

Financing of Innovative Small and Medium-Sized Enterprises. A Research in Turkey

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Abstract Today's business realm involves a vast variety of businesses and business groups; small and medium-sized enterprises (SMEs) being one of the most prominent. Despite countless investigations from many different business-related perspectives, their innovation perspective is rarely subjected. This current study chooses this perspective and moves a step beyond by considering financing of these businesses. In other words, this study covets to uncover how innovative SMEs are financed, how much these businesses care about professionalization towards financing issues, and what problems they face in their financing processes. Emphasizing innovative SMEs in techno parks in Turkey, this study discloses noteworthy facts from the Turkish context. Major findings pinpoint a low priority towards a professional financing approach and problems related with external and long-term financing opportunities. A noteworthy implication about both external and long-term financing is that they are entirely dependent on exogenous factors. Most of the participating businesses are on micro and small scales, besides being very young.

Key words Innovation, Small and Medium-Sized Enterprises (SMEs), Capital, Finance, Turkey

DOI: 10.6007/IJARAFMS/v6-i1/1997

URL: <http://dx.doi.org/10.6007/IJARAFMS/v6-i1/1997>

1. Introduction

Being one of the key players, small and medium-sized enterprises (SMEs) dominate business contexts worldwide (Kheng and Minai, 2016) and thus actively participate in economic development of many countries (Duc, 2016). A lately striking point about these businesses is their emphasis on innovation and the choice of using innovation as an aid for survival (Beynon *et al.*, 2016) or a strategic competitive advantage (Van de Vrande *et al.*, 2009). This emphasis is a great challenge for these innovative SMEs as innovations need continuous research and development efforts (Palmie *et al.*, 2016) as well as a continuous funding activity (Wonglimpiyarat, 2015).

All these needs actually render this challenge into a hummock. The insufficiency of available external capital (Hsu, 2004); paired with information asymmetries between these businesses and lenders (Carpenter and Petersen, 2002), difficulties of collateralization due to low value of their intangible assets (Rammer *et al.*, 2009), and uncertainties related to innovations' success (O'Sullivan, 2006) can become fatal inducements for these businesses. Therefore, financing becomes a real nuisance for innovative SMEs.

Despite its obvious importance, this nuisance is not much addressed in the literature directly. Other than the efforts of uncovering facts about research and development funding (e.g. Aghion *et al.*, 2004; Lerner and Hall, 2010), there is a faint consideration of innovative SMEs' financing choices (e.g. Acs, 2002) and related factors such as their capital (Hogan and Hutson, 2005) and financial (Aghion *et al.*, 2004) structures, bankruptcy (Hatten, 2016), and venture capital (Bottazzi and Da Rin, 2002). The present study aims to contribute to the literature in this sense and moreover, aspires to present interesting related facts from the Turkish context. The authors collect data from a sample of 54 innovative SMEs from techno parks in Turkey, which operate in many different sectors. The overall results yield that financing is not much professionally considered in these businesses and there are important problems about external and long-term financing.

2. Literature review

A Look at Innovation and Innovative SMEs

Innovation has become a very popular subject within many fields (Tidd, 2001) and is perceived as the global phenomenon in business environment to stand up the fierce competition not only in specific regions (Cooke, 1992) or markets (Utterback and Suarez, 1993; Wilke and Zaichkowsky, 1999), but also at the global level (Reddy, 1997; Zhu et al., 2006). Innovation; with its specific continuous models (Ireland and Webb, 2007; Mitchell and Coles, 2003), strategies (Teece, 2010; Zerenler *et al.*, 2006), and contextual possibilities (Hargroves *et al.*, 2013) can moreover provide a great advantage to businesses in order to manage this competition (Basim *et al.*, 2008) through the power of transformation (Cowan-Sahadath, 2010; Demirel and Seckin, 2008).

Innovation, developed from the word *innovatus* (Ozen and Bingol, 2007), is related to a process of renewal and its results simultaneously (Rogers, 1998). From the business paradigm, innovation may be defined as a new or enhanced product, service, or method that emerges at the end of a renewal process (Kavak, 2009) with a dual emphasis on the internal and external environments of the business (Damanpour, 1991). Though some definitions of innovation don't emphasize effectiveness primarily and calls it simply as the acceptance and implementation of new ideas, products, services and processes (e.g. Thompson, 1965) or the perception of newness and originality (Van de Ven, 1986); some definitions (e.g. Wong *et al.*, 2009) insist that there must be increases in the effectiveness, which should provide a common benefit to the stakeholders in order to talk about innovation. There is indeed a remark in the literature that innovation lacks a common widely accepted definition (McAdam *et al.*, 2004); nonetheless addressing this problem yields that various definitions commonly emphasize newness, change, improvement, and products, services and processes (Baregheh *et al.*, 2009).

Though Schumpeter (1934; 1950) is the pioneering voice to claim that organizations should pursue innovation, there are much early implications of this occasion in the literature (e.g. Lorenzi *et al.*, 1912). When these implications are coupled with direct references to innovation, there appear many different forms of innovation. A broad approach posits that innovation can take three different forms; process innovation, item innovation (a product, service...), or organizational innovation as an attribute (Kimberly 1981). Regardless of any form, innovation can also be incremental or radical (Kahn *et al.*, 2003; Plessis, 2007). An interesting point of classification depends on the consideration of relativity. While a target audience's perception of specific changes and related newness is enough to be able to claim the presence of innovation (Van de Ven, 1986; Zaltman *et al.*, 1973); an opposing idea insists that innovation must be unique in global terms (Becker and Whisler, 1967). This relativity is moreover not limited to target audiences; the performer or the agent of innovation may also be in a vast variety of forms. Literature makes many examples in this sense; such as individual (Kirton, 1988; Pitt and Clarke, 1999), group (Fernandez, 2001; Leonard and Sensiper, 1998), organization (Feldman and Ronzio, 2001; Garcia and Calantone, 2002; Ruppel and Harrington, 2000), and supra-organization (Ahuja, 2000; Biswas, 2001) levels of innovation. All these facts point out that innovation extends among many dimensions and can profoundly differ according to form, audience, and source.

A striking fact is that innovation, with all its mentioned varieties, was attributed to large businesses in the past (Chandler, 1990; Mansfield, 1984). The innovative capacity of SMEs has only been a scientific curiosity since the last few years (Caves, 1998) due to their short span of life (Keogh 1999) and their low priority for research and development (Kleinknecht, 1989). Despite these negativities, innovative SMEs are under the scope of many studies and the pillars of innovativeness are scrutinized primarily (Tether, 1997). These pillars are briefly claimed to be a fast response potential for sudden contextual changes (Rothwell, 1989), risk management ability (Hadjimanolis, 2000), unique competencies (Sexton and Barrett, 2003), and knowledge management skills (Gray, 2006). With some or all of these pillars combined, innovative SMEs are expected to benefit from in-house research and development (Freel, 2005; Roper, 1997), or to form strong technology-focused co-operations (Brockhoff, 1991; Stafford, 1994) or even strategic technology alliances (Eisenhardt and Schoonhoven, 1996; Hagedoorn, 1993) in order to make innovation their core competence ultimately (Edelman *et al.*, 2005).

The mentioned recent scientific curiosity seems to be appropriate because innovative SMEs are becoming one of the prominent actors of many economic contexts. The literature, in fact, points out that

these businesses are dominant in the innovative capacities of many emerging countries (Fu *et al.*, 2011; George and Prabhu, 2003) such as Korea (Lee *et al.*, 2015), China (Usman *et al.*, 2015), Mexico (Rodriguez-Pose and Villarreal Peralta, 2015), and India (Fan, 2011; Reddy, 1997) as well as of the European Union (Carvalho *et al.*, 2015) and the US (Prajogo and Ahmed, 2006).

Capital Structure. Definitions and Capital Related Problems of Innovative SMEs

A literature review unveils that capital and capital structure are very popular subjects within many scientific fields, thus a variety of studies scrutinizes these subjects deeply. Although accounting or finance comes to mind in the first place when referring to capital, capital is considered from different angles by different branches. For instance, literature points out that there are intellectual (Bontis *et al.*, 2000), social (Bassani, 2007), family (Ayranci, 2009; Sorenson and Bierman, 2009), human (Heckman, 2000), and social innovation (McElroy, 2002) capitals. Despite all these varieties, a *pure* definition identifies capital as *an advantage gained or an accumulation of power* (The Free Dictionary 2016). When the attention turns to finance field, capital is assumed to be *the total financial value of business assets* (Investopedia, 2016a) or *the total wealth of a business needed for its operations* (Inc., 2016). Despite these simple definitions, capital becomes a complex concept with its diversities such as working capital (Hill, 2013), net (Rehn, 2012) and gross (Brealey *et al.*, 2006) working capital, operational working capital (Monto, 2013), net operational working capital (Hill *et al.* 2010), and financial working capital (Hoque *et al.*, 2015).

Similar to the capital, *capital structure* has a simple definition. It may be considered as *the mixture of a business's long and short term debts and equity* (Investopedia, 2016b) or can be defined as *the financial source composition of a business in order to finance its operations* (Oxford Dictionaries, 2016). This simplicity, however, leads to wrong conclusions when a deeper scientific focus is used. In other words, the literature claims that the above definitions of capital structure are not fully accurate. There is a claim that the long and short term debts should not be treated to be in the same class as short-term debt is used to fund daily operations, thus it has to be considered within working capital solely (Joshi, 2013). This emphasis leads to a distinction between *capital structure* and *financial structure* of a business. In this case, capital structure can precisely and scientifically be defined as the pattern, which is built by all long-term financial sources of a business (Weston and Brigham 1990); whereas financial structure refers to the pattern, which is shaped by *all* business liabilities, regardless of their time frames (Patra and Panda, 2006).

The consideration of capital structure's accurate and scientific definition implies that its composition has many underlying factors from internal and external environments. Regardless of the debates about arriving at an optimal capital structure (Titman and Tsyplakov, 2007); corporate spin-offs (Dittmar, 2004), market capitalization (Ruan *et al.*, 2011), and dividend policy (Manos, 2001) are all found out have reciprocal relationships with the capital structure of a business; whereas suitability of business assets to be used as collateral for debt-financing (Cassar and Holmes, 2003), warranties of using collateralized debts for specific investment projects (Galai and Masulis, 1976), tax issues such as tax allowances (Flannery and Rangan, 2006) and tax incentives (DeAngelo and Masulis, 1980), management's expectations about long-term business growth (Titman and Wessels, 1988), issues related to agency relationships (Lambrecht and Myers, 2006; Morellec, 2004), business liquidation process (Titman and Wessels, 1988), business size (Rajan and Zingales, 1995), revenue trend of the business (Kim and Sorensen, 1986), profitability (Lim, 2012), foundation process (Moon, 2009), and finally managers' personal features (Carter and Rosa, 1998) and preferences (Harris and Raviv, 1993) are all posited to affect the capital structure of a business unilaterally.

All these factors have led to the emerge of many different capital structure theories, from the classical net revenue (Durand 1952), net operational revenue (Kuhlemeyer, 2002), and Modigliani-Miller (Modigliani and Miller, 1958) approaches to the contemporary trade-off (Fama and French, 2002), agency (Jensen, 1986), pecking-order (Myers, 1984), signaling (Ross, 1977), and market-timing (Baker and Wurgler, 2002) theories and the neutral mutation hypothesis (Kamath, 1997).

Despite this vast variety, innovative SMEs are related with only few factors and theories of capital structure, which leads to many noteworthy points. Although these businesses are under the umbrella of small and medium sized enterprises (SMEs) and thus have similar capital structures (Ertugrul, 2011), innovation is the main driving force behind their capital preferences (Hogan and Hutson, 2005). Reaching appropriate external funding sources is a great villain for SMEs (Cant and Wiid, 2013; Klagge and Martin,

2005), while it gets even worse for innovative SMEs (Westhead and Storey, 1997) as innovation is perceived to be a risky matter by creditors (Baldwin *et al.*, 2002; Giudici and Paleari, 2000). This extra risk requires greater collaterals (Carpenter and Petersen, 2002; Guiso, 1998) and creditors quite often deny providing credits to these businesses due to specific reasons. Innovative SMEs, for instance, usually have incapacities to pledge their assets as collateral (Jordan *et al.*, 1998), their valuation and thus collateralization is hard to make (Audretsch and Weigand, 2005), and their innovation may not be considered to be qualified enough to become collateral especially if the related technology changes rapidly (Westhead and Storey, 1997). These reasons obligate innovative SMEs to use their limited internal funding sources profoundly (Hogan and Hutson, 2005), prefer short-term debt primarily as an external funding source (Freel, 1999), benefit from venture capital at a very high cost (Bottazzi and Da Rin, 2002; Rossi, 2015) or use equity financing as a last resort (Giudici and Paleari, 2000). All these findings imply the use of a pecking order to select among different funding sources; although some scholars (e.g. Acs, 2002; Atherton, 2009; Sau, 2007) claim that there may be some adjustments in the pecking order in some certain cases. With or without any adjustments, there is indeed clear evidence that innovative SMEs actually facilitate from pecking order theory to set up or update their capital structure in various settings such as Belgium (Bozkaya and De La Potterie, 2008; Manigart and Struyf, 1997), Sweden (Andersson and Loof, 2012), Italy (Vacca, 2013), the UK (Parris and Demirel, 2012), USA (Sjogren and Zackrisson, 2005), Turkey (Ertugrul, 2011), Ireland (Hogan and Hutson, 2005), and Canada (Baldwin *et al.*, 2002).

The lack of professional management, which is generally attributable to SMEs and innovative SMEs (Desouza and Awazu, 2006; Durst and Runar Edvardsson, 2012; Smith, 2003), deteriorates the effectiveness of the pecking order (Aypek, 2001; Hamilton and Fox, 1998; Paul *et al.*, 2007). This deterioration, moreover, is reinforced by a distinctive occasion of innovative SMEs. These businesses need a continuous funding as they use their equity during their startups and need additional sources to fund their innovations thereafter (Hadjimanolis, 1999), thus these businesses' decision-makers may even need to be more competent than other SMEs' decision-makers. If this need for extra competency is not addressed, there can easily be catastrophic funding problems (Acs and Audretsch, 1990; Hatten, 2016; Kortum and Lerner, 2000) especially due to economic instabilities (Bekci and Usul, 2001; Keskin, 2006), inefficient investments (Radas and Bozic, 2009; Yucel, 2000), capital market access problems (Ayyagari *et al.*, 2012; Chang *et al.*, 2006; Muftuoglu, 1991), and insufficient innovation incentives (Ertugrul, 2011; Mahmood and Mitchell, 2004) in emerging countries.

3. Methodology of research

Due to the purpose of unearthing innovative SMEs' financing issues; data from 54 of these businesses, which are present in Turkish techno parks, are collected. Data collection is utilized by a bipartite questionnaire and while the first part is about businesses' features; the second part deals with financing issues with an emphasis on professionalization, and the use of external and long-term financing. This second part is formed according to the conclusions of specific related studies, namely those of Bottazzi and Da Rin (2002), Carpenter and Petersen (2002), and Freel (1999; 2005). The questionnaires are applied via face-to-face communication.

3.1. Findings about Business Features

While more than half of the participants (61.11% - 33 businesses) are micro businesses with 9 business members at most; one third (31.48% - 17 participants) is constituted by small businesses, having 10 to 49 business members. The rest four businesses (7.41%) claim to have between 50 and 250 members and thus fall into mid-sized business category. Micro and small businesses' passion for innovation is actually a surprising outcome. The findings about sectors, on the other hand, do not surprise the authors. Almost 65% of participants (35 businesses) are in the information technologies sector, followed by consultancy (9.26% - 5 businesses), and machine design (7.41% - 4 businesses) sectors. There are also a few businesses in other sectors with examples such as medicine (3 participants), law (2), ceramics (2), and textile (1). Similar to the distribution among sectors, ages of the businesses do not give a surprise; most of them are very young as expected. Exactly half of the businesses (27) are infant – between 0 and 5 years old. 29% of

the participants (16 businesses) are between 6 and 10 years, and about 17% (9) are between 11 and 25 years old. Only 2 businesses are older than 25 years old.

The findings about all managers in all of these businesses (a total of 197 managers) point out that just more than 60% (119 participants) of these people have an undergraduate degree, whereas 31% (61 participants) have a graduate degree. There are also 17 managers with a high school degree. Education levels lower when workers (688 people) are in question; almost half (49% - 337) have a high school degree and 40% (275 people) have an undergraduate degree. This reveals that only 11% (76 people) have a graduate degree. Facts about education levels are also astonishing; although managers' education levels suit the authors' expectations, workers were anticipated to have a higher level of education generally.

3.2. Findings about Financing Issues

Financing section of the questionnaire starts with start-up capital. The results indicate a very strong compliance with the literature - almost 80% (43 participants) of the businesses are founded by owners' equity entirely and just more than 13% (7 participants) prefer a mix of owners' equity and external capital simultaneously. Besides 2 businesses' avoidance of an answer, a much unexpected result is that another 2 participants' foundation entirely depends on external capital. The conservativeness towards capital source is moreover found to continue afterwards. Approximately 80% (43 participants) do not use any external financing currently and only 20% (11 participants) use long-term financing. Those using external financing state that the major problems about reaching this source are ambiguities about procedures and bureaucracy (47%), credit terms (21%), extremely high costs (16%), and insufficient amounts granted (16%). Besides these findings, all of the businesses using any long-term financing posit that they have a great difficulty to access this type of capital. A deeper investigation about this difficulty yields that there are two main reasons behind – equity insufficiency (83% of the answers provided) and economic imbalances (17%).

A more detailed look at the use of external financing reveals that the most preferred source is the bank credit (4 out of 11 businesses give the highest priority), followed by financing via angel investors (4 over 11 participants), and incentives or credits granted by the government (3 over 11). The funds obtained as such are primarily used for research and development purposes (stated by 69% of the ones using external financing), followed by special line service procurement (15%), and capacity expansion investments (about 8%). When professionalization of financing issues is considered, the participants purely show a great weakness. As a beginning, almost 95% (51 participants) of the businesses do not have a finance department. Financing decisions are taken by business owners or managers in 78% (42 participants) of the businesses, whereas roughly 15% (8 participants) transfer these decisions to a professional finance manager and a 7% (4 participants) assigns an accounting manager. Despite these upsetting results, the businesses declare that their presence in a techno park is useful for tax incentives (61% - 33 participants), and financing opportunities special to techno parks (34%). This affirmative declaration, however, is not properly addressed by techno parks' management as almost 52% (28 participants) of the businesses assert that they are not supported by these parks' management.

3.3. Findings about External Financing – Business Features Relationships

After the investigation of the participating businesses' features and their financing issues, the next step is to scrutinize the relationships between external financing and a bunch of business features such as the scale and age of businesses, and the presence of a finance department. Table 1 presents the first array of relationship in this sense – between business scale and the use of external financing.

The relationships in Table 1 are tested by a Chi-Square analysis in order to reach a conclusion about the first hypothesis:

H_{0A}: There is no relationship between the participating businesses' scales and their use of external financing.

The analysis performed by SPSS software reveals that the significance level (p) is 0.141 and thus at 5%; $p > 0.05$. H_{0A} is accepted in this case, and therefore there is not a significant relationship between the participating businesses' scales and their use of external financing.

The next relationships – those between the participating businesses’ ages and their use of external financing – are shown in Table 2. These are to be tested in order to obtain a result about the second hypothesis:

H_{0B}: There is no relationship between the participating businesses’ ages and their use of external financing.

Table 1. The Relationships between Businesses’ Scales and their Use of External Financing

| Business Scale | | Do you use external financing? | | TOTAL |
|----------------|------------|--------------------------------|------|-------|
| | | Yes | No | |
| Micro | Number | 5 | 28 | 33 |
| | Percentage | 15,2 | 84,8 | 100 |
| Small | Number | 6 | 11 | 17 |
| | Percentage | 35,3 | 64,7 | 100 |
| Mid-Sized | Number | 0 | 4 | 4 |
| | Percentage | 0 | 100 | 100 |
| TOTAL | Number | 11 | 43 | 54 |
| | Percentage | 20,4 | 79,6 | 100 |

Table 2. The Relationships between Businesses’ Ages and their Use of External Financing

| Age (In Years) | | Do you use external financing? | | TOTAL |
|----------------|------------|--------------------------------|------|-------|
| | | Yes | No | |
| 0-5 | Number | 6 | 21 | 27 |
| | Percentage | 22,2 | 77,8 | 100 |
| 6-10 | Number | 4 | 12 | 16 |
| | Percentage | 25 | 75 | 100 |
| 11-25 | Number | 1 | 8 | 9 |
| | Percentage | 11,1 | 88,9 | 100 |
| 26 and up | Number | 0 | 2 | 2 |
| | Percentage | 0 | 100 | 100 |
| TOTAL | Number | 11 | 43 | 54 |
| | Percentage | 20,4 | 79,6 | 100 |

The result of the related Chi-Square analysis yields that p is 0.740. As $p > 0.05$; H_{0B} is also accepted. There is not any significant relationship between the participating businesses’ ages and their use of external financing. The last relationships considering external financing are towards the presence of a finance department in each business. While Table 3 uncloaks these, the third hypothesis is to be tested via a Chi-Square analysis:

H_{0C}: There is no relationship between the presence of a finance department in the participating businesses and their use of external financing.

Table 3. The Relationships between the Presence of a Finance Department in the Participating Businesses and their Use of External Financing

| Do you have a finance department in your business? | | Do you use external financing? | | TOTAL |
|--|------------|--------------------------------|------|-------|
| | | Yes | No | |
| Yes | Number | 3 | 0 | 3 |
| | Percentage | 100 | 0 | 100 |
| No | Number | 8 | 43 | 51 |
| | Percentage | 15,7 | 84,3 | 100 |
| TOTAL | Number | 11 | 43 | 54 |
| | Percentage | 20,4 | 79,6 | 100 |

The result indicates p to be 0.402. As per this result, $p > 0.05$. Again, the null hypothesis (H_{0c}) is accepted and there is not a significant relationship between the presence of a finance department in the participating businesses and their use of external financing. When the three results are aggregated, it becomes clear that the use of external financing is not related to any mentioned business factor – the scale, age, and the presence of a finance department. This simply implies other unconsidered factors' effects on the preference or possibility of external capital use.

3.4. Findings about Long-Term Financing Problems – Business Features Relationships

The second set of relationships subject problems faced within long-term financing and specific business features including the scale, and the presence of a finance department and a finance manager. As mentioned before, there are only 11 businesses expressing the use of long-term financing, all of which also declare related problems. The first hypothesis in this set (H_{0d}) is tested via a Chi-Square analysis, using the data in Table 4.

H_{0d} : There is no relationship between the participating businesses' scales and their problems in accessing long-term financing.

Table 4. The Relationships between Businesses' Scales and their Problems in Accessing Long-Term Financing

| Business Scale | | Do you have problems in accessing long-term financing? | | TOTAL |
|----------------|------------|--|------|-------|
| | | Yes | No | |
| Micro | Number | 3 | 2 | 5 |
| | Percentage | 60 | 40 | 100 |
| Small | Number | 4 | 2 | 6 |
| | Percentage | 66,7 | 33,3 | 100 |
| TOTAL | Number | 7 | 4 | 11 |
| | Percentage | 63,6 | 36,4 | 100 |

A very striking point is that there is not even a single mid-sized business, which uses long-term financing. The result indicates p to be 0.819 and thus $p > 0.05$. H_{0d} is accepted and that is why there is no significant relationship between the participating businesses' scales and their problems in accessing long-term financing. The presence of a finance department and problems about long-term financing are simultaneously considered next, and data in Table 5 are used to evaluate H_{0e} .

H_{0e} : There is no relationship between the presence of a finance department in the participating businesses and their problems in accessing long-term financing.

Table 5. The Relationships between the Presence of a Finance Department in the Participating Businesses and their Problems in Accessing Long-Term Financing

| Do you have a finance department in your business? | | Do you have problems in accessing long-term financing? | | TOTAL |
|--|------------|--|------|-------|
| | | Yes | No | |
| Yes | Number | 1 | 2 | 3 |
| | Percentage | 33,3 | 66,7 | 100 |
| No | Number | 6 | 2 | 8 |
| | Percentage | 75 | 25 | 100 |
| TOTAL | Number | 7 | 4 | 11 |
| | Percentage | 63,6 | 36,4 | 100 |

The result of the Chi-Square analysis posits p to be 0.201. As $p > 0.05$; H_{0e} is accepted. This denotes that the presence of a finance department in these businesses is not significantly related with their problems in accessing long-term financing. The final analysis is performed to understand whether the presence of a finance manager is connected with problems faced in accessing long-term capital. This connection is implied via the last hypothesis, H_{0f} , and tested by facilitating from the data in Table 6.

H_{0f} : There is no relationship between the presence of a finance manager in the participating businesses and their problems in accessing long-term financing.

Table 6. The Relationships between the Presence of a Finance Manager in the Participating Businesses and their Problems in Accessing Long-Term Financing

| Do you have a finance manager in your business? | | Do you have problems in accessing long-term financing? | | TOTAL |
|---|------------|--|------|-------|
| | | Yes | No | |
| Yes | Number | 1 | 1 | 2 |
| | Percentage | 50 | 50 | 100 |
| No | Number | 6 | 3 | 9 |
| | Percentage | 66,7 | 33,3 | 100 |
| TOTAL | Number | 7 | 4 | 11 |
| | Percentage | 63,6 | 33,4 | 100 |

H_{0F} is also accepted due to p being 0.658; therefore $p > 0.05$ at the end of the Chi-Square analysis. The presence of a finance manager can not significantly be related with problems in accessing long-term capital.

To summarize, the second group of relationships totally fails – problems in accessing long-term capital is not related with any of the mentioned factors: the scale of the business, and the presence of a finance department or a finance manager.

4. Conclusions

As per the literature, financing is one of the greatest complications SMEs face, and these businesses' focus on innovativeness even exalts this complication due to many reasons. Besides clarifying this reality via many proofs, the literature suggests that innovative SMEs must get professionalized in terms of financing. These were the main points addressed by this current study. The authors tried to understand not only the features of the participating innovative SMEs; but also strived at finding out their capital compositions, types of difficulties faced in order to get external and long-term capital, sources and targets of external capital obtained, any accommodation provided by their presence in techno parks, and finally professionalization towards financing, which depends on factors such as handling financing decisions and processes by finance departments or by finance managers. As a last step, the authors tried to find out whether the use of external financing or problems of long-term financing are related with specific business features. A very great portion of the participants was micro and small businesses; and this result, contrary to the expectations of the authors that innovativeness' need for continuous funding highlights mid-sized or even big businesses was simply amazing. This outcome, paired with the fact that Turkey is an emerging country, may imply that innovation is a flourishing subject in the Turkish context. This idea was further reinforced when it was found out that the participants were very young businesses overall. The distribution among sectors was not surprising at all anyway; a vast majority was in very innovation-demanding sectors. While most of the managers in the participants had high levels of education with a few exceptions, workers were significantly less educated than the authors' anticipation. The authors believe that this fact could be related with the operating costs of the participating businesses. As found out, most of the participants were micro and small businesses, which emphasized innovation. Financial shortcomings, along with the necessities to invest in innovative projects, may have forced these businesses to cut back certain operating costs and therefore, a more suitable remuneration to less educated workers may have been preferred.

When it comes to financing, an obvious result was that the participants were very conservative towards external financing not only at the time they were founded, but also as of today. Such conservativeness was in fact due to certain problems; bureaucracy, terms, costs, and amounts granted, being the greatest. Long-term financing was also observed to be problematic as being ultimately the result of equity insufficiencies and economic imbalances. All these results were very compatible with the literature and the expectations of the authors, especially when considering Turkey's position as an emerging country with economic turbulences from time to time.

The lack of finance departments and professional finance managers seemed to be very odd at first, despite the need for experts to cope up with financing problems. The authors' consideration of their previous thoughts, however, rendered this occasion acceptable. In other words, it was believed that the participants could be paying attention to their costs and they were found out to be very conservative towards external and long-term financing. These could be the driving force behind their low priorities given

towards a professional structure or a decision-maker for financing issues. Despite these businesses' claim that their presence in a techno park is beneficial for tax issues and special financing convenience, these parks' managements were posited to overlook the participants' needs.

Finally, the use of external financing and the long-term financing access problems showed up to be free of certain business features; and therefore the results implied that there could be undisclosed exogenous factors for this unrelatedness. In other words, the authors believe that sector or economy based factors, which were not currently investigated, could be behind external financing decisions or problems about long-term capital access. When all these results and conclusions are aggregated, innovative SMEs scrutinized were mostly found out to be young micro and small businesses, which preferred to use internal capital sources profoundly and did not pay enough attention to handle financing issues professionally. They were also not backed up by their techno parks' management and came up against many challenges in order to obtain external or long-term funds. This study has many limitations. It was only performed while embracing a small sample of innovative SMEs in Turkish techno parks. Future studies may enlarge this sample and focus on innovative SMEs within and out of techno parks. These businesses may also be grouped according to their presence in different techno parks and may then be compared to distinguish between any actual benefits provided by these parks. This grouping may also be coupled with other certain criteria such as business features. There may also be country-wide studies in this sense or may also be co-operations among scholars to make country-based comparisons among these businesses in terms of financing. All of these approaches may also be used whilst noting different definitions of SMEs or different perspectives towards innovation such as process, delivery or marketing innovations.

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