

INSTITUTIONALIZATION OF SME'S IN TURKEY AND A COMPUTATIONAL FINANCIAL MANAGEMENT SOLUTION SUGGESTION

Associate Prof. Dr. Mehmet YAZICI

Istanbul Esenyurt University, Faculty of Business and Management Studies, mehmetyazici@esenyurt.edu.tr, Istanbul-Turkey

Assistant Prof. Dr. Hakan YILDIRIM

Yozgat Bozok University, Faculty of Economics and Administrative Sciences, hakan.yildirim@bozok.edu.tr, Yozgat-Turkey



ABSTRACT

This study focuses on to solve basic problems of SME's in Turkey such as lack of finance, technical information, well-educated staff and institutionalization. The research project is proven that SME's can be institutionalize easily by help of a developed software. Project also aims to provide a fintech solution for survival of the businesses without being dependent on the founder family members. After 2 years research and development process the system called "Head of Finance" emerged as a web based, fast, cheap and user-friendly finance and risk management tool. Regarding the uncertainty in the current market conditions, risk management application need for both banks and SME's has been increased. The innovative aspect of suggested software is to make financial decisions and risk management practices accessible for SME's while making their financial decisions. It is also aimed by the software to provide entrepreneurs and managers decision support and risk management applications that are not made by any bookkeeping or accounting software.

Key Words: SME's, Business Management, Financial Management, Decision Support System, Fintech.

JEL Classification: G23, G32, G41, M1, O31

1. INTRODUCTION

The management style that is emerged in the form of family business has been the driving force for entrepreneurship and production all over the world. Due to its contribution to the country's economy, SME's also have a significant share in Turkish economy. 90% of all registered companies in Turkey and 94.1% are SME's. (Karpuzoglu, 2004: 43) The share of SMEs in all registered businesses in Turkey is 99.9%, therefore the central role of the sector in the economy is evident. (Ari, 2013) According to the Banking Regulations and Supervision Agency (BRSA) data, 3,85 million of the 4.1 million enterprises in the definition of official (sales of up to TL40 million and up to 250 employees) are SME's.

"SME's in Turkey provide at least 75% of total GNP and 85% of employment. (DÜNDAR, 2016) However, despite the importance in Turkish economy, the number of family companies that reached the fourth generation in Turkey is extremely low due to their problems, and the rate of reaching the third family in Turkey is 10%. (www.bloomberght.com, 2014) The average life span of companies is 18 years in Germany and 9 years in France. In Turkey, 80% of enterprises cannot reach 5th year, 96% cannot reach 10th year. (www.capital.com.tr, 2015)

It is possible to examine the advantages of SME's under two headings below (Bilgin, 2007: 9-12; Karpuzoğlu, 2001: 22-24):

Financial Advantage: The financial resources required in SME's are usually provided by the family members. Equity is an important part of the company's capital for the SME's, and the way to solve financial problems in the family gives a stronger position against the company's competitors. Besides, when financial problems are encountered, SME's can reveal their resources more sacrificially in order to solve the problem. Because of the survival of the business, they can easily give up both family's and entrepreneurial assets. SME's operates in the countries that has a less developed capital market is attempts to solve financial problems by inhouse sources.

Managerial Advantage: SME's have an advantage in that they can make financial decisions faster by using their own resources and fast processes. The founder of the company may take a more active role in decision making during the implementation phase, as there are not too many bureaucratic obstacles in the company. Regarding the family members are also employees at the same time the company generates much more synergy than the other competitors. An entrepreneur controlling a large portion of the business can decide faster in technical, administrative and investment matters as the family member works with the professionals. Since SME's do not have bureaucracy in their bodies, they do not experience any delay in taking decisions. Since SME's are future-targeted organizations, they concentrate on the existence of capital and a strong structure that will be left to next generations.

The two major advantages mentioned above may also turn into disadvantages of SME's at the same time. SME's are encountered with major challenges such as technical knowledge, institutionalization and financing during the growth process. In the SME's hiring and working with professionals can be problematic and expensive as well. In time, entrepreneur's exception of the company as a child, makes the company dependent to him however this kind of attitude also makes him dependent to the company.

The aim of this study is to make a system suggestion as solution for institutionalization, financial management and access to technical information, which are identified as the biggest problems in the development process of the SME's.

2. IMPORTANCE OF INSTITUTIONALIZATION OF SME'S

Huge Amount of Small and Medium Sized Enterprises consists of Family-owned businesses and these firms are very important parameter in order to understand economic situation. SMEs have important responsibilities which accelerate social development, economic growth and decrease unemployment. These activities can be succeed via progressive SMEs which are capable of making well financial decision.

In order to make financial decision properly, firms need to possess financial information in terms of financial statements, cash flow, capital expenditures and cost report. Right information can be provided via effective financial management and consensus. Today's, Small and Medium Sized Enterprises suffer from absence of information or wrong information about financial activities. For this reason, wrong financial decision occurs and this lead to risk for firms.

Especially, family-owned businesses face a dilemma owing to lack of definite financial planning. Small and Medium Sized Enterprises which play an essential role on country's economy need to be managed financially. Otherwise, firms will not work effectively and this situation will affect country's economy negatively. Therefore, small and medium businesses should work efficiently and have efficient financial structure.

Family-owned businesses prevent SMEs from improving their perception and result in dilemma for firm. Long and short range plans, debt management, management of receivable, financial forecast and similar important financial activities become complicated tasks due to dilemma.

Furthermore, members of family-owned business do not tend to investigate financial data and news. It is obvious that financial data and news are very important components for management of Daily

financial activities and risk management. Change of currency, interest rate and macroeconomic indicators should be followed for financial decision and risk management. This situation emphasizes importance of Financial Literacy.

Nowadays, success of SME's performance are measured via use of Information Technologies, use of source. Effective use of source can be possible thanks to efficient use of Information Technologies. In free market economy, use of Information Technology has become requirement, at any sectors.

3. DEFINITION, FEATURES AND THE PROBLEMS OF SME'S IN TURKEY

SME's are those in which multiple members of the same family are involved as major owners or managers, either contemporaneously or over time. (Miller, Le-Breton Miller, Lester, Canella, 2007) According to other definition SME's are those in which the family controls the business through involvement in ownership and management positions. Family involvement in ownership (FIO) and family involvement in management (FIM) is measured as the percentage of equity held by family members and the percentage of a firm's managers who are also family members (Sciascia and Mazzola, 2008) Despite the different definitions of family business there is not a significant and unique measure of the size and the impact in economies all over the World. In turkey, 94.1% of are SME's and therefore we can take the official SME definition at the same time for calculating the size and impact of this type of entrepreneurships in Turkish economy.

In accordance with the relevant legislation, SME is defined as an enterprise that employs less than 250 employees per year and either its annual net sales revenue or balance sheet value does not exceed 40 million Turkish Liras. However, in this press release, enterprises with less than 250 employees hired without any criteria for financial size (annual net sales or balance sheet value) are defined as SMEs. The press release includes statistics such as the number of enterprises, number of persons employed, turnover, foreign trade and technology usage in the SMEs. Small and Medium-Sized Enterprises (SMEs) constituted 99.8% of total number of enterprises, 73.5% of employment, 54.1% of wages and salaries, 62% of turnover, 53.5% of value added at factor cost and 55% of gross investment in tangible goods in 2014. (<http://www.turkstat.gov.tr>, 2017)

Some basic features of Turkish SME's which is provided by Turkish Statistics Institute:

- ✓ 99,8% share in total enterprises
- ✓ 93,5% internet accessing
- ✓ 65,2% has a web page
- ✓ 39,2% share in total wholesale and retail trade
- ✓ 59,7% low technology user

Institutionalization refers to the management of the organization within the framework of certain systems, principles and values, in line with specific goals and objectives, regardless of persons. Institutionalization is the sum of policies and practices that guide the organization in making strategic decisions, running company activities and setting the principles and values. Most of the SMEs in Turkey are founded by the family members, not managed by the professional managers. Especially, the main problems that are manifested by institutionalization and access to finance are deepened by constraints on accessing technical information and well-educated staff. The patriarchal structure of the SME's in Turkey is not based on professional management principles of decision-making mechanisms, but on the basis of family balance, lack of formal and professional structure. On the other hand, regarding the OECD report about Turkey, one of the major priority area for SME policies has been access to financing. (OECD, 2004) The most important reason why the SME's cannot be passed on to future generations is the lack of planning and institutionalization that is ending with the entrepreneur's die or disability to work. (DUNDAR et al., 2016)

The stability of the SME's, which have such an importance in the economy, the compatibility with the environmental conditions and the continuity affect the integrity of the economic life. But, the



lifetimes of SME's are generally short in Turkey. The main reason behind the short lifetime is based upon confusion of business management and family relations with each other. (Pazarcık, 2004) Although, almost all the businesses are SME's in Turkey, regarding the Customs and Trade Ministry's declaration, 65% of the businesses in Turkey are closed in five years. (www.hurriyet.com.tr, 2013) And 80% of all enterprises are being failed managing by the first generation is based upon the results of a research. (Koçak, 2012)

4. WEB BASED FINANCIAL MANAGEMENT AND DECISION SUPPORT SYSTEM FOR SME'S

This study focuses on how businesses can be institutionalized in a fast, cheap and standard way and also aims to provide a fintech solution for the survival of the business without being dependent on the founder family members.

Fintech, or financial technologies, has emerged as the name given throughout the software and initiatives that provide end-users with access to financial products and financial institutions. Although it has been re-invented for the last two years, however it has a long history of 70 years in the world. With the development of the internet and communication technologies, financial technology is increasingly on the agenda with the intention of attracting an intense entrepreneurial interest, especially non-banking financial institutions.

One of the most important elements supporting this development is the increasing rate of internet access of SME's. The formation of Turkey's population structure by youth, encouragement of entrepreneurship as well as the support given by the state and angel investors facilitated access to information and financial resources and created equal opportunity.

The client and solution-oriented approaches of niche areas created by financial institutions that meet the needs of customers or making decisions and at the same time the initiatives in this ecosystem have made financial solutions accessible not only to corporate enterprises but especially to individuals and SME's as well. The reason why the number of enterprises not exceeding 10 in 2015 is over 200 today is due to this simple need.

After 2008, the beginning of the global financial crisis, there is increasing uncertainty in the local and the global markets which brings greater risks for SMEs. And therefore, need for financial and risk management applications for SME's has increased. Unfortunately, making financial decisions sometimes requires complex practices and expensive solutions of the consultants.

The innovative aspect of the suggested web-based system is to make complex financial decisions and risk management practices accessible for SME's (SMEs). It aims to provide fast, cheap, standard fintech solutions such as financial decision support and risk management services in order to institutionalize the businesses which lack of financial sources, technical information and finance professionals.

With the system which is called "Head of Finance" (HoF), company owners and managers can control and monitor company's daily financial activities on internet by computers, tablets and smart phones from all over the world. The system can operate in a high-security cloud environment or on an enterprise's server and it is constantly updating and developing according to the company's needs and business requests. HoF is not designed as a bookkeeping software, but it also does everything a bookkeeping software can do.

The software, which came out with a 2-year study and a team of 4 software developers out of ten, was tested for 6 months on 14 companies operating in different sectors and different sizes. Software modules and screen designs have been developed in accordance with the needs of SME's, in order to make the software easy and ready to use.

The level of utility that is assessed by the family business owners or managers and characteristics of the test group are as follows:



Table 1. The Level of Utility and Characteristics of The Testing Group

Sales Turnover (1.000 USD)	Employees	Years in Business	Sector	Utility Level (between 1 and 5)
100.000	5000	35	Textile	3
5.000	100	32	Textile	5
3.000	25	4	Textile	5
30	5	4	Services	2
50	6	5	Services	2
50.000	150	15	Construction	4
7.000	50	12	Construction	4
4.500	50	8	Retail	5
8.000	65	4	Package	5
4.000	15	25	Wholesale	5
3.000	10	70	Metal	5
2.000	50	70	Metal	5
10.000	200	20	Metal	5
6.000	20	40	Wholesale	5

Testing SME's, out of big sized textile company and service companies, are mostly graded their utility from the system as five which is shown that the companies have a turnover between USD 2 and 50 million are highly utilized in cash and risk management and financial decision-making processes as well.

The participatory demographics of 14 enterprises are as follows:

- ✓ 100% was established as a family business.
- ✓ 2 out of 14 people participating in the study are female and 12 are male.
- ✓ 60% of participants are married, 90% are above 40 years old.
- ✓ 35% graduated from Vocational School and university, 20% have master / doctoral degree.
- ✓ 35% of participants are managers and 75% are partners in the company.
- ✓ Three of the companies are textile producers, three are doing trade, three of them are metal machinery producers, two are consulting companies, two are construction companies and one is a packaging company.
- ✓ 9 out of 14 companies are declared the utilization score as 5 have an average 30 years in business. These companies have 57 employees in average.
- ✓ 70% is a limited liability company and 30% is a joint stock company.
- ✓ 79% is managed by the 1st generation.

5. MODULES OF THE SYSTEM

HoF consists of three main modules, cash management, customer analysis and scoring and Financial calculations.

5. 1. Cash Management Module

The first module of HoF is cash management. The biggest problems of Turkish SMEs are that they cannot follow cash flows clearly, cannot follow receivables and debt maturities and cannot manage sales policies and pricing correctly. These problems will be automatically tracked in seconds with the cash management module right after extraction of excel forms from any bookkeeping or accounting software.

Poor cash management is one of the main reasons for business failures. But differs from the official bookkeeping concept, we recommend companies to use their actual figures while making financial decisions. In Turkey as a developing country, SME's are using avoid paying taxes as a way of alternative finance in business activities. Understanding the basic concepts of cashflow will help SME's make plans for the unforeseen eventualities that nearly every business experiences. Business liquid assets are mostly used in both business and personal needs of the owners. Therefore, instead of avoiding actual figures to take cash position is make sense in our decision support system



calculations. It is not inventory, it is not accounts receivable, and it is not property. Cash flow refers to the flow of total cash into and out of a business. Monitoring the cash inflows and outflows instantly wherever the company owners and managers need is one of the most important management tasks for any businesses.



Picture 1. Customer Follow-up

Some features included in the module are:

- ✓ Preparing customer information cards
- ✓ Detailed tracking of customers and suppliers
- ✓ Figuring out average maturity and due dates
- ✓ Warnings for extension of maturities
- ✓ Customer payment performance follow-ups
- ✓ Customer and supplier concentration tracks
- ✓ Collateral and warranty tracks
- ✓ Payment history and payment problems in cheques and bills checks
- ✓ Customer risk based pricing
- ✓ Foreign currency change effects on financials
- ✓ Value added tax calculations

With these functions we also want to raise risk awareness in SME's which is very low. Risk awareness is the foreseen of risks and the active process of reducing or eliminating those risks which is caused by company or environment. The business owner might be thinking "why do I need to know about possible risks and how do I reduce those risks?" Risk awareness has a close relation with the concepts of experience, business culture and education. One of the idea behind the project is also to increase SME's awareness about risks then show how to prevent and prepare for it., we wanted to implement basic risk management applications into SME's life as well.



Picture 2. Customer Monthly Sales and Concentration Track



Picture 3. Sales and Concentration Graphs



Picture 4. Foreign Currency Change Effects on Financials

5.2. Customer Scoring And Analysis Module

The second module of HoF system is customer scoring and analysis module. This module gives SMEs an opportunity to evaluate themselves from the perspective of the banks as well as customer scoring. By OCR document reading system in this module, it is also possible to upload PDF formatted year-end financials in seconds for financial analysis.



Picture 5. Scoring and Decision Support System

Some features included in the module are:

- ✓ Vertical and horizontal analysis
- ✓ Ratio analysis
- ✓ Graphical analysis
- ✓ Sector comparison depending on Central Bank of Turkey data
- ✓ SME and Individual scoring (payment behaviors of the clients are reflected)

- ✓ Altman Z-Score, which measures the likelihood of non-performing loan
- ✓ Maximum limit, maturity and collateral decision system
- ✓ Collection and sales management processes



Picture 6. P/L and Current Assets Analysis Graphs

EXPLANATION	PREVIOUS PERIOD (2014)	PERCENT	HISTORICAL PERIOD (2015)	PERCENT
I. CURRENT ASSETS	14.361.630,68	100,00	14.974.879,19	100,00
A. Liquid Assets	4.919.438,37	34,25	3.275.107,78	21,87
1. Cash	33.840,96	-	378.294,23	-
2. Cheques Received	2.874.427,39	-	3.256.062,55	-
3. Banks	2.800.755,60	-	2.660.169,34	-
4. Cheques Given and Payment Orders(-)	789.585,58	-	3.019.545,84	-
5. Other Liquid Assets	0,00	-	127,50	-
B. Marketable Securities	492,20	0,00	504,52	0,00
2. Private Sector Bonds, Notes and Shares	492,20	-	504,52	-
C. Trade Receivables	5.832.900,07	40,61	7.941.096,94	53,03
1. Customers	5.061.527,95	-	7.169.703,82	-
5. Deposits and Guarantees Given	402.037,97	-	402.037,97	-
6. Other Trade Receivables	286.432,28	-	286.432,28	-
7. Doubtful Trade Receivables	273.421,08	-	273.442,08	-
8. Provisions for Doubtful Trade Receivables (-)	190.519,21	-	190.519,21	-
D. Other Receivables	806.774,53	5,62	897.262,69	5,99
1. Due from Shareholders	536.677,02	-	613.553,19	-
5. Other Receivables	270.097,51	-	283.709,50	-

Picture 7. Horizontal Analysis

5.3. Financial Calculations Module

The third module of the HoF system is financial calculations. The concepts such as correct financial calculations, reconciliation with banks, investment analysis, company valuations are very technical and requires experienced personnel. However, this module is designed in order to make all complex financial calculations very easy for SME's.

By HoF, businesses can easily make the calculations below when they need to make decisions in financial management:

- ✓ Present value and future value
- ✓ Periodic return and net return
- ✓ Breakeven analysis
- ✓ Making payment plans and
- ✓ Making decisions among the alternatives
- ✓ Calculating principals, installments and maturities
- ✓ Cash flow and EBITDA calculations
- ✓ Company valuation

Picture 8. Loan Calculator

6. CONCLUSION

Web based financial management and decision support system development project that is conducted between April 2015 and June 2017 has successfully completed. In the second step we started to test the product over internet (www.finansmuduru.com.tr) by free trials. The name of the system and domain is officially registered.

Expected outcomes of the project are as follows:

- ✓ With a cheap and easy-to-use fintech solution, institutionalize and train SME's as fast as possible
- ✓ Change the way of doing business in the market by adding financial institutions as a third-party solution partners on our portal
- ✓ Increase the risk awareness in SME's
- ✓ Reduce the negative effects of potential market and business risks
- ✓ Use the system training tool for university students
- ✓ Reduce costs for SME's
- ✓ Reduce non-performing loans of the financial institutions
- ✓ Developing new solutions for SME's by the effect of big data management

Participants in the survey considered the family business as an advantage, pointing to quick decision making and establishing a relationship based on mutual trust with their employees as the most important advantages. Another important finding from the survey is that family members who

are not on duty in the company are not allowed to intervene in the company management, but it is also not preferable to have non-family professionals in the top management of the business.

9 enterprises with 64% of participants gave the highest utilization score 5. 2 business scored 4, 2 business scored 2 and 1 business scored 3 in the survey. The lowest scorers were service businesses and the highest scorers were metal manufacturing, construction companies and trade businesses.

After 2-year system development and 6 months testing process on 14 SME's, research is shown that the companies have a turnover between USD 2 and 50 million are highly utilized in cash and risk management and financial decision-making processes as well.

REFERENCES

- ARI, A. (2013). KOBİ'ler, Esnaf ve Sanatkarlar Özel İhtisas Komisyonu Raporu, Trakya Kalkınma Ajansı, <http://www.trakya2023.com/uploads/docs/09072013yl8AAu.pdf>, DOI: 12.07.2017
- BİLGİN, N. (2007). Aile Şirketleri Kurumsallaşma Eğilimleri: Ankara KOBİ Örneği, <http://www.library.atilim.edu.tr/tezler/1027341.pdf>, Atılım Üniversitesi Sosyal Bilimler Enstitüsü İşletme Anabilim Dalı, Ankara, pp.9-12
- DÜNDAR D., Üçüncü Kuşağa Geçmeyi Başaran ve Kurumsallaşabilen Aile Şirketleri Sonsuza Kadar Yaşayabilir, <http://www.sondakika.com/haber/haber-ucuncu-kusaga-gecmeyi-basaran-ve-kurumsallasabilen-5902558/> DOI: 04.10.2016
- KARPUZOĞLU, E. (2001). Büyüyen ve Gelişen Aile Şirketlerinde Kurumsallaşma, Hayat Yayınları, İstanbul, pp.22-24
- KOÇAK Zeliha S. (2012). KOBİ Ölçeğindeki Aile İşletmelerinin Kurumsallaşma Sürecinde Halka Arzı ve İMKB Gelişen İşletmeler Piyasası, 5. Aile İşletmeleri Kongresi, İstanbul Kültür Üniversitesi, İstanbul, pp.357-375
- MILLER, LE-BRETON MILLER, LESTER, CANNELLA (2007). Are Family Firms Really Superior Performers, Journal of Corporate Finance, Vol. 13, Issue 5, pp.829-858
- OECD. (2004). Small And Medium-Sized Enterprises In Turkey: Issues And Policies, p.15
- PAZARCIK O. (2004). Aile İşletmelerinin Tanımı Kurumsallaşması ve Yönetişimi, 1. Aile İşletmeleri Kongresi Kongre Bildiriler Kitabı, İstanbul Kültür Üniversitesi Yayınları, İstanbul, pp.33-42
- SCIASCIA and MAZZOLA. (2008). Family Business Review, Vol. 21, Issue 4, pp.331-345
- <http://www.bloomberght.com/haberler/haber/1534645-aile-sirketlerinde-surdurulebilirlik-ve-kurumsallasma>, DOI: 20.07.2017
- <http://www.hurriyet.com.tr/sirketlerin-ilk-5-yil-k-busu-23431671>, DOI: 10.08.2017
- <http://www.turkstat.gov.tr/PreHaberBultenleri.do?id=21540>, DOI: 20.07.2017
- <https://kolayik.com/blog/insan-kaynaklari-dijitallesme-raporu-2017>, DOI: 29.07.2017
- <https://www.capital.com.tr/yonetim/liderlik/sirketlerin-omru-daha-da-kisalacak-mi>, DOI: 21.07.2017