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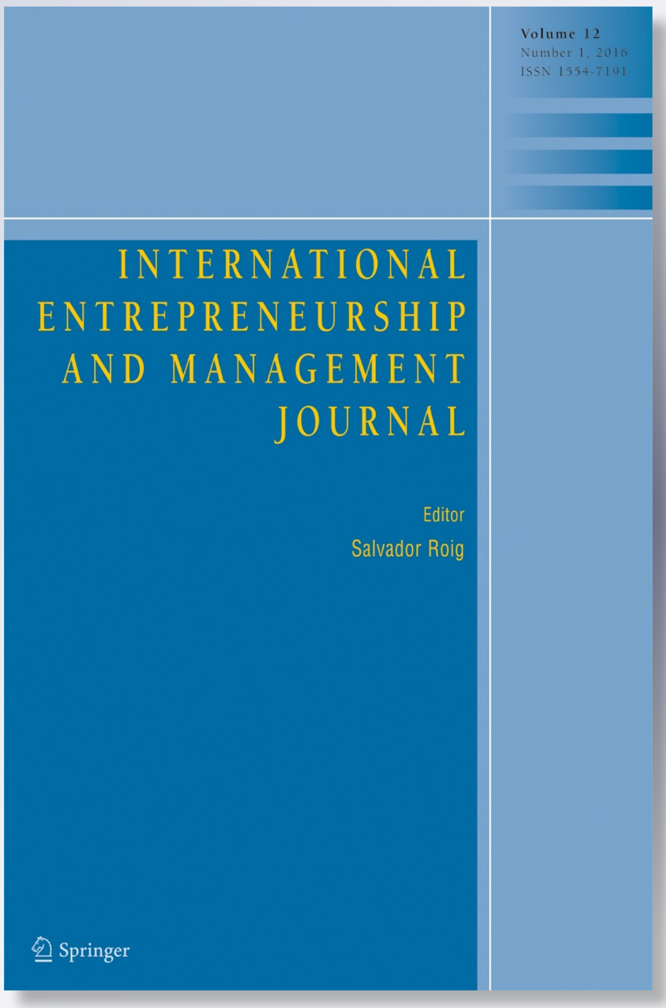

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Building entrepreneurial inter-firm networks in an emerging economy: the role of cognitive legitimacy

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Abstract We take an organizational legitimacy perspective and use data from a large-scale nationally representative study on the state of small business in Saudi Arabia, in order to explore the antecedents to the formation of entrepreneurial ventures' inter-firm networks in the context of an emerging economy ($n=331$). We argue that entrepreneurial ventures need to overcome a threshold of cognitive legitimacy in order to develop inter-firm ties with a diverse set of large, established firms. Results indicate that having a written business plan and a formal organizational structure are positively associated with the diversity of the new venture's inter-firm network, while the education level of the entrepreneur does not have a significant effect. In addition, the effect of having a formal organizational structure is stronger for younger ventures. Implications are discussed.

Keywords Inter-firm networks · Legitimacy · Entrepreneurial ventures · Emerging economies · Saudi Arabia

Introduction

The establishment of inter-firm relations, particularly with large, established partners, offers numerous benefits to entrepreneurial ventures. Inter-firm networks offer access to capabilities (Alvarez and Barney 2001), a means of sharing resources (Fuller-Love

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2009) and avoiding competition in the open market (Moensted 2007); empower the creation and diffusion of knowledge in industrial clusters (Capó-Vicedo et al. 2008); facilitate the identification, evaluation, and exploitation of entrepreneurial opportunities (Fuentes Fuentes et al. 2010); help achieve economies of scale through specialization within a carefully chosen subset of value-chain activities, such as design, logistics, or contract manufacturing (Jarillo 1988); and bestow legitimacy through partner endorsement, particularly when the partner is a high-power, high-status social actor (Aldrich and Fiol 1994; Podolny 1993). In the context of emerging economies, inter-firm networks partially substitute for the inefficient market-clearing mechanisms (Khanna and Palepu 1997; Peng et al. 2008), provide access to scarce resources (Wright et al. 2005), and help overcome the high costs of information search and monitoring through referral trust (Batjargal 2007). In addition, the complex assets and relationships embedded in inter-firm networks are path-dependent, unique, causally ambiguous, and socially complex. These attributes erect powerful isolating mechanisms, or barriers to imitation, providing a source of relational rents and competitive advantage for all participating firms (Dyer and Singh 1998).

While the benefits of having a strong and diverse inter-firm network have been well documented, surprisingly, the genesis of such a network has received far less attention (Zaheer et al. 2010). Social network theorists model inter-firm network formation "…as a dynamic process driven by exogenous interdependencies that prompt organizations to seek cooperation and by endogenous network embeddedness mechanisms that help them determine with whom to build partnerships" (Gulati and Garguilo 1999: 1442). The process through which new ventures set up their inter-firm networks in the first place, however, particularly in the context of emerging economies, is still not very well explored (Stuart and Sorenson 2007). Our study addresses this research gap by focusing on the role of cognitive legitimacy as a critical precondition for the formation of the entrepreneurial inter-firm network.

We anchor our study in institutional theory's organizational legitimacy perspective and argue that new ventures need to overcome a certain "threshold" of initial cognitive legitimacy, or "taken-for-grantedness" (Scott 1995; Zimmerman and Zeitz 2002; Rutherford and Buller 2007) in order to build their inter-firm network. A sizeable corpus of literature in institutional theory and entrepreneurship has looked at the legitimizing *effects* of participant and inter-firm networks in enhancing the new venture's legitimacy (DiMaggio 1992; Aldrich and Fiol 1994; Elfring and Hulsink 2003; Dacin et al. 2007). In contrast, we explore the role of cognitive legitimacy as an *antecedent* to network formation. In line with Zimmerman and Zeitz (2002), Delmar and Shane (2003, 2004), and Khaire (2010), we stipulate that legitimacy is a precondition for accessing other resources needed for survival and growth. In the context of entrepreneurial inter-firm network formation, we argue that a level of cognitive legitimacy is necessary in order for the new venture to "get a foot in the door", i.e. to be considered and eventually accepted as a partner by established players. To gain cognitive legitimacy, "the new venture tries to put forward the impression that its identity is such that it provides what is needed as desired and will be successful in the business domain in which it purports to operate" (Zimmerman and Zeitz 2002: 420). "Being-taken-for-granted" is particularly important in emerging markets, where the lack of information transparency and the sizeable informal sector render the objective evaluation of new ventures extremely problematic (Miller et al. 2005; Webb et al. 2009).

The present study focuses on the entrepreneurial ventures' inter-firm ties with large businesses, and, more specifically, on the effect of cognitive legitimacy on the diversity (e.g. range of different inter-firm arrangements, such as a supplier, distributor, financing, alliance, or a partnership agreement with a large business), rather than the size (e.g. number of inter-firm arrangements with large businesses) of the entrepreneurial venture's inter-firm network. Our logic is that the diversity of inter-firm arrangements manifests the acceptance and support for the new venture by a diverse blend of large, well-established social actors and, by extension, by a broad strata of the business community. We explore three means through which new ventures seek to acquire cognitive legitimacy: the education of the entrepreneur, the development of a formal business plan, and the development of a formal organizational structure. We next argue that the legitimizing effects of developing a business plan and a formal organizational structure will be stronger early in the life of the new venture. To test our hypotheses, we use data from a large scale survey of the state of small business in Saudi Arabia, commissioned in 2011 by the Saudi Ministry of Labor (n=316) and augment our discussion with interview data from six Saudi entrepreneurial ventures. Saudi Arabia provides an interesting context for the study, because small-and-medium-sized firms account for only 33 % of GDP (Al-Jaseer 2010) and inter-firm relationships with large players are vital for their continued survival and growth.

Our study seeks to make three contributions to the literatures on organizational legitimacy and entrepreneurial networks. We argue and find that a level of cognitive legitimacy is necessary in order for a new venture to build a diverse inter-firm network with large, established partners. Next, we argue and find that the effect of cognitive legitimacy is stronger early in the life of an entrepreneurial venture. Finally, we establish that the sources of cognitive legitimacy for entrepreneurial ventures in emerging markets may differ from those in developed markets. Thus, our study adds to the conversation on different paths to building legitimacy in emerging economies (Ahlstrom et al. 2008; Webb et al. 2009), using empirical evidence from Saudi Arabia, a context relatively unexplored by current research.

The paper is organized as follows. We start by presenting our theoretical argument and hypotheses, followed by our research methodology and the results from the statistical tests. We conclude by discussing the study's theoretical, managerial, and public policy implications.

Theoretical perspectives and hypothesis development

Organizational legitimacy

Students of institutional theory argue that strategic and economic activity is embedded in a social and normative context and this context motivates organizations to behave in a socially acceptable manner in order to gain legitimacy, or a social license to operate (Meyer and Rowan 1977; Hannan and Freeman 1989; Scott 1995). Legitimacy is defined as "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman 1995: 574). In other words, an organizational form is legitimate when the public recognizes the organization's right to exist and accepts its outputs (Ahlstrom et al. 2008). If key social constituencies, such as suppliers, buyers, customers, regulatory agencies, or the media are not sure what to make out of an organization or are reluctant to accept its outputs, this organization's viability and survival chances will be seriously jeopardized.

Newly formed organizations face unfamiliar roles, lack a track record of socially acceptable behavior, and have difficulties resisting the conforming pressures of the institutional environment, resulting in a "liability of newness" (Stinchcombe 1965; Singh et al. 1986). Overwhelming empirical evidence, particularly in the population ecology tradition (Stinchcombe 1965; Freeman et al. 1983; Singh et al. 1986; Hannan and Freeman 1989; Aldrich 1990; Bruderl and Schussler 1990; Geroski et al. 2010; Wiklund et al. 2010), shows that entrepreneurial firms are exceedingly prone to organizational failure and death. Gaining legitimacy, therefore, is a critical, but extremely difficult goal in the early years of an organization's existence. Delmar and Shane (2004) documented that undertaking activities to generate legitimacy reduces the risk of venture disbanding and facilitates the transition to other organizing activities. Tornikoski and Newbert (2007) and Tornikoski (2009) conceptualized the very process of organizational emergence as a "quest for legitimacy". Once the nascent venture is established, continued social acceptance and approbation enhance future survival prospects (Freeman et al. 1983), and allow access to other resources needed for operation and growth (Zimmerman and Zeitz 2002; Khaire 2010). Cognizant of the importance of initial legitimacy for survival and continued growth, new ventures undertake a variety of legitimation strategies, which vary in the level of proactive engagement on a continuum from passive *conformance* to sociopolitical and cognitive pressures, through purposeful *selection* of the domain of activity, to *manipulation* and even proactive *creation* of the institutional environment (Oliver 1991; Suchman 1995; Zimmerman and Zeitz 2002; Tornikoski 2009).

Establishing legitimacy may be even more important for new and small ventures in emerging economies (Wright et al. 2005; Ahlstrom et al. 2008). The predominantly state-centered institutions in these countries confer higher status to large businesses and government agencies, while entrepreneurship is often associated with opportunism and profiteering. In many Middle Eastern societies, in particular, entrepreneurship is viewed as having practical appeal, but less status or visibility (Farid et al. 2011). In addition, the relatively underdeveloped institutions escalate the risks and the transaction and opportunity costs of starting a business, resulting in high failure rates (Djankov et al. 2002) and low-growth orientation (Batjargal et al. 2013). For example, the average life span of a new firm in Saudi Arabia, the context of our study, is about 7 years (Al-Jaseer 2010). The high failure rates reinforce the already skeptical social attitudes towards entrepreneurial initiatives. Not surprisingly, entrepreneurs in emerging economies proactively seek to legitimate their new ventures, their industries, and the entire private sector (Ahlstrom et al. 2008). In sum, going through a process of legitimation before engaging in market and social exchanges with key stakeholders is critical for the continued development of new ventures around the world, and particularly critical for new and small ventures in emerging economies.

Organizational legitimacy is multifaceted. Its *pragmatic* dimension (Suchman 1995; Kumar and Das 2007), also called instrumental (Tost 2011) or market (Dacin et al. 2007) legitimacy, is rooted in the "self-interested calculations of an organization's most immediate audiences" (Suchman 1995: 578). *Moral* (Suchman 1995), or normative legitimacy (Ruef and Scott 1998; Zimmerman and Zeitz 2002), "reflects a positive normative evaluation of the organization and its activities" (Suchman 1995: 579). *Cognitive* (Aldrich and Fiol 1994; Suchman 1995; Zimmerman and Zeitz 2002; Shepherd and Zacharakis 2003) legitimacy is an "acceptance of the organization as necessary or inevitable based on some taken-for-granted cultural account" (Suchman 1995: 582). Other dimensions explored by organizational scholars include *regulatory* (Zimmerman and Zeitz 2002; Ahlstrom et al. 2008), *relational* (Dacin et al. 2007; Tost 2011), or *sociopolitical* (Aldrich and Fiol 1994; Bitektine 2011) legitimacy.

It should be noted that theorists ascribe different connotations to cognitive legitimacy, the construct of interest to our study. Thus, Aldrich and Fiol (1994) and Shepherd and Zacharakis (2003) view cognitive legitimacy as "the spread of knowledge about the new venture" (Aldrich and Fiol 1994: 648). Zimmerman and Zeitz (2002) embrace Scott's (1994) conceptualization of cognitive legitimacy as addressing "widely held beliefs and taken-for granted assumptions that provide a framework for everyday routines, as well as the more specialized, explicit and codified knowledge and belief systems promulgated by various professional and scientific bodies" (Scott 1994: 81). Khaire (2010: 170) defines it as "the general acceptance of a new entity as being appropriate". The common thread across these definitions, which serves as the conceptual anchor for our study, is that organizations are cognitively legitimate "when they are understandable" (Shepherd and Zacharakis 2003: 151). Table 1 summarizes representative studies on the dimensions of organizational legitimacy, legitimation strategies, and the process of social legitimation.

Social actors reach cognitive legitimacy judgments about a new organization by assigning it to an already known organizational form, usually based on a set of recognizable organizational characteristics (Meyer and Rowan 1977; Bitektine 2011). For example, if a new venture describes itself as an accounting firm, has two departments: "Corporate taxes" and "Audits", and ten employees, all of whom have Master's degrees in accounting and have been conferred a nationally or internationally recognized and accepted certification (such as a Certified Public Accountant certification in the United States), it is easy for the public to understand and classify this new venture as an accounting practice. Once the public classifies the new venture as a member of an already known and legitimate class of organizations, the evaluation stops and social actors accept it as "taken-for-granted" without further questioning (Bitektine 2011; Tost 2011).

The easier it is for various social actors to ascribe cognitive legitimacy to an entrepreneurial venture, the more comfortable and willing they will be to enter into social exchanges with it. Thus, passing the threshold of cognitive legitimacy is the foundation for further social and market exchanges (Zimmerman and Zeitz 2002; Rutherford and Buller 2007), including the formation of a diverse entrepreneurial inter-firm network.

The inter-firm networks of entrepreneurial ventures

New and small ventures form their inter-firm networks for a variety of strategic and social reasons, including discovery of opportunities (Elfring and Hulsink 2003), access to resources and capabilities (Alvarez and Barney 2001; Fuller-Love 2009), increased market power (Moensted 2007), enhancing legitimacy (Elfring and Hulsink 2003; Dacin et al. 2007), business development (Capó-Vicedo et al. 2008), or growth

Table 1 New venture legitimacy and legitimation strategies

Authors, Year	Perspective	Dimensions of legitimacy explored	Definitions	Legitimation process	Legitimation strategies
Singh et al. 1986	Organization	External legitimacy	An organization having its actions endorsed by powerful external collective actors and developing strong relationships with external constituencies		
Aldrich and Fiol 1994	Evaluator	Sociopolitical	Extent to which macro-level stake holders accept the new venture as appropriate given the norms of society and "laws of the land"	Cognitive –>Sociopolitical	
		Cognitive	Spread of knowledge about the new venture		
Suchman 1995	Organization and evaluator	Pragmatic	Rests on the self-interested calculations of an organization's most immediate audiences		Conformance (cooptation), selection, manipulation
		Moral	A judgment about whether the activity is "the right thing to do"		
		Cognitive	Acceptance of the organization as necessary or inevitable, based on a taken-for-granted cultural account		
Ruef and Scott 1998	Organization	Normative (Managerial)	Normative support for organizational mechanisms such as personnel management, accounting practices, and the rules of conduct and structure of the administrative staff.	Both technical and managerial legitimacy increase with organizational age; technical legitimacy increases with niche specialism; managerial legitimacy increases with niche generalism and the	

Table 1 (continued)

Authors, Year	Perspective	Dimensions of legitimacy explored	Definitions	Legitimation process	Legitimation strategies
				conformity of the mission with institutional regime.	
		Normative (Technical)	Focused on aspects of core technology, including normative support for staff qualifications, training programs, work procedures, and quality assurance mechanisms.		
Zimmerman and Zeitz 2002	Organization	Regulative	A generalized sense that the new venture is operating according to the letter and the spirit of laws and regulations		Conformance, selection, manipulation, creation
		Normative	Consistency with societal values		
		Cognitive	Addressing the beliefs and assumptions accepted within various domains of activity		
		Industry	Level of social acceptance of the industry the firm operates in		
Shepherd and Zacharakis 2003	Evaluator	Cognitive	Organizations are cognitively legitimate when they are understandable (that is, there is greater awareness and therefore less uncertainty involved with the organization)	Cognitive –>Sociopolitical	
Delmar and Shane 2004	Organization	External legitimacy	Appearance of reliability and accountability		Engaging in select organizing activities

Table 1 (continued)

Authors, Year	Perspective	Dimensions of legitimacy explored	Definitions	Legitimation process	Legitimation strategies
Dacin et al. 2007	Organization	Market	Rights and qualifications to conduct business in a particular market		Partner selection and governance structure of a strategic alliances
		Relational	Worthiness to be a partner		
		Social	Conformity of the firm to societal rules and expectations		
		Investment	Worthiness for the business activity		
		Alliance	Validity or appropriateness of strategic alliances		
Kumar and Das 2007	Mutual acknowledgement by alliance partners	Pragmatic	The organization satisfies the interests of its members	Pragmatic legitimacy is critical at the formation stage of the alliance, moral legitimacy is critical during the operational stage, and cognitive legitimacy is most relevant during the post outcome phase of the evaluation	
		Moral	The organization's actions are appropriate		
		Cognitive	The organization is "taken-for-granted"		
Rutherford and Buller 2007	Organization	Legitimacy	A social judgment of acceptance, appropriateness, and desirability, [that] enables organizations to access other resources needed to survive and grow	Reaching the legitimacy threshold: the point below which the new venture struggles for existence and probably will perish and above which the new venture will achieve further	

Table 1 (continued)

Authors, Year	Perspective	Dimensions of legitimacy explored	Definitions	Legitimation process	Legitimation strategies
				gains in legitimacy and status	
Tornikoski and Newbert 2007	Organization	Conforming	Possession of characteristics deemed credible by the society in which the firm operates		The action a nascent organization takes (strategic legitimacy) may be more important than its characteristics (conforming legitimacy) in explaining organizational emergence
		Strategic	Engaging in activities aimed at convincing external audiences that the organization is operational		
Ahlstrom et al. 2008	Organization	Normative	The organization's activities are proper and consistent with influential groups and societal norms		Selection, conformance, manipulation, creation
		Cognitive	Congruence between an organization and its external environment		
		Regulatory	Laws and regulations are passed that recognize and help to safeguard the legal right of the industry to exist		
Tornikoski 2009	Organization	Pragmatic (exchange)	A social judgment of acceptance, appropriateness, and desirability		Selection, cooptation, manipulation; firm emergence is a manifestation of legitimacy
Khaire 2010	Organization	Cognitive	The general acceptance of a new entity as being appropriate		Adoption of practices and procedures defined and endorsed by prevailing norms, typically those carried out by large, established firms in the industry;

Table 1 (continued)

Authors, Year	Perspective	Dimensions of legitimacy explored	Definitions	Legitimation process	Legitimation strategies
					conformity through mimetic isomorphism (structural and ceremonial mimicry)
Tost 2011	Evaluator	Pragmatic (instrumental)	The continued existence of the entity entails a higher expected value than its absence	Cognitive judgment first; if inconclusive, then pragmatic, moral, and relational (order and importance depend on the level of identification with the group associated with the entity under evaluation).	
		Moral	The entity conforms to moral values and ethical principles		
		Relational	The entity is perceived to affirm the social identity and self-worth of individuals or social groups and to ensure that individuals or groups are treated with dignity and respect and receive outcomes commensu rate with their entitlement		
		Cognitive	Absence of questions about or challenges to an entity		
		Regulative	Social cues indicating the validity of an entity		

(Fuentes Fuentes et al. 2010). The antecedents, processes, and outcomes from these inter-firm relationships have been studied through a variety of theoretical lenses, including a resource-based, transaction cost, resource-dependence, social network, or a punctuated equilibrium perspective (Street and Cameron 2007; Stuart and Sorenson 2007).

Empirical research, primarily focused on entrepreneurial ventures in the US high-technology sectors, has documented, for example, that new ventures take a strategic approach and actively shape their inter-firm ties (Eisenhardt and Schoonhoven 1996; Hallen and Eisenhardt 2012); value network contacts that are perceived to offer potential access to the widest variety of resources (Grossman et al. 2012), are more successful when they simultaneously form ties with multiple partners (Ozcan and Eisenhardt 2009), and establish their initial network positions through their founders' personal ties and human capital, and, later on, through their organizational accomplishments (Hallen 2008). Other studies have looked at the predictors of the size and diversity of the new venture's inter-firm network, by focusing on the social resources of the new venture and its managing team (BarNir and Smith 2002).

The related literature on partner selection in joint ventures and strategic alliances sheds additional light on the reasons for, and the mechanisms through which new ventures form ties with established organizations. Taking a resource-based or an organizational learning perspective, authors in this stream of research document that firms search for partners that have resources they can leverage (for a comprehensive review, see Das and He 2006), and the importance of these resources varies depending on the institutional context (Hitt et al. 2000) as does the propensity to engage in collaborative behavior (Steensma et al. 2000). For example, Hitt et al. (2000), in their study of the international partner selection of firms from emerging and developed markets, found that emerging market firms emphasize financial assets, technical capabilities, intangible assets, and willingness to share expertise, whereas developed market firms were more interested in unique competencies, local market knowledge, and access to the local market.

The role of legitimacy as an antecedent to entrepreneurial collaborative relations and networks is less well explored. Das and He (2006), in their overview of the partner selection criteria of entrepreneurial firms, noted that entrepreneurial firms differ in their level of legitimacy compared to established firms, because the level of legitimacy of entrepreneurial firms is generally lower than the legitimacy of established players. Kumar and Das (2007) developed a conceptual model of interpartner legitimacy in the alliance development process. These authors traced the relative importance and dynamics of three types of legitimacy (pragmatic, moral, and cognitive) in the formation, operation, and outcome stages of alliance development. They also noted, much in line with the central premise of our paper, that a level of initial legitimacy is necessary in order for both partners to enter the relationship with a cooperative, rather than a competitive frame of mind. In the next section, we theorize about several mechanisms through which new ventures seek to establish the critically important initial cognitive legitimacy and its effect on the diversity of the new venture's inter-firm network.

Cognitive legitimacy and the diversity of the new venture's inter-firm network

Following the lead of Zimmerman and Zeitz (2002) and Khaire (2010), we explore three means through which new ventures seek to acquire cognitive legitimacy: the education of the entrepreneur, the development of a formal business plan, and the development of a formal organizational structure. Zimmerman and Zeitz (2002) discussed the role of the entrepreneur's education and qualifications as a source of cognitive legitimacy for the new venture. In his study of new advertising agencies, Khaire (2010) extensively discussed cognitive legitimacy rooted in structural and ceremonial (procedural) conformance. The conformity to social expectations through proper entrepreneurial credentials (level of education) and organizational isomorphism (structural and procedural mimicry) helps in judgments about the cognitive legitimacy of a new organizational form because this conformity makes the new venture "understandable" (Shepherd and Zacharakis 2003) and easy to assign to an already known organizational form, based on a set of recognizable organizational characteristics (Bitektine 2011).[1]

Level of education

Entrepreneurial ventures are little more than the extension of their founders' human capital (Reuber and Fischer 1999), hence their social acceptance depends critically on founder credentials. Formal education is a component of general human capital that leads to increased productivity (Becker 1962), signals the absorptive capacity and achievement motivation of the individual (Hatch and Dyer 2004) and may assist in the accumulation of explicit knowledge and skills useful to entrepreneurs (Davidsson and Honig 2003), thus increasing belief in managerial capability and the likelihood of achieving the desired new venture performance levels. The education level of the entrepreneur, therefore, indicates to what extent s/he possesses knowledge and skills that are expected to benefit the new venture (Zimmerman and Zeitz 2002). Prior empirical research has established that the general human capital of the entrepreneurial founding team, demonstrated by formal education, is significantly and positively associated with the new venture's network position early in its lifecycle (Hallen 2008).

The education levels in Saudi Arabia, the context of our study, are generally lower than the education levels in other emerging countries at similar levels of economic development. Formal and organized education in Saudi Arabia did not exist until 1948 and, as of 1950, more than 90 % of the Saudi Arabian population was illiterate (Al-Abdulkareem 2003). Today, Saudi Arabia has a nationwide educational system that provides free training from preschool through university in diverse fields of modern and traditional arts and sciences. Tertiary, or higher, education enrollment stood at 37 % as of 2011. While this level of higher education enrollment compares favorably to neighboring countries, such as Qatar (12 %), or Oman (29 %), it is still

[1] It should be noted that, as Zimmerman and Zeitz (2002) acknowledge, it is sometimes difficult to distinguish (especially empirically) between normative and cognitive legitimacy. Thus, Suchman (1995) classified personal, structural, and procedural legitimacy (in addition to consequential legitimacy) as forms of moral (or normative) legitimacy. Similarly, Ruef and Scott (1998) considered managerial and technical legitimacy as forms of normative legitimacy. In our study, we follow Zimmerman and Zeitz (2002) and Khaire's (2010) conceptualizations, as they provide a clearer manifestation of cognitive legitimacy as being "understandable" (Shepherd and Zacharakis 2003). We are indebted to an anonymous reviewer for bringing our attention to these alternative classifications.

lower than the tertiary enrollment in emerging markets with similar per capita income levels, such as the Czech Republic (64 %) (World Bank 2013). Thus, we surmise that the legitimizing effect of the entrepreneur's formal education will be particularly strong in the context of Saudi Arabia. Formally:

H1a: The formal education of the entrepreneur will be positively associated with the diversity of the new venture's inter-firm network.

Formal business plan

The formal business plan demonstrates the soundness and internal consistency of the organization's procedures and processes in pursuit of the new venture's mission, vision, and goals. Thus, in writing a formal business plan, the entrepreneur engages in an act of procedural mimicry. Procedural mimicry refers to the adoption of strategies, routines, and procedures generally accepted as appropriate for the organizations operating in a domain of activity and typically associated with the higher performing, more successful players in the organizational field. In other words, organizations acquire legitimacy by adopting externally validated assessments of the value of various organizational strategies and activities (Meyer and Rowan 1977), and by imitating (or professing to become similar to) successful paragons and generally accepted practices. One of three types of isomorphism identified by DiMaggio and Powell (1983), mimetic isomorphism refers to conformity through the imitation of other referent actors' structures and actions.

Prior empirical research has established that completing a business plan is influenced by institutional forces, such as coercive or mimetic isomorphism (Honig and Karlsson 2004). Completing a formal business plan also increases the likelihood that the nascent venture will undertake other activities, such as product development, marketing, acquiring inputs, or talking to customers (Delmar and Shane 2003, 2004). In related research, Karlsson and Honig (2009) established that entrepreneurs write business plans as part of a symbolic act to gain legitimacy for their actions.

Research on the use of formal business planning tools in Saudi Arabia has documented that Saudi firms face significant challenges in collecting data and making realistic market projections (Tuncalp 1988) and that almost half of the small-turnover and single-and-family ownership firms do not use strategic planning tools and techniques (Al-Ghamdi 2005). In the context of another emerging economy, India, Wright et al. (2002) found that domestic venture capital firms rely on accounting and financial data from new ventures' business plans to a significantly lower extent than their counterparts in the U.S., which implies that business plans are used by new ventures in India as legitimating symbols, rather than vehicles for information disclosure. Though sparse, this empirical evidence suggests that business plan writing by emerging market entrepreneurial firms may be serving largely symbolic and legitimizing goals. By signaling professionalism and articulating the entrepreneur's vision in conformity with predominant cognitive schemata, the formal business plan assures a diverse set of stakeholders that the new venture is likely to behave in a socially appropriate and accountable manner. Formally:

H1b: Having a formal business plan will be positively associated with the diversity of the new venture's inter-firm network.

Formal organizational structure

The formal organizational structure indicates that the new venture is becoming isomorphic with the rationalized concepts of organizational work institutionalized in society (Meyer and Rowan 1977; DiMaggio and Powell 1983; Haveman 1993; Schoonhoven et al. 1990). Thus, in putting together a formal organizational structure, the entrepreneur engages in an act of structural mimicry. To the extent that the entrepreneurial organization can demonstrate that it is constructed in a way similar to existing institutions, it provides evidence that the new venture conforms to the social expectations carved by these existing institutions, and is thus accepted without further questioning (Tost 2011; Khaire 2010; Loworn and Chen 2013). Succinctly put, isomorphism legitimates (Deephouse 1996). Empirical research in the context of Saudi Arabia and other Gulf countries has documented that firms conform to legitimizing isomorphic pressures with respect to hiring local workforce (Forstenlechner and Mellahi 2011), or the establishment of internal audit units (Al-Twaijry et al. 2003). Formally:

H1c: Having a formal organizational structure will be positively associated with the diversity of the new venture's inter-firm network.

The moderating effect of firm age

We next argue that the legitimizing effects of developing a business plan and a formal organizational structure will be stronger early in the life of the new venture. This is because early in their organizational life cycles entrepreneurial ventures act "as if" (Gartner et al. 1992) to create the impression that they are fully functioning organizations with a permanent place in the market (Tornikoski and Newbert 2007). Legitimation is a precursor for the completion of other start-up activities and gaining access to resources critical for continued vitality, survival, and growth (Delmar and Shane 2004). Formal business plans and organizational structures are important components in the impression management process. With time, the role of impression management is likely to wane, to be replaced by strategic considerations, such as the development of proprietary resources, the optimal configuration of the new venture's value chain, or the design of an organizational structure that is uniquely fitted to the business model of the new venture (Hite and Hesterly 2001; Hite 2005). Formally:

H2a: Age will negatively moderate the relationship between having a formal business plan and the diversity of the new venture's inter-firm network.

H2b: Age will negatively moderate the relationship between having a formal organizational structure and the diversity of the new venture's inter-firm network.

The conceptual model of our study is presented in Fig. 1.

Methods

Research context

Saudi Arabia has a factor-driven economy with strong government controls over major economic activities. The petroleum sector contributes 80 % of the budget revenues, 45 % of GDP, and 90 % of the export earnings (The World Factbook 2013). The private sector consists of many family-run businesses involved predominantly in merchandising and distribution (Rice 2004). While small and medium-sized enterprises with fewer than 60 employees constituted 96.2 % of all enterprises in Saudi Arabia as of 2009, they contributed only about 33 % to the country's GDP (Al-Jaseer 2010). This modest participation can be attributed to the immensity of the oil and the public sectors. Thus, inter-firm relationships with large, established players are vital for new and small ventures' continued survival and growth.

Sampling and data collection

Data for the study came from a large-scale survey on the state of small business in Saudi Arabia, commissioned in 2011 by the Saudi Ministry of Trade. The survey

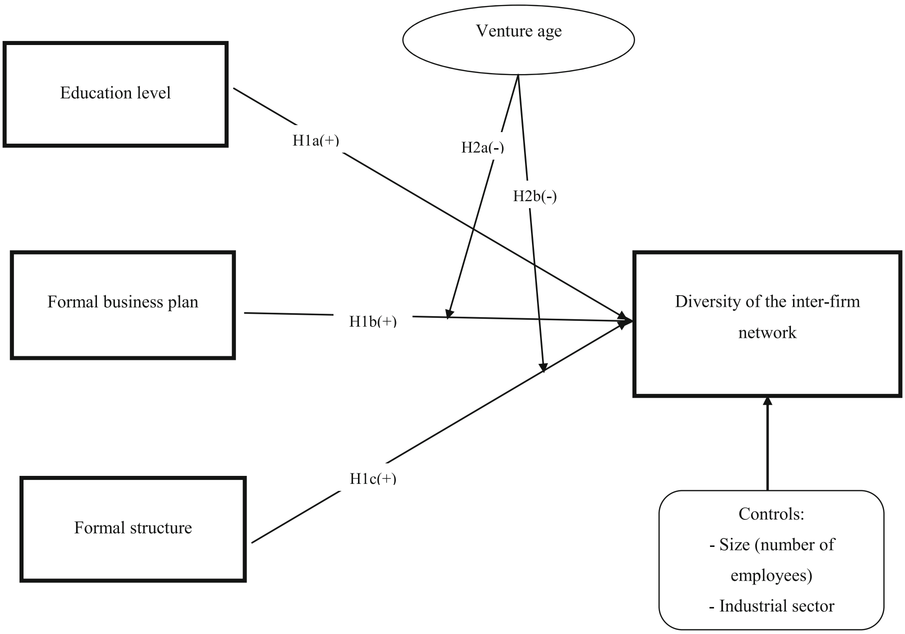

Fig. 1 Conceptual model and hypotheses

instrument was based on prior research on the state of small business in the country and consisted of five sections: general information about the company, demographic information about the owner/manager; perceptions of the business environment; access to financing and government services; competitiveness and inter-firm relationships; and business problems and reasons for failure.

The study covered six cities that collectively account for 84 % of all registered firms in Saudi Arabia. Surveys were distributed to 1,500 firms, randomly chosen from the company register at the Ministry of Trade, according to a quota sampling plan, based on the total number of registered SMEs in each city, as follows: Riyadh (36 %), Jeddah (29 %), Dammam (20 %), Buraydah (7 %), Abha (5 %), and Tabouk (3 %). Thus, the study sample is regionally representative of small business economic activity in the Kingdom of Saudi Arabia. After employing several methods to obtain an adequate response rate, the study team was successful in getting back 1,249 completed questionnaires. Of these, 26 questionnaires were unusable, rendering a total sample size of 1,223, to a response rate of 81 %. The survey respondents were all Saudi nationals, firm owners, and all male. Each respondent was asked to describe a single venture. The firms were small, with fewer than ten employees on average, and about two-thirds of them (63.44 %) operated in the trade sector. Firms in manufacturing, services, and real estate accounted for around 12 % in each sector, whereas firms in agriculture comprised only 4.23 % of the sample.

Consistent with prior empirical research, we defined entrepreneurial new ventures as owner-managed firms eight years of younger (Zahra 1996; Wang and Bansal 2012). These new ventures accounted for 66.12 % of all firms in the study, and firms where the owner was also the full-time manager of the business comprised 40.10 % of the sample. Combined, these two criteria rendered a subsample of 331 owner-managed entrepreneurial ventures, which comprise the final sample for our study.

To garner deeper insights into the phenomena of interest to the study and contextualize its findings, we supplemented the quantitative analysis with qualitative data from six interviews with Saudi entrepreneurs. The interviews were conducted in January-February of 2014 in Riyadh with small firm owners who were also full-time managers of their firms. The firms were between 3 and 10-years old and operated in a diverse array of industries, such as manufacturing, construction, and services. The interviews lasted between 45 min and 1 h and were semi-structured, covering six main topics, "Major opportunities and challenges of the business at founding and currently", "Inter-organizational relationships with large businesses", "The education of the owner/manager and its importance", "The business plan of the firm and its importance", "The formal organizational structure of the firm and its importance", and "Other factors that are important in building inter-firm relations with large businesses". Illustrative quotes from the interviews are used throughout the discussion section of the paper to enhance the findings from the statistical tests.

Measures

Following Brush and Chaganti (1999), the dependent variable, the *diversity of the inter-firm network*, was measured as the sum of five binary items indicating whether or not the new venture had a supplier, distributor, financing, alliance, or a partnership agreement with a large business. Our independent variables were measured by three self-reported items. The *education* level of the owner was measured on a 6-point ordinal scale, indicating the highest level of education level attained, where 1 = primary education, 2 = secondary education, 3 = high school diploma, 4 = professional diploma, 5 = college degree, 6 = graduate and post-graduate degree. Respondents also reported whether or not the new venture had a *formal business plan* (binary variable), or a *formal organizational structure* showing positions, units, and departments (binary variable). We controlled for the *age* of the new venture (on a 4-point ordinal scale), size (*number of employees*), and *industrial sector* (four categories measuring effects relative to the baseline category of the most populous industrial sector, trade). Tables 2 and 3 report the descriptive statistics and correlations for all variables entered into the statistical analysis.

With respect to the distribution of our dependent variable, 79 entrepreneurial ventures in our sample (24.31 %) reported no inter-firm ties; 20 % had one inter-firm relation, 28.62 % had two, 18.46 % had three, 6.77 % had four, and six ventures (1.85 % of the sample) had five different inter-firm relations in their network. More specifically, about half of the new ventures had either a supplier (44.21 %) or a distributor (55.89 %) relationship with a large business, but only slightly above a fifth of the entrepreneurial ventures (21.21 %) had a financial relationship and slightly below a fifth of them (19.45 %) had a partnership relationship. About 30 % (29.31 %) had a formal strategic alliance with a large business.

Table 2 Descriptive statistics

Variable	n	Mean	SD	Min	Max	Frequencies[a]	
						Yes/Category	Percent
Dependent variable							
Business network diversity	325	1.69	1.30	0	5		
Independent variables							
Education	329	3.60	1.34	1	6		
Formal structure	330	0.43	0.49	0	1	141	42.73
Formal business plan	325	0.36	0.49	0	1	117	36.00
Controls							
Venture age	331	2.91	0.91	1	4	<1 year old	7.80
						1–3 years old	24.75
						3–5 years old	35.89
						5–8 years old	31.56
Number of employees	328	9.76	12.33	1	119		
Industrial sector	331	3.21	0.91	1	5	Agriculture	4.23
						Manufacturing	11.78
						Trade	63.44
						Services	12.39
						Real Estate	12.39

[a] Categorical variables only

Table 3 Correlations

		1	2	3	4	5	6	7	8	9
1	Business network diversity	=								
2	Education	−0.01	=							
3	Formal structure	0.11	**0.21***	=						
4	Formal business plan	**0.18***	**0.18***	**0.40***	=					
5	Venture age	0.01	**−0.17***	−0.06	−0.11	=				
6	Number of employees	**0.14***	0.11	**0.27***	**0.22***	**0.15***	=			
7	Manufacturing	0.1	0.09	**0.20***	0.07	−0.05	0.11	=		
8	Services	−0.01	0.01	0.08	**0.14***	**0.17***	**0.20***	−0.11	=	
9	Agriculture	0.09	0.1	0.09	**0.16***	−0.008	**0.13***	−0.06	−0.08	=
10	Real estate	−0.07	**−0.12***	−0.10	**−0.16***	0.08	−0.07	−0.11	**−0.14***	−0.08

*Significant at $p<.05$ or better

Statistical procedure

The dependent variable for the study is a count variable, i.e., the data are distributed as non-negative integers. Therefore, we chose a negative binomial regression specification as a modeling procedure (Hilbe 2011). We used the *nbreg* procedure in STATA, entering first the controls (Model 1), then the independent variables (Model 2), and, finally, the interaction terms (Model 3). The parameter estimates for the control and independent variables entered into the models are exponentiated and reported as incidence rate ratios (IRR), together with the corresponding standard errors. The IRR can be thought of as a ratio of ratios. For binary variables, the IRR measures the ratio of the risk of the event occurring during the study period in the "treated" group to the risk of the event occurring in the "control" group. Consider the binary variable "formal business plan". An IRR of 2 would indicate that the new ventures with a formal business plan have formed twice as many inter-firm relations (i.e. experienced twice as many "events"), compared to the new ventures that did not have a written business plan. An IRR of 1 would indicate the same risk between the two groups. An IRR of .5 would indicate that the new ventures with a formal business plan have half the inter-firm relations compared to the new ventures without a formal business plan. For continuous variables, the IRR indicates the percentage increase (or decrease) of the count variable for one unit increase in the independent variable, when other variables are held at their mean. Thus, an IRR of 1 indicates that the condition or event under study is equally likely regardless of the increase or decrease of the explanatory/control variable. An IRR greater than 1 indicates a positive effect of the explanatory/control variable, whereas an IRR lower than 1 indicates a negative relationship (Hilbe 2008; Sedgwick 2010). The joint tests of significance test the omnibus hypothesis that the coefficients of the new block of variables entered into each consecutive regression model are equal to zero. The results from the statistical testing are presented in Table 4.

Table 4 Negative binomial regression estimates on predictors of network diversity (n=316)

Variable	Model 1		Model 2		Model 3	
	IRR	S.E.	IRR	S.E.	IRR	S.E.
Controls						
Venture age	1.01	0.05	1.01	0.05	**1.20***	0.09
Number of employees	**1.01†**	0.01	1.00	0.01	**1.01†**	0.01
Manufacturing	1.26	0.19	1.22	0.19	1.22	0.19
Services	0.94	0.13	0.90	0.13	0.90	0.16
Agriculture	1.26	0.24	1.17	0.23	1.12	0.22
Real estate	0.86	0.13	0.89	0.14	0.86	0.13
Independent variables						
Education			0.97	0.03	0.97	0.03
Formal structure			1.03	0.10	**1.82†**	0.59
Formal business plan			**1.29***	0.13	**1.99***	0.65
Interactions						
Age * Structure					**0.82†**	0.89
Age * Business plan					0.86	0.09
Regression function						
LR chi-square (d.f.)	**10.56(6)†**		**18.71(9)***		**28.25(11)****	
Joint test of significance						
LR chi-square (d.f.)			**8.27(3)***		**9.53(2)****	

† Significant at p<.1, *significant at p<.05, **significant at p<.01, ***significant at p<.001

Results

In the fully subscribed model (Model 3), the education of the owner was not significantly associated with the diversity of the new venture's inter-firm network. Thus, H1a was not supported. Having a formal business plan, however, was positively and significantly associated with the diversity of the new venture's inter-firm network. Thus, our H1b received full support. Having a formal organizational structure was also positive and significant in the fully subscribed Model (Model 3), rendering support to H1c. In addition, the interaction between the age of the new venture and having a formal organization structure was significantly and negatively associated with the diversity of the new venture's inter-firm network, suggesting that the effect of having a formal structure decreases with the age of the firm. The interaction between having a business plan and the age of the entrepreneurial venture was not significant. Thus, H2a was not supported, whereas H2b received statistical support.

Among the control variables, both age and size were positively associated with the diversity of the inter-firm network, suggesting that entrepreneurial ventures tend to expand their networks as they get bigger and older.

Discussion

A voluminous corpus of literature in organizational sociology and entrepreneurship has documented the legitimizing effects of entrepreneurial networks, particularly when new ventures ally with prominent, resource-rich, and/or high-status partners (Podolny 1993; Stuart and Sorenson 2007; Stuart et al. 1999; Dacin et al. 2007). Our study contributes to this stream of literature by documenting that it takes an initial level of cognitive legitimacy in order to form these inter-firm relationships. The results from our statistical tests lead us to three major findings, which will be discussed next.

Organizational isomorphism is positively associated with the diversity of the entrepreneurial network

Similar to Deephouse (1996), we found that organizational isomorphism legitimates. When the new venture can demonstrate that it is constructed in a way similar to existing institutions and its procedures and processes are in accordance with prevalent cognitive schemata and social cultural accounts, it gains social acceptance among a diverse set of external stakeholders. This acceptance, in turn, improves the chances of the new venture to form ties with large businesses and to build a diverse inter-firm network. More specifically, the incidence rate ratios (IRR) in Model 3 (Table 4) show that new ventures with a formal written business plan or a formal organizational structure had almost twice as many large organizations in their network, compared with those entrepreneurial organizations that did not have a written business plan or a formal organizational structure.

Insights from our interviews support the finding that a formal business plan and organizational structure fulfill largely symbolic, legitimizing functions. One of our interviewees, a founder/manager of a construction company with 25 employees, shared that even though the business had a formal plan, "project management was more important". The owner of an animal fodder company acknowledged that the firm put together a formal organizational structure prior to applying for financing with the Saudi Credit Bank because the new venture needed to include it in the application package. Entrepreneurs used their formal business plans and structures to show that "we have organized work and each worker has duties" (the founder of a DNA lab) or that "<the potential partners> are included in our plan" (the founder of a coffee shop in downtown Riyadh). All of our interviewees emphasized the critical importance of "quality and reliability" in their relationships with large businesses. We surmise that having a formal business plan and organizational structure demonstrates conformity with socially accepted business structures and practices and thus sends a signal of quality and reliability to prospective partners.

Our work supports prior research by Delmar and Shane (2004) and Honig and Karlsson (2004) who, in a series of studies based on nascent entrepreneurial ventures in Sweden, a developed market economy, established that a formal business plan, in particular, fulfils a critical legitimizing role. We extend this line of research by demonstrating that having a formal business plan and a formal organizational structure fulfills a similar legitimizing role in the context of an emerging market.

Isomorphic effects are stronger earlier in the life of a new venture

As expected, we found that the legitimizing effect of the development of a formal structure is stronger early in the life cycle of the entrepreneurial venture. Our work offers further support to Delmar and Shane (2004), who argued and empirically documented that "legitimacy is likely to have its greatest effect on venture survival during the earliest period of the venture's life because this period is the one in which disbanding depends most on the perceptions of external stakeholders, rather than on actual financial performance …<and> the generation of legitimacy improves the terms upon which the new venture may undertake transactions with other actors" (Delmar and Shane 2004: 388). However, unlike Delmar and Shane (2003), we did not find a significant interactive effect between age and formal planning. Instead, we found a significant effect of the interaction between age and having a formal organizational structure. These different findings can be attributed to the nature of the samples in the two studies. Our sample consists of young (up to 8-years old), but already established new ventures, whereas Delmar and Shane (2003) tracked nascent ventures during the first 30 months after the initiation of start-up activities. Understandably, Delmar and Shane (2003) did not test for the effect of a formal organizational structure, because the likelihood that the nascent firms in their sample would develop a formal organizational structure would be quite minimal. Thus, our finding may indicate that having a formal structure is an important signal of cognitive legitimacy for early stage entrepreneurial ventures that are already operational.

The paths to reaching cognitive legitimacy differ between developed and emerging economies

As reported in the results section, we found that the education level of the entrepreneur did not have a significant effect on the diversity of the new venture's inter-firm network. In contrast, in his study of Internet security ventures, Hallen (2008) documented that the entrepreneurial ventures in his sample formed their initial network positions through their founders' personal ties and human capital (measured by formal education). To some extent, these different findings can be attributed to the difference in contexts. One can surmise that the role of the owner's human capital (i.e. level of education) is much more critical for a high technology entrepreneurial venture, such as the ventures comprising Hallen's (2008) sample, than for a entrepreneurial venture operating in the "economic core" (Kirchhoff 1994), or the lower growth, less resource-endowed sectors of the economy where the majority of the entrepreneurial ventures in our sample operate. Recall that almost two-thirds (63.44 %) of the firms in our sample, regionally representative of the general population of Saudi SMEs, operated in the trade sector; whereas firms in manufacturing accounted for only 12 % .

Still, as we argued in the theoretical development of our paper, we expected that the general education level of the owner/managers in our sample would have a strong legitimizing effect because of the generally lower education levels in Saudi Arabia. Surprisingly, we found a non-significant effect. We explored this non-significant effect further, by recoding the ordinal variable for education and rerunning the statistical tests with five dummy variables, allowing us to test for the effect of each education level relative to the lowest level of education attained (primary education or lower). The results from this sensitivity analysis, not reported here because of space constraints, and available from the authors upon request, showed that only the second level of education (secondary education) improved significantly the percentage of forming inter-firm ties, relative to the lowest education level. In other words, the sensitivity analysis very much confirmed the non-significant effect of the entrepreneur's formal education on the diversity of inter-firm ties.

The persistent non-significant effect of education prompted us to take a closer look at prior empirical research on the role of human capital for entrepreneurial performance. A recent meta-analysis on the link between human capital and entrepreneurial success (Unger et al. 2011), based on 70 independent samples, found that the link between human capital and entrepreneurial success was stronger for the outcomes of human capital investments (such as knowledge or skills) than for human capital investments, such as education or experience. In other words, if social actors associate entrepreneurial success with the entrepreneur's knowledge and skills rather than his or her education or prior experience, then the legitimizing effect of education may similarly diminish.

The relationship between level of education and entrepreneurial success may be even more tenuous in emerging markets. For example, empirical work in the context of the transitional economies in Central and Eastern Europe has established that formal education is not significantly associated with important markers of entrepreneurship, such as entrepreneurial orientation, entrepreneurial growth expectations, access to financing, or the performance and growth of new ventures (Manev et al. 2005). An explanation for this human capital puzzle may be that general education is necessary, but not sufficient to prepare for an entrepreneurial career in the emerging markets' private sector. These are economies where private initiative has only recently begun to flourish, a culture of entrepreneurship is still developing, and there are fewer role models of successful entrepreneurial career trajectories. Aspiring entrepreneurs, therefore, need specific knowledge, training, and guidance on how to start, manage, and grow a business.

From our fieldwork, we learned that all of our interviewees considered education "very important', as it "helps in marketing, sales, advertising and managing crises", and "demonstrates knowledge to the customer". Interestingly, when discussing the role of education, two of the six interviewees specifically emphasized the importance of knowledge of English. Clearly, there is much yet to be learned about the role of education for entrepreneurial success in the context of emerging economies. We encourage future theoretical developments and empirical investigations on the legitimizing role of the investments in general human capital (i.e. education) for entrepreneurial ventures in emerging economies.

Boundaries and limitations

Our work is not without limitations, which need to be borne in mind when considering its theoretical and practitioner implications. First, the sampling frame is a potential source of survivor bias. As in all cross-sectional research, only those new businesses that survived the perilous years of their initial histories could be studied.

Second, the cross-sectional design cannot rule out reverse causality. In our case, new ventures may be drafting a formal business plan or an organizational structure *as a* *result of* working with large organizations. Our interview data suggest that new ventures put together business plans and formal organization structures *in anticipation of* their collaboration with a large business, much in line with the main premise of our study. Still, as with any cross-sectional design, reverse causality cannot be completely ruled out. We encourage future longitudinal case studies to further disentangle the complex causal relationships between networking and legitimacy.

Third, the sampling plan was based on a quota sampling procedure. While quota sampling rendered a preset number of cases in each of several predetermined categories (regional representation) that reflect the diversity of the population, it can introduce some selection bias (Neuman 2003). Further, consistent with prior empirical research, we defined entrepreneurial new ventures as owner-managed firms 8 years of younger (Zahra 1996; Wang and Bansal 2012) and constructed the study sample based on these two criteria. Thus, the implications of our study should be drawn within its boundaries, namely owner-managed small businesses, eight years or less of age, and representative of the regions where the bulk of small business economic activity in the Kingdom of Saudi Arabia is concentrated. A future study based on pure random or stratified random sampling would permit robust statistical corroboration and generalization of the study results.

Fourth, the firms in our sample were all formally registered, and were all led by men. We also focused on one legitimizing strategy, namely conformance with formal regulations and social expectations. Given that the informal sector accounts for a sizeable portion of economic activities in emerging economies (Webb et al. 2009; Godfrey 2011) and that many women-owned businesses in Saudi Arabia are informal and home-based (Alturki and Braswell 2010), future research should specifically explore the paths to legitimacy in the emerging markets' informal sector. Although economic entities operating in the informal economy may not fully conform to established laws and regulations, they are often socially acceptable (Webb et al. 2009). In particular, Ahlstrom et al. (2008) discussed the specifics of the legitimizing strategies of conformance, selection, manipulation, and creation in emerging markets. A particularly fruitful extension of our research will be to compare the legitimation strategies of formal and informal businesses, and/or the legitimation strategies of men-led and women-led businesses in the context of emerging markets.

Fifth, our explanatory variables are single-item measures. Although we extracted the measures from the answers to objective and specific questions (i.e. check the highest education level completed (1–6), does the business have a business plan (yes/no), does the business have a formal organizational structure, showing positions, units, and departments (yes/no), thus minimizing reliability concerns, our measures do not fully capture the multitude of ways in which new ventures build legitimacy. For example, new ventures can engage in procedural mimicry not only by putting together a business plan, but also by stipulating accountability procedures, market information processes, human resource policies, quality control processes, etc. (Suchman 1995), whereas having specific departments in place may be a more specific demonstration of structural mimicry (Khaire 2010). In other words, while we did our best to use valid and reliable measures of legitimacy, our measures are narrow. Ideally, we would have liked to work with multi-item measures, but were hampered by data availability. We call on future research to complement our study with survey data focused specifically on the ways of building legitimacy in emerging market context, implementing a wider array of measures of different types of legitimacy.[2]

Sixth, we controlled for age, size, and industrial sector. Although age and size proxy the effect of resources available for inter-firm collaboration, many other elements, such as the new venture's strategic goals, firm-level capabilities, or the firm's positioning in the industry value chain may account for the network diversity of a new firm. Unfortunately, we did not have the data to include these effects in the regression specifications.

We would have liked, in particular, to control for the effect of the social connections of the entrepreneurs, but the survey did not contain these data. Personal ties are important precursors to the establishment of an inter-firm network in any institutional context (Hallen 2008), and may be even more important in the context of our study. Entrepreneurial social capital, personal connections, and personal trust are critical for competitive success in emerging economies (Peng et al. 2008; Batjargal 2007; Manev et al. 2005). Personal connections, known as "*wasta*" in Arabic, form to a large extent the cultural matrix for business and management in Arab societies (Weir and Hutchings 2005). Insights from our fieldwork also pointed to the important role of personal connections in the formation of inter-firm relationships. Thus, one of our interviewees shared that he got access to a large company through "friends and relatives", and this access subsequently garnered him an important subcontractor contract. Another interviewee emphasized that it was important to know "the key people", and a third identified "official and non-official relationships" as "very important in our work". Future research on the role of personal connections as precursors to social approbation and as a basis for the formation of inter-firm networks in the context of emerging markets will nicely complement our work.

Seventh, it is also important to keep in mind that different networks are built for different purposes and that networks evolve over time not necessarily through the enhancement of legitimacy, but because of a need for resources, market access, or other efficiency or strategic considerations (Hite 2005; Hite and Hesterly 2001).[3] Our work focuses on the initial construction of networks early in the life history of a new venture. A fruitful extension of our study, therefore, would be to track the relative importance of legitimacy and efficiency considerations as entrepreneurial ventures grow and mature.

Finally, while we measure network diversity as a sum of five binary items, we have no data to measure the diversity of contacts/connections within each of the inter-firm relationships. Past research on inter-firm networks has established that the unique patterns of firms' bridging ties, such as the frequency and special location of contacts have differential effect on firms and present them with distinct opportunities and constraints (McEvily and Zaheer 1999). A study juxtaposing the diversity of firm inter-firm relationships with the diversity of personal bridging ties across firms will be a wonderful extension to our work.

[2] We are indebted to the two anonymous reviewers for encouraging an expanded discussion of the boundaries and limitations of our study.

[3] We are indebted to an anonymous reviewer for this insight.

Implications and conclusions

Limitations notwithstanding, our study has important implications for theory and practice. Our findings suggest that a level of cognitive legitimacy is necessary in order for new ventures in emerging markets to gain access to the inter-firm networks of large and established players, but its sources may differ from those in developed markets. In particular, we found evidence of the legitimizing role of the procedural and structural aspects of cognitive legitimacy, but no support for the legitimizing effects of the entrepreneur's educational credentials. Thus, our study adds to the conversation on different paths to building legitimacy in emerging economies (Ahlstrom et al. 2008), using empirical evidence from Saudi Arabia, a context relatively unexplored by current research.

The promotion of the small business sector, and the creation of a culture of entrepreneurship is a critical priority for Saudi public policy as the country strives to diversify its economic base away from the dependence on crude oil and to provide employment for its burgeoning young population. For practicing entrepreneurs and entrepreneurship educators in Saudi Arabia, the findings from our study reaffirm the importance of developing a formal business plan and organizational structure as important instruments in the quest for legitimacy in emerging markets.

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