

Towards coherence: fitting together opportunities and capabilities. Research units and acquisition of funds

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1 Introduction

As basic production units in science (Latour and Woolgar 1979), research units have been recognized as *loci* of collective knowledge-creation (ibidem; Knorr Cetina 1995), where different strategic profiles (Crow and Bozeman 1987; Larédo and Mustar 2000) and trajectories (Braam and van den Besselaar 2010) can develop and differentiate.

Accordingly, the ability of these units in conceiving and implementing strategies aimed at improving their organizational performance, especially through the acquisition of financial resources necessary for their tasks, has been a central topic of investigation (Weisenburger and Mangematin 1995) and it is still matter for discussion.

The priority-setting by the State, the introduction of market-based mechanisms (Gioia and Thomas 1996) for research funding and the drive towards “useful” science, seem to go over an old paradigm where performance and, thus, reward, were directly related to intangible assets such as credibility (Latour and Woolgar 1979), quality (Cole and Cole 1973) and reputation (Arora et al. 1998) of individual researchers and groups. In the “academic capitalism”, research activities are recognized as driven by market potential rather than by curiosity (Slaughter and Leslie 1997), and incentives may depend on positional features (Laudel 2006) such as membership in the peer review cadre, departmental standing, power in the distribution process (Viner et al. 2004), but also on cumulative advantage (Merton 1968; 1988) and past performances (Bornmann et al. 2009).

In this paper we highlight the need of harmonizing both perspectives - i.e. the one stressing an ideal science and the one describing a market for science - by introducing Social Capital Theory as an integrating framework (Bourdieu 1986; Portes 1998 and Lin 2003), and by attempting a preliminary test of its potential, explanatory strength for the topic under discussion. In fact, when dealing with funding acquisition and the complex environment in which it takes place, not only pure competition seems to matter, but also a patient building of a favorable social setting is crucial. Even better, the obtaining of funds by research units can be interpreted as a clear example of competition *within* a social setting, which can be deliberately used and shaped to strengthen organizational performance.

By using the construct of Social Capital in its three dimensions (i.e. structural, relational and cognitive) as theorized by Nahapiet and Ghosal (1998) as well as by Tsai and Ghosal (1998), we argue that the structural dimension is especially useful to capture and describe the two arenas (i.e. university and epistemic community) in which institutes use to compete in order to enter the two main channels of funding (i.e. institutional and third party), but also the advantages they experience according to the positions they hold

in both of them; moreover, all three dimensions are able to pool a set of factors recognized as critical by previous literature. In particular, the cognitive dimension can be related to socially constructed representations driving the allocation and, thus, the acquisition of funds. Hence, it is essential to preserve scientific integrity and freedom, despite the implications of academic capitalism.

Accordingly, the following, preliminary hypotheses are developed and tested through an exploratory approach: (1) heads of research units actively seek access to funds on the basis of the opportunities available in and through their social capital, and the ability in building and strengthening such capital in its three dimensions, is a central concern in fund-seeking strategies; (2) given the dual nature of research funding – institutional and third-party - in most European countries, heads of units need to actively shape the structural dimension of their social capital (network) at both intra (institutional) and inter-organizational (epistemic community) levels; (3) heads of research units seek financial assets by fitting together the opportunities available in their intra and inter-organizational networks of relations and the knowledge and knowing capabilities specific to their groups.

Beyond this introduction, the paper is organized as follows: section two introduces Social Capital Theory in its general features and as the suitable framework to describe both research funding environment and the strategies adopted by single units to acquire financial resources. Here, a set of preliminary hypotheses is formulated. Section three is about methodological issues, as well as about the empirical setting, which is represented by eight research units belonging to two medium-sized European universities. Section four presents the main findings: these are organized by reporting the fund-seeking strategies - as described by the eight interviewed heads of research units – and by arguing how the hypotheses are supported. Finally, section five outlines some broader implications for the topic and the avenues to be explored in future research.

2 Theoretical Framework

Rooted in insights from Resources Dependency Theory (Pfeffer & Salancik, 1978), and developed through the concept of “social embeddedness” in Network Theory (Granovetter, 1985), Social Capital Theory is essentially concerned with the significance of relationships as a resource for social action (Coleman, 1988). Starting from the assumption of rational actors pursuing their specific interests and goals, it considers that (different forms of) relationships are key resources allowing and enabling social action and, thus, it implies that organizational success and performance are critically dependent on social capital (Nahapiet & Ghoshal, 1998). Social Capital Theory has found applications in innovation researches, as well as in work on entrepreneurship (Tsai, 2000; 2001; Davidsson and Honig, 2003; Burt, 2004; 2007). Also, approaches to human resources development and researchers careers (Bozeman, 2004) in the so-called human capital framework (Schultz 1961) have attributed a central role to social capital in facilitating the acquisition and development of knowledge and skills, considered as keys for organizational advantage in highly intellectual activities like science and technology production.

In this section, we firstly introduce the concept of social capital, by focusing on its role as a facilitator for social action and by providing an analytical distinction among its three dimensions, namely structural, relational and cognitive (Nahapiet & Ghoshal, 1998). Secondly, by following recent works, we describe the acquisition of funds for research as a complex multi-actor social setting and we argue how, most of the factors which have been addressed by the literature to explain this phenomenon, can be interpreted as depending on different dimensions of social capital. Thirdly, by grounding on this argument, we discuss how, in order to be successful in acquiring funds, research units need to develop strategies which entail not only competition, but also the patient building of collaborations, the achievement of structural positions in organizations, and especially the sharing of meanings and values; further, we suggest that the three

dimensions of social capital shape opportunities for acquiring funds which can then be exploited if the unit's capabilities fit with them. We thus conclude this section by formulating three preliminary hypotheses.

2.1 Introducing Social Capital

We introduce the concept of Social Capital by focusing on its importance for the acquisition of resources, as well as on the distinction between three dimensions which will be useful for analytical purposes in the following of the paper.

The instrumental treatment of the concept can be traced back to the work of Bourdieu, who defined it as "the aggregate of the actual and potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (1985, p.248; 1980). Here, social networks are built "through investment strategies oriented to the institutionalization of group relations, usable as a reliable source of other benefits" (Portes 1998, p.3) and actors can "gain access to economic resources (...) they can increase their cultural capital through contracts with experts or individuals of refinement (...); or, alternatively, they can affiliate with institutions that confer valued credentials" (ibidem, p.4). By focusing on the instrumental sources of social capital, transactions between recipients and donors are recognized as embedded in a common social structure where reciprocity exchanges, as well as enforceable trust, play a key-role.

Lin (2003) emphasized the distinction between the resources and the ability to obtain them through the membership in different social structures, thus defining Social Capital as "the resources embedded in a social network accessed and used by actors for actions".

Building on earlier distinctions between a relational and a structural meaning of social capital (Burt, 1997; Granovetter, 1985), Nahapiet and Ghosal (Nahapiet & Ghoshal, 1998) have proposed to distinguish among three dimensions, namely:

- *The structural dimension*, which refers to the "impersonal configuration of linkages between people or units", thus entailing measures such as density, centrality, connectivity, hierarchy etc.
- *The relational dimension*, which focuses on "the assets created and leveraged through relationships", thus including facets like prestige, trust, norms and sanctions: for example, even if two actors occupy equivalent positions within a network structure, they will be able to act differently on the basis of the type of attachment they experience with other members.
- *The cognitive dimension*, which is related to "resources providing shared representations, interpretations, systems of meaning", shared language and codes (Nahapiet & Ghoshal, 1998, p. 244).

This framework is particularly relevant for our purposes according to two main reasons: first, it explicitly links social capital to organizational advantage, by arguing how social capital also facilitates the building of intellectual capital; as highly intellectual organizations, research units represent a good standpoint to observe how advantage is enhanced by building and strengthening social capital. Second, the authors highlight that structural, relational and cognitive dimensions of social capital are not independent, but build on each other, and attempt a first empirical understanding of their interplays (Tsai and Ghosal 1998). This provides a suitable approach to shed light on the working of the scientific enterprise, where interrelations among structure, relationships and systems of meanings represent an interesting issue to be inquired.

2.2 Interlude: resources acquisition by research units in research funding systems

While the literature on competition for research funding, which mainly grounded on principal-agent theory, assumed the independence of actors and the existence of goals recognized as exogenous to the system (Braun & Guston, 2003; van der Meulen, 1998), there is also evidence from empirical studies about the importance of actors' relationships and networks in determining resources allocation (Shove, 2003). Hence, the process of acquisition of funds by research units entails different actors, different levels (especially

intra-organizational and inter-organizational) and different mechanisms of funding (institutional and third party) which are linked and coordinated within different types of social structures, including hierarchical structures in formal organizations, institutionalized markets (White, 2002), as well as less formalized structures like social networks, characterized by mutual agreement and shared values (Lepori, 2011).

Accordingly, we consider Social Capital Theory as a promising approach to analyze resources acquisition by research units where rational, purposeful action is embedded in a dense set of social relationships. In so doing, we first describe the European funding system in its broad features, then dealing with the factors recognized by previous literature as critical for improving the units' chance of being funded. We finally address three preliminary hypotheses.

The dual nature of funding systems

Comparative studies have shown that in most advanced countries research funding systems are characterized by two distinct channels for distributing public resources, i.e. institutional funding and third-party funding (Lepori et al., 2007). While the share and the specific characteristics of each widely varies among countries, their distinction is common and very few cases do not fit into them. This structural distinction drives to the identification of two distinct arenas (i.e. university and epistemic community) where resources allocation takes place. These arenas are characterized by different procedures and criteria for the allocation of funds.

On one hand, institutional funding is attributed by the State to research centers and Higher Education Institutions (i.e. HEIs) and it often represents a long-term investment which entails resources such as rewards, grants, infrastructures and academic positions (e.g. tenured positions), thus involving not only research activities, but also teaching ones. It occurs when Government allocates budget to HEIs for their functioning according to different principles and criteria (Jongbloed, 2008): then, each of them distributes its amount of institutional funds among faculties, departments, institutes etc. on the basis of specific rules and/or negotiations. Hence, competition occurs both among universities, at an inter-organizational level, and among research units at an intra-organizational level.

On the other hand, third party funding regards well-defined research activities limited in time and scope and it is directly allocated to research units (Lepori et al., 2007). In this case, the Government controls the repartition of funds between agencies and instruments: thus, both a number of loosely coordinated funding agencies and a larger number of research units applying for funding have been recognized as the main actors of this process (Braun, 1998).

Resources acquisition by academic units

These two channels of funding have been differently treated in the literature dealing with resources acquisition by academic units. Here, two distinct streams of the literature can be taken into account: the first one is rooted in the tradition of Sociology of Science, thus evolving towards an in-depth analysis of the factors driving the obtaining of third party funding. The second one traces back Organizational Studies and basically discusses the cases of universities which internally allocate resources to departments. In other words, we can argue that this latter stream of works concerns what we recognized as "institutional funding".

Early studies started from the concept of *cumulative advantage*, which was introduced by the work of Merton (1968; 1988), thus highlighting the characteristics of *cyclicity* and *recursiveness* belonging to the relation between resources and scientific production. Another factor influencing the ability of researchers in getting funded relied upon the concept of *credibility*, as argued by Latour and Woolgar (1979) in their "cycle of credit": here, the notion of credit did not entail only "reward", but also credibility, as resources to be continuously invested and obtained to be, again, re-invested by scientists.

Most recent work dealt with the factors driving the acquisition of third-party funding. Among them, the *reputation* (Arora et al. 1998), the *network of relations*, the distribution of funds over discipline, but also the *membership* of the peer review cadre and the departmental standing (Viner 2004) have been recognized. Thus, there is empirical evidence that what is called “*the quality*” of a work (Cole and Cole 1973) has not been considered the only reason why a research unit obtains external grant, but that that “resources do seem to flow disproportionately to those with power in the distribution process.” (Viner 2004).

A distinct tradition in Organizational Studies addressed the issue of repartition/acquisition of resources in universities, by focusing however on departments and faculties rather than on research units.

According to this tradition, the obtaining of funds was maximized by departmental *power* (Salancik and Pfeffer 1974; Hills and Mahoney 1978; Pfeffer and Moore 1980) within the institution, but also by *centrality*, which was defined as “how closely the purposes of a unit match the central mission of the institution.” (Dozier Hackman 1985). Furthermore, concepts of *legitimacy* (Covaleski and Dirsmith 1988) and *access to knowledge*, considered as the ability of being aware and of accessing/managing the “disciplinary regime”, which is often exercised in institutional practices of allocation and re-allocation of resources (Ezzamel 1994), represented a further contribution of this approach in explaining how an intra-organizational unit maximizes its chance of acquiring funds.

Social Capital in resources acquisition by research units

To summarize the previous discussion, there is empirical evidence that research units are able to conceive strategies in order to obtain funds and to cope with environmental changes (Laudel, 2006; Sanz Menéndez & Cruz-Castro, 2003). Moreover, a research unit competes for institutional funds with other units - focused on different disciplinary fields - belonging to the same organization. At the same time, it competes for third-party/external funds with other units - focused on the same disciplinary fields – often belonging to the same epistemic community.

The factors recognized as driving this process - *power*, *centrality*, *credibility*, *legitimacy*, *access (to knowledge)*, *cumulative advantage*, *reputation and quality* - all entail, to a considerable extent, positions and social relations and they are here considered as instantiations of different dimensions of social capital.

For example, the concept of *power* can be related to the structural dimension of social capital, as long as resources are attached to a social position, whose occupant may change (Lin 2003); but power does not exist without terms of comparison on which it is exercised and by which it is assessed, thus, it entails also a relational dimension. Furthermore, power can be referred also to the cognitive dimension of social capital, as long as it can be interpreted and represented in different ways, depending on the type of position/relations an actor owns. The same happens with *legitimacy* (being legitimated means to be embedded in a structure of relations and to be compliant with specific norms which are shared, coded and interpreted) and with reputation, which “cannot arise in an open structure, and collective sanctions that would ensure trustworthiness cannot be applied.” (Coleman 1988, pp. 107,108).

As a metric in social network analysis, *centrality* (Freeman 1979) is here recognized as related to the structural dimension of social capital, together with *access* (an information benefit given by a specific position; Burt 1997) and *cumulative advantage*, whose recent name is “preferential attachment” (see de Solla Price, 1976) and whose features are here referred to redundancies existing in closed structures.

Finally, *credibility* and *quality* are here related both to relational and cognitive dimensions of social capital, as long as they have more to do with individuals and, in this case, with their scientific work than with structural properties of the network. Nevertheless, they are regulated by norms and expectations, as well as by codes and interpretations.

With this discussion, we do not imply that resources acquisition avoids elements of competition, but rather that this is embedded in (and framed by) a social structure, which creates differential opportunities based on the capital available to each unit. Depending on the characteristics of their social capital, individual units are likely to enjoy competitive advantages in the acquisition of some resources, for example institutional funding or some specific type of third-party funding. Hence, we first expect that:

H1. *Heads of research units actively seek access to funds on the basis of the opportunities available in and through their social capital, whose dimensions (structural, relational and cognitive) are able to capture those factors recognized as crucial for obtaining financial assets. Accordingly, the ability in building and strengthening such capital, is a central concern in fund-seeking strategies.*

Second, the dual nature (institutional and third-party) of research funding in most European countries describes two different arenas in which social capital is relevant; hence, we expect heads of units to differentiate their strategies in each arena, but also to take advantage of interdependencies between the two. Accordingly, we argue that:

H2. *Given the dual nature (institutional and third-party) of research funding in most European countries, heads of units actively shape their social capital (network) at both intra and inter-organizational levels.*

Third, we consider that human capital plays a central role in both shaping and exploiting funding opportunities generated through social capital. Human capital is “added value embedded” in people themselves; it is typically operationalized and measured by education, training and experience (Lin 2003), but also by skills and knowledge, which enable persons to act in new ways (Coleman, 1988). In science, its importance in the development of knowledge and as source of organizational advantage has become widely recognized (Bozeman 2001). Much of the literature argued that social and human capital co-evolve (Coleman, 1988;), as human capital is fostered by social relationships, providing access to tacit information; at the same time, the creation of social capital is closely tied to human capital through knowing capabilities and social networks related to personal reputation and standing.

Moreover, research funding can be considered as an upstream market (Lepori, 2011; White, 2002), where once competences are available in a research unit, they can be pushed upstream to funding agencies in order to get resources. Accordingly, if social capital creates opportunities to get resources, these can be exploited only if these match the available unit’s capabilities and, conversely, capabilities will not generate resources if this process will not be facilitated by the unit’s social capital.

Hence, we expect that

H3. *Heads of research units seek financial assets by fitting together the opportunities available in their intra and inter-organizational networks of relations and the knowledge and knowing capabilities specific to their groups.*

3 Empirical setting and methodology

We provided a preliminary testing of these hypotheses through a set of interviews to heads of eight research units belonging to two European universities (hereafter, universities Alpha and Beta). Since this work can be recognized as exploratory, we first aim at validating our hypotheses and, second, we want to provide insights for further developments of our theoretical framework towards quantitative approaches.

3.1 Selection of case studies

The notations “chairs”, “research centers”, “laboratories”, “institutes” etc. have been grouped within the notation “research unit”, in order to avoid cross-country and cross-institutional differences related to different labels referring to the same concept.

In our framework, a research unit is identified through the formal acknowledgement/appointment of its institution. Other features are as follows: (1) it cannot include a single person, while it entails a group of people generally headed by a single person; (2) depending on the structural organization of the HEI, it holds a specific position (e.g. it can be embedded into a faculty and/or department, it can be an inter-departmental unit, or an autonomous actor) and an informal status within the institution; (3) it carries on a research program; (4) it has a specific research agenda; (5) it discretionary manages obtained funds; (6) it is able to make strategic choices.

The selected universities (hereafter Alpha and Beta) are young and small-sized (less than 10’000 students). The former aims at integrating local and international dimensions, while the latter aims at integrating social and engineering sciences. Both of them try to achieve integration especially through teaching (by attracting and educating students), but especially by favoring scientific domains which are perceived as having a strong impact on society, with a particular focus on scientific excellence. They are located in two countries which are characterized by a longstanding research tradition in universities, as well as by a mix of funding sources with a strong component of institutional funding through the universities and an highly differentiated system of funding agencies, including in both countries a strong Research Council supporting academic work.

While universities have been selected according to their young age and to their research-oriented vocation, the choice of research units has been made according to their multidisciplinary nature, as well as to their focus on emerging domains. According to Friedkin (1978), research-oriented universities provide “likely sites” of multidisciplinary integration: thus, they and their units represent an ideal place to observe features of social capital and of the “group specific” human and intellectual capital.

Levels of analysis concern the two different competition arenas as identified through the two different channels of funding.

SELECTING CASES		
Theoretical reasons	universities	young age, research-oriented vocation
	research units	multidisciplinary
Unit of analysis	heads of/research units belonging to two European universities (4 per institution = 8)	
Levels of analysis	institutional level (institutional funding)	
	external level/academic community (third-party funding)	

Table 2. Cases selection

3.2 Overview of case studies

Research units within University Alpha belong to the faculties of Informatics (units B and D) and of Communication Sciences (units A and C), whereas units within University Beta do not depend on any specific faculty since the university counts on a matrix structure where faculties take charge of teaching, while research is carried out by institutes which are, at the same time, strongly interdependent with almost all the faculties, thus providing a constant interaction and a interdisciplinary environment.

University	Unit	Foundation	Scientific domain	Fields	Staff	FUNDS OBTAINED IN 2009 (€)	INST* %	TPF** %
Alpha (1996)	A	2000	Communication Sciences	ICT, new-media, education, training, learning, development	14	178.540	30%*	70%
	B	1988	Computer Science	Machine learning, optimal universal artificial intelligence and optimal rational agents, operations research, complexity theory, and robotics	45	3.582.825	30%*	70%
	C	1998	Communication Sciences	Argumentation, linguistics, semantics, rhetoric, pragmatics	23	116.962	50%*	50%
	D	2008	Computational Sciences	Mathematics, physics, chemistry, biomedicine, engineering	12	747.032	30%	70%
Beta (1964)	E	2003	Biomedical technology and technical medicine	Physics, chemistry, biology, mathematics, engineering, social sciences	180	15 Mln	55%	45%
	F	1994	ICT	ICT, telematics, business engineering, behavioural sciences	475	26.5 Mln	56,5%	43,5%
	G	2004	Behavioral Sciences	Communication Sciences, psychology, educational sciences, industrial design	65	8 Mln	50%	50%
	H	1999	Nanotech	Physics, engineering, chemistry, mathematics, biology, philosophy	500	45 Mln	40%	60%

Table 3. Summary information on the considered units. *Source:* author estimation. * *institutional funds*; ** *third-party funds*

3.3 Methodology and data sources

Information on fund-seeking strategies has been collected through focused interviews with the heads of units. The interviews have been carried out in the period between June and July 2010 and took between sixty and seventy minutes. The interviews were semi-structured and aimed at collecting *perceptions* about the following issues:

- the process of allocation of funds (at institutional and external level): basically, to which extent these processes are based on procedures and/or negotiations. Here, *negotiation* is interpreted as a proxy highlighting the importance of a relational dimension in funding allocation (Table 4).
- The amount of funds obtained in year 2009, as well as the share of institutional and third party funds (Table 3).
- The conditions to improve the chance of obtaining institutional and third-party funds: basically *how* the acquisition of funds is maximized (Table 6).
- The key-actors involved in the process (Table 5).

- The characterization of the strategies adopted on the basis of five categories: *positional*; *relational*; *reputational*; *based on the owned resources*; *other*. These categories have been designed to cover the factors recognized as important by the literature, as well as to be referred to the dimensions of social capital (see the following table).

FACTORS	DIMENSIONS OF SOCIAL CAPITAL	CATEGORIES USED
centrality	structural	positional
access (to knowledge)	structural	positional
cumulative advantage	structural	based on the owned resources
legitimacy	structural, relational	reputational
power	structural, relational	positional
reputation	structural, relational	reputational
credibility	cognitive	other
quality	cognitive	other

Source: designed by the authors.

Whereas possible, information from the interviews has been completed and cross-checked with data from official documents and reports, as well as from field-notes; however, an objective reconstruction of the funding history of these units was not the aim of this study, whose focus is the representation of the heads about the factors maximizing the acquisition of funds and, thus, the organizational advantage. Furthermore, as long as the constructs of social and human capital require specific measurements and tools, it has been preferred to understand *if* respondents *perceived* social structure and knowledge/knowing capabilities of people as important to acquire funds, thus by asking them general questions and without taking-for-granted, specific correlations. In other words, respondents were not necessarily expected to comply with the direction suggested by theory and hypotheses, but answers have been analysed in their narrative stream and related to the theoretical constructs of social capital and intellectual/human capital (Table 6), thus identifying eight different ways/strategies to acquire funds. Finally, main common features of these strategies have been summarized (i.e. section 4.2).

4 Findings

In this section we present the main findings of our study, thus organizing them as follows: first, fund-seeking strategies as described by the interviewed heads are summarized and framed according to the construct of social capital in its three dimensions; second, a more in-depth analysis of them is carried out, in order to support the hypotheses presented in section 2.2.

4.1 Eight ways of acquiring funds across three dimensions

Exploring different fields within the domain

Unit A focuses on topics such as media, education, training, learning and development, all of them deployed through the lens and tools of Information and Communication Technologies.

Due to the breadth and to the competitiveness of its scientific field, it developed a “360° view of Communication” in order to match with different opportunities related to different fields. This is considered more a “tactic” than a “strategy”, as long as third-party funds, with their term-time duration, are the main income of the unit. Its head stresses the importance of intellectual/human capital for the acquisition of money: money depends on (the right) people, more than the opposite, but they also depend on relational features. The relational dimension of social capital is particularly stressed in its instantiations of trust and reputation. As stated by head of unit A:

“I think there is a strong correlation between who decides and the trust he/she has in the research unit, and here also a strong reputation, at both external and internal level, plays a key-role.”

Moreover, while the structural dimension of social capital is mainly interpreted as the access to key-people and as the position in associations perceived as relevant for the unit, the cognitive dimension can be detected in a more subtle way. In the words of the head of unit A, it involves a kind of “core” in a broad field such as Communication Sciences, with which it is useful to be coherent. Here, the challenge is represented by a progressive approach to this “core”, as well as by a particular attention “to meet and exceed expectations” of who decides about how to allocate funds. This is something more than simple conformity:

“(…) Conformity may mean uniformity, standardization ... of course we need to be compliant with expectations, but there could be also a dimension of surplus, and to me this is a crucial dimension (...) If I win something, I win it because, apart from what you expected from me, I also gave you something more.”

Coordinating different people with different specialties

Unit B displays a different structure, as long as it is an inter-organizational actor which belongs both to university Alpha and to another institution. Thus, it needs to find its legitimation in both contexts. This task is accomplished by a strong research activity which focus on local dimension, through several connections with industries, and on an international dimension, through projects developed in partnership with units in the same scientific domain and related fields. Head of unit B tells a story of patient building of reputation, perceived through a dimension of continuity and coherence of the scientific track to a clear research focus, but also through exploration and strengthening of a network of partners. These conditions are prone to attract funds, which increase also through the skills of people in carrying out high-quality research, as well as in project management: different people with different specialties are coordinated within the unit to match with different funding opportunities. Furthermore, the ability in attracting talented researchers is here perceived as a way to assess the success of a group.

Here, the structural dimension of social capital is perceived as the position of the unit and of its members in two different institutions, but also in the whole community to which it belongs:

"(...) You do publications which then others refer to, you get renowned, you take part to conferences, you are invited as keynote speaker ..."

The relational dimension, again, is mainly associated to the concept of trust, but also to a kind of explorative attitude towards the building of reliable partnerships:

"Sometimes we realize that some partners are less trustful than they seemed at a first sight, or that we have also been less trustful (...) Last year we addressed a proposals with partners we did not know, but we also did them with partners from our network ... I use to do like this. You need to explore, you build new consortia, new groups, you seek for new material, you look for feeling, but then you also try to strengthen what you already did with other partners."

Finally, the cognitive dimension is recognizable as a strong identity, which is built through the coherence of the research track. This coherence is the basis for creating something else, which was identified by unit A as the "surplus". Head of unit B calls it "delta":

"If you have a scientific tradition in a given field, then you can ask the funding agency to finance the new ideas. If you are able to create a relevant scientific track, than you can go on with "the plus delta something" (...) so you need to arrive to a scientific maturity and then to do some deltas."

Cognitive dimension means also quality, where "quality" cannot abstract from both what the agency recognizes as "core" and from a focused identity:

"Quality matters (...) sometimes you see that a call favored a project about a topic which was similar to the one you proposed, but then you realize that maybe that project was more centered (...) then you own two, three labels of important things you did, and they make you identifiable ... in my opinion the important thing is to be identifiable according to few things."

Adapting a strong expertise to different domains

Unit C plays a different game in acquiring funds: it is a long-tradition research group belonging to a broad scientific domain. Instead of exploring different fields within the domain (as unit A does), it concentrates on its main expertise by adapting it to different needs, also coming from different domains both within and outside the institution, as well as from business sectors. Head of unit C talks about a "strong hypothesis", which is pertinent with the issues of the community, but which is also able to change and "refrain".

"(...) It is important to build a dialogue, but because you have a strong key-point, a strong hypothesis. In other words, who is able to elaborate a strong hypothesis, thus going in for it and methodologically investing into it, he/she is also able to do competitive research."

"A strong hypothesis" can be related to a clear research focus as well as to a neat academic identity, thus highlighting the importance of the cognitive dimension of social capital as the driver to build the relational one. In the words of the head of unit C:

"(...) You can ask about each researcher: "Who is he/she?", and this is not about a name or a surname, while it has to do with scientific and disciplinary identity."

A clear focus allows on one hand for several connections at intra-institutional (with other units) and inter-institutional level; it also counts on positional features, but it cannot be reduced to them. Positioning is important:

"Being in different issues ... among issues' experts ... among reviewers ... yes: this is absolutely precious for positioning."

On the other hand, it entails a profound relational dimension, which here means a dialogue and a continuous comparison with a varied community of researchers aimed at improving knowledge and, internally, expertise.

"(...) Each of us is connected to more than one community (...) we sensitively but not radically change our communities."

The example chosen by head of unit C for describing the importance of relations is "syllogism": if a research unit has a major premise without the minor one, it cannot move to conclusion. Relations, dialogues, comparisons with other units provide the minor premise and conclusion represents the growth of knowledge. Here, the major premise is a strong research focus, and the minor one is the contributions which relations can bring to it.

Building relations, not only connections

Unit D is the newest within the institution: especially through the words of its head, it is very promising and aware of its position (i.e. structural dimension), strengthened by the strategic nature of its scientific domain, both within and outside the university. More generally, the three dimensions of social capital are tightly interrelated:

"We are a central node in the national initiative for high performance computing (...) also structures are important because structure creates reputation and reputation is important because it positions you with respect to your relations and so you can survive."

Head of unit D knows that it is important to fit into current money streams, as well as to have the support from the institution and to negotiate for obtaining additional funds. These conditions cannot abstract from the importance of "creating connections" and of having a good "running group" of talented people, who requires investments. Moreover, it is also important to have good relationships, more than connections per se: building high-quality relationships brings to a better diffusion (of people and ideas) process, while links that seem to be productive solely on scientific basis, but without a positive human value, have to be avoided. Finally, also head of unit D argues about the importance of building a research focus which then has to be coherent, at a cognitive level, to what is scientifically perceived as important:

"The question was where to put strategic emphasis on (...) is applying for funding in fields which currently get funding ... there are always some fields which are somehow in and where money goes (...) you have to adapt somehow what you do to fit into current money streams (...)the focus on computational science has to be constructed."

Helping the unit in strengthening its networks

Unit E is focused on biomedical technology and technical medicine and, although it is not the largest research entity, the university shows great interest in its positioning, thus favouring the structural dimension of its social capital through the creation of useful, relational connections .

Accordingly, current funding is composed by 55% of institutional funds and a 45% of external grants, but these shares should be inverted in the next years. It is also interesting to underline how, through the words of the respondent, the board of University Beta recognizes the growing importance of the field to which Unit 1 belongs, thus deciding to invest in its development by supporting the unit in strengthening its network at regional, national and international levels through lobbying activities.

"Our executive board helps us to strengthen our network, our relationships with regional authorities, but also on a national level and international level. So what we see is that there is grown interaction between the executive board of this university and the management of the institute in finding external funds."

Thus, this is a case where the institution perceives the importance of a scientific domain and it helps the intra-organizational growth of one of its sub-units. Among these external connections, other research units, industries and funding agencies are recognized as most relevant.

According to the cognitive dimension of its social capital, head of unit 1 stresses the relevance of coherence, of being multidisciplinary with a strong research focus. When asked to explain the possibility of ensuring simultaneously both a strong research focus and multidisciplinary, he highlights a risk to be avoided: having several research focuses within a single unit is like having several groups which work separately; coherence among research tracks allows to be innovative without being also dispersive.

“A strong focus, a strong research focus ... when you want to become, ya ... a leading institute you must have a clear focus in your research program, so what we did in the last year is that we distinguished four research team within our institute that helps us to have a strong focus internally but also externally (...) coherence means that we don’t want to have several research items within our institute.”

Furthermore, he also underlines the importance of finding and having “the right people”, as well as of optimizing project management skills, which are necessary to increase the chance of obtaining external funds. Finally, he stresses the relevance of funding agencies. Being well-connected with them is important not only when applying for funds, but also in order to make them more aware about the research issues on which agendas should be focused in the future.

Generating critical mass to create opportunities

The history of unit F displays how social capital can be actively and strategically used in its three dimensions to improve the acquisition of funds. Head of this unit came from another context and he brought to the new position his network of relations, thus providing a good amount of opportunities for the unit. In this case, the more it became well connected within the academic community, the more it became important for the institution. This process was carried out through an instrumental use of inter-organizational networks, and it can be summarized as follows:

(1) generating critical mass by playing a role in different networks.

“First approach is being in the writing team for the overall programs, that means in a process that has no overall programs ... there must be a program ... you must play your role in the writing of the overall program at the national level, and at the EU level (...) The position we have is important. You cannot do it in the right way as one of the employees ... you must have a position as scientific director, business director of an institute which have clear responsibility ... you can’t do the lobbying work as staff member (...) You need the right critical mass and you need the right focus and that’s the goal of the management of an institute: to create critical mass around certain topics and at the same time to create the right focus.”

(2) Carrying out lobbying activities, especially with funding agencies.

“(...) Position is not the crucial topic, you need it, but even with the right position without a relational network you can forget it (...) being connected with all those funding agencies and playing our lobbying work, political lobbying work in the right way, that’s the role of the institute.”

(3) Creating opportunities by stressing the right focus/topic/issues.

“(...) we are doing our lobbying work to take care that those overall programs are there with the right topics in it, that’s our task.”

(4) Catching the right time and then fitting together the right people (who balance quality and creativity) belonging to the unit with the right opportunity.

"(...) Then the goal of us is taking care that the right topics where you know you have the right research groups working on."

This process entails both top-down and bottom-up forces, but also intra and inter-organizational levels, while its instrumental nature can be anyhow cushioned by the establishing role of the research focus. Here the right research focus is the one on which, again, agendas should be focused in order to favour scientific progress and it is shared and enforced within the academic community. Head of unit highlights the importance of "being the core", especially to obtain third-party funds, meaning to fit together with the strategic scientific issues, as recognized by the community.

"(...)Our goal is to make choice with right focus (...)we are doing our lobbying work for those groups who are in the core (...) and the same is true when someone is considered part of the group but doesn't fit in our strategic choices ... I don't say you are doing a bad job but you don't fit our strategic approaches ... but then you are not member of the core. So we are doing our lobbying work for the core."

Creating a context for "the flagships"

Unit G is the smallest among the considered ones, and it has also a research vocation grouping a broad range of fields. Its head describes how the unit was once focused on too many fields: this dispersion brought to a "loss of positions" within the institution, thus highlighting the importance of a strong identity as instantiation of the cognitive dimension of social capital.

"(...) We can't do everything ... you have to choose, so we've made some choices (...) last year we had a whole process of refocusing of the research activities (...)then the quality of research is getting up because we are focusing."

It is interesting to underline how, through the words of the head, objective conditions such as size and funds received in the past are prone to improve the chance of being funded by the university, whose allocation process is recognized as based on procedures. Thus, a big effort to win back "positions" was carried out through the patient building of a "context" for the topics developed by stronger units within the institution. These are considered as the "flagship" of the university: thus, according to the head of unit 3, it is necessary to find a "niche" to be competitive. This was represented by a combination of technology and social sciences.

"(...) We have to pick niches where we can accelerate and compete with the best universities in the world."

The strategy to increase the chance of obtaining funds relies upon specific choices aimed at narrowing the research focus to the topic on which the unit is more skilled, but also at attracting talented people. Furthermore, head of unit G admits a difference between the ability of obtaining funds within the institution and the external context. While the former is driven by position, the latter is based upon relations.

"(...)To grow as institute we have to be more visible in other (networks) (...) we have a very good international network which helps."

Being in the league and making use of it

Unit H is the most reputed within the institution. Its head describe a funding process which has increasingly become based on negotiations. The relational dimension of social capital is here particularly stressed by head of this unit: building networks of relations, through which people and ideas can be exchanged, is necessary to be "in the league", "to make use of it", but also to count on intellectual/human capital, which is here represented by young and talented people, who need to be attracted, as well as by senior researchers, who guarantee scientific excellence.

“I don’t think it’s a strategy, it’s a necessity (...)creating partnerships and being in that league and using it, making use of it.”

Moreover, according to the respondent, the first question an institution, but also a unit should ask itself is: “Where do we want to go?”, thus having a clear direction of investment and, again, a neat identity.

“(…) It’s not just calculating the amount of people, the amount of publications or what it is. Ok ... where do we like to ... where do we want to invest, where do we have our main ambition, where are we among the best of the world and what we shouldn’t do anymore...”

4.2 Fitting together opportunities and capabilities

Looking for opportunities

According to the first hypothesis, the ability in building and strengthening social capital, as a source of funding opportunities, is a central concern in fund-seeking strategies. This construct is validating through the importance which respondents gave to *relations*, but also to *connections*, *partnerships* and *networks* (i.e. Table 6). According to the interviewees, the processes through which funds are obtained, both from internal (institutional) and external sources, entail negotiations, although often supported by procedures (i.e. Table 4).

Institution	Unit	Negotiations	Procedures	Factors (INST)*	Factors (TPF)**
University Alpha	A Communication Sciences	X	X	trust; reputation; past experiences	awareness, patience, skills
	B Computer Science		X	consistency of the scientific track; exploitation of scientific results; scientific maturity	experience (also about the mechanisms of funding process); skills, trust
	C Communication Science	X		ability to compare with scientific community; dialogue; having strong hypotheses	ability to compare with scientific community; dialogue; having strong hypotheses
	D Computational Sciences	X		research focus strategic for the institution; ability to negotiate for additional funds; productivity	networking; having a running group; fitting with current money streams
University Beta	E Biotech	X	X	having a strong research focus; finding right people; strong programme office	having a strong research focus; finding right people; strong programme office
	F ICT	X		size; strategic importance	creativity, quality, being the core
	G Behavioral Sciences		X	size; funds received in the past; fit together with the topic university recognizes as important	knowing opportunities; international network; combining technology and social sciences
	H Nanotech	X		scientific excellence; attractiveness for external funds; patents and spin-offs	Attracting and educating high-talented young people; reputation of “older” scientists; application oriented multidisciplinary work and collaboration with industries

Table 4. Characteristics of the funding process and factors impacting the acquisition of funds. * institutional funds; ** third-party funds. *Source:* designed by the authors.

As a respondent states “It’s important to provide high scientific quality, but it’s important that others believe that quality exists.” - thus implicitly highlighting how criteria which should represent an objective way to assess the production of a research unit, actually entail the relational dimension of social capital, namely trust, norms and sanctions. *Negotiations* are here perceived as relying upon relations, which are played at different levels, thus displaying a “collaboration (that goes) beyond organizational boundaries”.

Among the people recognized by the interviewees as institutional key figures for the acquisition of funds, not only rector, boards or deans are cited, but also other faculties and other institutes within the same university.

At an external level, several are the actors recognized as key figures to obtain funds (i.e. Table 5): these are ministries and funding agencies, but also other institutes focused on the same scientific domain, industries and spin-offs. In particular, spin-offs are considered as a kind of “buffering” between the academia and the industrial context and they help the dialogue of these two actors.

Institution	Unit ID and scientific domain	Key-figures (INST)*	Key-figures (AC)**
University Alpha	A <i>Communication Sciences</i>	no answer	colleagues
	B <i>Computer Science</i>	administration, faculties	other partners, industries
	C <i>Communication Science</i>	other institutes	other institutes
	D <i>Computational Sciences</i>	dean,president, colleagues	key-figures
University Beta	E <i>Biotech</i>	other faculties	other institutes, industries, funding agencies
	F <i>ICT</i>	Board members, colleagues, other institutes	other institutes, funding agencies, ministries
	G <i>Behavioral Sciences</i>	faculty,dean,other institutes	other institutes, funding agencies
	H <i>Nanotech</i>	board,other students institutes,	other institutes, NGOs, industries, spin-offs

Table 5. Key actors in funding acquisition. *Source:* designed by the authors; * institution; ** academic community.

To summarize, through the words of respondents, there seems to be no preferences related to specific hierarchical position: heads of research units need to relate to deans, but also to students; they need to relate to funding agencies, but also to potential partners like similar institutes/research units. In other words, they need to strategically invest both in formal relations and in the “content” of these relations, which is here provided by the specific human/intellectual capital that students or other units bring with them to feed the scientific domain.

Shaping opportunities

According to second hypothesis, given the dual nature (institutional and third-party) of research funding in most European countries, heads of units need to actively shape the structural dimension of their social capital (network) at both intra and inter-organizational levels. Hypothesis two goes beyond the first, by highlighting the agency of actors in modifying their position within the structure of social capital in order to access opportunities, and it has been partially validated by empirical data. This partiality depend on a more complex picture which emerges from the perceptions of interviewees, and which displays an interaction between intra and inter-organizational networks as structural dimensions of the same social capital, which can be actively shaped and instrumentally managed.

Social capital of a research unit, through the words of their head, can be recognized as made by two types of networks: an intra-organizational one, and an inter-organizational one, which provides the above-mentioned “collaboration beyond organizational boundaries”. These two networks are here distinguished only on a conceptual basis, as long as some institutional actors within the intra-organizational dimension

play an important role in activities of inter-organizational lobbying, this in order to help units in their growth.

It is important to highlight how interviewees have demonstrated to be aware of these networks and how they instrumentally and strategically move into them/use them.

“We have our political network”, says a respondent in describing how, the conscious and patient building of national and international networks of units with the same research focus was useful to generate critical mass and to put on the stakeholders’ table the research issues recognized by the community as the most critical for the progress and, thus, as the most necessary to be funded.

Another interviewee talks about the importance of *“being in the league and make use of it.”*, which means *“creating partnership with the best research units focused on the same research issues”* and entails an *“organized interactivity”* where multidisciplinary work and where *“exchange of people and ideas”* are easier.

Most importantly, the interviews point to the fact that, despite a large share of third-party funding, some degree of institutional support is required and heads of units strategically handle this issue. As the case of unit E displays, this is not only a matter of resources: institutional support takes also the form of recognition and legitimation which helps in creating external linkages, for example with units working in the same domain, as well as with funding agencies. On one hand, respondents acknowledge institutional support and consider it as quite relevant for the development of their unit. On the other hand, as one of the respondents states, if a unit gets legitimation from external audiences, it indirectly supports also the standing of the university, which thus develops an interest in endorsing successful units.

Counting on capabilities

Finally, according to third hypothesis, heads of research units seek financial assets by fitting together the opportunities available in their intra and inter-organizational networks of relations and the knowledge and knowing capabilities specific to their groups.

The importance of intellectual/human capital has been perceived at different levels. According to the interviewees, the acquisition of funds depends more on the right people than on the opposite. Here, being the *right* people involves both personal and professional skills: while the latter entail specific abilities and knowledge (e.g. project management skills), which need further investment, the former include features like creativity, will, ability in carrying on dialogues, as well as the ability *“to meet and exceed”* expectations.

Moreover, the ability in attracting high-talented people is a recurrent feature belonging to units perceived as successful and, as described by head of unit D, it is more important to count on good relationships than on useful connections. Here the actors - as well as their personal skills, knowledge, history, experience - involved in these relations play a key-role in bringing about what is here recognized as *“good”*.

As Table 6 summarizes, there is wide agreement among the respondents on the importance of both social and intellectual/human capital for acquisition of funds, but also on the importance of fitting together the two.

Unit	Social capital	Intellectual/human capital	Strategy
A	relational dimensions which cannot abstract from trust and reputation	importance of human capital for the acquisition of money: money depends on (the right) people, more than the opposite	<i>matching</i> with different opportunities related to different fields, within the same domain
B	connections with industries, exploration and strengthening of a network of partners	skills of people in carrying out high-quality research, as well as in project management; ability in attracting talented researchers perceived as a way to assess the success of a group	continuity and <i>coherence</i> of the scientific track; different people with different specialties coordinated within the unit <i>to match</i> with different funding opportunities
C	connections at institutional (with other units) and inter-institutional level; profound relational dimension; dialogue and continuous comparison with a community of researchers aimed at improving knowledge	expertise adapting to different needs	concentrating on the unit's expertise by <i>adapting</i> it to different needs, also coming from different domains; having a strong hypothesis
D	importance of building high-quality relationships	having a good "running group" of talented people	<i>fitting together with</i> current money streams; building high-quality relationships for a better diffusion (of people and ideas) process
E	working on the inter-organizational connections of the unit: among them other research units, industries and funding agencies	finding and having "the right people"; optimizing project management skills	being multidisciplinary with a strong research focus
F	playing a role in different networks; carrying out lobbying activities, especially with funding agencies;	fitting together the right people (who balance quality and creativity) belonging to the unit with the right opportunity	generating critical mass to create opportunities
G	third-party funding perceived as based upon relations	attracting talented people	narrowing the research focus ; patient building of a "context" for the topics developed by stronger units within the institution
H	being "in the league" "make use of it",	attracting young and talented people, retaining senior researchers, who guarantee scientific excellence	having a clear direction of investment

Table 6. Eight strategies for acquiring funds through social and intellectual/human capital. *Source:* designed by the authors.

Three levels of coherence

Table 6 shows also two interesting features belonging to all the described fund-seeking strategies: first, verbs such as "to meet", "to match" etc. highlight the recurrent perceptions of respondents about the necessity of having and creating opportunities, which should *fit together* with specific capabilities. Second, the commitment in defining a specific research focus for the unit is considered as a key for long-term success in acquiring funds.

According to third hypothesis, in order to improve the chance of obtaining funds, opportunities within and accessible through social capital should fit together with group-specific human/intellectual capital. Results of the interviews show that a more-profound meaning of the ability in “fitting together” is perceived. It is argued that this meaning has to do with the concept of *coherence*, which is here introduced as an important issue to be developed in future works, and which is required at three levels:

1. *coherence* and strength of the research focus, which refers to the adhesion to strong choices of research, which brings to the continuity of scientific track and, thus, to a clear academic identity;
2. *coherence* of the research focus to the research issues recognized as strategic by the institution;
3. *coherence* of the research focus to the research issues recognized as important by the academic community.

The second level is critical: while it could seem that actors (here research units) simply comply with what their institutions perceive as “strategic”, they are also able to change these perceptions by acting on the third level of coherence: their ability in matching the issues recognized as critical by the community, by building and strengthening external connections, improve the chance of obtaining external funds, thus improving also the chance of becoming “strategic” for the institution itself.

“Now we are returned to their table”.

Declares a respondent to describe the final phases of the process aimed at acquiring the interest of the institutional board and made by strong efforts in building a network of external relations. This process recalls the words of Lin (2003, p.32):

“(…) to change the values of resources requires more than individual actions; it needs the mobilization of other actors who make similar demands. Such mobilization can range from the formation of social networks promoting alternative value assignments to resources to revolutions that aim to replace the community’s decision makers.”

The case of unit G shows that second level of coherence is also important for these units which are not institutionally recognized as strategic: university Beta has a technical and scientific vocation, where technical units are considered “the flagship” of the university; accordingly, unit G (focused on social sciences) developed a specific niche in interdisciplinary studies of technology adoption, thus by providing “the context” for the activities of these units recognized as more important within the institution.

Finally, it is here argued that the first level is the most important for being competitive and, thus, for obtaining funds. According to respondents, “coherence and strength of the research focus” means

(to have a) “scientific identity”

(not being) “too dispersive”

(giving) “continuity to scientific research”

(knowing) “where do we want to go”

(Asking) “who you are?” to each researchers

Respondents indicate that dispersion and lack of focus are a major risk for a research unit and that it would lead to a loss of position both at intra and inter-organizational levels. The process of focus-reconstruction is often painful, and it involves both the development of specific identity and capabilities at an intra-organizational level, as well as the legitimation from external audiences.

It is now possible to argue that coherence in its three identified levels is able to improve the chance of a research unit in acquiring funds.

Being coherent does not mean “being aligned” or being compliant with institutions and academic communities: firstly, it means a patient building of scientific track, through specific choices and continuity of research which cannot abstract from skills, expertise and reputation of involved people.

At a second stage, being coherent means also being able to adapt, without losing identity but by enriching it through explorations and collaborations. Adaptation can be referred to strategic issues as recognized by the institution and by the academic community, but it can be also recognized as an active kind of adaptation which is aware of the possibility to change a state of art. Again, this possibility relies upon skills and expertise of researchers, as well as upon their ability in building connections and in making use of them.

It is important to highlight that the concept of *coherence* denotes punctuality, while respondents described out-and-out processes where coherence is more a final, successful step, than a prerequisite. Accordingly, it can be argued that coherence is *constructed*, and that its construction can be recognized as a best practice to be suggested for funds-seeking strategies. Finally, it is also important to underline how, without this first level of coherence (coherence of the research focus *per se*), it is difficult to pursue the other two. A strong and coherent research focus is the necessary condition for scientific progress; furthermore, this level preserves research from being just an exercise of alignment to institutional and community's issues.

5. Conclusions

Given the limited number of the considered units and the exploratory nature of this study, the results presented in the previous sections cannot be generalized and we recognize this as the main limitation of the present study. Accordingly, it is important to highlight how its conclusions might have been biased by taking into account only units in two young and entrepreneurial universities, where bottom-up initiatives are explicitly encouraged, as well as in two countries with a strong tradition in research funding and in the integration of the academic community in national priority-setting and funding agencies. A stronger empirical validation of the proposed theoretical approach and hypotheses, as well as of the three levels of coherence presented in the previous section is thus needed.

Nevertheless, we argue that this work displays some strengths which can be developed in future researches. We discuss them according to the contributions given to Higher Education Studies, Organizational Studies and Strategic Management.

The framework provided by Social Capital Theory is very suitable to represent, describe and explain the specificities of higher education institutions, as organizational units which are embedded in a dense social setting where positions, but also relations and shared values matter. Of course, some characteristics of funding systems, as well as strategic public priorities and reputational issues, might be so strongly embedded in social context to be considered by researchers as fixed boundary conditions for their action. However, as pointed out by the results of this study, new research topics can be put on the agenda of funding agencies, emerging domains can get reputed in the academic communities and then supported by research councils and new themes can be integrated bottom-up in the university strategic plans.

Accordingly, best practices for successful research entrepreneurs can involve investment into relationships and human capital, but also the shaping of social structure in order to create regular funding opportunities for their own research program, thus reducing costs and uncertainty. This is often a long-term process, where coherence represents a constant objective and it can be sought dynamically in its three identified levels, in order to develop a stable niche where continuity can be achieved both in research activities and in the flows of resources.

Although in this paper we dealt with the acquisition of financial resources as a key for the improvement of subunits such as research groups, we believe that an approach focusing on social capital, can be easily recognized as a strong theoretical tool to frame specific, empirical issues, also at different levels of analysis. Future works may consider the idea of testing on a larger scale, and through refined methodological tools, some insights provided by our preliminary hypotheses, in particular by H2 and H3.

H2 can be considered as particularly relevant if framed within Organizational Studies' perspective, by addressing a more in-depth understanding of the mechanisms which drive the complex interplays among different dimensions of social capital. Moreover, it provides insights to study how intra-organizational networks of organizational subunits are able to impact on their internal positions. This issue can be explored also by works in Strategic Management dealing with the role of specific actors in actively shaping the opportunities provided by social capital.

Finally, H3 suggests implications in terms of both adaptation and differentiation to broader, cognitive systems of meaning as shared by institutions and epistemic communities. Organizational Studies already dealt with this issue by addressing the role of categories as both imperatives to be compliant with (Zuckerman, 1999) and templates aimed at the exploration of potential tools for innovation (Schneiberg and Berk, 2010). Here, the setting provided by Higher Education Institutions seem to be an interesting asset to be exploited in future researches.

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