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The Role of Advice Sources for Entrepreneurship and Innovation

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Abstract

Entrepreneurial firms have been considerably involved in innovation ? technological, service as well as business model ? and innovativeness is regarded as a key factor for their success. Concerning the determinants of innovative performance, research pays much attention to the role of networks for new ventures. Firms that tap into these external sources of knowledge and resources are higher performers when it comes to entrepreneurial outcomes such as innovation. The network concept has gained much attention in business research in the last two decades and its contributions to entrepreneurship are well established. The following paper analyzes the relationship between external advice, a one aspect of network activities, and innovative performance of entrepreneurs. We investigate the relevance of knowledge concerning different external advice sources throughout two venture stages, exploration and exploitation. We use cross sectional survey data from entrepreneurial firms in the Middle East and North Africa.

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Abstract: Entrepreneurial firms have been considerably involved in innovation—technological, service as well as business model—and innovativeness is regarded as a key factor for their success. Concerning the determinants of innovative performance, research pays much attention to the role of networks for new ventures. Firms that tap into these external sources of knowledge and resources are higher performers when it comes to entrepreneurial outcomes such as innovation. The network concept has gained much attention in business research in the last two decades and its contributions to entrepreneurship are well established. The following paper analyzes the relationship between external advice, a one aspect of network activities, and innovative performance of entrepreneurs. We investigate the relevance of knowledge concerning different external advice sources throughout two venture stages, exploration and exploitation. We use cross sectional survey data from entrepreneurial firms in the Middle East and North Africa.

INTRODUCTION

Much organizational effort and resources within the entrepreneurial and innovation process are dedicated to the search for creative ideas that can lead to new products and services with high market potential. This search is knowledge intensive (Dosi 1988) and much knowledge necessary for these activities lies outside the area of firm competencies and expertise (Rosenkopf and Almeida, 2003). Research has long recognized the importance of social embeddedness of entrepreneurial action (Granovetter 1973), as well as for innovation as a form of entrepreneurship (Amabile 1996). External knowledge supports organizational learning and enhances innovation capabilities, which include skills, experience, and organizational structures that are important for change. Entrepreneurs interact with others and, through this, benefit from access to knowledge, physical assets, and skills (Kogut and Zander 1992). These contacts may help to identify and validate business opportunities (Hill, et al 1999), provide information about the wider firm environment (Hill et al. 1997), and support the entrepreneurs in the management of customers and suppliers (Uzzi 1996, 1997).

Functional and structural characteristics regarding external networks and advice seeking are well researched (O'Donnell et al. 2001). In this context, research has analyzed numerous traits of external relations in order to understand their effect on survival and firm performance. For example, advice sources have been classified by research whether they relate to more formal relationships (e.g., research partnerships) that were shown to have positive impact on patent activities and growth rates of young firms (Stuart 2000); or informal relations (Birley 1985) (e.g., family, friends, 'communities of practice' (Wenger 1998)) which were shown to associate with higher degrees of trust. Informal relations were also shown to be effective in transferring complex and context dependent knowledge (Uzzi 1997). Other researchers have emphasized the frequency of interaction between contacts and how these differences influence the content of knowledge that gets exchanged between advice seekers and givers (Granovetter 1973). Strong ties are important for social support, but they supply advice seekers mainly with redundant information due to common backgrounds and interests they most often share with each other (Granovetter 1973). Weak ties (e.g., friends of friends) provide access to more distant knowledge and novel information important for innovation and entrepreneurship (Granovetter 1973). Research on innovation systems has focused on advice sources concerned with knowledge generation and diffusion, such as actors

in research institutions and universities (Autio 1998), or advice sources in the competitive environment (Oerlemans et al. 1998) that are more concerned with knowledge exploitation (Autio 1998).

However, much less research—empirical and theoretical—addresses dynamic features of advice seeking behavior most appropriate for different stages of the firm’s growth (O’Donnell et al. 2001, Parkhe et al. 2006). In recent years, some authors use staged models of entrepreneurship to conceptualize the development of networks (Lechner and Dowling 2003; Greve and Salaff 2003). Greve and Salaff (2003), for example, treat advice sources as variable, depending on the stage of the venture. They show that entrepreneurs use their social contacts to gain access to necessary resources, which may change with the firm’s evolution. For example, entrepreneurs tend to consult with a very diverse and eclectic network of advice sources during the planning stage of an entrepreneurial venture as they are still unsure of who may be helpful for them in the future (Greve and Salaff 2003). On the other hand, they are more likely to focus on key persons for advice who are able to provide or give access to required resources at a later stage when the business is established (Greve and Salaff 2003).

Our research adds to this literature and examines the impact of different external advice sources on entrepreneurial performance during different venture stages. Information needs of entrepreneurs change throughout the venture history (Shane 2000) as previous knowledge and experience gained throughout the venture process influence an entrepreneur’s knowledge stock in succeeding phases (Shane and Venkataraman 2000) and renders knowledge seeking very dynamic. Moreover, different venture stages are associated with different knowledge and information content. We assume that this affects and changes the pertinence of certain advice sources for venture outcomes during different venture stages.

Shane and Venkataram (2000) and Choi et al. (2008) draw a distinction between entrepreneurial exploration, which associated with organizational activities related to discovery, experimentation, and innovation (Cheng and Van de Ven 1996) and exploitation, which refers to the use and further development of known things (Levinthal and March 1993).

Our research focuses on advice sources as a form of knowledge for business related matters. This is obviously only one aspect of social capital and networks as it does not include the whole set of resources and relationships that have previously been addressed in social network analysis (Powell and Grodal 2005), but a deeper understanding of this aspect may help understand sources of advantage in emerging ventures.

Our paper is divided into four major sections: First, we analyze previous literature that addresses external advice and develop our hypotheses. This is followed by an outline of our data sample and the description of our methods. A third part presents and discusses descriptive statistics and the results. Finally, we offer conclusions as well as discuss limitations of our work and possibilities for further research.

THEORY

Researchers have assumed that organizations develop in an evolutionary way and specific entrepreneurial phases can be distinguished that relate to different strategic issues and which emphasize various entrepreneurial activities in each sequence (Hite and Hesterly 2001). Examples are Wilken's (1979) distinction between the motivational, planning and establishment phases; as well as distinctions between nascent, baby or young and established entrepreneurs (Gartner et al. 2003). Shane and Venkataram (2000) and Choi et al. (2008) draw a distinction between entrepreneurial exploration and exploitation. Exploration is associated with organizational learning and activities related to discovery, experimentation, innovation (Cheng and Van de Ven 1996) and the search and discovery of new business opportunities from the first idea to a full-fledged business concept (Bhave 1994). Entrepreneurs also evaluate business concepts and the potential of innovative products in terms of viability and whether they are marketable, legal, and hold the potential to generate profits (Timmons et al. 1987). Entrepreneurial exploration is predominantly concerned with new value creation.

Exploitation, on the other hand, refers to the use and further development of known things (Levinthal and March 1993). According to March (1991) this includes "such things as refinement, choice, production, efficiency, selection, implementation, execution" (p. 71). Entrepreneurial exploitation is predominantly concerned with value capture. In the following we will study how external advice sources, notably, advice from market and industry, professional intermediaries, international contacts, research institutions and the private environment influence entrepreneurial exploration and exploitation.

Value creation can refer to the development of entirely new products that produce greater utility for customers than existing products. Or it can refer to the offer of products and services that possess a similar utility as existing ones but for lower prices. Value creation refers to the identification of 'problems' as well as the generation of new ideas that help to develop solutions for those problems (Amabile and Khair 2008). In the entrepreneurial

context opportunity recognition is synonymous with problem identification and it refers to the problem of an unmet customer or market need. Moreover, the value creation process is concerned with finding an optimized solution in terms of speed and cost for the identified problem (Nickerson et al. 2007). Problem solving in the context of innovation development often bases on numerous knowledge bases. Problem solving can either involve recombining already existing knowledge in a new way in order to create value adding products and services for potential customers. Or it draws on new scientific knowledge, which draws on natural laws and principles as well as causal relations and scientific mechanism that underlie technological innovation (Asheim and Gerler 2005). Search for solutions also involves knowledge how to capture value from business opportunities, as well as information about macro environmental factors, such as social, legal and market are necessary in order to fully seize the potential and the viability of the entrepreneurial project.

Research on high growth entrepreneurial firms shows that access to a broad mix of managerial and technical knowledge is import for this early entrepreneurial phase (Kakati 2003). Market and industry knowledge have been identified as pivotal for successful opportunity recognition, stemming for example from previous experience with customers and in industry (Shane 2000). Entrepreneurs with market and industry knowledge were shown to be more able to evaluate the commercial value of potential products and services than those without access to this knowledge (Collarelli O'Connor and Rice 2001). In this context, research showed the importance of contextual knowledge regarding the commercialization of the products and services, which are transmitted by knowledge intermediaries, or information brokers (Oerlemans et al. 1998). These intermediaries (for example, public advisors, chambers of commerce, innovation centers, banks, investors, and lawyers) can give general advice as well as they transmit venture-specific knowledge (Vesper 1996). Moreover, they are capable to link potential partners for innovation with each other (Oerlemans et al. 1998). Expert advice of this sort helps to reduce knowledge deficits, which impede entrepreneurs from developing firm internal capabilities and skills necessary for the analysis of venture specific problems and the generation of viable solutions (Chrisman et al. 2002). For example, public advisory agencies were shown to reinforce entrepreneurial learning-by-doing through guidance and feedback, which allows advice seekers to better understand the role of firm internal resources and capabilities as well as their effective deployment (Chrisman and McMullan 2004). From this follows:

Hypothesis 1: There is a positive relationship between an entrepreneur's access to advisors in the market and industry environment and entrepreneurial performance during the exploration phase.

Hypothesis 2: There exists a positive relationship between an entrepreneur's access to advice from knowledge intermediaries and entrepreneurial performance during the exploration phase.

Moreover, international sources of advice as a form of distant search (Rosenkopf and Almeida 2003) may help to overcome biases toward geographically localized knowledge. In this context, international knowledge is beneficial as it informs entrepreneurs about products and services available abroad, which may be absent in their domestic market. Entrepreneurs may also gain information related to trends and dynamics, and best practices in business that may be applicable at home. In this way, knowledge learned through international channels enlarges the circle of business opportunities for future start-ups and entrepreneurial firms, as it may allow access to knowledge that they then can transfer to their home operations. As the ability to later exploit emerging opportunities depends on the capabilities to learn and to absorb knowledge and this process is cumulative and path dependent (Cohen and Levinthal 1990), entrepreneurs have an interest to acquire this type of strategic knowledge at an early stage of their venture history when organizational routines and competencies can still be adapted to pursue business opportunities (Cohen and Levinthal 1990). This leads to:

Hypothesis 3: There exists a positive relationship between an entrepreneur's access to international advice and entrepreneurial performance during the exploration phase.

For many entrepreneurial firms technology is an inherent component of their processes and for ventures concerned with radically new technological innovations it is inherent to their product development. Access to specialized scientific or technological knowledge is thus essential to many managers (Granstrand 1998) in order to keep pace with continuous technological evolution as well as developments in the scientific field. Much of this knowledge may be accessible through reports and scientific papers. However, much technical knowledge is tacit in nature (Polanyi 1967) and therefore needs to be transmitted through direct interaction with researchers and institutions concerned with the dissemination of such knowledge as well as of technical skills (Autio 1998). These could refer to people in educational and research institutions or the technology mediating institutions that are concerned with the production and diffusion of publicly available technologies (Autio 1998).

Hypothesis 4: *There is a positive relationship between an entrepreneur's access to advisors in research institutions and entrepreneurial performance during the exploration phase.*

Exploration tends to be related to experimentation and is more externally oriented toward markets and consumers; exploitation, on the other hand, tends to be internally oriented toward the creation and management of efficient organizational processes (Busenitz and Barney 1997). Exploitation envisages the establishment of a performing business, which requires full resource commitment and entrepreneurial investment to build the necessary infrastructure (Choi and Shepherd 2004). Exploitation refers to an entrepreneurial phase that focuses on value capture. It requires knowledge how to gain access and to organize necessary resources and capabilities in such a way that opportunities can be exploited (Baker et al. 2005). Moreover, the ability of entrepreneurs to exploit opportunities also depends on variables out of reach of managerial control, such as changes in product and factor markets. Furthermore, Teece (1987) refers to factors other than firm- and market-related ones, but that have the potential to interfere with an entrepreneur's ability to generate profits, e.g., technological change, regulatory environments, industry competition and others.

The success of entrepreneurial efforts and the ability of entrepreneurs to appropriate returns from their venture requires knowledge of commercialization (Teece 1987) and knowledge that enables the creation of effective and efficient operations for their proposed products and services (Block and MacMillan 1985). Although exploration and exploitation activities take place in every entrepreneurial phase, there is a focus on exploitation at later stages after substantial and "irreversible" commitments have been made (Choi et al. 2008).

Successful opportunity exploitation requires important tacit knowledge (Alvarey and Busenitz 2001) and private knowledge (Uzzi 1999) related to a firm's operating environment. Research has shown that small and new firms profit from informal contacts with industry and market participants (Kingsley and Malecki 2004) in terms of learning and performance. Knowledge from industry and market contacts refers mainly to the market and industry environment, but also to technological innovations (Thorpe et al 2005). However, it has been shown that socially embedded contacts often supply firms with important "soft information" (Uzzi 1999) that is not publicly available about their immediate market and industry environment, such as unpublished information about other firms' actions and strategies, product capabilities, labor issues (hiring), and customer information (Uzzi 1999; Kingsley and Malecki 2004). This kind of information may also be considered valuable, rare,

inimitable, non-tradable, and non-substitutable, contrary to publicly available knowledge, which is not unique and rare (Kingsley and Malecki 2004), and thus a source of competitive advantage. From this follows:

Hypothesis 5: There is a positive relationship between an entrepreneur's access to advisors in the market and industry environment and entrepreneurial performance during the exploitation phase.

Knowledge intermediaries may also be useful during the exploitation stage of a new venture in that they may help implement or execute the plan by exposing the entrepreneur to professional services rather than pronouncing on the viability of the idea. These professional services may enable the entrepreneur to protect intellectual property, scale up the business, develop marketing plans, draft contracts, set up manufacturing facilities, and organize bookkeeping, to name a few roles. While these tasks will not necessarily make a good idea great, access to these intermediary services can mean the difference between a successfully exploited idea and an unsuccessful business.

Hypothesis 6: There exists a positive relationship between an entrepreneur's access to advice from knowledge intermediaries and entrepreneurial performance during the exploitation phase.

Finally, private advice in the form of family and friends have been described as instrumental when it comes to motivation and social support, the idea being that they may help recognize an opportunity or provide insight about the viability of an idea. However, they are considered an unreliable advice source for commercially relevant information or novel knowledge, which is important for any kind of innovation (Powell and Grodal 2005). Contacts of this kind are usually based on common interests, values, and similar social and cultural contexts and lack the diversity that is necessary to supply the entrepreneur with new ideas and knowledge. We therefore hypothesize:

Hypothesis 7: Entrepreneurs' access to private advisors is not related to entrepreneurial outcomes.

DATA AND METHODS

Sample

To test our hypotheses we use survey data from the 2009–2010 Global Entrepreneurship Monitor (GEM). GEM is an international project that has generated extensive data on a multitude of topics and issues related to entrepreneurship. The original intention was to compare and analyze entrepreneurial activities across the world. Participating national teams annually run a GEM adult population survey that comprises at least 2000 respondents per country that answer numerous questions regarding entrepreneurial attitudes, engagement and influencing factors. It is a random selection process that allows for representativeness and generalizability (Klyver 2008). This study focuses on data records concerning 13 Middle East North African (MENA) countries in 2009 and 2010. Respondents include start-ups, future- start-ups, and owner managers of operating businesses, a total of 13251 respondents for all countries for the entire period. The underlying questionnaire is standardized and was pretested before final distribution to evaluate wording and comprehensiveness of all questions.

Measurement

The impact of external advice on firms' performances is measured by their influence on perceived innovation outcomes of entrepreneurial firms. We use single indicators and multi items scales where latent constructs are measured with three to four variables. Our dependent variable is entrepreneurial performance, which we measure as innovation outcomes. We distinguish between three forms of innovation:

a) New to the market (“Right now, are there many, few, or no other businesses offering the same products or services to your potential customers?”) (NewMarket). New to market innovation refers to the introduction of already existing products to markets where they have not been available so far (Firth and Narayanan 1996). In the Oslo Manual ‘new to the market’ is a distinguished type of innovation on the same level as ‘new to the firm’ and ‘new to the world’ (OECD and Eurostat 2005). ‘New to the market’ is defined as products or services that are innovative to the market when the firm is the first to introduce it to that market.

B) New to the customer (“Do all, some, or none of your potential customers considers this product or service new and unfamiliar?”) (NewCusInn). New to customer innovation refers to a perceived value that does not necessarily correspond to the typical definition of innovation as an invention that is exploited commercially. The term characterizes an impression, awareness or consciousness about a product offering which may not necessarily refer to the actual newness of the product. In this respect, Roger’s (2003:12) definition is more applicable according to which innovation is “...an idea, practice, or object that is perceived as new by an individual or other unit of adoption.” The innovativeness of a product for customers depends on expectations about an innovation’s value creating potential (Rindova and Petkova 2007) and the belief of the customer that an innovative product presents features and functionalities that are beneficial for him/her (Shrivastava 2001). Factors that affect this belief are the relative advantage of a product or service compared to previous ones (Horn and Salvendy 2009), the compatibility with needs of potential customers and with their past practices, the complexity of the underlying technology, the testability of an innovation and the degree to which effects of this innovation on the customer are also visible to others (Roger 2003).

C) Innovative products and services that base on new technologies (“Have the technologies or procedures required for this product or service been available for less than a year, or between on to five years, or longer than five years?”) (NewTecInn). The dependent variable is truncated and rank ordered – respondents have only a small number (3) of choices. We also created a variable that is calculated as the mean of the three previous variables (INNOINDEX). Our independent variables refer to different advice sources. We look at external advisers, notably, private advice (spouse, parents other family, friends); professional intermediaries’ advice (investors, banks, lawyers, accountants, public advisors), international advice (somebody abroad, somebody who has come from abroad) and market and industry advice (competitors, suppliers, customers, collaborating firms). Respondents were asked whether they had received advice during the past year by certain actors (“During the last year, have you received advice from...?”).

We split our sample into exploration phase, measured as ‘future start ups’ and exploitation phase, measured as ‘established ventures’, and we split the sample along those lines.

Control Variables

Control variables include firm size, entrepreneurial phase, and export percentage as well as industry sector as control variables. Firm age (firm age) is measured in the number of years that wages have been paid before the survey. Empirical research shows that innovation activities have a positive effect on exporting activities of firms (Kumar and Siddharthan 1994). In fact, there is a consensus in research that firms that are innovative are also more productive and self-select into international terrain (Bernard and Jensen 2004). In order to account for the different propensities to innovate between export intensive and non-intensive firms, we control for export expressed as percentage of customers that live abroad (Export Percentage). Finally, we add an industry control to account for the variation in innovation activities across industries. We differentiate between sectors at the SIC4 category level (SIC4), which refers to extractive sector, transforming sector, business services and consumer oriented sectors.

Statistical Method

The dependent variable ‘innovation’ is measured on a rank ordered scale of three. It is ordinal but not continuous, because the metric underlying the variable is not substantively meaningful. For example, the metric underlying the dependent variable ‘customer perceived innovation’ is not the same as a linear metric. The difference between 1 (none of the customers considers the product/ service new) and 2 (some perceive it as new) may differ from the difference between 2 and 3 (all customers perceive it as new). In these cases a widely applied approach to estimate the models is ordered probit regression. The structure of the ordered probit regression is expressed as (Greene 2003):

$$y^* = \beta X + \mu$$

Where y^* refer to an unobservable dependant variable (newness of innovation), β is a regression coefficient vector, X is the vector of independent network variables and control variables and μ is a normally distributed and well-behaved (zero mean, constant variance) error term. While y^* cannot be observed, the categories of response referring to the ordinal nature of the observed dependent variable (y) can be captured:

$$\begin{aligned} y &= 1 \text{ if } y^* \leq \omega_1 \\ y &= 2 \text{ if } \omega_1 < y^* \leq \omega_2 \\ y &= 3 \text{ if } \omega_2 < y^* \leq \omega_3 \\ y &= 4 \text{ if } \omega_3 < y^* \leq \omega_4 \end{aligned}$$

$$y = 5 \text{ if } \omega_4 < y^*$$

Ordered probit assumes a latent continuous metric that underlines observed ordinal responses. In this case, ω_i represent unobserved threshold values, which separate the real regression line into different areas corresponding to the different ordinal categories. The specific estimations in line with the previous equations are:

$$\text{INNOVATION} = f(X_{NW}, C, \mu)$$

Where X_{NW} represents networks determinants and C represents firm-, industry- and country-level controls.

RESULTS AND DISCUSSION

Descriptive Statistics

Based on our survey data we examine what sources of advice future and current entrepreneurs in the MENA region rely on during their entrepreneurial venture. In the survey 20 different sources of advice were differentiated that represent five major groups of advice (private, professional, market and industry, international. Furthermore the survey asked for the firm internal work environment, which was not considered in the context of this research). Figure 1 shows the repartition of different advice sources in the sample and regarding different entrepreneurial stages.

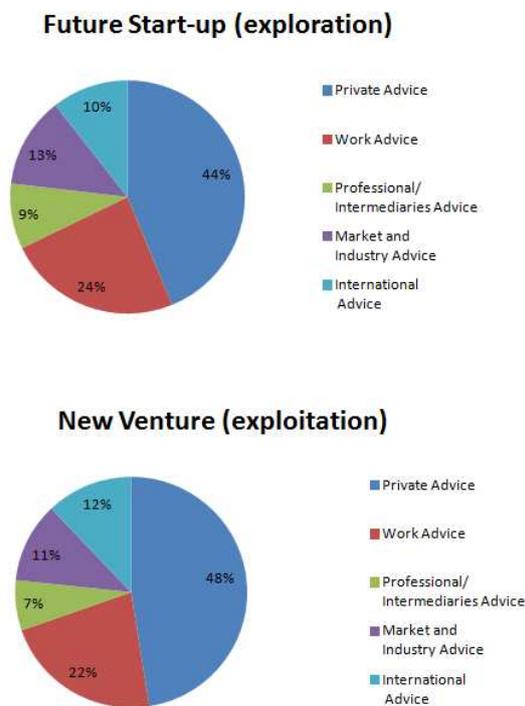


Figure 1: Sources of advice

Our results show that across the MENA region entrepreneurs rely most on advice from private sources such as family and friends. Second most important source of advice proves to be the work environment, which consists of colleagues and superior managers, followed by market and industry advice, international advice and advice from professionals and intermediaries. This repartition remains stable throughout exploration and exploitation phases with slight changes in the percentages. However, private advice and international advice source grow in importance throughout the entrepreneurial process.

Table 1 shows the repartition of the different innovation types across countries. They refer to products and services that are new to the market (but not necessarily new to the world) (market innovation (MarketAdv)); products and services that are perceived as new by the customer (new to customer (NewCusInn)); and products and services that use advanced technologies (technological innovation (NewTecInn)). The results base on our survey data and represent perceived values. These may be greater or lower than the actual innovativeness because respondents hold incomplete information in order to judge correctly. It does not give absolute values of innovation activities in countries. However, it allows significant insights into how innovators think they perform and create value and it is therefore a valuable performance measure.

	Sample size	Market Innovation	Customer perceived innovation	Technological innovation (technologically advanced products)
Egypt	330	1.38	1.47	1.79
Pakistan	434	1.45	1.53	1.48
Iran	1092	1.36	1.47	1.49
Morocco	441	1.40	1.21	1.32
Algeria	407	1.45	1.97	2.09
Tunisia	246	1.28	1.72	1.16
Lebanon	588	1.47	1.46	1.51
Jordan	294	1.34	1.56	1.51
Syria	296	1.56	1.64	1.25
Saudi Arabia	250	1.35	1.73	2.24
Yemen	468	1.55	2.18	2.26
Palestine	580	1.44	1.56	2.13
United Arab Emirates	184	1.42	1.84	1.9
Total	5610	1.43	1.65	1.68

Table1: Mean of the different Innovation Types

REGRESSION RESULTS AND DISCUSSION

Correlation Matrix and descriptive statistics are reported in Tables 2 and 3. The results of our ordered probit regression analysis can be found in tables 4 and 5. We report estimated coefficients and standard errors following standard practice. Each table presents the models concerning the role of advising on different innovation outcomes during exploration or exploitation phases and follows an identical format. Figure 2 gives a summary of the relevance of external advice sources throughout exploration and exploitation of the venture.

	New to Customer	New to Market
Exploitation	Market (+) Professional (+) International (+) Private (-)	Market (+) Professional (+) Private (-)
Exploration	Market (+) Professional (+) Private (-)	International (+) Private (-)

Fig. 2: External Advice sources and their impact during exploration and exploitation

Private advice

We studied the impact of various advice sources on innovation outcomes during different entrepreneurial phases. Based on previous literature, we argued that access to private advisors is not related to entrepreneurial outcomes in terms of innovation (hypothesis 7). Our research cannot confirm this hypothesis. Our results show, that the parameter for private advice is significant and negative across our different entrepreneurial phases (future start-up and established venture). Moreover, private advice is negatively correlated with ‘new to customer’ innovation (NewCusInn) ($p < 0.01$) and ‘new to market’ innovation (NewMarket) ($p < 0.001$). This correlation is non-significant for technological innovation. Our results indicate that private sources of advice seem to transmit information that is harmful for innovation outcomes. One reason could be that contacts in the private sphere may not grasp

and understand complex business decisions and underestimate or ignore critical variables for success, which may lead to biased conclusions and advice with negative consequences.

Moreover, previous research finds that when people are faced with uncertainties and their convictions are questioned they search for advice from sources that are likely to reassure them in their beliefs and to instill confidence in their own actions (Birley 1985). Typically, future entrepreneurs would turn toward people who share their social or functional backgrounds. Research on top managers has shown that similarity in functional backgrounds for example may lead to advice that supports a manager's strategic judgment and offers solutions that are similar to his/her own (Hambrick and Mason 1984). In a similar vein, Birley (1985) finds that private advice of entrepreneurs tends to recreate previous behavior and employment strategies even when they start a new business in an entirely different sector. Research on social networks shows that high similarity favor social support, but do not provide new ideas and perspectives that would help to enhance the creative input into the innovation process (Ibarra 1992). On the other hand, advice from non-friends and family was shown to provide access to novel ideas and contradictory views and perspectives enhance the quality of decision-making (Ibarra 1992). Our descriptive analysis reveals that the private advice sources are most sought within our sample. In the current case, our results clearly show that when entrepreneurs use too much private advice in their search for innovation they face decreasing innovation results.

Research advice

We argued that advice from research institutions (public or private) and researchers supplies firms with necessary technological knowledge, which is especially important during the exploration phase for successful development of innovative products and services (Hypothesis 4). We cannot entirely confirm our hypothesis as our results are mixed. That means we find positive and statistically significant correlations between research advice and innovation during the exploration as well as exploitation phases. 'New to market' innovations benefit from research advice during the entire venture process. On the other hand, 'new to customer' innovations as well as the innovation index, are positively correlated with research advice during the exploitation phase. Moreover, we are surprised that technological innovation is actually negatively correlated to research advice during the exploration phase. Based on previous literature, technological innovation is the type of innovation that depends and profits most from research advice. However, entrepreneurs in our sample seemed to be

penalized for interaction with researchers and research institutions. This may be due to suboptimal innovation national systems in the MENA region. The Arab Knowledge Report (UNDP 2009) claims that MENA states invest relatively little into research and development. Moreover, public R&D institutions in the region tend to be detached from industry and service sectors (UNDP 2009). As a consequence, these institutions have little or no impact on innovation outcomes as their advice and the knowledge they transfer is of limited usefulness and applicability for practitioners.

Professional intermediaries

We hypothesized that advice from professional knowledge intermediaries (Professional Adv) would be of importance during all venture phases (Hypotheses 2 and 6). Our results confirm our hypotheses. In addition to the aggregated advice measures we performed a post hoc analysis of the different components that represent the advice constructs, which can be found in Table 6. The different components consist of advice from investors (InvestAdv), bankers (BankAdv), lawyers (LawAdv), accountants as well as from public advice services (PublicAdv), which turned out to be the most important subcomponent of professional advice. Public advice is positively correlated with customer perceived innovation as well as technology based innovation during the exploration phase as well as with ‘new to customer’ and ‘new to market’ innovation during the exploitation phase. The innovation index variable is equally positive and significant in both entrepreneurial phases. Next to the mean variable, customer perceived innovation is the only innovation type that profits from public advising services throughout the entire venture process.

Our data indicate that innovative performance not only depends on the capacity of innovators to exploit information from numerous sources, but it also seems pivotal that innovators receive support from public advising institutions as strategically important advice source. That supplies firms with information, coaching and consulting on numerous innovation relevant matters, (e.g. recent technology trends, market development, sector analysis, market opportunities, and guidance through entrepreneurial and innovation processes). Innovators in many MENA countries are confronted with challenging environmental situations in terms of economies, political stabilities as well as quality of governance institutions. In line with previous research on Chinese entrepreneurs (Atuahene-Gima and Li 2004), we believe that innovation effectiveness in countries with insufficient institutional infrastructures depends not only on how firms manage environmental

uncertainties, but also on the support from public advising institutions to facilitate innovation and entrepreneurial processes.

Another interesting result that we found was the negative association of investors' advice with technological innovation in the region. In fact, investor advice is negatively correlated with technologically based innovation, which seems to indicate that investors focus less on technology based innovative products but is more attracted by market-driven innovations (market-pull)—also given the result that investors' advice is highly significant and positively correlated with customer perceived innovation during exploration phase. Advice from other sources such as banks and lawyers shows more significance during exploitation phase, which we could expect.

International advice

In Hypothesis 3 we claim that international advice (InternationalAdv) will be of greatest advantage and impact during the exploration phase. Our results are mixed. We do indeed find that international sources are important to entrepreneurs during the exploration stage when they are concerned with 'new to market' innovations. The coefficients for international advice are significant and positive (0.01 p-values). We also find positive and significant correlations between the innovation mean variable (InnoIndex) and international advice during the exploration phase. International advice allows firms to gain access to varied ideas and technologically diversified products and processes existent in other markets, which can be especially beneficial during the exploration phase when firm builders construct their knowledge base and organizational strategies, competencies, and routines can more easily be designed to fit than in later phases. However, we also find that international advice is important during exploitation phase for 'new to customer' innovation.

With regards to these results we suspect that the intention to export the new product to other markets, or the export proportion may complicate the results. In other words, the importance of international advice during the exploitation phase may have to do with the intention of the entrepreneur to extend sales abroad. We therefore select subsets from our data based on the proportion of customers that live outside the home market (our data offers 7 categories: 0 customer abroad, 1-10%, 10-25%, 25-50%, 50-75%, 75-90%, 90-100%). The results can be found in Table 8. International advice is positively correlated during the exploitation phase if the company has 1 to 50% of customers abroad. For all other export percentages the regressions outcomes are insignificant. This confirms our suspicion that in fact the intention to extend export activities incites entrepreneurs to seek international advice

as entering new and geographically remote markets requires understanding local laws and regulations, unique needs of local consumers and clients in terms of new products and customer expectations of these products. Existing products and services need to be adapted to diverse local specifications, as well as firms need to adapt their business strategies to local market needs. Biggest challenge is to combine local knowledge with innovation know how. For this they need expert knowledge about regional and local customs and culture, which many firms find through. International advice gives entrepreneurs access to local knowledge and improves their responsiveness to local customer need (Casson et al. 1992) and the firm gets more familiar with the local industry and market environment (Kotabe et al. 2007).

Market and Industry advice

Our research finds rather strong support for Hypothesis 5 that claims that the relationship between advisors in the market and industry environment (MarketAdv) and entrepreneurial outcomes is positive especially during the entrepreneurial exploitation phase since the variable measuring market and industry advice is positive and significant during the exploitation phase for both ‘new to customer’ ($p < 0.001$) and ‘new to market’ ($p < 0.05$) innovations. However, we find also positive correlations between market and industry advice for ‘new to customer innovation’ ($p < 0.01$) during the exploration phase, which confirms hypothesis 1 at least for this kind of innovation. This indicates that this type of innovation can profit from a broad search with regards to advice sources as companies need to anticipate and understand customer needs and preference that are not satisfied by current products and services and make this an integral part of the innovation process. The information the company gains has to enable the alignment of utility, price and costs and is especially relevant with regards to potential customers that have not been served so far (Gupta et al. 1999). In this context, strategic marketing literature advises companies to gather market intelligence on new developments, opportunities, and competitive threats by involving the entire stakeholders in the value chain that can contribute or develop relevant knowledge and ideas with regards to customer value creation (Day 1994). These can be constituencies that may contribute to the competitive advantage or that have the potential to undermine competitive advantage (Narver and Slater 1990).

On the other hand, our analysis reveals that market and industry advice is not of relevance for ‘new to market’ innovations during the exploration phase. Local market and industry participants may not be knowledgeable about innovations outside their own markets or they may be unable to see the value of certain innovations for their local environment.

Christensen and Bower's (1996) observations concerning disruptive innovations may explain this phenomenon: established companies focus their value propositions on mainstream customers and overestimate the value of their advice. Mainstream customers are typically late adopters of innovative products and services and can usually not evaluate the potential usefulness and value for their needs. Companies that listen too closely to local and existing market advice tend to allocate scarce resources on projects that focus on improvements regarding current product offers and miss investing into innovations that create new needs and markets and over time may conquer mainstream markets in the future.

CONCLUSIONS AND LIMITATIONS

Innovation requires diverse knowledge about different markets, customers, technologies and processes. In order to access this knowledge, entrepreneurs draw on external advice sources in their innovation efforts. To deepen our understanding about the impact of external advice on entrepreneurial performance (measured as innovation outcome) the present paper examines different external advice sources and their contribution during two entrepreneurial stages, exploration and exploitation. We argued that exploration and exploitation are related to various organizational activities that require different knowledge and resources. As entrepreneurial need for knowledge evolves with the venture history, the relevance of knowledge given by certain advice sources may change as well. We studied the influence of research-, private-, professional/ intermediaries-, market and industry-, as well as international advice on innovation outcomes. We also distinguish different types of innovation: products and services that are new to customers, new to the market or that base on new technologies and procedures.

Our result, based on a survey of MENA entrepreneurs, showed that private advice is negatively correlated with any type of innovation during all entrepreneurial phases. However, our descriptive analysis shows that entrepreneurs in the MENA region strongly rely on private advice during exploration and exploitation phases. This may be due to the cultural context of the MENA region, which is described by Hofstede (2012) as a region that has a high preference for uncertainty avoidance and is intolerant to unconventional ideas and behavior; countries in the region are considered as collectivist cultures, which override most rules and regulations. The regional cultures also score high on power distance (accepting hierarchical inequalities, centralization and autocracy). These are characteristics that are not very conducive to innovation as empirical research on the relation of cultural values and

innovation outcomes shows (Shane 1993). Innovative performance has been associated with uncertainty acceptance, lack of power distance and individualism (Shane 1993), which is in line with research on effective organizational culture of innovation that identifies risk taking, flat organizational structures and low bureaucracy, as well as high autonomy and tolerance for mistakes as dominant feature (Brown and Eisenhardt 1997). Moreover, people in more individualistic cultures draw on advice from business and job networks, whereas in cultures with collectivist values, such as countries in the MENA region, the private environment is often the primary sources of advice (Hofstede 1980). Although, cultural contingencies are very relevant, we do not address the topic with our research as we study only countries that stem from the same region. Nevertheless, future research should pay attention to the interrelationship between cultural specificities and the role of external knowledge sources and their impact on innovation.

Our research shows that the relevance of advice sources varies with the venture phase and with regards to the innovation types. We found that advice from international sources plays a bigger role for ‘new to customer’ innovations during the exploitation phase, whereas for ‘new to market’ products and services this is the case during the exploration phase. International advice is a form of distant search and represents a mean for entrepreneurs to reach beyond their present contexts when searching for knowledge (Rosenkopf and Almeida 2003). Research acknowledges the important role of both, local and distant knowledge for innovation. However, our research seems to indicate that it is not only the effectiveness of search mobility (in terms of proximity and distance), but that we also need to pay attention to the timing of search decisions. Apparently, the proper timing to access international advice channels decides about the benefits that this type of knowledge has for innovators. Our research indicates that distant search can be more effective if it is properly aligned with knowledge gaps appearing during different entrepreneurial stages and with regards to different innovation types.

Market Advice and advice from professional intermediaries proved to be of greatest relevance for entrepreneurs in our study. Especially, with regards to the latter our analysis of the effect of different components that represent the advice constructs on innovation outcomes reveals that the subcomponent ‘public advice’ is positively correlated with all innovation outcomes during the different venture stages. In other words, when entrepreneurs in the MENA region draw on public advisors they are more successful with regards to innovation outcomes. In most countries in the region, managers adhere to the idea that

innovation is beneficial for macro and micro economic growth. In a recent survey managers in the region proved highly optimistic about the impact of innovation on improved quality of life (the UAE scored higher than any other country, 90 out of 100) (General Electric 2012) Nevertheless, innovation output, measured through knowledge creation, -impact and -diffusion as well as creative output in terms of new goods and services, is relatively low within region. The Insead innovation Index 2012 ranks for example Jordan 46th, United Arab Emirates (UAE) 51st, Tunisia 58th and Algeria 134th and Yemen 138th out of 141 countries worldwide (Dutta 2012). This seems to indicate that managers understand the necessity of innovation and are willed to invest, but they seem to fall short in the execution. Public advice could be of great help. However, the general quality of the institutional environment, which comprises the political and regulatory environment, but also the particular conditions for innovation are not in favor for innovators and vary largely between different countries in the region shows: Out of a 141 countries in Insead's ranking, the ranked highest on the 40th place, followed by Tunisia 49th and Saudi Arabia 53rd. Countries such as Algeria (114th), Egypt (116th) and Yemen (130th) ranked at the bottom of the entire global ranking (Dutta 2012). Our research provides empirical evidence that with relatively mundane measures, such as increased capacities of public advising (for example, through public problem solving support); innovation performance can be improved significantly. Moreover, increased access to public advising is likely to offer an alternative to private advice and may help to reduce the dependency on it.

Limitations of our paper refer to the use of a large-scale database that cannot address certain issues without more direct observations. For example, our sources of advice do not give us information about the quality of underlying advice relationships. Only with regards to the private advice sources we can assume so called strong ties (Granovetter 1973, 1982), which link similar people to each other. The information received through these strong ties may be redundant as people are likely to display similar ideas and understandings regarding innovations of products and services, which explains partly the negative effects on innovation. However, our data does not allow us to understand the relationships of other advice sources, for example, in how far professional sources, market and industry sources and international sources represent strong or weak ties (Granovetter 1973, 1982). We have no information about possible underlying networks of the different advice source either. For example, the centrality of certain advice sources for a network as well as in how far these sources represent critical sources for the respondents in terms of resource allocation. This

may affect the power relationships between them, and constrains the advisee especially if there are some kinds of dependency (Pfeffer and Salancik 1978). Future research could address this issue by offering more fine grained items for the different advice sources.

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ANNEX

VARIABLES	NewCusInn	NewMarket	NewTechInn	InnoIndex	Private Advice	Professional Advice	Market Advice	International Advice	Research Advice	firmage	Export Percentage	sic4categ
NewCusInn	1											
NewMarket	0.2081	1										
NewTechInn	0.1861	0.0587	1									
InnoIndex	0.7214	0.5745	0.6732	1								
Private Advice	0.0082	-0.0541	0.052	0.0096	1							
Professional Advice	0.1242	0.0623	0.0101	0.0981	0.2182	1						
Market Advice	0.1145	0.0329	-0.0446	0.0502	0.1758	0.4458	1					
International Advice	0.1162	0.083	-0.0031	0.0956	0.1931	0.3352	0.3138	1				
Research Advice	0.0728	0.0914	-0.0098	0.0726	0.1002	0.36	0.3315	0.259	1			
firmage	-0.1312	-0.0894	-0.2065	-0.2215	-0.1256	-0.0378	-0.0208	-0.0574	0.0044	1		
Export Percentage	0.0634	0.0501	-0.0106	0.0493	0.0079	0.1518	0.1162	0.1954	0.1167	-0.031	1	
sic4categ	0.0491	0.0469	0.0345	0.0651	-0.0852	-0.0487	-0.0194	0.0377	-0.0413	-0.0953	-0.0189	1

Table 2: Correlation Matrix

Variable	Obs	Mean	Std. Dev.	Min	Max
NewCusInn	7364	1.611353	0.769662	1	3
NewMarket	7707	1.428052	0.621533	1	3
NewTecInn	6826	1.650308	0.804045	1	3
InnoIndex	7926	1.558534	0.496963	1	3
Private Advice	13112	0.577493	0.346395	0	1
Professional Advice	11630	0.116243	0.245606	0	1
Market Advice	11538	0.149744	0.269996	0	1
International Advice	11669	0.127217	0.297097	0	1
Research Advice	11178	0.078368	0.268762	0	1
firmage	7726	5.840344	9.37984	0	5
Export Percentage	7135	9.886896	21.89085	0	95
sic4categ	3988	3.160231	1.084655	1	4

Table 3: Descriptive Statistics

EXPLORATION	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
	NewCusInn	NewCusInn	NewMarket	NewMarket	NewMarket	NewTecInn	InnoIndex	InnoIndex	InnoIndex
	β	β	β	β	β	β	β	β	β
	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.
Research Adv			.3155429**			(.2404192)*	(0.2741909)**		
			0.1092352			0.1061684	0.0905072		
Private Adv				(0.2851319)**				(0.1312285)**	
				0.1018479				0.04379	
Professional Adv	0.6885312***								.1674642 *
	0.1677621								0.0664047
Market Adv		0.4427493**							
		0.1346645							
International Adv					0.2663251**				
					0.1032555				
firm age	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Export Percentage	n.s.	n.s.	n.s.	n.s.	n.s.	(0.0028537)*	n.s.	n.s.	n.s.
						0.0013322			
SIC4	n.s.	n.s.	(0.0604076)**	(0.0717613)*	(0.0662219)*	n.s.	n.s.	n.s.	n.s.
			0.0297544	0.0293895	0.0294486				
Cut 1	-0.0429503	-0.0619052	-0.0715601	-0.2940894	-0.0818695	-0.2667551	-1.209107		
	0.106974	0.1076753	0.1039489	0.1214772	0.1024439	0.1011611	0.1112091		
Cut 2	0.797339	0.7791808	1.157171	0.927564	1.148578	0.4935959	-0.7648932		
	0.1083782	0.1090521	0.1085476	0.1241407	0.1065334	0.1013264	0.109735		
constant								1.871679***	1.766377
							0.1299222	0.0516394	0.0423625
Number of obs	1348	1346	1437	1474	1451	1363	1526	1526	1513
Prob > F								2.78	2.32
Wald chi2	19.77	13.24	14.8	13.85	12.91	11.08	11.34		
Pseudo R2	0.0073	0.0048	0.0056	0.0052	0.0052	0.0038			
R2							0.002	0.0073	0.006

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

Table 4: The Impact of different advice sources on innovation outcome during the exploration phase

EXPLOITATION	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18	Model 19	Model 20	Model 21
	NewCusInn	NewCusInn	NewCusInn	NewCusInn	NewCusInn	NewMarket	NewMarket	NewMarket	NewMarket	NewTeInn	NewTeInn	InnoIndex
	β	β	β	β	β	β	β	β	β	β	β	β
	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.
Research Adv	0.3282153†					.4523936***						
	0.1382844					0.1290368						
Private Adv		(0.2175527)**					(0.3461781)***					(.1312285)**
		0.0848453					0.0803069					0.04379
Professional Adv			0.4173045**					.6205048***				
			0.1629875					0.1744676				
MarketAdv				.4437626***					0.2589502*	(.5198671)***		
				0.1113609					0.1192859	0.1395608		
InternationalAdv					0.250764**							(.3078435)***
					0.0819524							0.0963452
firm age	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	(.0334001)***	(.0318593)***	n.s.
										0.0043533	0.0041154	
Export Percentage	0.0066661***	0.0047367***	.0064376***	.0063632***	0.0038417**	0.0027064*	n.s.	n.s.	.0028468*	0.0028324*	n.s.	n.s.
	0.0013575	0.0011524	0.0013697	0.0013541	0.0011856	0.0013777			0.0013628	0.0013691		
SIC4	0.0737791†	n.s.	.0769086**	0.0738452*	0.0498271†	0.0979524**	0.0704623**	.1000596***	.0955865**	n.s.	n.s.	n.s.
	0.0295914		0.0296162	0.0297659	0.0278772	0.0285827	0.026697	0.0285677	0.0283435			
Cut 1	0.8923148	0.6929968	0.918785	0.9381709	0.819941	0.8604345	0.5948889	0.8885484	0.8706513	0.221812	0.2571592	
	0.1120596	0.1123077	0.1127574	0.1141115	0.1050001	0.1070102	0.1075925	0.1075559	0.1067452	0.1102813	0.1056388	
Cut 2	1.546461	1.344639	1.571147	1.59303	1.471215	1.850679	1.601761	1.878977	1.857887	0.7703962	0.8065128	
	0.1185275	0.1176017	0.1196339	0.1210264	0.1104462	0.1166383	0.1159893	0.1172467	0.1163188	0.1105718	0.1058826	
Constant												1.871679***
												0.0516394
Number of obs	1813	2029	1822	1822	1995	1848	2065	1858	1859	1755	1875	1526
Prob > F												2.78
Wald chi2	36.32	25.11	37.54	44.29	27.62	29.54	30.63	30	21.74	73.51	67.48	
Pseudo R2	0.0123	0.0081	0.0123	0.0151	0.0087	0.01	0.0094	0.0104	0.0079	0.0331	0.0281	
R2												0.0073

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

Table 5: The Impact of different advice sources on innovation outcome during the exploitation phase

Exploration	NewCusInn	NewCusInn	NewCusInn	NewTeInn	NewTeInn	InnoIndex
	β	β	β	β	β	β
	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.
PublicAdv	0.5882757***			.2342147**		.1588033***
	0.0915601			0.0845247		0.0351723
InvestAdv		0.2902618***			(0.1263751)†	
		0.083116			0.0763537	
BankAdv			0.2036631†			
			0.1232138			
firm age	.017094†	n.s.	n.s.	n.s.	n.s.	n.s.
	0.0103582					
Export Percent	n.s.	n.s.	n.s.	(0.0026508)†	(.0026875)†	n.s.
				0.0013315	0.0013353	
SIC4	.0597703†	n.s.	n.s.	n.s.	n.s.	n.s.
	0.0311854					
Cut 1	0.0418386	-0.105472	-0.1458179	-0.257918	-0.257918	
	0.1096703	0.1062186	0.1056093	0.1029081	0.1029081	
Cut 2	0.8821955		0.6724226	0.4979573	0.4979573	
	0.1114262		0.1064913	0.1030263	0.1030263	
const						1.744448
						0.0430726
Number of obs	1313	1322	1313	1354	1363	1478
Prob > F						0.0002
Wald chi2	43.86	15.4	3.46	12.16	8.12	
Pseudo R2	0.0163	0.0053	0.0012	0.0043	0.0028	
R2						0.0137

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

Table 6: Subcomponents of Professional Intermediaries (Exploration)

Exploitation	NewCusInn	NewCusInn	NewCusInn	NewMarket	NewMarket	InnoIndex	InnoIndex
	β	β	β	β	β	β	β
	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.	s.e.
PublicAdv	0.3076556*			.6741278***		.1576048**	
	0.1487599			0.1364662		0.0567369	
InvestAdv		.2625252*					
		0.1025259					
BankAdv					.2254892†		
					0.1244589		
LawAdv			0.2042236*				.0737626†
			0.0977518				0.0392225
firm age	n.s.	n.s.	n.s.	n.s.	n.s.	(0.0043252)**	(0.0043326)**
						0.0016152	0.0016212
Export Percentage	0.0068946***	.0066499*	0.0067114***	.0029059**	.0028755*	.0022548***	.0021842***
	0.0013428	0.0013689	0.0013821	0.0013506	0.0013887	0.0005419	0.000559
SIC4	.0744757*	.0829221**	0.0805947**	0.102425	0.1013359***	0.0292019**	.0300117**
	0.0296737	0.0296862	0.0296586	0.0286186	0.0287179	0.0092012	0.0091599
Cut 1	0.8975115	0.9311494	0.9185575	0.8863481	0.8738273		
	0.1126316	0.1128249	0.1125733	0.1074259	0.1075125		
Cut 2	1.554458	1.592683	1.577208	1.891378	1.862679		
	0.1190479	0.119255	0.1191202	0.1170065	0.1171826		
const						1.334492***	1.33186***
						0.0370392	0.0367981
Number of obs	1807	1803	1806	1843	1842	1860	1859
Prob > F						11.05	10.46
Wald chi2	35.6	40.52	38.04	43.18	20.89		
Pseudo R2	0.012	0.0134	0.0125	0.0139	0.0076		
R2						0.032	0.0303
†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001							

Table 7: Subcomponents of Professional Intermediaries (Exploitation)

EXPLORATION	Exp 1-10%	Exp 10-25%	Exp 25-50%
	NewCusInn	NewCusInn	NewMarket
	β	β	β
	s.e.	s.e.	s.e.
InternationalAdv	.2245828**	0.1501636†	0.1483141
	0.084825	0.0896776	0.0859243
firm age	(0.0258885)***	(0.0206203)**	(0.0190642)**
	0.0053495	0.0073433	0.0069965
SIC4	n.s.	n.s.	n.s.
Cut 1	-0.023097	-0.1515439	-0.1471685
	0.0873308	0.0937494	0.0932134
Cut 2	0.7688821	0.6782613	0.7150792
	0.0884756	0.0947939	0.0942423
Number of obs	1995	1656	1639
Wald chi2	33.58	10.73	10.79
Pseudo R2	0.0129	0.0037	0.0033
†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001			

Table 8: New-to-Customer Innovation and International Advice during the Exploration phase