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Analyzing young entrepreneurs' networks in Morocco from a "quantified narratives" method

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Abstract:

The embeddedness of entrepreneurs in a network of social relations has been largely documented by the literature since the seminal work of Granovetter. In different contexts, it has been shown that the entrepreneurial network plays a central role in the creation of their business and provides a variety of resources. Few studies, however, seek to understand the motivations of entrepreneurs when they mobilize a tie, and the effects of these mobilizations on the content and quality of this relationship. From a fieldwork undertaken in Morocco, we implement a "quantified narratives" method which codes each sequence of access to a resource in the course of the start-up in order to map the network of relationships of young innovative entrepreneurs. We go further than previous studies using this method in that we develop a multivariate model that enables us to build hypotheses from qualitative material analysis and to test them econometrically. This case study highlights more generally the interest of mixed methods in analyzing complex mechanisms like network mobilization and their motivations. We analyze the different logics which led entrepreneurs to the mobilization of the network at the time of the creation of their business. The main result that emerges is that the family is sidelined in obtaining funding. This original result is indicative of the tension faced by these young Moroccan entrepreneurs: the need to grow their business is sometimes in contradiction with the desire to create through it a space of autonomy gained on the family.

Keywords: entrepreneurship, social networks, embeddedness, mixed methods, Morocco.

JEL: L26, Z13.

1. Introduction

The embeddedness of entrepreneurs in a network of social relations has been largely documented by the literature in sociology, economics and business studies since the seminal work of Granovetter[1] (1985). It is now acknowledged that social relations can provide a wide range of resources helpful to those seeking to start up a firm: information, advice, funding and material assistance, moral support, and so on (Birley, 1985; Aldrich and Zimmer, 1986). In this respect, many researchers have endeavored to measure the impacts of social relations on entrepreneurship outcomes. While their studies vary in terms of methods and conclusions, especially regarding the form of a useful or supportive network, results generally show that diversified, well-developed networks are associated with better firm performance (for a review, see Hoang and Antoncic, 2003; Jack, 2010; Nordman, 2016). An economic successful entrepreneur is thus generally seen as someone who knows how to make use of his/her social environment and be a good "networking [wo]man" (Johannisson, 1998).

There is to date a gap between the quantity of works dealing with the effect of networks on entrepreneurial outcomes and what remains to be explored about the determinants of networks mobilization. We believe that research can understand a lot about the entrepreneurial process and outcomes if the entrepreneur's network is considered as a dependent variable instead of being directly considered as an independent one: why do entrepreneurs choose to activate one relation instead of another in order to obtain a resource? How do they make a choice between ties?

[1] Embeddedness has been defined in different ways since Granovetter. Inspired by the definition given by Grossetti (2015), we define the "embeddedness" of entrepreneurship as "the proportion of external resources entrepreneurs have access to, thanks to chains of interpersonal relations" not specific and limited to the economic sphere. In this way, we capture how the firm's network and the network of its creator are linked and intertwined.

Several determinants can be considered when ones looks at the literature, like for instance entrepreneurs' social origins or professional experience, that could be good proxies of their network diversity and thus determine relations that they would mobilize during the entrepreneurial process according to their needs (Anderson and Miller, 2003). Time considerations also matter, as some works show that entrepreneur use less and less strong ties as their firm is developing because professional ties get abundant (Grossetti and Barthe, 2008). Another determinant seems to us important: motivations and aspirations behind firm creation. Indeed, it is acknowledged that, when entrepreneurship is not compelled or a necessity, entrepreneurs can have different motives for starting up a firm: for instance, the need for personal achievement, for some autonomy and independence, to leave an unpleasant job for a more prestigious activity, or to contribute to the welfare of the community (Cromie, 1987; Dubini, 1989). Personal profit is one such motive, which is often important and essential, but rarely exclusive (Birley and Westhead, 1994; Carsrud et al., 2009; McKeever et al., 2014). It therefore seems too restrictive to analyze the social networks mobilized by entrepreneurs in the light of firm performance or through the lens of economic rationality, as this assumes firm growth might be the entrepreneur's only ambition. Not all entrepreneurs intend to be "good networking (wo)men" in an economic way. It is with this in mind that some authors differentiate between "entrepreneurs" and "business-owners" (Carland et al., 1984; Chell and Baines, 1998), pointing out the differences in their motives and their more or less utilitarian approach to their network. This has made it clear that different motivation sets exist as much within the same entrepreneur as across them. What logics other than economic rationality can be found when looking at the use of ties?

Morocco is a good case to answer this question. In contrast to Western countries, self-proclaimed innovative firms are recently emerging in the country, following the arrival of incubators and other support structures, largely financed by international donors (XX, 2018).

These structures associate entrepreneurship and innovation with freedom and personal development in a country where individual trajectories are largely determined by the family (Lecestre-Rollier, 2015). As such, the so-called "innovative" entrepreneurship represents an opportunity for many young people eager to go their own way, what can also be observed in other developing countries (XX, forthcoming). In this article, we analyze in two steps how several young "innovative" entrepreneurs in Morocco mobilize their networks: first, we estimate quantitatively the determinants of networks use and examine how important these determinants are *vis-à-vis* each other; second, we explore qualitatively how and why these results can be justified in the context of our study.

To combine quantitative and qualitative approaches, we conducted 53 semi-structured interviews with young Moroccan identified as "startuppers" in the Rabat and Casablanca regions. We used "quantified narratives" as defined by Grossetti et al. (2011), designed to code, in the interviews, each sequence of access to a resource in the course of start-up. We go further than previous studies using this method and presenting purely descriptive statistics (Grossetti and Barthe, 2008; Berrou and Gondard-Delcroix, 2011), in that we develop a multivariate model to estimate isolated effects of each determinants. This method provides a good response to recent concerns in the field of entrepreneurship studies over the need for more contextualization of purely quantitative results (Jack, 2010; McKeever et al., 2014).

Our results show how the interviewed entrepreneurs try to find a middle ground between economic considerations – make their firm growth – and autonomy aspirations – take their independence from their social environment. Segmentation of their networks is part of the success: they avoid strong ties for some resources that create a debt relationship, but favor them for others in order to stay in a protective network. While our results are specific to our population of young, skilled, middle and upper class individuals in an emerging country like Morocco, they shed some light on other motivations and rationalities behind the use of ties

that cannot be analyzed through the lens of firm outcomes alone or/and like a natural-progressive disembeddeness process.

2. Theory and hypothesis

2.1. Entrepreneurs' initial characteristics and needs for resources

Entrepreneurship is a resource-consumer process (Wernerfelt, 1984). As the entrepreneurs surveyed here have their own trajectories and come from different social spheres, they are not equipped in the same way to start their venture. Some have resources for success (financial, behavioral, moral and technical) that other entrepreneurs do not have. Subjectively, some think they need resources, while others do not. Some, again, use strategies other than asking people when they are in need, such as financial bootstrapping (Winborg and Landström, 2000). Before looking at how they make use of their network, we first need to look at what resources entrepreneurs obtain from it depending on their and their firm's characteristics (relation (1) in figure 1).

With respect to financial capital, it is not clear whether the level of personal endowments influences start-up (Kim et al., 2006; Klyver and Schenkel, 2013), even though some studies suggest that this can be observed in Morocco (Hassi and Storti, 2014). In all cases, the founder is often the prime source of funding for the firm in the early stages, especially in developing countries (Bygrave, 2003; Lingelbach et al., 2005). We can expect this effect to be found in Morocco where external funds such as traditional bank loans are relatively hard to come by for young nascent entrepreneurs (OECD, 2017).

On the other hand, it has been shown that the level of human capital is positively correlated with the decision to create a start-up (Davidsson and Honig, 2003; Kim et al., 2006). While this selection effect is particularly strong for innovative firms, the question could be asked as to whether the quality/quantity of the human capital influences the type of resources

entrepreneurs need. Entrepreneurship requires a range of skills and knowledge, especially in management and finance, and enough autonomy and maturity to run a firm (Hood and Young, 1993). Those who do not have these types of skills and knowledge probably have more of an incentive to seek training and mentoring within their network (Johannisson, 1998), or to go into partnership with somebody who is qualified. As such, entrepreneurial teams are generally based on skills heterogeneity (Cooney, 2005; Forbes et al., 2006; Aldrich and Kim, 2007).

Lastly, having entrepreneurs in the family generally drives intentions to start up a firm (Dunn and Holtz-Eaking, 2000; Laspita et al., 2012; Lindquist et al., 2015), although the existence of a positive effect on firm performance is debated in the literature (Sorensen, 2007). Nevertheless, we assume that early exposure to entrepreneurship can have an impact on the structure of the resources needed, although it is not easy to know in which way. For instance, early socialization in entrepreneurial circles could be expected to reduce the need for training and management advice as people have already acquired a "practical sense" of entrepreneurship (Bourdieu, 1980a; Johannisson, 2011). At the same time, having close relations with entrepreneurs makes knowledge more available and social capital could play here an instrumental function in giving access to specific resources.

H1: In keeping with Anderson and Miller (2003), we expect the need for training or management advice to be lower for those who have entrepreneurs as parents and those who studied in these areas as they are more likely to have already acquired skills and knowledge that are necessary to the entrepreneurial process.

2.2. Entrepreneurs' initial characteristics and diversity of social relations

We assume inequality in the entrepreneurs' initial characteristics (education, skills, personality traits, and so on) to have an influence on their needs for resources. At the same time, these unequal characteristics influence the size, structure and quality of their personal

networks (Lin, 2000, relation (4) in figure 1). In the early stages, the enterprise's network is primarily the entrepreneurs' network, made of relationships developed before start-up and reflecting the entrepreneurs' embeddedness in their social circles (Grossetti and Barthe, 2008). Intuitively, those with larger, more diversified initial networks are more able to secure potential resources, irrespective of their needs, and have more direct access to them. Two kinds of factors are important in explaining these network size and quality differences:

First, the levels of financial and cultural capital[2] are generally good indicators of network quality and structure (Anderson and Miller, 2003). In Bourdieu's analysis, in particular, financial, cultural and social capital are closely linked and their accumulation mutually reinforcing. The higher people are in the symbolic hierarchy, the more relations they have and the closer to resources they are (Bourdieu, 1980b). In keeping with Bourdieu, the levels of financial and cultural capital should be considered as potential determinants of the use of ties associated with the path length, i.e. the number of intermediaries needed to access the resource (Grossetti et al., 2011). Put differently, the more developed the network, the less needed an external mediation to join useful people or institution.

Second, depending on life events, people do not interact with the same social spheres and therefore do not build the same types of relations (Bidart and Lavenu, 2005). For instance, those who already have an entrepreneurial experience are more likely to have developed weak ties that are potentially useful to their professional future (Johannisson, 1998; Mosey and Wright, 2007). General professional experience, even when not in entrepreneurship, can also help secure initial contacts or identify them better (Jack and Anderson, 2002), especially compared to students who socialize mainly with other students.

[2] Bourdieu (1979) defines "cultural capital" as each individual's set of cultural resources. Cultural capital can take three forms: *incorporated* (language, knowledge, tastes, etc.), *objectified* (books, paintings, musical instruments, etc.), and *institutionalized* (qualifications and academic degrees).

H2: We expect entrepreneurs with high financial and cultural capital levels and those who have a significant professional experience to use shorter path length in terms of access to resources as they should have a more developed network of direct relations.

2.3. Temporality and entrepreneurial network development

Many studies have investigated how networks evolve over the entrepreneurial process (for a review, see Fayolle et al., 2016). One result is that strong ties and personal relations prior to firm start-up decrease in importance as the firm grows (relation (8) in figure 1). Entrepreneurs gradually develop their professional networks and connect to more "calculatively based" relations (Hite & Hesterly, 2001. p. 278). They also have more knowledge of the institutional support they can obtain as they are socialized into a new professional sphere. In other words, they are "disembedded" from their original social sphere and the firm gets its own network (Grossetti and Barthe, 2008). In our sample, the parents of nascent Moroccan entrepreneurs are mainly civil servants, teachers and international corporate executives (appendix B). In general, these entrepreneurs are clearly not operating within a reproduction logic and are far from an "entrepreneurial culture" (Discua Cruz et al., 2012). We therefore also expect them to be less dependent on strong ties as firm grows and their network becomes more professional and centered on their new activity.

H3: Use of strong ties and the path length are supposed to decrease over time, as firm development entails a disembeddedness process from the social sphere of origin.

2.4. Entrepreneur network segmentation

A long-standing debate in networks literature is how reflective people are when they mobilize a tie (Small, 2013, Small and Sukhu, 2016). If some alters are spontaneously mobilized by entrepreneurs, for example because of their accessibility – what Small (2013) calls an

"opportune mobilization" – it is also clear that some mobilizations are more "targeted" and reflective. However, few studies have investigated how entrepreneurs intentionally separate out their network depending on the resource they seek from it (Arregle et al.., 2014). It could be that some resources are more present in certain categories of ties leading entrepreneurs to a de facto segmentation of their networks, i.e. the so called "different strokes from different folks" described by Wellman and Wortley (1990). But it could also be that resources are unequal in terms of the implications of their use and that it may be preferable not to mobilize certain people to get certain resources. On this last point, there appear to be three kinds of particularly distinct resources of interest in the entrepreneurial process:

(1) Financial funding, which is an extremely important resource for nascent entrepreneurs (Aldrich and Zimmer, 1986). Family and strong ties have long been identified as a major source of funding for nascent entrepreneurs (Mokyr, 1985). This conclusion is largely accepted across the different studies and contexts (Bates, 1997). GEM data confirm that family is the leading source of external funding for new businesses in Morocco, all firm sizes and all sectors considered. Nevertheless, asking for funding generates a concrete and complex "gift-counter gift" process, as originally defined by Mauss (1930), implying a burden of debt. It also raises the probability of "family interference in running the new venture" (Arregle et al., 2014. p. 320). Moreover, the failure of a firm when it was financially supported by the family can raise problems such as moral judgment and a feeling of illegitimacy (Sieger and Minola, 2017). These negative aspects are potentially strong in the context of Morocco where family remains the most important social entity and governs numerous aspects of individual's lives (Lecestre-Rollier, 2015). Thus, young "startuppers" might be expected to avoid the family for funding, as pointed up by Au and Kwan (2009) in China, albeit here mostly for symbolic reasons.

(2) Regular help with labor, either formally (partner) or informally (unpaid voluntary) in the firm, is a special resource because it assumes that the founder assimilates somebody else into the firm's everyday life, dividing labor and tasks and sharing management to varying extents. While this help is necessarily human (the only resource in our database that excludes institutions), the question arises as to whether entrepreneurs prefer strong or weak ties to obtain this resource. Classically, strong ties and especially family ties are seen as a good pool of help with labor (Stewart, 2003), as trust is generally high within the family (Anderson et al., 2005). Sieger and Minola (2017. p. 185) find that that it is clearly in the interest of students who create start-ups to include parents or siblings in their venture in order to prevent conflict by playing the transparency card and hence gaining "bargaining power" with the family. However, we can assume that this premise is directly at odds with the desire for independence driving the entrepreneurial intentions of several "startuppers". The onboarding of strong ties and especially family members in the enterprise may be incompatible with the subjective picture built by the entrepreneurs (the "fortress enterprise", Curan et al., 1994). It reinforces the embeddedness of the social and economic sphere, as family relations are perpetuated within the company.

(3) Moral support is needed in the entrepreneurial process, especially in the early stages. Strong ties, given the intimacy and frequency of interactions, have been shown to be essential for this kind of support (Brüderl and Preisendorfer, 1998), especially for young start-up entrepreneurs (Edelman et al., 2016). We believe this resource to be symbolically strategic, as it is highly personal. Asking for somebody's moral support places importance on that person and helps build or sustain a close, intimate relationship. Conversely, not asking for somebody's support could be a sign of reluctance that could break the intimacy and reduce the strength of the tie.

As “innovative” entrepreneurship in Morocco is presented as a path to autonomy as well as to economic success, we assume that “startuppers” would avoid using strong ties for resources that would create a long-term debt relationship and increase the feeling of dependence (funding). They would also avoid involving them directly in the firm that they would try to build as a “fortress” (regular help with labor). Conversely, as they want to keep these ties, they would use them for moral support, which is a less intrusive resource, but also a sign of a high level of trust.

H4: Funding and regular help with labor are supposed to be driven by avoidance of an interpersonal burden of debt, especially with family and strong ties, while moral support is supposed to be a determinant of the use of strong ties.

H4 is our main hypothesis and intend to test how strong relation (5) in figure 1 is, while comparing it with relations (4), (7) and (8).

-------- Figure 1 here ----------

3. Research Design

3.1. Sampling and data building

We built our data from 46[3] interviews with young Moroccan “innovative” entrepreneurs between November 2015 and December 2017 conducted by one of this paper’s authors to restrict subjective bias (XX, 2018). Our goal in investigating the subjective factors behind start-up ventures was not to objectivize the emergence of innovative firms based on economic criteria, but to capture a social reality. We therefore used an “institutional definition” of start-

[3] Seven of the 53 semi-structured interviews conducted were not coded. We do not include interviews where information was incomplete or misleading (due to a lack of interviewee cooperation, the interview straying to other issues and audio recording problems).

up[4] to select our sample. In this, we identified associations and incubators with a proclaimed "start-up identity" in Morocco, using registers of authorized associations. We listed in these structures all the projects that had benefited from awareness campaign, training or incubation programs in the previous three years. We included in our final sample 41 of all the projects listed, approximately representative in terms of activity sector, founder age and gender. Secondly, we added five more projects independent of institutional actors, referring to the "self-definition" of start-up. For this, we used www.F6S.com, one of the leading self-listing websites for start-ups in Morocco. A total of 32 projects in our sample fit this "self-definition" of start-up (27 of the 41 initially identified projects were also listed on www.F6S.com). Almost all the projects were located along more or less 150 km of the Moroccan seaboard, between the cities of Casablanca and Kenitra where the vast majority of institutional start-up actors are concentrated (XX, 2018). Some one-third of interviewees were in the gestation phase. Their firms were not yet registered at the time of the interview, but had already engaged with at least one of the listed associations. Few firms (5 of the 46) had already folded at the time of the interview, and soon after start-up. All the extant firms were young, with formal registrations ranging from 1 to 36 months before the interview, with a mean of just over a year (Appendix A).

Meetings were held with the firm's initial founder (44 of the 46) or arbitrarily with one of the founders when it was not possible to isolate one person (2 of the 46). To conduct interviews, we used the "quantified narrative" method (Grossetti, 2011; Grossetti et al., 2011) whose objective is to identify sequences of access to resources within business creation stories and to convert them in quantitative (numerical) data. Unlike names generators, this method is based on a mix of open-ended questions, complemented if necessary by more directive ones to list the resources that entrepreneurs obtained from their networks. In this vein, our interviews

[4] A start-up is generally defined as a young firm whose activity is oriented towards new technologies, focused on international markets and with a high growth potential.

were first focused on the firm's start-up history, giving interviewees relative freedom to bring up what they saw as important points. A vast majority of resources they get during the creation were then spontaneously mentioned, and the interviewer subsequently just had to go into more details about them (who gave the resource, when, etc.). In the case of certain common resources (funding, training and labor), if not directly raised by the entrepreneurs themselves, questions were systematically asked by the interviewer to secure comparability across cases[5]. Our survey strategy was to find a middle ground between getting enough information from the interviews to gain a balanced picture of the entrepreneurial process and enable quantitative treatment and the risk of over-influencing the entrepreneurs. This was especially the case with "moral support" often mentioned in the interviews, but rarely raised by the interviewer. Our basic intention was more to identify those resources that emerged from the entrepreneurs' narratives as being important to their start-up (*i.e.* really acting as an help) than to draw up an exhaustive list of all resources across the board.

For each resource mentioned in an interview, we subsequently coded in the database a number of details regarding the resource (type and subjective quality), the supplier (type and, if a person, age, sex, profession and relationship with the entrepreneur), the timeframe (during which stage of the entrepreneurial process the resource was obtained and chronological order with respect to other resources), and the path length (amount and type of mediation required to obtain the resource). These data – one row in the database equals one resource – were linked to the data on the entrepreneurs who obtained the resource (socio-demographics, social origins, professional career, personal life, and the formal networks they were embedded in). We coded 460 resources for an average of 10 per entrepreneur, which is less than in other

[5] It refers to three kinds of questions in our guide: for funding ("How did you finance your project? Did you ask for loans from specific people? Or rather formal actors (banks, etc.)?", for training and advices ("Who gave you advice in the management of the company? Have you used training or mentoring?"), and for labor ("How did you recruit your employees? Are your family concerned with the functioning of the company?").

similar studies (Grossetti and Barthe, 2008; Berrou and Gondard-Delcroix, 2011), but is consistent with the shorter lifespan of the firms in our sample.

The interviews also addressed, in a second part, a number of topics through open-ended questions, this time not intended to be converted into quantitative data, like motivations and aspirations of entrepreneurs, self-perception and how they think they are perceived, mobility and, more generally, their perceptions of entrepreneurship. The average interview lasted 84 minutes (minimum 45 minutes and maximum 163 minutes), varying depending on the entrepreneur's availability and the detail sought for the investigation. In our design, and unlike Grossetti and Barthe (2008), we did not compare interviews of the founder with those of other people in the entrepreneurial team, given that we consider the entrepreneurial network essentially as a personal network, especially in the early stages of the firm's development[6].

In a nutshell, the "quantified narratives" is a method that integrates a qualitative and a quantitative dimension in the collection of the data. In the analysis, while we prioritize quantitative data through a multivariate analysis, qualitative data help us to refine our hypothesis and better interpret the results, playing there a complementary role (Small, 2011, Hollstein, 2014).

Lastly, as we identified our entrepreneurs mainly through the institutional actors with which they were associated, we need to check whether we introduced a selection bias into our sample. Indeed, entrepreneurs engaged with associations or dedicated structures are potentially different from those who are not, i.e. have characteristics that can also explain differences in resource mobilization. The samples in our study were too small to test for selection issues. Only five entrepreneurs were independent of institutional actors. However,

[6] In the study of Grossetti and Barthe (2008), firms are much older than in our sample (sometime over than 20 years), so that memory bias can be very important, which justifies crossing interviews.

such a bias seems neither avoidable nor that problematic. It is unavoidable because business registers are incomplete in Morocco and there was no official census of "start-up" ventures or innovative firms at the time of survey. Drawing our entire sample from the www.F6S.com database would have implied other biases, such as excluding older entrepreneurs who do not generally use the website. Moreover, we were interested in nascent ventures, and incubators are the easiest way to find firms not yet registered. Neither is such a bias that problematic because being assisted, mentored or trained by structures like incubators is part of the "start-up culture" as it spreads worldwide from the Silicon Valley (Ester and Maas, 2016). However, we do control for participation in associations by including dummy and continuous variables in our model (see the section on control variables).

3.2.Model

Previous studies using the "quantified narrative" method have painted a broad picture of the resources obtained, but do not consider correlations between variables, what could be problematic. Let us take the example of moral support. Table 1 shows that it is a resource that is most needed at the beginning of the entrepreneurial process, even before the legal creation of the company (in 70% of cases). On the other hand, Table 2 shows that this resource is mostly provided by kinship ties (in 42.5% of cases). Since they provide a resource that is abundantly needed early in the process, naturally, kinship ties will be less solicited as the business develops. One could then conclude too quickly to a disembeddedness process, when in fact, the family is not replaced by another actor, it is simply that the resource it provides the most is less necessary as time goes by (relation (6-7) rather than relation (8) in figure 1).

--------- tables 1 and 2 here ----------

We then propose a multivariate model to obtain isolated effects for each variable (other things being controlled for), taking into account several possible determinants of the use of ties.

We first estimated a multinomial logit model to address the question of the resources needed by entrepreneurs and test hypothesis 1. This checks whether some variables impact on the need for a specific resource, not in absolute terms, but relative to others. We therefore looked at resource structures and their determinants. For each entrepreneur i and his/her firm j:

$$Re_{ij} = \beta' X_i + \alpha' Z_j + \varepsilon_{ij}$$

where Re_{ij} $(i = 1. \ldots, 46; j = 1. \ldots, 46)$ is the index value for the resource obtained with four possible scores (categorical, not ordinal): 0 ("other resources", i.e. material help (excluding funding), information and idea, technical help and moral support), 1 ("funding"), 2 ("regular help with labor"), and 3 ("training and management advice"). X_i is a vector of entrepreneur attributes and Z_j a vector of firm characteristics. The error term is ε_{ij}.

We then estimated a classic form of probit model. Here again, for each entrepreneur i and firm j:

$$Ta_{ij} = \beta' X_i + \alpha' Z_j + \gamma' k + \varepsilon_{ij}$$

To test hypotheses 2, 3 and 4, we successively analyzed three dependent variables that specify the type of ties activated (Ta). In addition to the vector of entrepreneur attributes (X_i) and the vector of firm characteristics (Z_j), we introduced variable k in the regressors, which specifies the type of resource obtained (more details are reported below).

For each dependent variable, we also ran fixed effect logit models in order to control for any remaining unobserved heterogeneity that may be specific to each entrepreneur (e.g. a specific unobserved ability). This was made possible because the sample observation unit is made up of resources mobilized (at least two) for each entrepreneur. We could thereby treat the sample as if it were a balanced panel with two dimensions: the resources and the entrepreneur who

gets the resources. The estimates' standard errors were then corrected for clustering at the individual (entrepreneur) level.

Lastly, a potential problem in multinomial logit models is that they may suffer from the Independence of Irrelevant Alternatives assumption (IIA), which is debatable in many cases. We performed Hausman tests on each case that provided evidence that the IIA assumption had not been violated.

3.3. Variables

3.3.1. Dependent variables

We built three dependent variables based on which actor provides the resource and the path length to join it: strong ties (1), interpersonal ties (2), or mediated resources (3).

(1) In keeping with the Granovetter (1973) dichotomous categorization of ties, we defined strong ties as family and friendship ties[7]. Rather than the extent of intimacy or reciprocity, we dissociated strong ties from weak ties where they were found in social spheres with specific modes of regulation (Paugam, 2014). One hundred of the 460 resources coded in our sample came from strong ties. Friends and family gave almost equally (49 versus 51, respectively). Family resources came from parents (30), siblings (11) and spouses (9). Just one resource came from a cousin who we also coded as a strong tie. The "friends" category was subjectively defined, as we recovered the terms used by the interviewees to define each relation[8].

[7] We also ran models dissociating family ties from friendship ties within strong ties. The "strong ties" category remained relevant overall.

[8] Where cases were complex, we coded the social sphere in which the relationship started. For instance, it was not unusual to hear an entrepreneur talk about a "customer" who is also a "friend". If the relationship started before firm start-up, we coded it as a "friend". If having the person as a customer led to a friendship, we coded it as a "professional tie". In all cases, firm lifespan was short and evolving relationships concerned just a few cases.

(2) Interpersonal ties distinguish resources that come from people (280 out of 460) from those that come from institutions, i.e. associations, foundations, firms and so on (180 out of 460), which do not have the same implications for entrepreneurs. For some resources, such as funding and material assistance, it is quite easy to differentiate between the two, as money and material can come from a person (or more than one, such as parents) or an institution (albeit actioned by people). The task is rather more complicated for other resources. For instance, some entrepreneurs received moral support from people who worked in an association. Moral support is *a priori* an interpersonal resource, but it is often the start-up associations' mission to provide entrepreneurs with moral support. We decided to follow the discourses: when the moral support relation was individualized, we coded it as interpersonal, and when it was more general ("I had moral support from this association"), we coded it as institutional support.

(3) Mediated resources are obtained through people or institutions that are not directly accessible by entrepreneurs, but through mediation (211 out of 460). Mediation can involve personal relations (33 out of 211) or non-personal resources (178 out of 211). For instance, an entrepreneur can be helped by his/her mother to write the articles of association (no mediation, short path), by somebody his/her mother recommended (interpersonal mediation, long path), or by somebody the entrepreneur found through an association or an event (non-personal resource, long path). The importance of institutional actors and social events (start-up meetings, competitions, conferences, etc.) is both direct and indirect.

3.3.2. Independent variables

We dissociate three kinds of independent variables of interest: those relative to the resource (1), those relative to dynamics and time issues (2), and those relative to the entrepreneurs' capital attributes (3).

(1) We assume that the use of a tie is partially resource-driven. To test this hypothesis, we created categories of resource types. We dissociated "financial resources" (money transfers) from "material support" (loan of equipment or premises), "regular help with labor" (volunteer or partner), "networking with professionals" (being put in contact with a supplier, a customer or a partner), "training and management advice", "information and ideas", "technical assistance" (associated with neither management nor daily operations, such as help with writing the articles of association, setting up a commercial website, etc.), and "moral support". We used "information and ideas" and "technical assistance" as reference categories, since they are basic resources generally involving little reciprocity and entrepreneurs find them from different kinds of actors throughout the entrepreneurial process.

(2) We assume that time is important to explain why some ties are used and others not. We created two variables to capture this. The first one is categorical and divides the entrepreneurial process into three stages: "before legal start-up" (110 out of 460), "from legal start-up to one year in business" (319/460), "more than one year in business" (31/460). Given that the firms in our sample are very young, the categories are not homogeneous in size and the start-up phase is overrepresented. It could be said that we should have divided this middle category into two, but many of the resources, especially the more basic ones, were hard to situate perfectly in time. The second variable is a relative chronological variable. For each resource mentioned by interviewees, we used their start-up stories to code its order of arrival in relation to all the resources obtained. Sometimes it

was impossible to pinpoint precedence between two sequences, in which case we coded two resources with the same order.

(3) In addition to resources and time, we believe that the use of ties is driven by some of the entrepreneur's capital (financial, human, and cultural). We measured the entrepreneurs' financial capital by their parents' capital. There were two reasons for this choice: firstly, the entrepreneurs were very young on average (28 years old), so financial capital is largely inherited; and secondly, in addition to pure financial capital, we wanted to capture their position in society and their socio-economic origin, capable of explaining different socialization patterns and, in turn, ways of rallying their network. To approximate the parents' level of financial capital, we used the national statistics institute's more recent taxonomy of wages in professions (HCP, 2012). We ranked parents in four ordinal categories by their professional wage rank from 1 for low-skilled workers to 4 for senior officials, senior executives and university professors. Human capital was measured by a dichotomous variable indicating whether the entrepreneur had more than two years of work experience or an entrepreneurial experience. Differences in level of education are very small, as they were all highly educated or in higher education. We measured cultural capital as an ordinal score based on the parents' highest level of education, ranging from 1 when parents stopped before high school to 5 when one of the parents had a Ph.D. or equivalent qualification. With respect to financial capital, cultural capital is supposed to be an instrument of rank in society, and to have an impact on socialization (*ibid.*). Lastly, given that in Bourdieu's theory, financial and cultural capital are cumulative and both are instrumental in structuring society, we created a "social origins" variable, a combined variable of financial and cultural capital, ranging from 1 (what could be called the "working classes"), to 4 (what could be called the "upper classes").

3.3.3. Control variables

We control for the entrepreneurs' sociodemographics such as sex, age at start-up, and level of education measured by years after high school (actual and targeted). We also control for certain aspects of the entrepreneurs' personal and professional lives that could explain network differences, including dichotomous variables such as marital status, living with parents, and if they have another economic activity or if they are still students.

The sector of the firm can be considered to have an impact on the resources needed (Chandler and Hanks, 1998), but also on the network structure, so we should control for this. For instance, the IT sector is highly developed in Morocco compared to some other new technology-intensive sectors such as green buildings, innovative agriculture and e-commerce. IT sector enterprises are numerous and organized around central structures such as Technopark (in Rabat, Casablanca, and some other major Moroccan cities) (Mezouaghi, 2002. Assens and Abbitan, 2010). So the IT sector is more developed, and it is probably easier for entrepreneurs to identify and find help in this dense, integrated sector than in others.

We control for participation in associations or incubators in two ways. First, we added up the number of institutional actors the entrepreneur was associated with, ranging in our sample from 0 to 5. Second, we created a dichotomous variable for whether the entrepreneurs were members of *Enactus Morocco*, which is the most influential student entrepreneurial association in Morocco (Kabbaj et al., 2016). In our observations, we noticed that *Enactus* members retained a great deal of contacts after leaving university and that the association works as a large network. Previous membership could potentially help explain the use of ties and network structures.

3.4. Limitations

One major limitation is that we cannot rank the resources obtained. Each sequence of access to a resource corresponds to one line in our database. This is a problem when it comes to comparing different resources. For instance, 1 million dirhams in funding from parents is considered equal to one day of help from a friend to create a Facebook page for the firm. We can assume that it is easier to find the second type of help, and that this resource is much less useful to the firm's development than the former. That is probably true, but as we are more interested here in the effect of the use of ties on tie content rather than on firm performance, this problem is minor. Nevertheless, the absence of ranking reduces our information and consequently our understanding of certain mechanisms, especially when we want to compare two resources of the same kind.

Similarly, we do not address the frequency of each single resource. We merely coded when the resource was obtained during the process. That can be problematic for certain resources such as "moral support" and "regular help with labor", because they are typically spread across time. This implies a significant bias, which is that "moral support" resources are seen in our database as being massively obtained in the early stages when we know that most of them are still present later in the process. However, taking time into account includes other biases, such as assuming the resource's linearity, stability and temporal homogeneity.

Finally, another limitation is that our sample is restricted to 46 individuals, which could be considered as small and making it hard to generalize our conclusions. However, young innovative firms are thin on the ground in Morocco, even though estimates of their number are very vague as seen before. It could therefore be assumed that the cases we investigated are not marginal. Moreover, mixed-methods such as "quantified narratives" suppose a double data construction process. In particular, it is preferable for the interviews to be conducted by the same researcher, as the qualitative guide is less standardized than in a quantitative survey. Nonetheless, we should still regard this study as an interesting case study on specific

entrepreneurs, rather than as a representative study of the social network dimensions of young innovative firms in Morocco.

4. Results

4.1. Entrepreneurs' initial characteristics and needs for resources

The multinomial logit model estimations (table 3) show that those who are well endowed financially have no less probability than others of needing funding, relative to other resources. Nonetheless, entrepreneurs whose firms are not specialized in IT (building sector, agriculture, healthcare, etc.) have a greater probability than others of asking for funding, relative to other resources, which is consistent with some literature results (Chandler and Hanks, 1998).

---------- table 3 here ----------

Hypothesis H1 is partially rejected, as being a business graduate has no effect on the probability of asking for training or management advice, and having an entrepreneur or self-employed worker as a parent increases the probability of asking for this resource. Here, we have the inverse relation we expected. Even if the children of entrepreneurs and self-employed workers have probably grasped a "practical sense" of entrepreneurship (Bourdieu, 1980a), it appears that having entrepreneurs in the close network encourages them to ask them for help, especially when creators have just started up and have no experience. This is consistent with the fact that previous entrepreneurial experience reduces the probability of asking for training and management advice. So entrepreneurial ties can be useful in the early stages to offset a lack of experience.

Age appears to be strongly and negatively correlated with the probability of asking for labor instead of other resources, which could reflect different socialization patterns (Bidart and Lavenu, 2005). As we will argue later, it is very common for young people, still students or

young graduates, to collaborate with (ex) classmates, more out of collective aspirations and community spirit than a lack of skills and knowledge. Conversely, older entrepreneurs are more used to working in isolation, generally because they are more concentrated on their family sphere.

4.2. Resource mobilization patterns

Although resources are not distributed evenly among entrepreneurs by certain of their characteristics, what appears to diverge the most is how the network is used (table 4).

Hypothesis H2 is confirmed here:

- having more than two years of professional experience slightly, but significantly, reduces the probability of using strong ties (table 5). This can be explained by the fact that these entrepreneurs have more professional ties to rally and are already more emancipated from family and old friends.
- although financial and cultural capital levels have no effect when taken separately, when the combined variable is incorporated into our model, we observe that social origins are significant, but the effect is not linear. Entrepreneurs from the working classes are more likely to use longer path length than others. This may mean that they are particularly distanced from helpful networks and need to be linked to other social circles, a finding we observe in the qualitative data. For instance, when we asked Samir - 27 years old, a son of non-commissioned officers, working in digital marketing - if his parents helped him with the start-up, he answered:

"Not really. There's always a minimum, I'll say, "Well, here's what I do, here's my business card if you hear of someone, that's it". But when you know there's really a

> huge gap between me, what I do, and them, what they do […]. So, they have contacts with people but… let's say my target is not in their contacts".[9]

First, Samir's parents work in a field that has nothing to do with his activity sector and, more generally, with entrepreneurship. Second, his parents do not have cross-field contacts, which probably reveals their relatively low position in the military field (Lin, 1999).

Time also matters. Hypothesis H3 is partly confirmed since entrepreneurs use strong ties less and less as they advance through the entrepreneurial process. Even though the effect is small (table 5), this result is important in our sample because firms have short lives (average 13.7 months), showing that the disembeddedness process starts very quickly. This is consistent with the origin of interviewees, who are generally remote from entrepreneurial circles (appendix B), and entrepreneurs need to use weak or institutional ties to get specific resources. However, time has no effect on path length. Qualitative data suggest that we might observe two divergent effects cancelling each other: first, the gradual development of one's own professional network could make some resources more directly accessible and reduce path length; and second, developing the weak ties network could offer mediation to join even more specific social circles and lengthen the path (Lin, 1995).

Although some results point to disembeddedness as a generic process and a standard transition from the entrepreneur's network to the firm's network, our results enable us to argue that it can also be partly planned by entrepreneurs due to their motivations and aspirations. Hypothesis H4 is partially confirmed: the need for funding is indeed associated with a 36% decrease in the probability of asking people (rather than institutions) (table 5). Here, strong ties are avoided as much as weak ties and this result is robust to fixed effects (table 4). One may say that this result could be due to the lack of financial resources of the

[9] All quotes from interviews were translated from French to English by the authors.

strong ties. But as Appendix B shows, innovative entrepreneurs generally come from the middle and upper classes, and therefore from families that could help them financially, albeit marginally. Moreover, it is important to note that some parents and spouses have clearly offered financial assistance that many entrepreneurs have refused. Zineb says, for instance, that:

> "Sometimes he [her husband] wants to support me financially, but I say, 'No, it's ok, back off, it's my project' [laughs]. I want to stay independent. Sometimes he says to me, 'There's this person I can contact for you if you want', and then I say to him, 'No, that's ok, I can contact her myself'. That's this kind of conversation we regularly have".

---------- tables 4 and 5 here ----------

On the other hand, regular help with labor is not linked to the type of ties used: some mobilize strong ties, while others mobilize rather weak ties. One possible explanation for the fact that strong ties, and especially family ties, are not sidelined is that they are more accessible than weak ties with respect to this resource, resulting in an "opportune mobilization" (Small, 2013). Nevertheless, what we observe qualitatively is that those who use strong ties rallied more regularly siblings or spouses than parents, and took advantage of this mobilization. We take the example of Leïla who works with her younger brother as a partner:

> "[…] At the project level, I'm the general project organizer, so I put pressure on the team when we are in a rush, when we have to submit a dossier or a progress report. It's easier to put pressure on somebody who lives in the same house. Follow-up is easier! [laughs]".

Lastly, the need for moral support is positively correlated with the use of a strong tie in both the probit and the xtlogit models (table 4).

5. Discussion: from entrepreneur-oriented resources to firm-oriented resources, or how to combine different motivation patterns in the analysis of the network mobilization

Our results qualify previous studies on the importance of the family and strong ties in the entrepreneurial process (Edelman et al., 2016). We find that interpersonal relations, and especially strong ties, are sidelined when it comes to funding, which is one of the most important resources needed by young nascent innovative entrepreneurs, especially in Morocco. These entrepreneurs are not dependent on family or strong ties for specific resources (networking, management advice and technical assistance). Likewise, they do not rely that much on them to find help with labor, but rather use weak ties for that purpose. Quantitatively, strong ties represent less than a quarter of all resources obtained in our sample.

On the one hand, this relative marginalization of strong ties is partly due to external factors. Young innovative entrepreneurs are distanced from entrepreneurial social circles (appendix B). Hence, it would appear rational to seek specific resources beyond their close circle, using weak and institutional ties to do so. On the other hand, as the example of Zineb just before illustrates it, their rather high social origins gives them access to several potential resources, like funding. Strong ties are also often prepared to help as additional labor. So external factors are not enough to explain the use of ties.

We assume here that entrepreneurs differentiate their networks in accordance with all their logics. The main motivation that emerges from the qualitative interviews is the desire for autonomy and the need for self-fulfillment. Azzedine, 25 years old, reflects a relatively general point of view on the issue:

"Entrepreneurship, I would say, is a path to freedom. When you're an employee you follow the orders in the firm, there's a hierarchy, you can't do what you want in the time slot. When you're an entrepreneur, it's true that you take risks, but you have the freedom to do what you want. »

Thus, there is a transversal search for "freedom" in entrepreneurship (the term comes up more often than autonomy strictly speaking), which would consist in escaping from the supervision of various authorities that tend to impose choices, orientations, or simply from which the respondent must ask for validation before acting. We would come close to the notion of "capabilities", in Sen's sense, insofar as it is a matter of feeling free to choose one's "type of life", that is, not having to "be accountable" as Nour insists, or being able to "breathe" as Hicham expresses it, much more than being totally independent and cut off from the rest of the world. Indeed, for respondents, gaining "autonomy" does not mean engaging in a solitary process and the pattern of network mobilization is central to explain how they do to achieve these goals. In this way, we proposed to distinguish what we call “firm-oriented resources” from “entrepreneur-oriented resources”. The former are resources that go directly into the firm or the entrepreneur seen as the personification of the firm (funding, training, etc.). The latter are resources (moral support, everyday assistance) that go directly to the entrepreneur seen as a human being with a range of social roles (son, friend, etc.). While Moroccan startuppers ask family for “entrepreneur-oriented resources”, they seek “firm-oriented resources” mainly from weak ties or institutional actors so as to keep the firm’s social space distant from strong ties (the “fortress enterprise”).

Of course, strong ties are neither absent from nor completely marginal in the entrepreneurial process. Family is the first source of material assistance (loan of equipment and premises). This is useful to the entrepreneurs, but it does not generate a debt relationship as much as

financial transfers might. Moreover, nearly half of the entrepreneurs were still living at their parents' home during their firm start-ups. This could be considered as indirect assistance with their project, but it is perceived as "normal" in family life since it is intended for the preservation of the person. Youssef, 18 years old, says:

> "You need your parents behind you, just to give you a chance [to become an entrepreneur]", because "they are the ones who give you money and food. They are your first business angels".

Along the same lines, family and strong ties are the main providers of moral support, which helps maintain the intimacy and strength of closer ties. In this way, they remain part of a protective network and this "long-term source of social support […] underwrites the capacity of entrepreneurs to take short-term risks" (Stewart, 2003. p. 387).

These typical mobilization patterns show that entrepreneurs can be driven by a number of motives at the same time, namely their business development and emancipation from the family and some of their strong ties. In concrete terms, they need help to develop their firm which their close network can easily give. At the same time, subjectivity building via firm start-up entails hiding some of the aspects of the help they receive. They avoid actual countable financial debt and using resources which might enable interference in the running of the enterprise. Examples of the range of these strategies' repercussions are described in recent economic studies on very small African and Asian informal businesses (Grimm et al., 2013; Nordman, 2016; Nguyen and Nordman, 2018). In our study, the two main kinds of help that entrepreneurs get from their strong ties – relative to other ties (i.e. material assistance and moral support) – do not hamper the construction of a self-image as being at the helm and do not compromise the economic success of the firm.

Obviously, the entrepreneurs interviewed here do not have the same autonomy objectives and do not have the same network mobilization strategies. We wanted to test for a homogeneous approach, neither differentiating between entrepreneurs nor using categories (as in Curan and *al.,* 1994, for example), considering that differences exist within entrepreneurs more than across them. In our sample, it is much easier for the married entrepreneurs, for instance, to ask for family support, even with respect to financial matters, since autonomy issues are partly behind them. Abdel - 38 years old, married, and father of three sons - says, for instance, that:

> "[Parents] are the first people you ask for money, before looking at other structures, because you know they're more flexible, on the basis that you have honest relationship there".

However, the aspiration for autonomy is nonetheless present and goes hand in hand with, if not predominates over, the economic stakes. Abdel adds:

> "This is my own firm, nobody else is involved in it. You cannot mix it all together, you must not mix it all together. My wife has her own firm […], my parents do their own thing. There's no point getting them involved, because you'd complicate the relationship with them".

Naima, 26 years old, pointed out how relationships change when we asked if it was a problem for her to ask her father for money in order to fund her firm. She said:

> "Before, it was a problem. When I was student, it was a problem. But now, since I married, it's changed because he's helped me at different levels. I've needed his help several times. […] I've asked him to lend money to me, not give it me, and I've paid him back every time. […] I don't have to ask a bank for small amounts of money."

Qualitative material goes a long way to helping understand quantitative results. For instance, regarding help with labor, we made the assumption that sharing tasks could be at odds with the construction of the "fortress enterprise". At the same time, we have shown that some entrepreneurs perpetuate a dominant family position to benefit their enterprise. Disembeddedness is not uniform and entrepreneurs may have an interest in onboarding strong ties to grow their firm. It therefore seems more important to consider the kind of relationship concerned rather than merely considering the broad categories of "strong" and "weak" ties. Only qualitative material can provide the information needed to conduct this type of analysis.

Lastly, we argue that contextualization is key here to understanding how networks are used by entrepreneurs. Motivations such as the desire for autonomy or self-fulfillment have a particular influence over young people who fell constrained by the weight of social structures, as expressed by Sofiane, 21 years old:

> "Here, in Morocco, there's an attitude that there's nothing you can do. It's for the government to do it for you. People hate thinking that way, but they see no other alternative. It's like a weight. We do nothing, and we just wait for something".

In this respect, one salient fact is that almost half of the entrepreneurs said they did not choose their studies and went along with their parents' aspirations, often resulting in professional and personal frustration.

This aspect also needs to be analyzed in the general context of the fast-spreading "start-up culture". The ideology that advocates freedom, self-fulfillment and economic performance is clearly instrumental in shaping the aspirations of many young people worldwide, especially in Morocco. The development of incubators, associations and institutional actors promoting start-ups also offers Moroccans other potential resources, and the possibility of doing without

family and strong ties. Lastly, a convergence of factors drive the network mobilization strategies we have observed.

6. Conclusion and future research

First, this study raises the question as to what, in our context, constitutes a good network for an entrepreneur, which is not the same question as what constitutes a good network for firm growth. As long as entrepreneurship represents more than simply an economic process – embeddedness in social structures and dependence on personal pathways – entrepreneurs will continue to build complex strategies depending on diverse motivations sometimes at odds with their firm's sustainability. We analyze these kinds of strategies from a fieldwork in Morocco based on interviews with entrepreneurs qualified as "innovative" using a mix-method to build our material. Our empirical strategy (a multivariate model) highlights in particular one quite paradoxical situation, that is, the marginalization of family and strong ties in getting funds, while interviews show that family is often ready to help on this point, at least marginally. Qualitative data help to understand that entrepreneurs try to avoid to enter into a gift-counter gift relation that could be generated by accepting funds from family and strong ties. This way, they intend to keep their firm as an entity independent from family.

For next research, this result implies taking more into account, beside firm development, how can subjectivity be built during the entrepreneurial process. This point is particularly important in contexts like Morocco where innovative entrepreneurship is new and represents an opportunity full of promise. Incubators and associations promoting "innovative" entrepreneurship are spreading fast in continents like Africa in the last years and entrepreneurship is often presented as a solution to all problems (XX, forthcoming). Surely it leads to complexify the motivations that are generally attributed to innovative entrepreneurs in Europe or United States, and in the end, have impact on the way networks are mobilized

through the process. We believe that distinguishing between "entrepreneur-oriented resources" and "firm-oriented resources" could be heuristic in understanding how entrepreneurs combine different motivations in practice, like making profit and getting autonomous from their social environment.

For practitioners, our results imply that organizations promoting entrepreneurship should recognize that starting up a business can undermine social and work relations. The challenge for them would be to make certain resources more available than others, especially funding, even for those that could be financially helped by family.

Second, the study does not consider firm performance. First, because we are more interested in understanding determinants of network use rather than economic outcomes of these mobilizations. Second, because the firms we studied were nascent (some had already folded) and almost half of them were not yet (or no longer) earning an income. An interesting avenue for future research in this respect could be to compare early-stage network activation with long-term firm performance, and especially to ask if those who are mainly driven by autonomy motivations succeeded, economically speaking, less than those who are mainly motivated by economic prospects.

Third, we believe this study shows that mixed methods are useful to explain the entrepreneurial process and how a multivariate model can be derived from qualitative network data. "Quantified narratives" is a recent method that needs improving, but it seems extremely helpful to understanding network mobilization. More generally, the method can be seen as an advanced way of combining quantitative and qualitative analysis whose combination has represented a challenge in social sciences for decades. Indeed, instead of relying sequentially or in parallel to distinct data collection instruments (closed-ended questionnaire versus open-ended interviews/life histories), the method implies merging these data collection tools into

one unique data structure, allowing the researchers to both grasp complex narratives (which is always the case in network analysis) and benefit from the rigor of categorization and quantification of these narratives. Interdisciplinary by nature, such a combined approach can only help understand complex topics implying the nesting of structural and individual forces, such as in gender studies, or in research on developing countries implying the intersectionality of spatial, social, individual, and cognitive choices and constraints.

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Appendices

Appendix A: Sociodemographics of interviewees

(N=46)

Variable	**Mean**	**Min.**	**Max.**	**Std. Dev.**
Age	28.5	18	42	6.0
% of men	61.2	-	-	-
Actual years of education (high school)	4.4	0	8	1.3
Targeted years of education (high school)	5.2	0	8	1.6
Length of in entrepreneurship	0.6	0	8	1.3
% of interviewees with professional experience (> 2 years)	53	-	-	-
Number of partners in the firm (in addition to creator)	1.0	0	4	1.1
Time from legal start-up to interview (in months)	13.7	0	36	12.4
Number of associations or institutional actors associated with interviewees	1.8	0	5	1.2
% of interviewees who still have another economic activity (in addition to entrepreneurship)	39	-	-	-
% of single people (not married)	67	-	-	-
% of interviewees who still live with parents (or at least one of them)	33	-	-	-
% of interviewees who have a personal Facebook page	96	-	-	-
Interview length (in minutes)	85.8	45	176	24.5

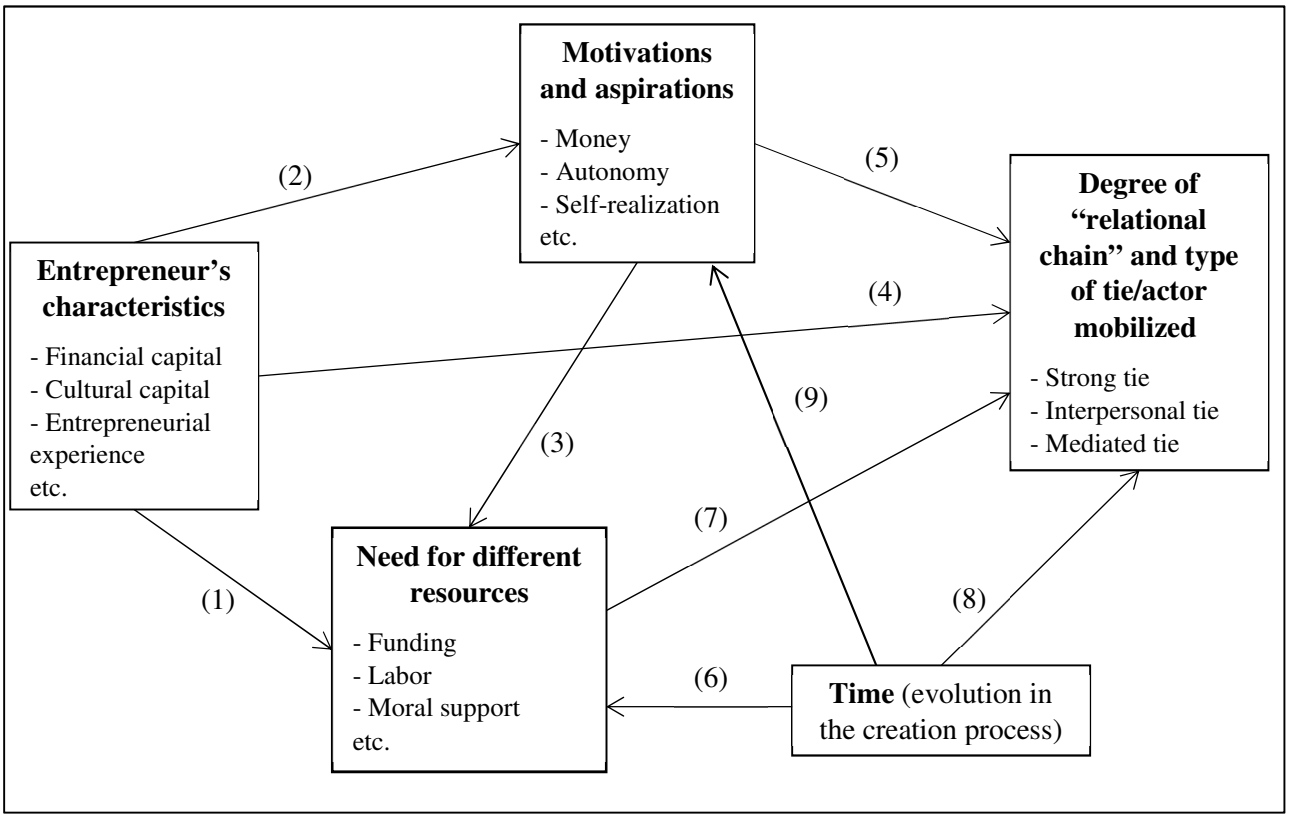
Appendix B: Social origins of interviewees (professions of father and mother)

(N=40)

Read: Nour's father is a trader, and Nour's mother is a pharmacist.

	Occupations	**Father**	**Mother**
Upper classes	Trader	Nour	
	Senior executive, senior civil servant, diplomat, airline pilot	Youssouf, Hicham, Achraf, Oumaima, Hind, Assia, Abdel, Yacine,	Youssouf
	Architect, pharmacist, chartered accountant	Soraya Soukaina	Nour Abdel
	Professor, university lecturer and researcher	Naïma, Sana Abdelhakim	Sana
	Middle manager, executive (public or private sector)	Sofiane, Fouad Mohamed, Nasser Brahim, Omar Khalid	Sofiane Mohamed Abdelhakim Omar
Middle classes	Shopkeeper, craftsperson, small business owner	Hamza, Aniss Safae, Jaalaeddine Abdelraman, Farid	Aïcha, Soraya Safae Farid
	Teacher	Bouchra, Asma Azzedine, Loubna Lahcen, Zineb Saïd	Bouchra, Fouad Lahcen, Zineb Abdelraman, Khalid
	Non-commissioned officer	Idriss Samir	Idriss Samir
Working classes	Non-manual employee		Issam, Hamza Asma, Hassan Soukaina, Laïla
	Farmer	Imen Marouane	Imen
	Manual employee		Marouane
	Inactive		Hicham, Achraf Azzedine, Aniss Oumaima, Naïma Loubna, Assia Brahim, Jaalaeddine, Saïd

Figure 1: Determinants of the degree of « relational chain » and the type of tie/actor mobilized by entrepreneurs



Source : authors

Table 1: Types of resources obtained as a function of the firm's evolution

In absolute terms (column percentages in parentheses). **N=46**

Pearson Chi2 (12) = 90.2064 Pr = 0.000

	Funding and material assistance	Training or management advice	Networking	Information	Technical assistance	Moral support	Labor	Sum
Before start-up	32 (42.1)	39 (41.9)	15 (27.8)	39 (54.2)	21 (50)	28 (70)	67 (80.7)	241 (52.3)
Start-up (from 0 up to 1 year)	34 (44.7)	47 (50.5)	18 (33.3)	27 (37.5)	17 (40.5)	12 (30)	13 (15.7)	168 (36.5)
Post start-up (over 1 year)	10 (13.1)	7 (7.5)	21 (38.9)	6 (8.3)	4 (9.5)	0 (0)	3 (3.6)	51 (11.1)
Sum	76 (100)	93 (100)	54 (100)	72 (100)	42 (100)	40 (100)	83 (100)	460 (100)

Table 2: Type of resources obtained as a function of social sphere they come from

In absolute terms (column percentages in parentheses). **N=46**

Pearson Chi2 (30) = 282.7239 Pr = 0.000

	Funding	Material assistance	Training or advice	Networking	Inform.	Technical assistance	Moral support	Labor	Sum
Kinship ties	6 (10.5)	6 (31.6)	1 (1.1)	2 (3.7)	4 (5.6)	3 (7.1)	17 (42.5)	12 (14.5)	51 (11.1)
Friendship ties	3 (5.3)	2 (5.3)	0	4 (7.4)	5 (6.9)	7 (16.7)	5 (12.5)	23 (27.7)	49 (10.7)
Professional ties	5 (8.8)	0	30 (32.3)	21 (38.9)	27 (37.5)	14 (33.3)	11 (27.5)	18 (21.7)	126 (27.4)
Other weak ties	1 (1.8)	0	4 (4.3)	1 (1.9)	7 (9.7)	5 (11.9)	6 (15)	30 (36.1)	54 (11.7)
Institutions	45 (78.9)	11 (57.9)	56 (60.2)	23 (42.6)	21 (29.1)	13 (31)	1 (2.5)	0	167 (36.3)
Other (Internet)	0	0	2 (2.2)	3 (5.6)	8 (11.1)	0	0	0	13 (2.8)
Sum	57 (100)	19 (100)	93 (100)	54 (100)	72 (100)	42 (100)	40 (100)	83 (100)	460 (100)

Table 3: Dependent variables: types of resources mobilized

VARIABLES	(1) Funding	(2) Labor	(3) Training and management advice
Chronological order of the resource	0.065	-0.100	-0.016
	(0.058)	(0.077)	(0.040)
From 0 to 1 year after start-up	0.886**	-0.305	0.593**
	(0.352)	(0.338)	(0.280)
Over 1 year after start-up	0.357	-0.592	-0.576
	(0.598)	(0.469)	(0.485)
Sector excluding IT	0.486*	0.098	-0.097
	(0.252)	(0.271)	(0.316)
Male	-0.051	-0.067	-0.032
	(0.242)	(0.201)	(0.288)
Age	-0.040	-0.075**	-0.038
	(0.038)	(0.030)	(0.033)
Actual years of education	-0.045	-0.142*	0.116
	(0.129)	(0.081)	(0.109)
Still a student	-0.428	-0.353	-0.155
	(0.664)	(0.496)	(0.576)
Experience in entrepreneurship	-0.829**	-0.401	-0.716**
	(0.399)	(0.291)	(0.295)
Son/daughter of an entrepreneur	0.589*	0.310	0.849**
	(0.316)	(0.398)	(0.406)
Studied entrepreneurship	-0.328	0.369	0.034
	(0.509)	(0.355)	(0.363)
Single and living with parents	0.082	0.195	-0.344
	(0.301)	(0.233)	(0.332)
Professional experience (>2 years)	-0.475	-0.465	0.124
	(0.536)	(0.341)	(0.343)
Cultural capital	0.170	0.044	-0.338*
	(0.167)	(0.149)	(0.198)
Economic capital	-0.149	-0.126	0.283
	(0.171)	(0.132)	(0.181)
Intercept	-0.411	3.362***	0.147
	(1.327)	(0.936)	(1.029)
Observations		460	
Number of entrepreneurs		46	
Pseudo R^2		0.07	

Robust standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

Table 4: Dependent variables: types of ties used

VARIABLES	(1) Probit of Strong Ties	(2) xtlogit of Strong Ties	(3) Probit of Physical Ties	(4) xtlogit of Physical Ties	(5) Probit of Length of Tie	(6) xtlogit of Length of Tie
Funding	-0.026	-0.267	-0.917***	-2.274***	0.216	0.418
	(0.215)	(0.415)	(0.213)	(0.412)	(0.226)	(0.367)
Material assistance (exc. Funding)	0.710***	1.226	-0.590*	-2.105***	-0.126	0.235
	(0.268)	(0.766)	(0.348)	(0.585)	(0.298)	(0.557)
Help with labor	0.575**	0.671			-0.484**	-0.455
	(0.242)	(0.478)			(0.220)	(0.378)
Networking	-0.157	-0.346	-0.075	-0.636	0.478	0.698*
	(0.242)	(0.487)	(0.292)	(0.398)	(0.343)	(0.388)
Training and management advice	-1.391***	-2.963	-0.657***	-1.958***	0.629***	1.039***
	(0.409)	(6.977)	(0.172)	(0.336)	(0.209)	(0.328)
Moral support	0.924***	1.781***	1.487***	1.960*	-0.641**	-1.077**
	(0.275)	(0.567)	(0.449)	(1.043)	(0.253)	(0.486)
Chronological order of the resource	-0.086*	-0.092	-0.072	-0.121*	0.016	0.144**
	(0.045)	(0.108)	(0.044)	(0.072)	(0.042)	(0.065)
Participation in at least one association	-0.151		-1.174**		0.370	
	(0.282)		(0.501)		(0.283)	
Sector excluding IT	0.085		-0.353*		-0.152	
	(0.204)		(0.202)		(0.144)	
Male	-0.165		-0.262		-0.257	
	(0.278)		(0.241)		(0.198)	
Age	0.025		0.010		0.004	
	(0.030)		(0.024)		(0.018)	
Years of education	0.025		-0.052		0.048	
	(0.079)		(0.072)		(0.051)	
From 0 to 1 year after start-up	-0.146	-1.217**	-0.147	-0.907**	0.101	0.405
	(0.235)	(0.589)	(0.197)	(0.409)	(0.189)	(0.347)
Over 1 year after start-up	-0.172	-1.189	-0.187	-0.795	0.384	0.292
	(0.361)	(0.766)	(0.409)	(0.657)	(0.349)	(0.583)
Still a student	-0.337		0.408		0.176	
	(0.294)		(0.314)		(0.216)	
Experience of entrepreneurship	0.316		0.060		0.298	
	(0.289)		(0.272)		(0.205)	
Single and lives with parents	0.524***		0.129		-0.259*	
	(0.182)		(0.193)		(0.150)	
Professional experience (> 2 years)	-0.633**		0.131		-0.450**	
	(0.257)		(0.283)		(0.191)	
Lower middle class	0.016		0.179		-0.700***	
	(0.276)		(0.326)		(0.271)	
Upper middle class	0.112		0.179		-0.596**	
	(0.233)		(0.379)		(0.247)	
Upper class	0.515*		-0.006		-0.488*	
	(0.320)		(0.396)		(0.293)	
Intercept	-1.271		1.844*		-0.148	
	(0.901)		(0.977)		(0.737)	
Observations	460	427	377	427	460	441
Number of entrepreneurs	46	40	46	38	46	40
Pseudo R^2	0.26		0.20		0.12	
Correc. Class.	80.9		70.0		66.7	

Robust standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

Table 5: Probit model marginal effects

VARIABLES	(1) Probit of Strong Ties	(2) Probit of Physical Ties	(3) Probit of Length of Tie
Funding	-	-0.360***	-
	-	(0.085)	-
Material assistance (exc. Funding)	0.152***	-0.232*	-
	(0.059)	(0.137)	-
Help with labor	0.124**	-	-0.184**
	(0.056)	-	(0.087)
Training and management advice	-0.301***	-0.256***	0.251***
	(0.071)	(0.688)	(0.827)
Moral support	0.201***	0.587	-0.254
	(0.062)	(0.175)	(0.101)
Chronological order of the resource	-0.019*	-	-
	(0.009)	-	-
Participation in at least one association	-	-0.471**	-
	-	(0.194)	-
Sector excluding IT	-	-0.132*	-
	-	(0.081)	-
Single and lives with parents	0.113***	-	-0.095*
	(0.038)	-	(0.590)
Professional experience (> 2 years)	-0.064**	-	-0.197**
	(0.658)	-	(0.717)
Lower middle class	-	-	-0.268***
	-	-	(0.101)
Upper middle class	-	-	-0.217**
	-	-	(0.091)
Upper class	0.128*	-	-0.182*
	(0.044)		(0.112)
Observations	460	377	460
Number of entrepreneurs	46	40	46

Robust standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1