

Adoptive Survey of Commercial Soft Technology Systems on Small and Medium Enterprises in Iran and South Korea

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ABSTRACT

Profound role of Small and Medium Enterprises (SMEs) in economic growth has turned it into one of principle elements of policymaking. On this basis, policymakers have devoted special attention to development and facilitation of innovative processes in SMEs. Therefore, it is very imperative to design and perform protective systems for SMEs. Research on this topic is considered important because incumbents and policymakers of socio-economic development in Iran have highlighted important and key role of SMEs. Swift and eye-opening economic growth in South Korea with 4 decades of persistent growth in the world as well as vital role of SMEs in this trend, it seems very tempting to determine SMEs in this country.

With regard to Joseph Pitt's viewpoint as to technology in lieu of tools, techniques, and equipment as well as considering social tools such as governments, official arrangements, and legal systems all as technologies, the present study included protective system of SMEs as social tools and soft technologies and tried to present recommendations for optimization of commercial soft technology systems on SMEs in Iran through an adoptive survey of commercial soft technology systems on SMEs in Iran and South Korea by taking Zhouying Jin's classification of soft technology into account.

KEYWORDS: adoptive survey, commercial soft technology, Small and Medium Enterprises (SMEs)

1. INTRODUCTION

Adoptive survey is a deep-rooted and valid method in almost all human and social sciences. Comparison is contrasting things and people and judging on their similarities and differences. Comparison means testing two or more objects in order to derive quality and characteristics of similarities and differences (Moghimi, 2006). In this method, similarity of functional identity and structure in addition to similarity subjects such as size, social context, and meaning are considered. Raghunath defines adoptive management as analysis of similarities and differences between various management and business systems in one or more countries (Moghimi, 2006). Thus, the present study was an attempt to perform an adoptive survey of commercial soft technology systems on SMEs in Iran and South Korea.

The term “*technology*” is a coinage from the Greek words “*techno*” which means technique and “*logy*” which means knowing techniques. Khalil (2004) considers technology as entire knowledge, products, tools, methods, and systems adopted to create and make commodities and provide services. Joseph Pitt believes that technology should be regarded as tools, techniques, tool systems, and techniques. He adds social tools such as governments, official arrangements, and legal systems are all technologies. Definition of technology has been subjected to several revolutions and includes soft dimensions of technology (e.g. regulations, practices, and processes) as well as hard dimensions of technology (e.g. means, machines, and other work tools).

Soft technology is a type of practical knowledge originating from unnatural sciences and unscientific knowledge (traditional) and it aims at solving various practical problems. Soft technology arises from intelligent use of usual experiences or regulations in economic, social, and human activities and forms rules, concepts, regulations, methods, and procedures helping to improve, match, and control subjective and objective worlds. Soft technology should have two different characteristics, i.e. technological nature and soft nature. Overall, soft technology is defined as a human-centered mental technology of creation and innovation through ideology, feelings, values, personal behavior, organizational behavior, and human community behavior (Jin, 2005). Soft technology is divided into eight main areas in terms of application, i.e. commercial technology, social technology, cultural technology, learning through personal feeling and experience (LPFE), soft-life technology, soft-engineering technology, military-soft technology, and political technology (Jin, 2005). Commercial technology is the technology of

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economic activities process in a creative person. It can also be regarded as the technology of improving effectiveness of economic activities and flourishing economic value of technologies (soft and hard). According to Table 1, soft commercial technology include various technologies such as interactions technology, money technology, accounting technology, advertisement technology, management technology, financial technology, etc.

Table 1: different types of soft commercial technology (Jin, 2005).

Row	Types
1	Financial technology
2	Management technology
3	Advertisement technology
4	Accounting technology
5	Stocks technology
6	Patent technology
7	Money technology
8	Interactions technology
9	Incubator technology

Pitt (2006) contemplates technology as tools, techniques, and equipment as well as social tools such as governments, official arrangements, and legal systems. In this regard, the structures in industrial development processes such as supporting systems of official enterprises are all technological structures. The supporting systems is based upon info-ware, organization-ware, and software whereas the hardware aspect is limited; it includes financial attributes, accounting, management, money, stocks, etc. Therefore, the supporting structure is among soft commercial technological systems. The present study was an attempt to evaluate similarities and differences of commercial soft technological systems in SMEs of Iran and South Korea with an emphasis on financial attribute, accounting, management, money, stocks, and lending. In this regard, attributes of network of SMEs definition, enterprise status, lends to SMEs, comparison of supporting structure in SMEs, credit risk management system, architecture of financial and credit system of SMEs, lending process, and immunization as the innovative mechanism of SMEs were scrutinized.

2. METHODOLOGY

In this research, documentary study was performed in order to determine available library references. In addition, commercial soft technological systems of SMEs in Iran and South Korea were compared by visiting the websites of relative organizations.

3. LITERATURE REVIEW

Commercial soft technological system, especially financing, credit, and risk assurance structures, in small and medium industries have been evaluated in several countries. Thampy (2010) determined financing methods in India and stated limitation of financial resources as a critical point for the growth of small and medium industries. The author defines a conceptual network including two important factors to analyze financial provision of SMEs, i.e. lending technology and lending infrastructure. Uchida et al. (2006) studied lending technology and financing in small and medium industries in Japan and presented two lending technologies based on financial statements and combinational technology of financial statements and enterprise soft characteristics. Yan Shen et al. (2009) evaluated the relationship between bank size and lending in SMEs and how to prevent from unreal validation. Roussaueu and Kim (2008) studied investment of Korean companies and their financial provision before and after the economic crisis in 1997. Agarwal and Mohtadi (2004) examined the influence of financial markets on selection of the method of financial provision in companies of developing countries. NasiriAghdam and Naderan (2006) studied transaction cost of financial provision in production and manufacture enterprises and the effect of free access to tools and methods of financial provision on improving ecosystem of enterprise activity. Hosseini and Souri (2009) revealed that after communication of the article 44 of the constitution in Iran, fundamental changes occurred in cooperation organizational model and financial provision strategies of cooperatives; this strategy has inclined from traditional financial provision to supporting financial provision, notably direct financial provision. In a study on challenges and damages of money and capital market of Iran, Mehrabani (2010) stated the most important characteristics of Iranian financial market as being lack of strong financial tools and enterprises and bank orientation due to lack of an efficient capital market. Furthermore, it is emphasized that financial part of the country was underdeveloped and was unable to transfer funds from the sectors with surplus cash to manufacture and industrial sectors.

4. Necessity of Development of Commercial Soft Technological Systems in SMEs

Role and importance of SMEs in economic growth has turned it into one of the most important elements of policymaking (Hoffman et al., 1998). Extensive variations of technology, ever-increasing complication of decision-making and administration processes in organizations, necessity of immediate decision-makings, and positive accomplishments of SMEs have resulted in a change in dominant paradigm in entrepreneurship from big enterprises to SMEs (Nazari, 2010). The main characteristic of these enterprises is their creativity and innovation so that roughly 70 per cent of innovations and inventions in industry have been done by entrepreneurs who have basic potentials for technology development in SMEs (Ahmadi and Safari, 2009).

With regard to the special role of economic SMEs in entrepreneurship, economic growth, and social consistency as well as their role in elevation of export and fluorescence of innovations and inventions, it seems that one of the best methods to make economic and social revolution and development is to have policymakers, planners, lawmakers and administrators pay attention to these enterprises (Nasiri and Naderan, 2006). On this basis, a special emphasis has been put on SMEs by policymakers in order to facilitate and develop innovative operations and processes (Hoffman et al., 1998). Development of commercial soft technological systems in SMEs is important because they are the main stimulus of economic growth, advent of new businesses, achieving a better risk management, and development of financial system in close tie with country's general interests for economic development.

5. Classification of Small and Medium Industries

Overall, two principles are considered in defining small industries:

- (a) Quantitative criteria (e.g. number of employees, capital volume, and production volume)
- (b) Qualitative criteria (e.g. nativeness, type of ownership, and managerial systems of enterprise).

It is noteworthy that quantitative criteria are more distinctive. Moreover, some authorities recommend using qualitative criteria (Nazari, 2010). According to Table 2, the United Nations Industrial Development Organization (UNIDO) recognized SMEs as enterprises with <50 employees and <\$250,000 capital. On the basis of the International Labor Organization (ILO), a small enterprise is an independent entity whose official and operational management is performed by one or two person(s) while medium enterprises have organizational structure in their management systems and specialists in technical sector (Nazari, 2010).

Table 2: Definition of SMEs according to UNIDO and ILO (Nazari, 2010).

UNIDO	SMEs: employees<50, capital<\$250,000
ILO	Small enterprises: an independent entity with one or two person(s) performing official management Medium enterprises: with organizational structure and using specialists in management system and technical sectors

Table 3 represents the definition of European Union (EU) as to SMEs according to number of employees, turnover, balance sheet, and corporate governance.

Table 3: Definition of EU about SMEs (Nazari, 2010).

Indices	Individual	Small	Medium
Max. no. of employees	9	49	249
Max. turnover	-	€ 7,000,000	€ 40,000,000
Max. sum of balance sheet	-	€ 5,000,000	€ 27,000,000
Independence	-	<25% of the capital or voting right is for one or more non-SME companies.	

Iran Small Industries and Industrial Parks Organization has focused on number of employees in definition of SMEs. The organization considered the enterprises with <50 employees as being small enterprises and the ones with 50-100 employees as medium enterprises (Iran Statistics Center, 2008).

6. Findings of the Adoptive Survey

The main attributes of the adoptive survey of commercial soft technological systems in SMEs are summarized in Table 4.

Table 4: Main attributes of commercial soft technological systems in SMEs.

Row	Main attributes
1	Conceptual networks of SMEs
2	Status of SMEs
3	Lending volume to SMEs
4	Supporting structure in SMEs
5	credit risk management system
6	Architecture of financial provision system in SMEs
7	Lending process to SMEs
8	Immunization of SMEs

6.1. Comparing Conceptual Networks in Iran and South Korea

Definition of SMEs in South Korea is based upon type of business and annual capital and turnover. The enterprises with ≤ 300 employees are considered SME. Classification of different businesses is wholesale and retail, food and hotel, factory manufacture, transportation, repair services, educational services, property sales and lease, and etc. Relative share of wholesale and retail, food and hotel, and factory manufacture is 63.1% of all SMEs. In other words, factory small and medium industries are subgroups of SMEs in this country (South Korean Small and Medium-sized Enterprises Administration, 2015).

In the Iranian conceptual network, the entities with ≤ 49 employees are regarded as small industries. SMEs are exclusively in industries and industrial manufacture and they exclude other enterprises such as hotel and transportation. The industrial workshops with ≥ 50 employees are regarded as medium enterprises and they are subdivided into four groups, i.e. 50-99 employees, 100-499 employees, 500-999 employees, and ≥ 1000 employees (Iran Statistics Center, 2008). It can be seen that definition of business enterprises in South Korea includes all entrepreneurship units in production and service sectors whereas it exclusively belongs to production enterprises in Iran.

6.2. Comparing SMEs Status in Iran and South Korea

SMEs have a vital role in economy of South Korea with 3,044,169 companies in 2008 which meant 99.9% of all companies employing 87.3% of all employees. According to Table 5, small and medium production industries in South Korea are included in the list of SMEs. Relative share of factory productions had an increasing trend in a 40-year period from 1970-2010 in terms of number of enterprises, employees, products, and value added (South Korean Small and Medium-sized Enterprises Administration, 2015).

Table 5: factory products SMEs status in South Korea (South Korean Small and Medium-sized Enterprises Administration, 2015).

Status indices	1970	1980	1990	2000	2010
No. of enterprises (%)	97.1	96.6	98.3	99.3	99.9
No. of Employees (%)	49	49.6	61.7	74	86.9
Products (%)	30	31.9	42.7	47.4	36.2
Value added (%)	28.5	35.2	44.3	50.2	49.6

According to the statistics of 1996, SMEs in Iran were 1,200,000 with 98.4% of all businesses in the country. Based upon Table 6 and consistent with the statistics of industrial workshops in 2004, small industries with 10-49 employees included around 76% of the whole business and the medium industries with 50-149 employees included around 15.8% of the whole business. Over 24% of the entire workforce were in small industries and over 19% were in medium industries (around 43% of employees) and they had 9.7% and 8.9% of value added in the country's industry sector, respectively (Iran Statistics Center, 2008).

Table 6: The trends in industrial enterprises with 10-49 employees (2002-2007) (Iran Statistics Center, 2008).

Year	No. of enterprises	No. of employees	Value added	Production value	Investment value
2002.....	12822	265356	7.12870	5.33605	2.1543
2003.....	12836	276693	6.14869	0.40652	3.2067
2004.....	12365	267771	6.17597	5.48648	0.2799
2005.....	12206	266674	6.19903	9.55860	6.2727
2006.....	12151	266578	4.23506	7.67490	7.3853
2007.....	11780	265342	5.30339	8.87110	0.5817

Also, number of small industries from 2002-2007 decreased and employment remained stable. Value added in small industrial enterprises in the interval fundamentally increased. The same trend was detected as to production value and investment value (Iran Statistics Center, 2008).

6.3. Comparing Lending Volume to SMEs

6.3.1. South Korea

Lending volume to SMEs has steadily increased in South Korea so that it experienced fast growth of 22% despite the economic crisis in Asia. Lending volume reached from 89.1 trillion Yuan in 1998 to 225.2 trillion Yuan at the end of 2003 and relative share of SMEs reached from 75% in 1997 to 89.1% in 2004 (Jun, 2004). Furthermore, according to the report of Asian SME Finance Monitor (2013), lending volume by industrial and commercial banks to SMEs had steady growth from 2007 to 2012 (Fig. 1).

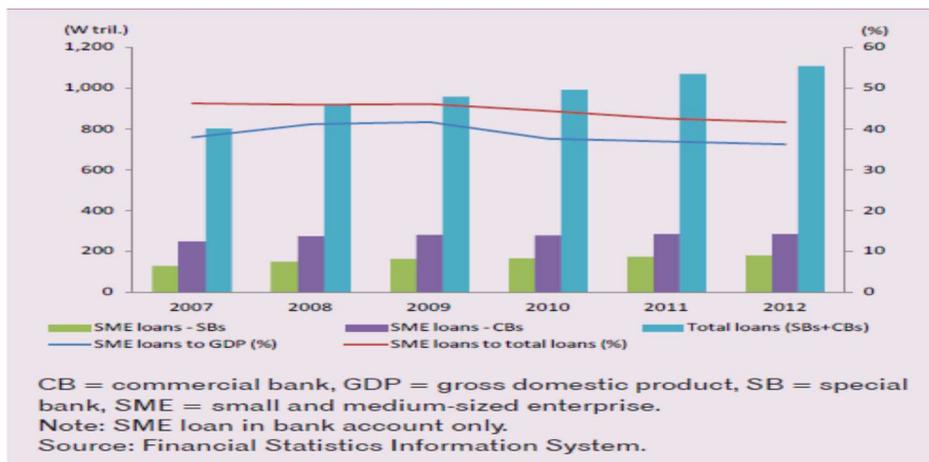


Figure 1: Lending volume to SMEs in South Korea.

6.3.2. Iran

Lending in Iranian banking system is generally divided into two types, i.e. from internal sources of bank and from organized funds). In 2008, pure amount of lending by banks and credit institution to industry and mine sector reached 405,000 billion Rial at the end of 2007 with a 5.9% growth compared to one year before that (Table 7). Bank of Industry and Mine, as the only bank dedicated to industry and mine, paid 13,000 billion Rial to different industrial sectors in the form of internal sources, organized funds, currency account, etc. with a 33.5% increase compared to a year before that (Summary of Iran’s Economic Revolutions, 2013).

Table 7: Main indices of lending to industry and mine sector from 2006 to 2013 (Summary of Iran’s Economic Revolutions, 2005-2013).

Year/index	Pure remained lending by banks (thousand billion Rial)	Remained lending in nongovernmental part of industry and mine	Remained lending in governmental part of industry and mine
2006	309.8	27.7 growth	-
2007	383.1	27.4 growth	49.1 reduction
2008	405	6.7 growth	25.2 reduction
2013	766	4.1 growth	-

In 2009, industry and mine sector’s share from the entire lending volume of banking system in Iran was 29.9%. All lending paid to various economic sectors from the onset of the regulation (2006) to 2013 was 316,000 billion Rial. 52% of the lending from the regulation was devoted to industry and mine sector. In 2013, Bank of Industry and Mine paid 18.3,000 billion Rial to this sector. The following can be understood from Table 7:

- Lending volume to small enterprises had an increasing trend during the studied years.
- Nongovernmental sector shows steady growth whereas governmental part shows steady reduction.
- During the studied years, the entire lending dedicated to different economic sectors from the time of execution of SME regulation was 316,000 billion Rial. 52% of this amount was for industry and mine sector.
- During the 8-year period, 40,000 billion Rial lending was given to SMEs from the regulation.

6.4. Comparing Supporting Structure of SMEs

6.4.1. SMEs supporting systems in South Korea

Supporting system structure of SMEs consists of three parts, i.e. official parts, financial institutions, and other related institutions. Official parts include Presidential Commission of SMEs (as the most superior entity to decide on SMEs), Small and Medium Business Administration (SMBA), and governmental agencies to seek development of SMEs with local structure in each city and province. The financial institutions include Bank of Korea as the executive of credit and monetary policies and stimulator of financial provision for enterprises, Industrial Bank of Korea as the only special bank of Korea for SMEs, public commercial banks with a role in selling the products of SMEs, and credit guarantee agencies to look for simple capital for SMEs by guaranteeing their debts by debt guarantee institutions.

Other institutions related to SMEs include small commercial institutions (with engineering supports, structure renovation, consulting, directing, and improving information), Korean Federation of Small Business (KFSB), nonprofit organization of SMEs, and governmental offices and organizations with around 97 types of offices under supervision of 13 ministries and administrations (Agarwal and Mohtadi, 2004).

6.4.2. SMEs supporting systems in Iran

In Iran, different organizations such as Labor and Social Affairs Administration, Ministry of Industries and Mines, and Governorships handle developmental affairs of SMEs which can be classified in some areas such as policymaking, financial supports, and supporting executive system. Majority of these policies include design and formation of supporting structures, monetary and lending supports, tax and customs motives, foreign investment motives, and educational technical supports.

Supporting structure of SMEs in Iran is represented in Table 8. From this list, Iran Small Industries and Industrial Parks Organization, Bank of Industry and Mine, Small Industries Investment Support Fund, Ministry of Industries and Mines, Processing Industries Affairs in Agricultural Jihad Organization, and the banking system have more intensive and special relationship with SMEs. Supporting nature of Ministry of Cooperation, Ministry of Labor and Social Affairs, Governorship, and Economic Technical Assistances Organization are general and not very specific.

Table 8: Supporting structure of small and medium industries in Iran.

No.	Small and Medium Industries supporting Organization	Specific performance (1) General performance (2)
1	Iran Small Industries and Industrial Parks Organization	(1)
2	Small Industries Investment Support Fund	(1)
3	Ministry of Industries and Mines	(1)
4	Bank of Industry and Mine	(1)
5	Processing Industries Affairs in Agricultural Jihad Organization	(1)
6	Ministry of Labor and Social Affairs	(2)
7	Ministry of Cooperation	(2)
8	the banking system	(2)
9	Economic Technical Assistances Organization	(2)

In this regard, Iran Small Industries and Industrial Parks Organization has a very important role as the administrator of the affairs related to small industrial units (with employment for <50 persons). The organization was founded in 2005 by integration of Small Industries Organization and Industrial Parks Company. Its duty is to help formation and development of small industries, development of entrepreneurship, development of technology, formation of a suitable bond between small, medium, and big industries, development of industrial networks and clusters, development of information centers, supporting market and economic collaborations, and formation and development of industrial parks and areas (Small Industries Organization, 2015).

Also, Ministry of Industries and Mines is one of the most important structures of planning, directing, and organizing industrial and mine sector in Iran; Iran Small Industries and Industrial Parks Organization and Bank of Industry and Mine are under supervision of this ministry. This organization has distinctive goals and tasks in socio-economic development with emphasis on industrial and mineral sectors. It should be noted that Bank of Industry and Mine is considered a legal entity and it functions independently in terms of administrative and financial affairs as a governmental company under supervision of Ministry of Industries and Mines and Central Bank of Iran. Bank of Industry and Mine is the special investing bank for formation and development of small and medium industries and it has an undeniable and crucial role in providing resources for the mentioned industries (Industries, Mines, and Trade Organization, 2015).

6.5. Comparing Credit Risk Management System

6.5.1. Credit Risk Management System in South Korea

The procedure of credit risk management is based upon analysis of supporting decision making. Credit classification system of SMEs in South Korea has continued from 1995 with some reforms. This system is beneficiary for decision making as to lending and interest rate. Determination of performance credit, analysis of company in all risks including industrial, managerial, and commercial risks in target organizations for development and call for logical decision making for lending about instrumental investment in order to increase products, review commercial feasibility, investment suitability, and market strength for products. The analyses are done by separate companies for purposeful experiments. In credit support, decision making occurs independently and based upon credit rate where consultants decide on lending. Also, there is a lending performance review system. There is also an inspection system for joint actions and supports for different risks (Agarwal and Mohtadi, 2004).

6.5.2. Credit Risk Management System in Iran

Risk management in financial provision system in Iran has been in the center of attention in recent years. On this basis, Small Industries Investment Support Fund was established in 2004. This fund aims at reduction of risks posed to banks as to loan installations and commitments of companies to banks. Furthermore, providing the basis for development of investment in nongovernmental part in small industries, reducing the execution time of entrepreneurship plans with economic feasibility prioritized for less-developed areas, and guarantying and facilitating lending process for small industries by banks and financial institutions are other goals (Small Industries Investment Support Fund, 2015). It should be noted that the highest burden of risk is on the shoulders of clients and entrepreneurs. In this regard, property security guaranties are one of the most important concerns of SMEs (Soltani et al., 2001). Decision making is generally done by governmental entities and specialist consulting companies are only adopted in Bank of Industry and Mine. Nevertheless, entrepreneur companies should be equipped with accounting system confirmed by credible auditing companies. Overall, risk management system in Iran is disintegrated and sparse and it is mainly done by entrepreneurs.

6.6. Comparing Architecture of Financing System in SMEs

6.6.1. Architecture of Financing System in South Korea

Architecture of financing system in SMEs in South Korea consists of two main parts: policymakers and legal network. The main policy regarding SMEs is the business office of SMEs which covers bank lending, credit guarantee, capital market, and information products. General public institutions act for realization of the policies of this organization where some tools are defined to guarantee lending and credit and information product such as Korea enterprise data are planned. Bank lending is divided into direct loan and mortgage loan. Credit guarantee organizations act in financial, technological, and regional areas and capital market act as financial institutions and financial tools such as saving bonds, etc. Nonetheless, the important attribute in financing system of Korea is provision of information products for databases adopted for decision making (Kim, 2010).

Financing system in South Korea				
Policymakers		Legal network		
Bank lending		Credit guarantee institutions	Capital market	
Direct loan	Mortgage loan	Financial institutions		Financial tools
KOFC	IBK.KDP.KDP Commercial bank	Credit guarantee entity Financial union Technology	Entities, National Provision Institutions	Saving bonds, Balance
Information products				

Figure 2: Financing system in South Korea (Kim, 2010).

6.6.2. Architecture of Financing System in Iran

Architecture of financing system of SMEs is not organized in Iran; however, the following model can be considered by considering the existing official procedures. Iranian architecture style consists of two parts, i.e. legal governmental policymaking and executive part. Legal decision makers on the policies regarding bank lending, interest rate, credit guarantee, and etc. are Small Industries Organization and Industrial Parks Company, Industries Organization, and Labor Administration. According to Fig. 3, there are two types of bank loans and credit technical assistances have been recently launched. Credit Guarantee Fund act in various sectors. Capital market in Iran has been unable to organize financial institutions and financial tools such as saving bonds, balance, etc. Iran financing network does not produce information products for data collection.

Financing system in Iran			
Policymakers		Legal system	
Bank lending		Credit Guarantee Fund	
Direct loan		Mortgage loan	
Bank of Industry and Mine. Commercial Banks		Industrial Parks Company (credit technical assistances)	
		Agent banks	
		Financial tools	

Figure 3: Financing model and network for SMEs in Iran.

6.7. Comparing Lending Process to SMEs

6.7.1. Lending Process to SMEs in South Korea

Table 8 represents financing structure in South Korea. In this country, entrepreneur organizations have two types of loans, i.e. direct loans and mortgage loans. Securities generally include credit guarantees. In direct loan, the government make decisions on lending through Korea Industrial Bank via determination of different projects. The government is also engaged in mortgage loan although the main decision maker is Financing Union in a close relationship with commercial banks. The banks determine projects and make decisions on lending. Interest rate for SMEs is on average 5.5 per cent (Kim, 2010).

Table 8: Financing Structure in South Korea (Kim, 2010).

Direct loan			Mortgage loan			
Government			Government			
Korea Industrial Bank			Financing Union			
Enterprise 1		Enterprise 2	Enterprise 3	Commercial bank 1	Commercial bank 2	Commercial bank 3
				Enterprise 1	Enterprise 2	Enterprise 3

6.7.2. Lending Process to SMEs in Iran

Lending in Iran banking system consists of two types, i.e. internal resources and organized funds. Organized funds are the most important financing resource for industrial projects. For a better collaboration between banks in different areas such as lending, Bank Relations Collaboration Commission has been founded. In lending organized funds, small and medium industrial projects are sent to the agent bank after being confirmed by the authority organizations (Industries Organization, Agricultural Jihad Organization, etc.) regarding lending for a project after being issued by the Employment Task Force Commission in Labor Organization. The project is determined in the agent bank in terms of economic, technical, and financial affairs and if approved, it is announced to the applicant and he/she is asked to present securities (property security, plan execution place, equipment, installments, and promissory notes). Interest rate in Iran is 14 per cent on average with a 5-year disbursement period where client validation and interest rate are not done on the basis of their credits. In lending from internal resources, lending process is similar to lending organized funds and the difference is in not engagement of the authority organization and interest rate.

6.8. Immunization as an innovative mechanism in SMEs

6.8.1. Immunization of SMEs in South Korea

With regard to high credit risk, SMEs need a financial mechanism to separate credit risk from providing companies. This is done by financing companies for innovative companies with intangible assets. Immunization is considered a process in which a set of assets allows financial tools to sell to public investors. Securities supported by Asset Backed Security (ABS) are the saving bonds supported by financial institutions. This asset usually consists of debts of credit cards, car loans, production contracts, and accommodation loan. These services are provided by separate institutions named Special Purpose Vehicle. ABS is a rather new but fast growing sector founded in 1985. It is estimated that over 2.6 trillion dollars have been exported from 1985 to 2003. These services are in financial provision in different forms for SMEs and venture capital (VC) financial companies (Agarwal and Mohtadi, 2004). Success factors of immunity system in capital market of South Korea are government policy as to formation of an effective legal system and efficient immunity system, transparent definition of true sales, clarification of information, gradual development of institutions, credit elevation, etc. (Agarwal and Mohtadi, 2004).

6.8.2. Immunization of SMEs in Iran

Immunization process in protective cycle of SMEs in Iran has not been performed yet.

7. DISCUSSION

Definition of SMEs in South Korea is based on enterprises with ≤ 300 employees according to type of business, number of employees, amount of capital, and annual turnover. In other words, SME is well defined in South Korea and includes small and medium factory industries. However, in conceptual network of Iran, the industrial enterprises with < 50 employees are only considered as small industries. It is recommended that conceptual network for SMEs is referred as all businesses including production and service giving (e.g. transportation). It should be noted that lack of organized statistics is one of the most important weaknesses in Iran. Therefore, organizing the statistics of enterprises seems to be very important. Table 9 shows the results of the comparison.

Table 9: Adoptive survey of commercial soft technology system of SMEs in Iran and South Korea

Row	Variable / status	Iran	South Korea
1	SME definition / no. of employees	<50 employees	<300 employees
2	Types of covered enterprises	Exclusively production	Production, service giving, commercial
3	Architecture of protecting system	Polycymaking, financial, an administrative structures	Polycymakers and legal network
4	Protecting structure	Small Industries Organization, Agricultural Jihad, Industries Organization	Official and financial structures and relative structures
5	Credit scoring system	Does not exist	Exists
6	Risk management system	Credit guarantee fund	Guarantee and credit funds
7	Types of lending	Direct loan and credit assistances	Direct and mortgage loans
8	Disbursement procedure	Ascending with fluctuations	Ascending persistently
9	Interest rate (%)	14	5.5
10	Information database	Does not exist	Exists
11	Immunization process	Does not exist	Exists

Determination of the trends indicates persistent growth of lending in South Korea with a 22-percent fast growth, especially after the economic crisis in Asia. The relative share of SMEs from the loans increased from 75 per cent in 1997 to 89.1 per cent in 2004 and the interest rate reached from 10.89 per cent in 1998 to 5.78 per cent in 2004. The lending volume in Iran banking system increased steadily from 2006 to 2009. Furthermore, the share of nongovernmental and governmental sectors shows steady and descending trends, respectively; this points to an emphasis on development of nongovernmental sector. During an 8-year period, 40,000 billion Rial per year has been paid as loans to all SMEs from the regulation of SMEs.

The interest rate in different sectors of Iran was around 14 per cent with serious fluctuation in delivery and disbursement in recent years. It seems that payment of financial resources in Iran requires facilitation of financing process and development of financial markets. On the other hand, lack of dependable statistics on lending to SMEs should also be considered.

Protecting system structure in SMEs in South Korea include three parts, i.e. official systems, financial institutions, and other relative institutions. Iran protecting policies is based upon organizational policies in business, especially in industry sector. Of the protecting structures in Iran, Small Industries and Industrial Parks Organization, Bank of Industry and Mine, Small Industries Investment Support Fund, Ministry of Industries and Mines, Processing Industries Affairs in Agricultural Jihad Organization, and Iran banking system have direct relationship with SMEs. Credit scoring system for SMEs in South Korea is adopted for making decisions on lending and interest rate. In Iran, risk management of financing system in Iran includes Small Industries Investment Support Fund. The fund undertakes responsibilities of companies to the bank in order to reduce bank risks in disbursement of the loans to small industries. In the current situation, the highest burden of risk is on the shoulders of clients and entrepreneurs and property security guarantees are the most important concerns of SMEs. Taken together, risk management system in Iran is unconsolidated and sparse and is the responsibility of entrepreneurs.

Architecture of financing system of SMEs in South Korea consists of two parts, policymakers and legal system. The main policymaker for SMEs is SMEs Commercial Office. However, architecture of financing system for SMEs in Iran is not organized. It is noteworthy that with regard to the existing official procedures, it includes legal structures, financial structures, and administrative systems. The main legal structure responsible for decision making as to bank lending, interest rate, and credit guarantee are Small Industries and Industrial Parks Organization, Industries Organization, Labor Organization. In South Korea, there are two types of loans, direct loan and mortgage loan. Securities are generally credit guarantees and interest rate of SMEs is 5.5 per cent on average. Lending in Iran banking system includes two types, i.e. internal resources of the bank based on the client's credit and organized funds. Organized funds are the most common financing resource for insutrial projects. Credit technical assistances

have also been launched recently. Credit guarantee fund functions in different areas. Capital market in Iran has been unable to organize financial institutions and financial vehicles such as saving bonds. Regarding the organized funds, small and medium industrial projects are propounded with confirmation of authority organizations and Employment Task Force and executed by the agent bank (such as Melli, Mellat, Sepah, etc.). Interest rate in Iran is 14 per cent on average with a 5-year disbursement period. Iran financing network does not provide information products as a database. Therefore, special software should be prepared in this area. South Korea has been prosperous in immunization. Success factors of this country include government policy based on formation of an effective legal network and efficient immunity system, a transparent definition of true sales, declaration of information, gradual development of founders, credit elevation, and etc.; one of these companies is ABS. These services are performed as financing for SMEs and venture financial companies. However, immunization process has not been formed in protecting cycle of SMEs in Iran and a wise decision should be made in this regard as soon as possible.

8. Conclusion

Commercial soft technological system in South Korea as “a human-made social world in which humans are living” (Vermaas, et al., 2011) has been more successful than the one in Iran. Therefore, technological change in social, technical, and protecting systems of commercial soft technology for SMEs in Iran is necessary in different components, especially lending technology, financing methods, interest rate, investment risk guarantee, etc.

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