hypothesis 3b: Civic norms will not be negatively associated with late-stage entrepreneurship, particularly with the success of becoming an entrepreneur.

Data and empirical method

Data

Our source of data is the individual-level data file of the second round of Life-in-Transition (henceforth, the LITS) survey which was implemented by the European Bank of Reconstruction and Development (EBRD). The data collection took place in late 2010 (EBRD 2011). Since a complete description of the LITS's methodology, including a report on observations and a discussion of the experiences with data collection can be found elsewhere (EBRD 2011), we limit ourselves to the following succinct discussion of the data set.

The main goal of conducting the LITS surveys was to collect directly comparable information about changes in individuals' and households' experiences, behaviors, and attitudes across the 35 European and Central Asian countries over time. Thirty developing countries and five developed Western European countries are covered in the data set. The survey consists of a cross-sectional survey which collected information on a broad range of topics, such as the socio-demographic characteristics of respondents (e.g. age, gender, and educational attainments) and households (e.g. dwelling ownership and rural/urban place of residency). Importantly, the LITS also collected data about personality traits, entrepreneurial process and social capital. The data was collected through face-to-face interviews by trained interviewers.

A consistent sampling methodology was used across all 35 countries. At least 900 households were interviewed in each country, with a total of 38,864 households interviewed altogether. The questionnaire is standardized for all countries and the sample is nationally representative. The LITS questionnaire consists of two sections. The first section of the questionnaire is administered to household head who is defined as the most knowledgeable person in the household and is designed to collect information on household composition, housing, expenditures and wealth. The second section of the questionnaire is administered to an adult household member in order to gather the individual's personal information, information about his or her economic activities, values and attitudes, as well as life history. The individual member of household was selected for the interview based on the "last birthday" sampling rule.

Sample description of the LITS by countries is reported in Panel A of Table 3 in the appendix.

Measures

Entrepreneurship variables

We use three outcome variables (preference, trial and success) of entrepreneurial process. The survey firstly asks to respondents whether they prefer self-employment to any other type of formal employment (*preference*). If they do, then the respondents are asked if they had ever tried to start a business (*trial*). If they had, then they are also asked whether they succeeded in establishing a new business (*success*). In our study, the first variable refers to latent entrepreneurship, while the last two questions consider the nascent entrepreneurship activities of respondents. The binary dependent variable measuring latent entrepreneurship takes the value of 1 if an individual prefers being self-employed and the value of 0 otherwise. For the *trial*, binary variable takes the value of 1 if an individual has tried to create a venture and the value of 0 otherwise. Our third dependent variable, *success*, takes the value of 1 if the respondent has succeeded in establishing a new business and the value of 0 otherwise. The same three phases of entrepreneurial process have been already used in a number of studies (e.g. Nikolova et al. 2012; Nikolova and Simroth 2013; Grilo and Thurik 2006).

Panel B of Table 3 in the appendix reports the percent of individuals engaged in each part of the entrepreneurial process for each country in the sample.

Social capital variables

We use a wide range of indictors to capture all three dimensions of social capital: trust, network and civic norms. For trust, we distinguish between social trust and institutional trust in accordance with prior literature (e.g., Coleman 1988; Paxton 1999). Social trust is operationalized using two types of interpersonal trust, namely particularized trust (trust in certain group of people) and generalized trust (trust in everybody). Personalized trust variables are extracted from the LITS questions: "To what extent do you trust people from the following groups: […] your family and […] friends and acquaintances." The answers to each particularized trust variable range on a scale of 1 to 5 (1-completely distrust and 5-compeltely trust). We create a new particularized trust variable called *trust in family and friends*, by summing up these two. For g*eneralized trust* variable, we used the following question from the LITS: "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?" Answers are on a scale of 1 to 5, where 1 means complete distrust and 5 means complete trust.

Institutional trust variables are extracted from the LITS questions: "To what extent do you trust the following institutions? […] the presidency/monarchy, […] the government/cabinet of ministers, […] regional government, […] local government, […] the parliament, […] courts, […] political parties, […] armed forces, […] the police, […] banks and financial system, […] foreign investors, […] non-governmental organizations, […] trade unions, and […] religious institutions". The answers to the institutional trust variables are classified on scale of 1 to 5 (1-completely distrust and 5-completely trust). We further re-classify the detailed institutional trust variables by using dichotomous measures. New variables created include: *trust in government* (sum of trust in the following institutions: the presidency/monarchy, the government/cabinet of ministers, the parliament, courts, armed forces, the police, regional government and local government), and t*rust in civic institutions* (sum of trust in non-governmental institutions, trade unions and religious institutions). *Trust in government* variable takes the minimum value of 8 and maximum value of 40, while t*rust in civic institutions* variable varies between 3 and 15.

For the measurement of the second social capital dimension we follow the previous literature (e.g., Putnam 2000; Habibov and Afandi 2011). We first construct a dichotomous variable indicating the frequency of meeting with relatives and friends. The variable gets values from 2 to 10 (higher means more frequent). In order to measure formal associational activities of respondents, measurements of membership in the following forms are used: *professional associations* (equals to 1 if member, otherwise 0); *labor union* (equals to 1 if member, otherwise 0) and *other organizations* (sum of membership in political party; church and religious organizations; sport and recreational organizations and associations; art, music or educational organizations; environment organization; humanitarian or charitable organization; and youth associations). For the membership in other organizations, the dummy variable was constructed which has a value of 0 if the respondent reported no membership in any institutions and a value of 1 if the individual is a member of at least one of these organizations.

For the third dimension of social capital, social norms, we follow the existing social capital literature that considers Coleman's (1988) theory of civic norms (e.g., Knack and Keefer 1997). Support for social norms was assessed in the LITS by questions

based on seven types of behaviors, which violate norms such as buying a university degree and public officials asking for favor in return for service. The following questions of LITS are used: "How wrong, if at all, do you consider the following behaviors to be? […] speeding to take somebody to the hospital in an emergency, […] paying cash with no receipts to avoid paying VAT or other taxes, […] selling something second hand without mentioning all of its defects, […] making an exaggerated insurance claim, […] a public official asking for a favor or gift in return of services, […] buying a university degree that one has not earned, and […]keeping an accidental overpayment from an employer". Each variable takes a value of 1 or 0 (1-not wrong et al.l and 0- otherwise). We reversed these scales, so that larger values indicate greater *Social Norms*, and summed values over the seven items to create aggregate social norms variable with a scale between 0 and 7.

At the preliminary stage of our research we experimented with alternative approach for all the three dimensions of social capital. Thus, we attempted to apply a data reduction technique such as principal component analysis (PCA) to reduce a collection of several measures of trust, network and social norms variables to a single underlying factor. In our case, the PCA demonstrated no clear tendency to identify specific underlying distinct components.

Finally, we have also considered the problem of multicollinearity. Theoretically, using a wide range of social capital variables in the same regression models can be problematic due to multicollinearity. We tested multicollinearity in our models by using VIF (variance inflation factor). As a rule of thumb, a variable with VIF greater than 10 should trigger further investigation (Baum 2006). In our case, no variable has a VIF higher than 10. Lack of multicollinearity is further reinforced by the absence of a high correlation between the various social capital components included in the analysis (See Table 4 in the appendix).

Detailed description for all three dimensions of social capital can be found in Panel A of Table 5 in the appendix.

Control variables

To empirically investigate the relationship between the three dimensions of social capital and three phases of entrepreneurial process, we complement our analysis by a set of individual-level variables and country fixed effects. This in general, allows us to minimize the effect of confounding variables.

Since our analysis relies on a cross-sectional data set, it is essential to incorporate a wide range of control variables in order to avoid omitted variable bias. In general, our control variables can be divided into three groups. First, as suggested by several studies (e.g., Demirgüç-Kunt et al. 2007; Grilo and Thurik 2008; Ardagna and Lusardi 2008; Van der Zwan et al. 2012), we include a number of socio-demographic variables such as respondent's gender, age, subjective health and the level of education. Second, as economic control variables we include wealth (car ownership) and access to bank services (e.g., Van der Zwan et al. 2010; Khayesi and George 2011). Third, we also control for risk tolerance of individuals. As suggested by previous studies (e.g., Van der Zwan et al. 2012; Afandi and Kermani 2015), general willingness of respondents to take risks may influence their entrepreneurial participation.

In all regressions, we also include country dummies to eliminate or minimize the effect of slowly changing country-level variables (e.g., culture or institutional quality) that could confound the results. By taking into account country-specific fixed effects, we can focus completely on variation within countries.

Overall, descriptive statistics and definitions of all outcome and explanatory variables are shown in Panel B of Table 5 in the appendix.

Empirical method

The main objective of our paper is to investigate the role of three-dimensional social capital, defined as trust, networks and norms, in three phases of entrepreneurial process, defined as preference, trial and success. Given that our entrepreneurship variables are binary dependent variables we employ a probit maximum likelihood estimation in the study. Econometrically, our empirical strategy is based on the following equations:

$$Prefer_{i,k} = \alpha_0 + X'\alpha_1 + K'\alpha_2 + S'\alpha_3 + \varepsilon \quad (1)$$

$$Try|Prefer_{i,k} = \beta_0 + X'\beta_1 + K'\beta_2 + S'\beta_3 + \eta \quad (2)$$

$$Succeed|Try|Prefer_{i,k} = \gamma_0 + X'\gamma_1 + K'\gamma_2 + S'\gamma_3 + \delta \quad (3)$$

where $Prefer_{i,k}$ denotes preference of self-employment by respondent i in country k, $Try|Prefer_{i,k}$ is a dummy variable equal to 1 if this individual i from country k has tried to set up a business provided that he or she prefers to be self-employed. $Succeed|Try|Prefer_{i,k}$ is a dummy variable equal to 1 if individual i from country k has succeeded to set up a business, provided that he or she prefers to be self-employed and has tried to open a business. $X'\alpha_1$, $X'\beta_1$ and $X'\gamma_1$ are vectors of individual and households-level independent variables. $K'\alpha_2$, $K'\beta_2$ and $K'\gamma_2$ refer to vectors of country level dummy variables, in order to control country-level heterogeneity. $S'\alpha_3$, $S'\beta_3$ and $S'\gamma_3$ are the vectors including the different social capital variable sets categorized under trust, network and social norms dimensions. Finally, ε, δ and η are disturbance parameters, which are assumed to be normally distributed.

As elaborated above, our dependent variables have a nested nature, which means our *trial* variable is a subset of our first category (*preference*), and *success* variable is a subset of the second category (*trial*). This character of the dependent variables enables us to estimate the determinants of each stage of entrepreneurial process separately, without concern for cross-equation correlation (Wooldridge 2002).

Given its broader definition, different dimensions of the social capital are mutually reinforcing and sometimes they substitute for each other and sometimes complement (Grootaert and Bastelaer 2002; Liao and Welsch 2005; Welter 2012). As Gedajlovic et al. (2013) suggested, some social resources may precede others and lead to the development of new forms of social capital. For example, networking and social

associations usually persist in many relations of mutual trust; high civic norms make it more likely to observe greater confidence among people or social norms and values in society may underlie people's networks. Taking into account the potential interrelationships between various forms of social capital, first we separately estimate the effect of each dimension of social capital on the entrepreneurial process. This strategy is proposed to check the robustness of the coefficients using different definitions of social capital. Additionally, we run regression with all three dimensions of social capital together for a full sample and European Union and Non-European Union samples only. This allows us to further check the robustness of our coefficients and to see: (i) whether each dimension of social capital has independent significant influence on entrepreneurship, and (ii) whether our results are geographically bound or not. All model specifications include individual-level control variables and country fixed effects.

Empirical results

In the proceeding sections, we present the results of our empirical analyses on the association between social capital dimensions and entrepreneurial process. Probit estimations report marginal effects that are calculated as Average Partial Effects. As discussed in the methodology section of the report, first, we separately estimate the effect of each dimension of social capital – trust, networks and norms – on entrepreneurial process and present the results in Panel A, B, and C respectively. This will allow us to account for the potential interrelationships between various forms of social capital. For the sake of simplicity and preserving space, we only report the variables of interest, namely social capital dimensions. The full results can be provided upon request.

Effect of trust on entrepreneurial process

Panel A of Table 1 presents the effect of trust variables on entrepreneurial process. The models also include all individual level control variables and country dummies. Probit estimations report marginal effects that are calculated as Average Partial Effects. The most important findings shown in these models revealed that neither generalized nor particularized social trust enter statistically significant in any stage of the entrepreneurial process, while trust in institutions tends to play a statistically significant role in entrepreneurship activities (Hypothesis 1a). Although trust in both government and civic institutions enter negatively in the first stage of entrepreneurial process (Hypothesis 1b), their effects become either positive (trust in government institutions) or non-significant at the final phase of entrepreneurship (success). After controlling for individual characteristics and country dummies, one unit increase in the trust in government institutions increases the likelihood of individual to succeed in establishing a new business by 0.3 percentage point. It is also found that trust in business-oriented institutions, namely trust in banks and trust in foreign investors appear to increase the likelihood of an individual to enterprise (Hypothesis 1c). For example, one unit increase in trust in banks increases the probability of an individual to become an entrepreneur by 2 percentage points.

Table 1 Trust, networks, norms and entrepreneurial process

	Panel A: Trust and Entrepreneurship			Panel B: Networks and Entrepreneurship			Panel C: Norms and Entrepreneurship		
	Prefer	Tried	Success	Prefer	Tried	Success	Prefer	Tried	Success
TRUST									
Generalized Trust	-0.0030	0.0022	0.0015						
	(0.0027)	(0.0061)	(0.0089)						
Trust in Family and Friends	0.0023	-0.0079	0.0007						
	(0.0023)	(0.0052)	(0.0073)						
Trust in Government	-0.0012**	-0.0012	0.0031*						
	(0.0005)	(0.0011)	(0.0016)						
Trust in Civic Institutions	-0.0033***	-0.0029	-0.0038						
	(0.0012)	(0.0026)	(0.0039)						
Trust in Banks	-0.0066	-0.0050	0.0203**						
	(0.0092)	(0.0067)	(0.0093)						
Trust in Investors	0.0136***	0.0109	-0.0100						
	(0.0030)	(0.0069)	(0.0100)						
NETWORK									
Frequency of Meeting Relatives and Friends				0.0027*	-0.0096***	0.0011			
				(0.0014)	(0.0032)	(0.0050)			
Member of Professional Organization				0.0526***	0.1094***	0.1032***			
				(0.0111)	(0.0237)	(0.0203)			
Member of Labor Union				-0.0594***	-0.1091***	-0.1726***			
				(0.0073)	(0.0166)	(0.0435)			
Member of Other Organizations				0.0015	0.0326***	-0.0355**			
				(0.0046)	(0.0107)	(0.0155)			
NORMS									
Civic Norms							-0.0103***	-0.0132**	0.0104
							(0.0023)	(0.0052)	(0.0079)

Table 1 (continued)

	Panel A: Trust and Entrepreneurship			Panel B: Networks and Entrepreneurship			Panel C: Norms and Entrepreneurship		
	Prefer	Tried	Success	Prefer	Tried	Success	Prefer	Tried	Success
Individual Characteristics	YES	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES
Obs.	27,937	6523	1897	36,396	8182	2350	33,046	7493	2106
Pseudo R	0.0727	0.1244	0.1637	0.0742	0.1281	0.1539	0.0721	0.1257	0.1404

Probit estimations report marginal effects that are calculated as Average Partial Effects. Robust standard errors are in parentheses

***significant at the 1 % level, **significant at the 5 % level, *significant at the 10 % level

Effect of networks on entrepreneurial process

Panel B of Table 1 presents the effect of network variables on entrepreneurial process. The results show that individuals' networking with close friends and families increases their likelihood to prefer self-employment (Hypothesis 2a). However, during the trial phase, the breadth of social networking became wider and more significant (Hypothesis 2b), while frequency of meeting friends and relatives reduces the chance of individuals to try establish a business. Being a member of trade union always exerts negative and statistically significant association with entrepreneurial process, which might show pro-worker rather than pro-entrepreneur nature of such institutions. Another main finding of the estimations is that, not all types of formal membership in organizations increases the entrepreneurial process, but mainly membership in professional associations that affect individuals positively to progress up the entrepreneurial ladder (Hypothesis 2c). For example, being a member of professional organization increases the chance of an individual to prefer, try, and succeed in an entrepreneurial process by 5.3, 10.9 and 10.3 percentage points respectively. However, being a member of trade union does always negatively and significantly correlate with the entrepreneurial process.

Effect of civic norms on entrepreneurial process

Panel C of Table 1 presents the effect of civic norms on entrepreneurial process of individuals. As we assumed (Hypothesis 3a), individual civic norms appear to be negatively correlated with the early stage of entrepreneurial process. For example, one unit increase in the civic norms reduces the likelihood of an individual to prefer and try entrepreneurship by more than 1 percentage point. This effect is statistically significant at least 5 % level. However, entrepreneurial success and the level of individual civic norms do not appear negatively correlated (Hypothesis 3b). It seems that after controlling for individual characteristics, country dummy variables, and personal preference and trial, individuals' success to create a new venture is not affected by the degree of civic norms that they perceive.

In Table 2, we present the regression results, which serve as robustness check of the estimations showed above. First, in Panel A, we present the results of binominal probit models estimated for all three dimensions of social capital – trust, networks and norms – together. This full model will help us to validate the findings of the regressions presented in Table 1. Then, in Panel B and C, we split the total sample into EU and non-EU members respectively, to explore variation between two groups of countries. The specifications are the same in all models, meaning that we include, but not report, individual level control variables and country dummies (for the marginal effects of control variables and country dummies see Table 6 in the appendix).

Panel A of Table 2 includes all social capital variables together. The previous results stand, meaning that all three social capital dimensions analyzed continue to be highly consistent, with marginal effects almost unaltered from those reported above. It can thus be claimed that individual level social capital in all its three key dimensions constitutes an important factor for the entrepreneurial process across the sample as a whole.

Panels B and C of Table 2 present the regression results for EU and Non-EU samples respectively. In brief, social capital as a three-dimensional concept has the same connections to individual entrepreneurial process. The results are largely the same as

Table 2 Social capital's dimensions and entrepreneurial process: whole sample and country groupings

	Panel A: Whole Sample			Panel B: Only EU			Panel B: Only Non-EU		
	Prefer	Tried	Success	Prefer	Tried	Success	Prefer	Tried	Success
TRUST									
Generalized Trust	-0.0030 (0.0028)	0.0018 (0.0065)	0.0059 (0.0090)	-0.0007 (0.0040)	0.0112 (0.0111)	0.0123 (0.0100)	-0.0063 (0.0039)	-0.0009 (0.0075)	-0.0035 (0.0160)
Trust in Family and Friends	0.0020 (0.0025)	-0.0054 (0.0055)	-0.0028 (0.0078)	0.0010 (0.0034)	-0.0160* (0.0095)	0.0058 (0.0080)	0.0018 (0.0036)	0.0024 (0.0064)	-0.0144 (0.0142)
Trust in Government	-0.0010* (0.0005)	0.0002 (0.0012)	0.0021 (0.0017)	-0.0008 (0.0008)	0.0034 (0.0022)	0.0012 (0.0018)	-0.0016** (0.0007)	-0.0015 (0.0013)	0.0034 (0.0030)
Trust in Civic Institutions	-0.0031** (0.0012)	-0.0042 (0.0028)	-0.0017 (0.0039)	-0.0041** (0.0017)	-0.0114** (0.0049)	-0.0041 (0.0043)	-0.0018 (0.0018)	0.0012 (0.0033)	-0.0011 (0.0070)
Trust in Banks	-0.0070 (0.0060)	-0.0029 (0.0070)	0.0193** (0.0092)	-0.0054 (0.0040)	-0.0120 (0.0116)	0.0137* (0.0084)	-0.0056 (0.0044)	-0.0003 (0.0083)	0.0249 (0.0174)
Trust in Investors	0.0129*** (0.0032)	0.0094 (0.0073)	-0.0047 (0.0099)	0.0127*** (0.0044)	0.0221* (0.0125)	-0.0051 (0.0097)	0.0114** (0.0047)	0.0028 (0.0085)	-0.0008 (0.0186)
NETWORK									
Frequency of Meeting Relatives and Friends	0.0042** (0.0017)	-0.0080** (0.0039)	0.0015 (0.0055)	0.0040* (0.0025)	-0.0121* (0.0067)	-0.0043 (0.0057)	0.0053** (0.0024)	-0.0041 (0.0045)	0.0076 (0.0105)
Member of Professional Organization	0.0603*** (0.0127)	0.1348*** (0.0267)	0.0813*** (0.0223)	0.0758*** (0.0149)	0.1600*** (0.0328)	0.0486*** (0.0180)	-0.0057 (0.0213)	0.0840* (0.0465)	0.1426*** (0.0564)
Member of Labor Union	-0.0712*** (0.0086)	-0.1207*** (0.0194)	-0.1801*** (0.0517)	-0.0663*** (0.0107)	-0.1606*** (0.0319)	-0.1223** (0.0580)	-0.0599*** (0.0142)	-0.0833*** (0.0244)	-0.2582*** (0.0859)
Member of Other Organizations	0.0045 (0.0055)	0.0295** (0.0125)	-0.0394** (0.0167)	0.0148** (0.0071)	0.0175 (0.0197)	0.0068 (0.0167)	-0.0064 (0.0084)	0.0411*** (0.01540	-0.1130*** (0.0321)
NORMS									
Civic Norms	-0.0082*** (0.0028)	-0.0172*** (0.0061)	0.0056 (0.0082)	-0.0051 (0.0040)	-0.0213* (0.0114)	0.0128 (0.0080)	-0.0113*** (0.0039)	-0.0129** (0.0065)	-0.0009 (0.0151)

Table 2 (continued)

	Panel A: Whole Sample			Panel B: Only EU			Panel B: Only Non-EU		
	Prefer	Tried	Success	Prefer	Tried	Success	Prefer	Tried	Success
Individual Characteristics	YES	YES	YES	YES	YES	YES	YES	YES	YES
Country Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES
Obs.	25,460	5945	1703	12,709	2640	941	12,751	3305	762
Pseudo R	0.0739	0.1366	0.1729	0.0834	0.1287	0.159	0.0682	0.1298	0.1387

Probit estimations report marginal effects that are calculated as Average Partial Effects. Robust standard errors are in parentheses

***significant at the 1 % level, **significant at the 5 % level, *significant at the 10 % level

in Panel A for the full sample, meaning that none of the marginal effects changed the sign, while very few changed in terms of significance level.

Conclusion and discussion

Despite the surge of empirical studies exploring the role of social capital in entrepreneurship, limited evidence exists with regard to relationship between multi-dimensional social capital and multi-stage entrepreneurial process. In general, our study found that all the three dimensions of the social capital concept established by Coleman (1988) – trust, networks and norms – matter in entrepreneurial process, albeit differently. Our findings reveal non-unitary of social capital and allow arguing that social capital may not be solely unique to different stages of entrepreneurial process. In comparing the relative effects of different dimensions of social capital on entrepreneurial process, we found that an individual's social networks play the most significant role in various stages of entrepreneurial process, while trust in general and social trust in particular exerts the least significant influence on people's entrepreneurial activities.

While one needs to agree not to claim strong causal attributions in cross-sectional data due to the biases such as endogeneity and omitted variables (Bono and McNamara 2011), the correlations that we found between different dimensions of social capital and entrepreneurial process persists in multiple specifications. Thus, our main findings on association between multi-faced social capital and multi-stage entrepreneurship point to the robustness of the results and allow to assume that this correlation is not spurious. For example, we have compared all our regression models with the complete model, which was run for a full set of social capital variables together and found fairly similar results. Furthermore, a total sample was compared with the different country groupings, namely EU and non-EU samples, to see whether results differ across different cultures and geographies. We found that our results are not geographically bound either, and the conclusions above hold true irrespective of the country context.

Theoretical and practical implications

In general, we make several compelling contributions in this study, to address the following gaps in literature on social capital and entrepreneurship. First of all, we use high-quality nationally-representative microdata set from 35 countries of Europe and Asia. This allows broadening the perspective of previous studies dealing with social capital and entrepreneurship and shifting the focus to an area of the world displaying a large variety of differences. Secondly, we distinguish between three stages of an individual's involvement in entrepreneurial process: preference, trial and success. This distinction enables accurate assessment of where and how in the entrepreneurial process social capital plays more significant role. Thirdly, we use a three-dimensional concept of social capital (trust, network and social norms) rather than a uni-dimensional construct. By doing so, we aim at overcoming the definitional controversy and oversimplification of the role of social capital which has haunted previous entrepreneurship studies.

As opposed to social trust in both generalized and particularized forms, institutional trust shows significant effect on entrepreneurial process. This finding acknowledges the potential negative consequences of social trust and its dark sides, which have been discussed in

prior literature (e.g. Goel and Karri 2006; Tonoyan et al. 2010; Zahra et al. 2006). However, our finding contradicts Bennet and Robson (1999), Davidson and Honig (2003), and Greve (1995), who argue that particularized social trust in a narrower context is an asset for establishing a new business, while further strengthens the Kwon and Arenius (2010), p. 317) argument that, "the role of generalized trust plays in perceiving entrepreneurial opportunities is crucial at the national level of analysis." In addition, our study helps to further shed light on the dark sides of the institutional trust in entrepreneurship literature. The empirical results of the study suggest that during the early stage entrepreneurship, trust in some institutions can prevent individuals from enterprising, assuming that in this stage people are taking very limited actions to enterprise and therefore, keep their intention within a smaller circle of close contacts. However, institutional trust starts to play mostly a positive role when it comes to the later stage of entrepreneurship, particularly at the success of establishing a new venture (Doh and Zolnik 2011). Our finding that not all types of institutional trust, but trust in business-oriented and-supporting actors mainly exert positive role in entrepreneurship success, further helps us to advance our understanding on the role of various institutional trust in entrepreneurship opportunities.

As acknowledged by prior research (e.g., Johannisson and Ramirez-Pasillas 2001; Thornton and Flynn 2003; De Clercq and Arenius 2003; Arenius and Clercq 2005), we found networks to be the most significant predictor of entrepreneurial activity. In addition, our study reveals two more findings which can potentially further advance our understanding with regard to networking and entrepreneurship. Firstly, we find that there is an inverted U-shaped relationship between the breadth of social network and the stages of entrepreneurial process. This means that at the preference or pre-trial stage, individuals' networks look narrower, while in trial stage they start to interact with a wider set of networks, because they do not know exactly who or which institutions can be beneficial for them in future. Further progress in entrepreneurial process, such as becoming an entrepreneur, requires individuals to somehow concentrate their networks to the limited organizations and avoid redundant resources. Although similar findings in the prior literature support the idea that over time an entrepreneur's social networks evolves from identity-based network dominated by strong-ties or close networks into more weak-ties and distant networks (e.g., Hite and Hesterley 2001; Johannisson and Ramirez-Pasillas, 2001), they fail to explicitly report an inverted U-shaped pattern of this evolution, particularly mentioning that social networks start to become tighter again at the latest stage of entrepreneurial process.

Secondly, we found a recursive interaction between strong personal ties and wider organizational engagement, indicating that the further an individual goes up the entrepreneurship ladder, the more he/she relies on organizational membership and less on strong ties or personal networks. Although the dominance of strong personal ties at emergence stage of entrepreneurship has been already highlighted by prior research (Bruederl and Preisendorfer 1998; Batjargal 2003; Jack 2005), there are some scholars who argue the opposite (e.g., Greve and Salaff 2003; Steier and Greenwood 2000). However, our findings suggest that strong personal ties become even detrimental to later stages, when an individual attempts to take some concrete actions in order to enterprise. This happens due to time scarcity, since exploring entrepreneurial opportunities may require to mobilize larger social networks and look for distant external network resources.

Another interesting finding of our study is related to the role of civic norms in entrepreneurial process. In contrast to previous literature which reveals mixed or inconclusive results (e.g., Fukuyama 1995; Krueger et al. 2000; Meek et al. 2009;

Davidson and Wiklund 1997), we able to identify the duality of individual civic norms in the various stages of entrepreneurial process. Our study found that individual level civic norms appear to be negatively associated with early stage entrepreneurship, while an individual's success in becoming an entrepreneur is not affected by social values. The reason why individual civic norms play detrimental role in latent entrepreneurship is mainly related to opportunistic behavior, which might be restricted by high social values and norms; however, one needs to be cautious when it comes to the generalization of this association. In fact, civic norms as constraints to narrow self-interest are expected to be reversed and improve the allocative efficiency at the society level (Knack and Keefer 1997).

Limitations, and directions for future research

Nevertheless, there are a number of important limitations of our study, which can be addressed by future research. First, it has to be borne in mind that the causal relation between social capital and entrepreneurship is not entirely beyond doubt when using individual cross-sectional survey data. Although we employed a number of model specifications for the sake of robustness, we still more prone to associational rather than causal relationships interpretation with regard to our empirical results.

Secondly, we do not control for the types of entrepreneurship due to the data limitations. Depending on the size, sectoral origin and some other entrepreneurial specifications, some types of entrepreneurs can value social capital more than others (e.g., Aldrich 2000). Moreover, once the preference of individual is controlled, there is a high chance that this individual will be an opportunity entrepreneur, rather than the necessity entrepreneur (Nikolova et al. 2012). As opposed to necessity entrepreneurship, in which an individual pursues self-employment due to the lack of other employment alternatives, opportunity entrepreneurship tends to be more desirable in terms of supporting growth and efficiency through generating new ideas and boosting knowledge transfers (Acs and Varga 2005). In this regard, future research may explore the same sets of probit models for necessity entrepreneurs in order to reveal differences, if any.

Thirdly, due to data limitations, our results on the non-significant effect of social trust in entrepreneurial process could be subject to the dynamic and habitual nature of the trust phenomenon. Ideally, trust and entrepreneurship studies may require a longitudinal approach which could be measured by the people's past trusting behavior, evolving trust-based relationships and the intensity of trust (e.g., Glaeser et al. 2000; Welter and Smallbone 2006).

Finally, future entrepreneurship research should also pay attention to study all three dimensions of social capital established by Coleman (1988) at community or country level. Community or country level social capital can be empirically examined with individual level social capital together, in order to understand how they complement each other in their joint effects on entrepreneurial process. For example, future research can examine whether the role of various dimensions of individual-level social capital in entrepreneurial process is stronger (weaker) in countries with low (high) levels of national social capital etc.

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Appendix

Table 3 Sample size and entrepreneurship activities by country

	Country Name	Panel A: Samples	Panel B: Entrepreneurial Process		
		Country Sample Size	Individuals who prefer self-employment	Individuals (among preferred) who tried to open a business	Individuals (among preferred and tried) who succeed in creating a business
1	Albania	1055	31 %	38 %	86 %
2	Armenia	1000	15 %	14 %	59 %
3	Azerbaijan	1002	9 %	19 %	39 %
4	Belarus	1000	34 %	17 %	54 %
5	Bosnia & Herzegovina	1087	13 %	22 %	77 %
6	Bulgaria	1014	17 %	34 %	87 %
7	Croatia	1006	17 %	32 %	74 %
8	Czech	1007	17 %	50 %	91 %
9	Estonia	1002	19 %	27 %	76 %
10	Former Yugoslavia	1072	21 %	28 %	79 %
11	France	1009	32 %	35 %	86 %
12	Georgia	1000	11 %	21 %	65 %
13	Germany	1042	14 %	56 %	88 %
14	Hungary	1054	10 %	54 %	98 %
15	Italy	1049	25 %	25 %	91 %
16	Kazakhstan	1000	30 %	22 %	65 %
17	Kosovo	1091	14 %	13 %	65 %
18	Kyrgyzstan	1016	35 %	16 %	64 %
19	Latvia	1007	15 %	27 %	68 %
20	Lithuania	1013	13 %	25 %	83 %
21	Moldova	1043	24 %	24 %	61 %
22	Mongolia	1000	30 %	36 %	61 %
23	Montenegro	1013	19 %	22 %	79 %
24	Poland	1616	34 %	29 %	95 %
25	Romania	1078	16 %	28 %	67 %
26	Russia	1584	34 %	26 %	61 %
27	Serbia	1519	20 %	42 %	78 %
28	Slovakia	1011	18 %	45 %	94 %
29	Slovenia	1000	19 %	32 %	89 %
30	Sweden	900	20 %	56 %	95 %
31	Tajikistan	1007	31 %	12 %	55 %
32	Turkey	1004	39 %	17 %	87 %
33	United Kingdom	1504	36 %	43 %	95 %
34	Ukraine	1559	48 %	18 %	57 %
35	Uzbekistan	1500	38 %	23 %	67 %

Table 4 Correlation and descriptive statistics for social capital variables

		1	2	3	4	5	6	7	8	9	10	11	Mean	S.D.
1	Generalized Trust	1.0000											2.9557	1.0528
2	Trust in Family and Friends	0.2021*	1.0000										8.7623	1.1528
3	Trust in Government	0.2359*	0.1745*	1.0000									22.0348	7.3302
4	Trust in Civic Institutions	0.1961*	0.1259*	0.4679*	1.0000								8.3002	2.9498
5	Trust in Banks	0.1702*	0.1414*	0.4888*	0.4090*	1.0000							2.9368	1.2361
6	Trust in Investors	0.1924*	0.1150*	0.4714*	0.5337*	0.6181*	1.0000						2.7217	1.1554
7	Frequency of Meeting Relatives & Friends	0.0483*	0.0971*	0.0267*	0.0749*	0.0387*	0.0572*	1.0000					6.9338	1.6941
8	Member of Professional Organization	0.0518*	0.0288*	0.0154*	0.0317*	-0.0153*	-0.0049*	0.0182*	1.0000				0.0539	0.2257
9	Member of Labor Union	0.0665*	0.0301*	0.0145*	0.0440*	0.0015	-0.0066*	0.0009	0.3138*	1.0000			0.0875	0.2826
10	Member of Other Organizations	0.0553*	0.0308*	-0.0003	0.0647*	-0.0187*	-0.0114*	0.0326*	0.2435*	0.2091*	1.0000		0.3369	0.5163
11	Civic Norms	0.0428*	0.0200*	0.0680*	0.0648*	0.0169*	0.0285*	-0.0100*	0.0132*	-0.0087*	0.0241*	1.0000	6.2577	0.9639

*Significant at 5 % level

Table 5 Variable definitions

Variable Name	Description	Question #
Entrepreneurship Variables		
Preference	Dummy variable equal to 1 if respondent prefers self-employment to any other job alternatives, 0 otherwise	q526
Trial| Preference	Dummy variable equal to 1 if respondent prefers and has ever tried to set up a business, 0 otherwise	q530
Success| Trial| Preference	Dummy variable equal to 1 if respondent who prefers to be self-employed has succeeded in setting up a business, 0 otherwise	q532
Panel A. Social Capital Variables		
TRUST		
Generalized trust	Score of respondent's trust in other people on a scale from 1 to 5 (higher means more trust)	q302
Trust in family and friends	Score of respondent's trust in family and friends on a scale from 2 to 10 (higher means more trust)	q304
Trust in government	Score of respondent's trust in all (8) types of government institutions on a scale from 8 to 40 (higher means more trust)	q303
Trust in banks	Score of respondent's trust in banks and financial system on a scale from 1 to 5 (higher means more trust)	q303
Trust in foreign investors	Score of respondent's trust in foreign investors on a scale from 1 to 5 (higher means more trust)	q303
Trust in civic institutions	Score of respondent's trust in civic institutions (e.g., non-governmental institutions, trade unions and religious institutions) on a scale from 1 to 15 (higher means more trust)	q303
NETWORK		
Frequency of meeting relatives and friends	Score of respondent's frequency of meeting relatives and friends on a scale from 2 to 10 (higher means more frequent)	q324 & q325
Member of professional association	Dummy variable equal to 1 if respondent is a member of a professional association	q713
Member of labor union	Dummy variable equal to 1 if respondent is a member of a labor union	q713
Member of other institutions	Dummy variable equal to 1 if respondent is a member of at least one of other institutions (e.g. political party, church and religious organizations; sport and recreational organizations and associations; art, music or educational organizations; environment organization; humanitarian or charitable organization; and youth associations), 0 otherwise	q713
NORMS		
Civic norms	Score of respondent's view on how wrong to break the rules on scale from 0 to 7 (higher means more wrong)	q322

Table 5 (continued)

Variable Name	Description	Question #
Panel B: Control variables		
Age	Age of respondent	q104
Age2	Age square of respondent	q104
Male	Dummy variable equal to 1 if respondent is male	q515
Secondary education	Dummy variable equal to 1 if respondent completed lower secondary, upper secondary or prost secondary education	q515
Higher education	Dummy variable equal to 1 if respondent completed Bachelor, Masters and higher education	q515
Subjective health	Dummy variable equal to 1 if respondent's health is good or very good	q704
Having car	Dummy variable equal to 1 if respondent or anyone in his/her household owns a car	q225
Having bank account or card	Dummy variable equal to 1 if respondent or anyone in his/her household owns a bank account and/or credit card	q225
Risk taker	Score of respondent's willingness to take risks in general on a scale from 1 to 10 (higher means more risk taker)	q537

Table 6 Individual level determinants and country fixed effects of entrepreneurial process

	Prefer		Tried		Success	
	Marginal Effect	Robust Std. Err.	Marginal Effect	Robust Std. Err.	Marginal Effect	Robust Std. Err.
INDIVIDUAL VARIABLES						
Male	0.0478***	0.0055	0.0854***	0.0122	-0.0202	0.0179
Age	0.0039***	0.0009	0.0159***	0.0023	0.0037	0.0033
Age sq.	-0.0001***	0.0000	-0.0001***	0.0000	0.0000	0.0000
Subjective Health	0.0120**	0.0061	-0.0022	0.0140	0.0504**	0.0214
Secondary Education	0.0004	0.0092	0.0557**	0.0223	-0.0083	0.0371
Higher Education	-0.0122	0.0105	0.0994***	0.0282	0.0142	0.0393
Bank account/card	0.0203***	0.0073	0.0551***	0.0175	0.0221	0.0250
Having Car	0.0346***	0.0060	0.1088***	0.0138	0.0645***	0.0236
Risk Taker	0.0236***	0.0011	0.0301***	0.0026	0.0112***	0.0036
COUNTRY FIXED EFFECTS						
Albania	-0.0165	0.0210	0.0475	0.0503	0.1060***	0.0275
Armenia	-0.0580***	0.0220	-0.2025***	0.0283	-0.0468	0.1297
Azerbaijan	-0.1640***	0.0106	-0.0637	0.0616	-0.1364	0.1293
Belarus	0.1067***	0.0294	-0.1060***	0.0395	-0.1526	0.1041
Bosnia & Herzegovina	-0.1550***	0.0111	-0.1556***	0.0346	0.0495	0.0611
Bulgaria	-0.1067***	0.0166	-0.0901**	0.0445	0.0871**	0.0409
Croatia	-0.1174***	0.0148	-0.1126***	0.0395	-0.0313	0.0763
Czech	-0.1272***	0.0138	0.0403	0.0567	0.1253***	0.0216
Estonia	-0.0373*	0.0230	-0.1049**	0.0428	-0.0047	0.0740
Former Yugoslavia	-0.0961***	0.0161	-0.1030***	0.0395	0.0190	0.0605
France	-0.0095	0.0219	-0.1119***	0.0361	0.0665	0.0431
Georgia	-0.1250***	0.0157	-0.1008*	0.0521	-0.0133	0.0964
Germany	-0.1419***	0.0125	0.0476	0.0582	0.0647	0.0463
Hungary	-0.1504***	0.0121	0.1063	0.0692	0.1090***	0.0292
Italy	-0.0610***	0.0186	-0.1438***	0.0327	0.0384	0.0588
Kazakhstan	0.0328	0.0248	-0.1195***	0.0364	-0.0143	0.1139
Kosovo	-0.1423***	0.0130	-0.1765***	0.0360	0.0018	0.0654
Kyrgyzstan	0.0595**	0.0259	-0.1307***	0.0338	-0.0188	0.0929
Latvia	-0.1323**	0.0151	-0.1200***	0.0465	0.0348	0.0723
Lithuania	-0.1096**	0.0168	-0.1471***	0.0380	0.0106	0.0655
Moldova	0.0080	0.0255	-0.1011**	0.0410	0.0457	0.0461
Mongolia	0.0276	0.0249	0.1218**	0.0579	0.0259	0.0631
Montenegro	-0.0933***	0.0168	-0.1346***	0.0361	0.1293***	0.0213
Poland	-0.0796***	0.0160	-0.1318***	0.0323	0.0332	0.0624
Romania	-0.1207***	0.0147	-0.1046**	0.0437	-0.0753	0.0839
Russia	-0.0326	0.0212	-0.0612	0.0441	0.0471	0.0473
Serbia	-0.1451***	0.0118	0.0055	0.0504	0.1208***	0.0238
Slovakia	-0.1209***	0.0144	0.0251	0.0557	0.0864**	0.0385

Table 6 (continued)

	Prefer		Tried		Success	
	Marginal Effect	Robust Std. Err.	Marginal Effect	Robust Std. Err.	Marginal Effect	Robust Std. Err.
Slovenia	-0.1164***	0.0149	-0.0957**	0.0420	0.1424***	0.0173
Sweden	-0.0600***	0.0201	0.0536	0.0577	-0.0801	0.1053
Tajikistan	0.0682***	0.0264	-0.1819***	0.0286	0.0881***	0.0347
Turkey	0.0966***	0.0260	-0.1095***	0.0360	0.1437***	0.0198
United Kingdom	-0.0757***	0.0170	-0.0471	0.0426	0.0069	0.0612
Ukraine	0.0620***	0.0238	-0.1419***	0.0306	-0.0401	0.0406
Observations	25,460	5945	1703			
Pseudo R^2	0.0739	0.1366	0.1729			

Probit estimations report marginal effects that are calculated as Average Partial Effects. All three models include full set of social capital variables

***significant at the 1 % level, **significant at the 5 % level, *significant at the 10 % level

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