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Intrapreneurial bricolage: a contradiction in terms or a useful construct?

ABSTRACT

This paper addresses the ambiguous relationship of internal, organizational social capital and external social capital with corporate entrepreneurship performance. Drawing on social construction theory we argue that bricolage can mitigate some of the negative effects associated with social capital by recombining and redefining the purpose of available resources. We investigated our hypotheses through a random sample of 206 corporate entrepreneurship projects. We found that both internal and external social capital have no direct effect on performance of corporate entrepreneurship projects. The results indicate that bricolage mediates the relationship between social capital and performance of corporate entrepreneurship projects. Bricolage thrives in particularly when there is wide availability of social capital internal and external to the organization. The implications are that bricolage is a critical behavior in allowing corporate entrepreneur projects to benefit from resources available through their network of social relations inside and outside the company.

INTRODUCTION

Corporate entrepreneurship involves combining new and existing resources (Covin and Miles, 2007; Katila and Ajuha, 2002). Corporate entrepreneurs may find these resources within (Shrader and Simon, 1997) and increasingly outside the company (Chesbrough et al., 2006). Social capital, the resources available through networks of social relationships, has gained increasing prominence as an important resource in enhancing corporate entrepreneurship (Subramaniam and Youndt, 2005; Yiu and Lau, 2008). While social capital is an important source for exchanging and acquiring resources for corporate entrepreneurial outcomes (Tsai and Ghoshal, 1998; Yli-Renko et al., 2001), no attention has been paid to how corporate entrepreneurs use and combine social capital to create corporate entrepreneurial outcomes.

An important problem regarding using social capital to create corporate entrepreneurship is that social capital is defined by the interaction of individuals through their social relations (Leana and Pil, 2006; Nahapiet and Ghoshal, 1998). Such interactions give meaning to social capital and this ascribed meaning can create lock-in effects constraining the use of social capital (Gargiulo and Benassi, 2000). While such lock-in effects have been studied in terms of a top management's dominant view on the organization (Tripsas and Gavetti, 2000; Burgelman, 2002), literature has largely been silent on how firms can overcome such lock-in effects of social capital. Maurer and Ebers (2006) argued that research should move away from focusing solely on the positive effects of social capital towards addressing the ability to redefine the body of social capital to escape these lock-in effects.

To address this knowledge void we aim to increase our understanding of the effects of social capital on CE by addressing the role of bricolage in redefining and combining social capital to enhance CE performance. Bricolage deals with the resources at hand, including those available through pre-existing networks (Baker et al., 2003). It may create corporate entrepreneurial outcomes by focusing on what resources could be instead of what they are according to dominant views in their networks and organization (Baker and Nelson, 2005; Duymedijan and Ruling, 2010).

We test our hypotheses on a random sample of 206 corporate entrepreneurship projects through the Global Entrepreneurship Monitor. We envisage making the following contributions. First, we investigate the relation of bricolage with social capital and corporate entrepreneurship. We will show how bricolage can overcome the liabilities associated with social capital by defining new purposes for prior resources (Dumeydjian and Ruling, 2010). Focusing on corporate entrepreneurship opens up possibilities for a richer investigation of bricolage as a behavior battle existing lock-ins regarding social capital.

Second, we aim to provide insight into how social capital influences the use of bricolage. Bricolage has been viewed as a mechanism in particularly suited to situations of significant constraints on the amount of available resources, yet at the same time may benefit from a diversity of available skills and resources at hand (Baker and Nelson, 2005). We aim to provide insight into these paradoxical notions by showing how the availability of internal, organizational and external social capital influences bricolage behaviors by corporate entrepreneurs.

THEORY AND HYPOTHESES

Corporate entrepreneurship involves the creation of new businesses and new products/services for new or existing markets (Zahra et al., 2000). It involves combining new and existing resources (Covin and Miles, 2007). These resources may be acquired from the parent company (Chesbrough, 2000; Shrader and Simon, 1997) as well as outside the company (Schildt et al., 2005; Chesbrough et al., 2006). Corporate entrepreneurship literature has been centrally concerned with organizational mechanisms to facilitate access to such resources through for example corporate venture capital (Keil et al., 2008), alliances (Rothaermel and Deeds, 2004), and ambidextrous organizational structures that simultaneously differentiate and integrate (O'Reilly and Tushman, 2004; Burgers et al., 2009). Underlying these mechanisms is the need to establish intra- and interorganizational relations that facilitate access to new resources.

Social capital

Social capital theory focuses on the ability to extract benefits from existing social relations such as access to resources (Portes, 1998; Nahapiet and Ghoshal, 1998). Social capital is "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" (Nahapiet and Ghoshal, 1998: 243). These social relations can provide access to resources needed to spark creativity (Perry-Smith and Shalley, 2003), entrepreneurship (Shane and Stuart, 2002), and innovation (Subramaniam and Youndt, 2005). Social capital may also increase the efficiency of actions (Nahapiet and Ghoshal, 1998). This increases speed and reduces costs, thereby enhancing the performance of corporate entrepreneurship projects. Social capital may also help corporate entrepreneurs to exert influence and gain legitimacy in the organization (Lin, 1999), leading to increased support and performance of corporate entrepreneurship projects.

Yet, despite these benefits, findings regarding the effects of social capital on corporate entrepreneurship are rather ambiguous. Subramaniam and Youndt's (2005) study suggested a strongly positive direct effect of social capital on both incremental and radical innovation. The results from Tsai and Ghoshal (1998) suggest that the relation between social capital and product innovation was mediated by resource combination and exchange. Yli-Renko et al. (2001) obtained similar results with knowledge acquisition as a mediator. Yiu and Lau (2008)

did neither find a direct effect on corporate entrepreneurship nor a mediating effect of corporate entrepreneurship in the social capital – performance relation.

One explanation for these inconsistent findings is that social capital can be a liability as well as an asset (Maurer and Ebers, 2006). Social capital literature views resources as embedded in social relations (Nahapiet and Ghoshal, 1998). The meaning of those resources and what uses they can have is socially constructed through those relations. Whilst social construction may lead to unique and heterogeneous entrepreneurial ideas from very similar resources (cf. Penrose, 1959; Shane, 2000), it has a flipside. A socially constructed meaning to social capital may prevent individuals to see other uses for this social capital due to relational and cognitive lock-in (Gargiulo and Benassi, 2000). Strong norms established in long-term relationships may deter new views and information (Leana and Van Buren, 1999). Maurer and Ebers (2006) for example, showed how social capital was very beneficial for the early development of biotechnology start-ups, but that same social capital significantly constrained further venture development.

In other words, the embeddedness in their social relations constrains actors in the activities they undertake (Garud and Karnoe, 2003). Not only the resources, but also their potential derived value is socially constructed, as individuals learn through their personal encounters with the resources (Weick, 1979; Baker and Nelson, 2005; Duymedjian and Ruling, 2010). Within a social relation a shared understanding evolves about the resources at hand, and this shared understanding may limit the ability to use the resource for creating corporate entrepreneurial outcomes. A well-established solution regarding the detrimental effect of shared understandings is to limit the exposure to such shared understandings by developing weaker social ties (Burt, 2000), or placing the corporate entrepreneurs in separate organizational units (Burgelman, 1983; Burgers et al., 2009). Yet, such separation leads to problems with actually sharing resources, due to lack of trust and understanding (Burgers et al., 2009). Prior research has shown that effective teams had a base level of understanding regarding resources they shared with outsiders, but simultaneously allowed for a more heterogeneous understanding of the resources available through their social relations (Kellogg et al., 2006; Faraj and Xiao, 2006). A way to create heterogeneity is by redefining such common understandings of social capital into alternative views (Maurer and Ebers, 2006). One such promising mechanism that can redefine resources available within networks of social relations is bricolage (Baker et al., 2003; Baker and Nelson, 2005).

Bricolage

Bricolage refers to making do with the resources at hand, and includes redefining the use of existing resources and combining them for a new purpose (Baker and Nelson, 2005). The term "existing resources" is not limited to resources directly under control, but includes resources available through networks of social relations (Baker et al., 2003). A prime aspect of bricolage is that bricoleurs refuse to accept established views on what resources can and cannot do (Baker and Nelson, 2005). This allows corporate entrepreneurs to redefine the use of existing resources and combine them for new purposes. Corporate entrepreneurs may draw on social capital within and outside organizations (cf. Adler and Kwon, 2002; Fukuyama, 1997; Leana and Van Buren, 1999; Leana and Pil, 2006; Inkpen and Tsang, 2005; Subramaniam and Youndt, 2005; Arregle et al., 2007; Cao et al., 2012).

External social capital refers to ties with external stakeholders (Adler and Kwon, 2002; Leana and Pil, 2006). Such business relations may provide vital access to knowledge about R&D,

marketing and logistics of new product/service development that may not be readily available in competitive factor markets or inside the organization (Yiu and Lau, 2008). External social capital has been associated with weaker ties that may provide more novel resources (Burt, 2000; Cao et al., 2012; Adler and Kwon, 2002). Thus a corporate entrepreneur with access to extensive external social capital has not only access to more, but also more diverse resources. More resources at hand in the form of external social capital leads to less need to venture outside of available resource stocks and a higher likelihood the corporate entrepreneur will make do with existing resources. A broader body of external social capital provides also more options to engage in recombination and redefinition of resources. Baker and Nelson's (2005) findings suggested that bricolage is highly facilitated in situations of diverse resource troves, broad sets of skills, and multiplex ties. In other words, more external social capital will lead to higher levels of bricolage behaviors.

Hypothesis 1a: External social capital has a positive effect on bricolage.

Internal social capital refers to the extent that employees from different departments engage in direct contacts with each other (Jansen et al., 2006; Jaworski and Kohli, 1993; Leana and Pil, 2006). It refers to informal social relations that contribute to the exchange and actual use of knowledge (Jaworski and Kohli, 1993). An issue for corporate entrepreneurs is the ownership of resources as owners may prohibit them to use or redefine the resources for corporate entrepreneurial outcomes (Duymedjian and Ruling, 2010). Other organizational members may also fear cannibalization by corporate entrepreneurship activities or other political motives may keep them from making resources available to corporate entrepreneurs (Zahra, 1996). A wide availability of internal social capital may allow corporate entrepreneurs to circumvent such unwillingness to share resources by using other resources at hand, thereby increasing the likelihood of bricolage behaviors. The increased social embedding through connectedness creates trust among organizational members that facilitates the likelihood of sharing resources throughout the organization (Tsai and Ghoshal, 1998). Internal social capital is in that sense not only a way to circumvent constraints, but embedded social relations will actively diminish the unwillingness to share resources, increasing the likelihood that corporate entrepreneurs engage in bricolage.

Hypothesis 1b: Internal social capital (connectedness) has a positive effect on bricolage.

Social capital, bricolage and corporate entrepreneurship

Wide availability of external social capital may be beneficial to corporate entrepreneurship. A large network within and outside the organization may imply access to unique information (Burt, 2000) and the combination of these thought worlds can facilitate creative breakthroughs necessary for corporate entrepreneurship to occur (Fiol, 1995). But in order for this beneficial effect to occur, external social capital will need to be used, as access to social capital does not imply use. In that sense, bricolage as a behavior to use resources at hand may mediate the relation between external social capital and corporate entrepreneurship.
Corporate entrepreneurs who intend to use resources acquired through their external relations into a CE-project, will need to engage in collective bricolage (Duymedjian and Ruling, 2010). Just bringing in new resources is not enough, as the other corporate entrepreneurs on the project will need to familiarize themselves with the new resources for the CE-project to perform well (Duymedjian and Ruling, 2010). Bricolage can help redefine the resources for

the purpose of the CE-project as well as combine it with existing resources. Without combining the external social capital with other resources at hand, the external social capital may be disjointed from the resources already at the disposal of the CE-project. As such, in the absence of bricolage, such external knowledge may have disturbing influences on the CE-project, harming the project's overall performance.

Hypothesis 2a: The relationship between external social capital and corporate entrepreneurship is mediated by bricolage.

Internal social capital in the form of connectedness enables organizational members from different organizational units to recognize opportunities and function as bridging linkages across differentiated units (Jansen et al., 2006; Subramaniam and Youndt, 2005; Floyd and Wooldridge, 1999). Bricolage may help to merge these diverse knowledge sources units underpinning corporate entrepreneurial activities. Bricolage is a mechanism that will use and combine those available resources to create innovative outputs (Senyard et al., 2012). Drawing on internal social capital will avoid reinventing the wheel, and results in cost-savings by not having to purchase resources. This will boost the performance of corporate entrepreneurship projects. Moreover, by putting established resources to use, bricolage will garner legitimacy and support for the project. This will further enhance the chance that the CE-project will have beneficial performance outcomes.

One particular issue with utilizing social capital for corporate entrepreneurship outcomes are so called lock-in effects in which social relations ascribe a specific meaning to a resource in terms of what it can and cannot do (Gargiulo and Benassi, 2000; Maurer and Ebers, 2006). This is in particular an issue regarding internal social capital. There may be very strong inert views in organizations about the purpose of resources (Tripsas and Gavetti, 2000; Burgelman, 2002). In order to have a positive effect on corporate entrepreneurship, internal social capital needs to be continuously redefined. Bricoleurs operate with a disdain for current purposes and continuously try to redefine and recombine resources available through their networks of social relations (Baker and Nelson, 2005; Baker et al., 2003). Through redefinition, bricolage behaviors will make available additional internal social capital for use in corporate entrepreneurship projects. These additional resources are likely to boost the performance of CE–projects, by speeding up development and develop higher quality solutions for the market.

Hypothesis 2b: The relationship between internal social capital (connectedness) and corporate entrepreneurship is mediated by bricolage.

METHODS

We investigate the effects of internal and external social capital and bricolage on the performance of corporate entrepreneurship projects by targeting corporate entrepreneurs through random sampling of 2,212 responding households. We used data we collected in 2011 as part of the Global Entrepreneurship Monitor (GEM) in Australia. The data was collected through computer-assisted telephone interviewing (CATI). This has been shown to improve response rates as well as provide scripted clarifications in case a respondent struggles with a question. The Global Entrepreneurship Monitor is a standardized and validated method across the world (Reynolds et al., 2005). The respondents are stratified in

several ways and reached by several communication tools (mobile phone as well as landline), to ensure the sample is representative of the Australian adult population. Corporate entrepreneurs were selected according to the screening methodology discussed by Martiarena (2011). Prior studies on social capital –corporate entrepreneurship tended to focus on firm- or business unit level count measures of innovations (cf. Tsai and Ghoshal, 1998; Subramaniam and Youndt, 2005; Yli-Renko et al, 2001). We focused on corporate entrepreneurship projects, as opposed to firm-level corporate entrepreneurship, as social capital is not so easy to transfer (Nahapiet and Ghoshal, 1998). As such, we focus on the social capital and bricolage behaviors of team members of corporate entrepreneurship projects.

The total sample of 2212 respondents contained 196 (8.9%) corporate entrepreneurs. The corporate entrepreneurs are slightly younger than the average population (41 as opposed to 46 years), and were more often educated at university (46.4%) than the general population (30.9%). Corporate entrepreneurs tend to less often female (40.8%) than the general population in our sample (54.5%).

Measures

We employed existing scales to measure our main constructs of social capital, bricolage and corporate entrepreneurship. The items for all our constructs can be found in the Appendix. We used factor and reliability analyses to investigate the properties of our measures. All scales showed unidimensionality and Cronbach Alpha's all exceeded the .7 threshold suggested by Nunnally (1978), except the performance measure. This demonstrates good construct validity and reliability. We analyzed our models using STATA.

Dependent variable. Our dependent variable is *corporate entrepreneurship performance*. We relied on a performance measure from Bonner et al. (2002), which is useful for assessing performance of more early stage projects. The four items (α = .64) tap into how well the corporate entrepreneurship project is on schedule regarding costs and timeline. Because we focus on early stage projects, there may not be any meaningful financial performance data. Moreover, financial performance is industry-specific, suggesting a subjective performance measure provides more meaningful insights (Covin, 1991).

Independent variables.

External social capital is based on a scale validated by Alexiev (2010). We focus on the pivotal role of the CE-project team members in accessing diverse bodies of knowledge through their social capital outside the organization. The six items tap into the extent the members of the corporate entrepreneurship project had prior experience in working together with other organizations regarding development, marketing, distribution of new product or service development (α = .88). Social capital is not easily transferable (Nahapiet and Ghoshal, 1998), so a measure gauging the prior experience of the project members rather than linkages of the organization provides us with a more specific measure of social capital. We focused on interactions with business partners, consistent with prior studies addressing social capital external to the organization (cf. Yli-Renko et al., 2001; Yiu and Lau, 2008; Cao et al., 2012).

Internal social capital is a five item scale (α = .67) based on Jaworski and Kohli's (1993) connectedness measure. It measures to what extent the corporate entrepreneurs feel connected with other people in their organization. The items focus on the perception of the corporate

entrepreneurs in terms of how connected they are, as that will drive their action rather than the objective network of social relations. In line with research on organizational social capital, the items tap into both the quantity of connections as well as the quality of the relations.

Bricolage is a scale derived from the CAUSEE-dataset (Senyard et al., 2012). The scale has eight items that tap into the extent to which the corporate entrepreneurs utilize and redefine existing resources at hand (α = .80). The items tap into both making do with as well as creative recombination of existing resources.

Control variables. On organizational level we controlled for *top management support* in terms of providing access to resources within the company. Top management support provides a supportive environment for corporate entrepreneurship (Kuratko et al., 1990; Hornsby et al., 2009) and may stimulate making-do-with-resources-at-hand behaviors. Top management may also play an active role in connecting corporate entrepreneurship projects to relevant knowledge in the organization (O'Reilly and Tushman, 2004), thereby actively shaping the availability of social capital to corporate entrepreneurs. Top management support was measured with a single item that asked the corporate entrepreneur's perception of the availability of knowledge and resources from top management. We controlled for *gender,* as women may have different social networks than men as well as utilize them differently (Brush et al., 2009). We also take into account *education* and *age* of the corporate entrepreneurs as indicators for human capital. Human capital may interfere with social capital (Subramaniam and Youndt, 2005) and bricolage (Baker and Nelson, 2005).

RESULTS

Table 1 presents an overview of the means, standard deviations and correlations of all our main variables. Some of the strong correlations between the social capital variables, led us to include all social capital measures in any regression as opposed to just one at a time, to avoid picking up spurious correlations. The highest Variance Inflation Factor was 6, well below the general cut-off of 10. It is expected to have a moderate degree of multicollinearity in mediation analyses. To test our hypotheses, we regressed our hypothesized variables and controls first on bricolage and then on corporate entrepreneurship (see Table 2). We used a Sobel-test and bootstrapping to test for the significance of the mediation effect. We utilized bootstrapping as it is now generally considered the superior alternative over the classic Baron and Kenny (1986) test for mediation (Zhao et al., 2010; Preacher and Hayes, 2008).

Insert Tables 1 and 2 here

Model 1A is our base model with the control variables regressed on bricolage. Model 1B adds the effects of internal and external social capital on bricolage, to test the first step of the mediation. The change in R-square was highly significant (F-change = 298, $p<.001$), with the social capital variables explaining over 80% of the variance in bricolage. The results show strong support for hypothesis 1A (β = .386, $p<.001$), suggesting that the availability of external social capital increases the use of bricolage amongst corporate entrepreneurs. Hypothesis 1B that internal social capital in the form of connectedness would lead to increased use of bricolage is also strongly corroborated by our findings (β = .243, $p<.001$).

Model 2A shows the effects of the control variables on corporate entrepreneurship performance. Model 2B adds the effects of internal and external social capital. As per our hypotheses, we do not expect a significant direct effect of social capital on corporate entrepreneurship performance. From the results of model 2B we can observe that only internal social capital ($\beta = .174$, $p<.01$) has a significant direct effect on the performance of corporate entrepreneurship projects. Model 2C adds the direct effect of bricolage on corporate entrepreneurship project performance. The change in R-square was significant (F-change = 8.46, $p<.05$) as well as the coefficient for bricolage ($\beta = .479$, $p<.01$), suggesting bricolage has a significant positive effect on the performance of corporate entrepreneurship projects.

Insert Table 3 here

To test for the mediation effect of bricolage, we ran a bootstrap and a Sobel-test using Stata's sgmediation command. The results in Table 3 provide strong support for hypothesis 2A. The Sobel-test indicated a significant indirect effect ($\beta = .185$, $p<.01$) of external social capital on corporate entrepreneurship project performance via bricolage. The results of the bootstrap corroborated the results of the Sobel-test, with both the lower and upper limit of the 95% bias-corrected confidence interval above zero (.051 - .328). Interestingly, the results in Table 2 and 3 show that once bricolage is added, the main effect of external social capital on corporate entrepreneurship project performance turns negative. The Sobel-test of internal social capital was significant and positive ($\beta = .116$, $p<.01$) and the upper and lower limit of the 95% bias-corrected confidence interval were both above zero (.035 - .226). This indicates strong support for hypothesis 2B, in that the effect of internal social capital on corporate entrepreneurship project performance is mediated by bricolage. That the significance of the direct effect of internal social capital disappears in model 2C and that the 95% confidence interval of the direct effect contains 0, suggests that it is full mediation by bricolage.

DISCUSSION

In this paper we sought to address how corporate entrepreneurs use social capital to enhance the performance of corporate entrepreneurship projects. Social embeddedness literature suggests that social capital can facilitate corporate entrepreneurship performance by providing new knowledge and resources as well constrain performance of CE-projects by invoking lock-in effects that constrain novel uses of resources available through social relations. We addressed this paradox by focusing on the bricolage behaviors of corporate entrepreneurs. Our findings based on a random sample of 206 corporate entrepreneurship projects suggest bricolage mediates the relationship between internal organizational and external social capital on corporate entrepreneurship project performance.

Our findings shed new light on the effect of social capital on corporate entrepreneurship by showing the effects of internal and external social capital on the performance of corporate entrepreneurship projects are fully mediated by bricolage. This provides support for a social embeddedness perspective of social capital, in that social capital can have both positive effects by providing access to new knowledge and negative effects through lock-in (Maurer and Ebers, 2006) and that these effects may cancel each other out. It may shed new light on the ambiguous results of prior literature, which has found positive effects (Subramaniam and Youndt, 2005), no effects (Yiu and Lau, 2008), and mixed positive and negative direct effects of social capital on aspects of corporate entrepreneurship (Yli-Renko et al., 2001). Bricolage may overcome these negative lock-in effects of social capital regarding corporate

entrepreneurship by being able to redefine the meaning of resources (Ruymedjian and Ruling, 2010; Senyard et al., 2012). It also supports prior findings in that having access to social capital is not the same as using the available social capital (Yli-Renko et al., 2001; Tsai and Ghoshal, 1998). Bricolage as a mediating making-do mechanism utilizes the available social capital in enhancing performance of corporate entrepreneurship projects. Corporate entrepreneurship literature should take into account both positive and negative effects of social capital and look for further mechanisms to alleviate the negative effects deriving from social capital.

Our results indicate internal and external social capital strongly drive bricolage behaviors. The more social capital within and outside the organization is available to a corporate entrepreneur, the more likely the corporate entrepreneur is to engage in making do and redefining existing resources. This provides further evidence for Baker and Nelson's (2005) observations that entrepreneurs who have access to diverse skills, resources and network ties are more likely to engage in bricolage. This means that while corporate entrepreneurs engaging in bricolage may be able to create something from nothing, bricolage is far more effective in enhancing corporate entrepreneurship in situations of higher availability of social capital. Our result also provide support for the notion of network bricolage (Baker, 2007; Baker et al., 2003), in that resources available through social networks are also viewed by bricoleurs as "resources at hand".

The results of our study indicate that bricolage is a fruitful mechanism for corporate entrepreneurs to raise the performance of their corporate entrepreneurship projects. We demonstrate that using bricolage helps corporate entrepreneurs making do through the use of the resources at hand, redefine the purposes of those resources to suit their corporate entrepreneurship projects and recombine them. Existing organizations often have strong views about what the purpose of certain resources is, constraining corporate entrepreneurship (cf. Burgelman, 2002; Arregle et al., 2007; Tripsas and Gavetti, 2000). Our findings show bricolage can play a role in overcoming such limitations by creating a positive effect of resources on corporate entrepreneurship performance.

Conclusion

To conclude, our study provides important insights in the role of bricolage and internal and external social capital in enhancing corporate entrepreneurship. We offer a conceptualization of social capital that addresses how social relations may create lock-in effects that prevent novel uses of social capital needed for corporate entrepreneurial outcomes. Our study shows that bricolage behaviors plays an important role in actively redefining and recombining social capital to enhance corporate entrepreneurship performance.

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APPENDIX I Items and Scales used in our research[a]

Internal social capital (Jaworski and Kohli, 1993)

- It is easy to talk with virtually anyone you need to, regardless of rank or position
- There is little opportunity for informal "hall talk" among employees[b]
- Employees from different departments feel comfortable calling each other when the need arises
- People around here are quite accessible to each other
- Our organisation is characterised by close, personal relations between employees

External social capital (Alexiev, 2010)

- Worked together with other organisations on product or service innovations
- Worked together with other organisations in order to put new products or services to market
- Allied with other organisations in order to introduce new products or services
- Implemented joint promotional activities for new products or services with other organisations
- Maintained joint distribution or service agreements for new products or services with other organisations
- Signed contracts with other companies or institutions for product or service development

Bricolage (Senyard et al., 2012)

- We are confident of our ability to find workable solutions to new challenges by using our existing resources
- We gladly take on a broader range of challenges than others with our resources would be able to
- We use any existing resource that seems useful to responding to a new problem or opportunity
- We deal with new challenges by applying a combination of our existing resources and other resources inexpensively available to us
- When dealing with new problems or opportunities we take action by assuming that we will find a workable solution
- By combining our existing resources, we take on a surprising variety of new challenges
- When we face new challenges we put together workable solutions from our existing resources
- We combine resources to accomplish new challenges that the resources weren't originally intended to accomplish

Corporate entrepreneurship project performance (based on Bonner et al., 2002)

- Adherence to budget and cost for development
- Meeting intended schedule
- Product/service performance
- Overall, how would you rate the performance of your new activity

[a] items measured on a 5-point Likert scale ranging from strongly disagree to strongly agree
[b] reverse-scored item.

Table 1. Descriptive Statistics and Correlations[a]

	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Corporate entrepreneurship performance	3.28	0.55	(.68)									
2. Bricolage	3.65	0.52	.208**	(.80)								
3. External social capital	2.96	1.08	.031	.836***	(.88)							
4. Internal social capital	3.76	0.55	.275***	.422***	.109	(.72)						
5. Top management support	0.47	0.50	.163*	.274***	.150*	.414***	-					
6. Gender	0.41	0.49	.002	-.002	-.052	-.120+	-.031	-				
7. Education	5.19	1.96	-.194**	-.057	.030	.127+	.058	.031	-			
8. Age	41.8	13.3	.014	-.073	-.048	.037	.084	.118+	.089	-		

[a] N=206. Numbers in parentheses on the diagonal are Cronbach alphas of the composite scales; + p<.10; * p<.05; ** p<.01; *** p<.001 (2-tailed)

Table 2. Results of Hierarchical Regression analyses[a]

	Bricolage		Corporate entrepreneurship performance		
	Model 1a	Model 1b	Model 2a	Model 2b	Model 2c
Top management team support	.286*** (.071)	.021 (.035)	.198** (.076)	.093 (.083)	.084 (.081)
Gender	.015 (.072)	-.089** (.032)	.010 (.077)	.036 (.076)	-.006 (.076)
Education	-.018 (.018)	-.011 (.008)	-.059** (.019)	-.049* (.019)	-.044* (.019)
Age	-.002 (.003)	-.001 (.001)	.002 (.003)	.002 (.003)	.002 (.003)
External social capital		.386*** (.015)		.001 (.035)	-.184* (.072)
Internal social capital		.243*** (.025)		.174** (.059)	.058 (.070)
Bricolage					.479** (.165)
R^2	.082	.820	.070	.110	.146
F-value for change in R^2		406.34***		4.42*	8.46**

[a] N = 206; Unstandardized coefficients are reported; standard errors in parentheses; + p<.10; * p<.05; ** p<.01; *** p<.001

Table 3. Results of bootstrap[a] and Sobel test[b]

		Indirect effect			Direct effect		
	Sobel-test	Observed coeff.	LLI	ULI	Observed coeff.	LLI	ULI
External social capital	.185** (.064)	.185** (.070)	.051	.328	-.184* (.080)	-.346	-.029
Internal social capital	.116** (.042)	.116* (.048)	.035	.226	.058 (.074)	-.086	.204

[a] bootstrapping using 5000 replications using case resampling; N=206; Unstandardized coefficients of direct and indirect effects are reported; standard errors in parentheses; 95% bias-corrected confidence interval

[b] Unstandardized coefficient of indirect effect; standard error in parentheses; + p<.10; * p<.05; ** p<.01; *** p<.001