



What is the role of facilitating factors of economic resilience in Iranian industrial sector with focus on SMEs? (Case study: Hirbod steel company)

Dr. Mohamad Reza Mansouri

Consultant of Hirbod Steel Production Company
Dr.mansouri109@gmail.com

Prof. Dr. Dr. h.c. Hamid Doost Mohammadian

Professor for International Management major Blue-Green Cultural Sustainability of the
Fachhochschule des Mittelstands (FHM)
doost@fh-mittelstand.de

Professor Dr. habil. Richard Merk

Head of School of Start-up & Succession of the Fachhochschule des Mittelstands (FHM)
merk@fh-mittelstand.de

Prof. Dr. Dr. h.c. Volker Wittberg

Vice Rector Research & Development of the Fachhochschule des Mittelstands (FHM)
wittberg@fh-mittelstand.de

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Abstract

In this research, *Hirbod Steel Company* has been used as a case study. The company is in production, in good condition, and in order to achieve higher quality products and to globalize its product portfolio, it must remove the leading obstacles, some of which are high policies and multi-banks outside the company, and some must Using the knowledge of foreign companies and exporting its product to world leading countries with European international standards, become a dynamic and active company in the global standard.

For this purpose, in this project, which has been applied to Hirbod Company, the existing obstacles in the way of this company have been identified, as well as the factors affecting the improvement of the company, including production, quality, monetary and financial policies, and the promotion of knowledge and technology. Let's take steps to strengthen it. among the 11 indicators that were extracted, three main effective factors were identified, which are *training*, *join venture* and *Interest*. among the 11 indicators that were extracted, three main effective factors were identified.

Keywords: SME, Innovation, globalization, Economic Strength, join venture and Interest.



Introduction

Today, most of the multidisciplinary studies connecting innovation to commercial and cultural sustainability focus on small and medium-sized enterprises (SMEs) with less than 250 employees and a turnover of less than €50 million. SMEs are considered as the type of companies which cannot handle extra bureaucracy's costs. Written policy is needed to vanquish problems. However, SMEs are the sources of innovation and creativity when cooperating with large industries. The collaborations among large industries and SMEs mean the exchange of capability and inventiveness. To facilitate the design of more sustainable business models, a range of new tools and techniques have been developed.

In this research, Hirbod Steel Company has been used as a case study. The company is in production, in good condition, and in order to achieve higher quality products and to globalize its product portfolio, it must remove the leading obstacles, some of which are high policies and multi-banks outside the company, and some must Using the knowledge of foreign companies and exporting its product to world leading countries with European international standards, become a dynamic and active company in the global standard.

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Literature Review

With lessons learned from previous episodes as well as substantial improvements in economic policies and fundamentals over the years emerging market economies (EMEs) on average are better positioned to withstand financial turbulences, both now and in the near future, than in the past. Since their respective last financial crises most EMEs have been implementing more prudent policies, made stronger their governance frameworks and created financial safety nets as a buffer against adverse shocks. As a result, they were able to strengthen their stock and flow balances and policy frameworks, deepen local capital markets, and diversify their production and exports together with stronger global trade and financial linkages.[1]

Strong stock and flow balances in EMEs

- *Stock balances*
 - *Public and private debt*
 - *External debt*
 - *Bank capital*
- *Flow balances*
 - *Growth*
 - *Inflation*
 - *Current account balance*

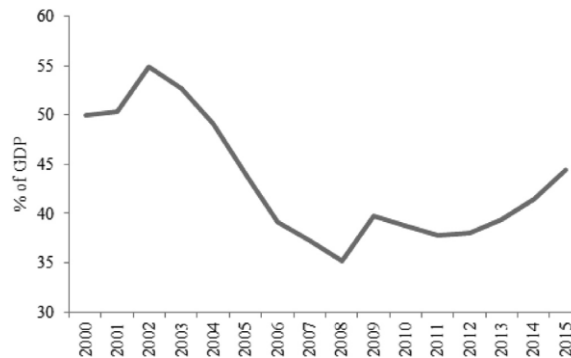


Figure 1 . EM gross government debt

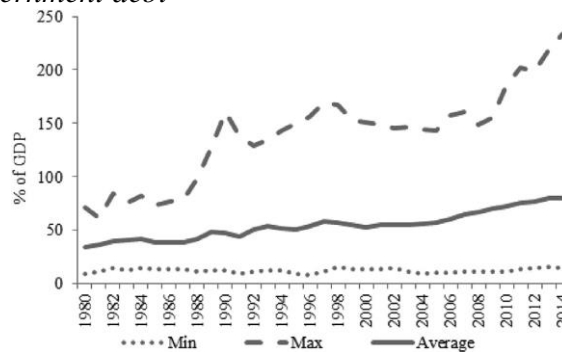


Figure 2 - - Private credits in EMEs

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Globalization has significantly increased international competition (Abbas and Waheed, 2017). Because of its contribution to international trade, small and medium-size enterprise (SME) sector is being considered as a major contributor in the global economy (Kunday and Sengüler, 2015). In fact, SMEs' needs and decision-making processes differ from those of big entities and they experience faster growth (Lee et al., 2012). Therefore, with respect to most SMEs, beginners, lack of a resolute pattern regarding competitive advantage (CA) is a big concern.

Though SMEs in Iran have the potential in accessing CA because of their qualified goods and services at a domestic scale, the absence of a definite pattern is obvious. In this study, after studying a list of SMEs with a high strategic stance in Iran, three industries, on behalf of all industries, consisting of knowledge-based (those which science and technology shape their core assets as an integral part, such as R&D, high-tech goods, know-how and so on), medical device production and construction stone cutting, with different structures, business type and innovative aspects thereof were selected and analyzed.

Finally, the managerial implications of the results are offered. Case description There is little unanimity regarding the definition of SMEs in Iran. Various ministries, institutions and organizations related to SMEs in one way or another have their own criteria to describe, categorize or define SMEs. As defined by the Ministry of Industry and Mines and the Ministry of Agricultural Jihad, SMEs are (rural) industrial and service enterprises with less than 50 employees, whereas the Ministry of Cooperatives alternately uses the criteria either determined by the Ministry of Industry or Mines, or by the Statistical Office of Iran in defining SMEs. According to the Iranian Statistical Yearbook for 1385 (2006/7), the latter categorizes businesses into four classes, i.e. businesses with 1-9 employees, 10 to 49 employees, 50 to 99 employees, and more than 100 workers. Although this categorization



bears some resemblance to the definitions used by the EU, the Statistical Office of Iran only considers businesses with less than 10 employees to be SMEs; others are regarded as “Large Manufacturing Establishments”. Similarly, the Central Bank of Iran only defines establishments with less than 10 workers as SMEs. In contrast, in the EU, SMEs are defined as non-primary enterprises

employing less than 250 employees. They are sub-divided into:

- Micro enterprises (1-9 employees);
- Small enterprises (10-49 employees); and
- Medium-sized enterprises (50-249 employees).

In addition, their turnover should be less than € 40m. With a balance sheet total of less than €27m; finally, they should be economically independent, i.e. more than 50% privately owned. Statistical overview of SMEs in Iran

Among the three industries, medical device production is outstanding at the global level. According to ISNA News Agency (2017), in the medical device industry during the 2016-2017 period, a total of \$11.44m at 35,000 tons of goods were exported, which recorded 8.5 per cent growth in value and 41 per cent decline in weight compared with the amount for the same period last year. As to the construction industry, Iran is endowed with 15 per cent of the global volume, with 6,000 stone cutting institutes, while it exports only 1 per cent of global market need (Mehr News Agency, 2017).

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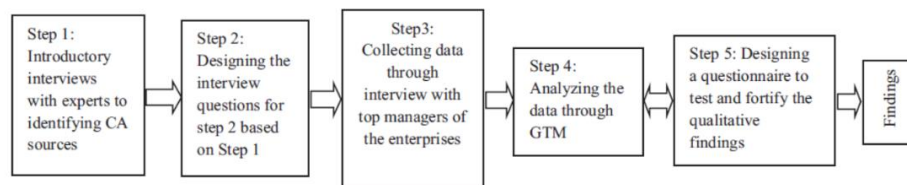


Figure 3 - The methodology process

Methodology

In the first step of this study the facilitating factors of economic resilience in industrial sector were identified by a review on the existing literature as well as interviewing with the experts in the related field. In the next step and with the purpose of confirming and ranking the facilitating factors identified in the previous step, a questionnaire is developed. The questions are designed to ask the experts about the level of importance of the 11 identified factors. The experts evaluate the importance of each factor in seven level from 1 (not important) to 7 (very important). In this study the opinions of 35 experts in the related field are collected using the mentioned questionnaire. The collected data are analyzed using the T-test analysis with SPSS software. The Eigenvalue in this analysis in the current study is considered 3.5. In the other words, the factors are analyzed by this value and those factors that are interpreted statistically important with the mean upper than 3.5 are considered significant.

This analysis could help to measure the level of importance of each identified factor of economic resilience in industrial sector. Also, from the results some practical suggestions could be extracted by focusing on those factors that are more important. Further, despite all the 11 identified factors are important and should be considered in the decisions to improve the level of economic resilience in industrial sector, concentrating on the more important factors could make the decisions more effective and could help the managers to achieve better results. Furthermore, the results of the analysis could contribute the body of the knowledge by



identifying and confirming some specific factors facilitating economic resilience in industrial sector as the customized elements.

Main research question:

What is the role of facilitating factors of economic resilience in Iranian industrial sector with focus on SMEs?

Research sub-questions:

- What are the facilitating factors of economic resilience in Iranian industrial sector with focus on SMEs?
- What is the degree of importance of facilitating factors of economic resilience in Iranian industrial sector with focus on SMEs?
- What are the guidelines of implementation of facilitating factors of economic resilience in Iranian industrial sector with focus on SMEs?

Main research objective

Analyzing the role of facilitating factors of economic resilience in Iranian industrial sector with focus on SMEs.

Research sub-objectives

Identifying the facilitating factors of economic resilience in Iranian industrial sector with focus on SMEs.

Investigating the degree of importance of facilitating factors of economic resilience in Iranian industrial sector with focus on SMEs?

Presenting the guidelines of implementation of facilitating factors of economic resilience in Iranian industrial sector with focus on SMEs.

In addition, this study is combination of descriptive, applied, explanatory and predictive. Generally, logic of the research is inductive research. Furthermore, this research is applied research in order to improve process of organization, find solutions for organizational challenges and develop a practical model for organizational stakeholders.

Descriptive research

Descriptive research consists of survey and fact-finding investigation of different kinds. The main purpose of descriptive research is explanation of the set of circumstances as it is present as such. The techniques used in descriptive research are can be of all kinds like survey methods, comparative and correlational methods etc.

Applied research

Applied research refers to finding a solution for specific, practical problem facing by an individual, society or an industrial or business organization. Thus, the main aim of applied research is to find out a solution for some critical practical problem.

Positivist research

The positive paradigm studies are based on the facts and considering the world is objective and external. Positivism claims that the true knowledge means the authentic knowledge and that such forms of knowledge derived from positive affirmation of theories which framed by strictly scientific methods, related to the specific aim of reasoning.

Primary and secondary research

This conceptual model (which presented by the researcher), uses the library resources and successful experiences of prosperous Iranian and German companies to outline some of the effective



factors such as, culture (visible culture and invisible culture), some accelerator, risk management, business cross cultural models and International human resources.

Qualitative and quantities research

In natural sciences and social sciences, quantitative research is based on the aspect of quantity or extent. It is related to object that can be expressed in terms of quantity or something that can be counted. Such type of research involves systematic experimental analysis of observable phenomenon via statistical, mathematical or While, a quantitative aspects and methods have important roles in developing of the research. In other words, the primary will be determined by the knowledge gained from the literature review, interview and questionnaire. The secondary research is concerned on analyzing methods.

Fundamentally, this research will be largely positivist, and the majority of the methods will be qualitative. These will be numerous and varied however, as is necessary for such a wide-ranging analysis.

Four indicators of research

In order to gather the information needed for research, these four indicators must be properly met, which are explained below.

- Power

I have been working as a senior consultant for this factory for many years. I was the representative of Markazi province in the parliament for 4 years. After the end of the parliamentary term, I am working in this factory again as a consultant and executive director. Therefore, it is possible to provide the required information easily.

- Privilege

About my Iranian case study, I do not have any problem about accessing the information. Because I have worked there for many years and I tried to have friendly manners with my workmates to attract their trust. Exactly I have some research about this topic in my master thesis and collecting data by printed questionnaire I myself distributed and gathered them easily.

- Politics

Politics is the way managers use power for personal gains. Managers at higher levels use politics to acquire more power. Thus, it is the way of working in a manner that a person is able to influence the behavior of others.

Every organization has specific politics which personnel should accept and allow that. When a researcher wants to start doing his/her research there, he/she should be aware from it.

- Ethics

Ethics are the moral principles that a person must follow, irrespective of the place or time. Behaving ethically involves doing the right thing at the right time. Research ethics focus on the moral principles that researchers must follow in their respective fields of research.

Ethical issues have been considered when constructing this proposal, including privacy, anonymity and confidentiality. All of which will be extremely important when developing, distributing and analyzing the questionnaire for primary research. In brief, the participants will not be forced to complete the questionnaire; neither will it ask them to disclose any details regarding the organization that they work for.

The Case Hirbod Company

The company is in production, in good condition, and in order to achieve higher quality products and to globalize its product portfolio, it must remove the leading obstacles, some of which are high policies and multi-banks outside the company, and some must Using the knowledge of foreign companies and exporting its product to world leading countries with



European international standards, become a dynamic and active company in the global standard.

For this purpose, in this project, which has been applied to Hirbod company, the existing obstacles in the way of this company have been identified, as well as the factors affecting the improvement of the company, including production, quality, monetary and financial policies, and the promotion of knowledge and technology. Let's take steps to strengthen it.

Zarandieh Hirbod Steel Industries Company (Hirbod Steel) is one of the most complete complexes of steel production in Iran and Middle East. Hirbod steel has been operated in Mamounieh Industrial Town located at Zarandieh city of Markazi province in 2012, following convergent and continuous supply pattern of an agile and dynamic chain and providing lean thought of entrepreneurship in Iran within private sector investment. Current capacity of this complex is over 2.2million tons per year. Supply chain of the products includes steel billet in different dimensions, steel rebar in all diameters and various types of constructional and industrial profiles and pipes. Hirbod Steel employing skilled and committed experts and specialists with modern and up to date equipment as its main assets could influence target market effectively in the country and abroad by manufacturing different and unique products.

Mission

Hirbod Steel is dedicated to exceeding lean production, customer orientation and intimacy by producing and distributing world class steel products utilizing its diligent and dynamic culture, experienced and efficient employees and managers.

Key Values

Hirbod Steel considers the manpower as its main assets and does its best to enhancing their self-confidence and sublimation.

- Responsibility is our primary concern.
- Customer orientation, intimacy and respecting all customers is our essential belief.
- Observing legal and ethical rules in all work processes is a noteworthy duty.
- Hirbod Steel commits to all accepted human values.
- We do believe that the customer is always right. They do not need us, but we are depended on them.
- We do believe that all beneficiaries are deserved to receive the most possible interest observing law and ethical rules.
- We consider our city as our home. We do our best in order to preserve the environment.

Installations and Infrastructures

Hirbod Steel is unique due to its energy infrastructures and installations. Zarandieh Hirbod Steel complex has an exclusive 63kv high voltage electricity substation, two gas substations with capacity of 25000 cubic meters per hour and water storage pools. Zarandieh Omid Arian Melting Industry Complex is equipped with an exclusive 20kv feeder creating 6700kv electricity as well as an exclusive water input with 3/4 inch.

Quality Control Management

The emphasis on quality of products in accordance with national and international standards is the most important advantage of Hirbod Steel products. Whole processes would be checked by quality control management system from the beginning up to the end of production. Hirbod Steel has provided one of the best-equipped quality control laboratories



consisting of devices such as tensile test machine, micro hardness accelerometer, polish, optical microscope, bending and re-bending test system, thermometer, densitometer, pH meter, sclerometer, hydraulic press, heat-treatment furnaces, spectrometer and other measurement tools consisting of coulisse, protractor, inclinometer, filter, etc. to guarantee quality of products.

Hirbod Quality Viewpoint

Hirbod Steel bound itself to implement quality management system based on up to date standards as one of the most complete steel complexes in Iran. Therefore, this company has been founded all activities based on lean production. Accordingly, Hirbod Steel considers all personnel as an active member of quality management department. It undertakes to supervise quality of products in all processes and stages. We summarize them as below:

- Enhance customers' satisfaction by producing high quality products and on time delivery.
- Use standard and high quality raw materials for production.
- Give priority to quality if any disputes risen in working procedures.
- Recruit qualified, efficient and professional personnel as the main asset of the company.
- Enjoy personnel involvement in continuous improvement and promote self-control and self-evaluation culture.
- Promote customer orientation and intimacy culture in the company.

Transportation

Hirbod Steel tries to produce high quality and competitive products at international level and achieve long term and permanent customer satisfaction at any time and working conditions. Regarding importance of delivery time, this company can guarantee delivery of cargo at predetermined time. Continuous presence in international markets allows us to provide competitive prices with the minimum shipping time and best services. Hirbod Steel will insure the whole cargo against all associated risks from origin up to buyer's warehouse.

Analyzing and Finding

In this research, we use SPSS software to determine the most important factors. The tests used in this study are T-student single value and Kolmogorov–Smirnov test. Our statistical sample is 35 who are experts. Below we can see the result of SPSS software.

| | N | Minimum | Maximum | Mean | Std. Deviation |
|------------------------|----|---------|---------|------|----------------|
| energy | 35 | 1 | 3 | 1.51 | .742 |
| salary | 35 | 1 | 4 | 1.54 | .780 |
| exchangeratestability | 35 | 3 | 7 | 5.46 | 1.197 |
| training | 35 | 4 | 7 | 6.11 | .963 |
| bankinterestrates | 35 | 3 | 6 | 4.63 | 1.003 |
| tax | 35 | 1 | 4 | 2.86 | .772 |
| socialsecurity | 35 | 1 | 4 | 2.49 | .818 |
| labourrules | 35 | 1 | 4 | 2.46 | .741 |
| bankingtransferprocess | 35 | 2 | 5 | 3.57 | .850 |
| competitiveness | 35 | 3 | 6 | 4.23 | .770 |
| jointventure | 35 | 3 | 7 | 5.80 | 1.079 |



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|------------------------|----|---------|---------|------|----------------|
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| bankingtransferprocess | 35 | 2 | 5 | 3.57 | .850 |
| competitiveness | 35 | 3 | 6 | 4.23 | .770 |
| jointventure | 35 | 3 | 7 | 5.80 | 1.079 |
| Valid N (listwise) | 35 | | | | |

Figure 4 - Descriptive Statistics

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| | Test Value = 3.5 | | | | | |
|--------|------------------|----|-----------------|-----------------|---|-------|
| | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
| | | | | | Lower | Upper |
| energy | -15.822 | 34 | .000 | -1.986 | -2.24 | -1.73 |

Figure 5 - One-Sample Test

Discussion

Interest

Interest rate in every country should determine in well-proportioned to inflation rate. As it is shown in charts despite present inflation in the country and about 25% bank interest draw to the depositor, we could see increasing rate of foreign exchange and because of inflation it keeping it in real rate at the least measurement.

Many of the country financial sources as bank interest are drawn to the foreign depositor. Even sometimes 25% interest as foreign currency are paid to the depositor it means if foreign depositor could change foreign currency from us Dollar to Rial and deposit in Iran banks after few years 25% interest bank could be received and then change it to the foreign currency that in proportion to us Dollar it has low raise and could receive 25% as interest



bank in us Dollar that means annihilating country resource says which contradict resistant economic primary.

Thus, sometimes the other countries treat carrying out suddenly real price US Dollars in sanction period is raised. Wonderfully based on the performance of resistance economic which is the best way for resist the pressure of sanctions as Ayatollah Khamenei's command but the government practically could not perform and sometimes pave the way for sanction by making quite obvious mistakes. Wasting foreign exchange resources and running out budget. If all recourses are more considered as Iran's foreign exchange resource the sanctions become less effective short-term plans to keep constant the rate of US Dollar cause great harmful to Iran's economic that three years mutation unbelievable.

For economic income and costs are two main components. Even in sanction period the government try not to decrease the costs and accessing low price foreign exchanges the country financial resources with inflation rate could be annihilated. Because everyone could use more foreign exchanges. Sometimes considering inflation rate the price was two or three times more than real rate by going abroad or importing the foreign instruments.

Could use net subsidization. The fifth real number are very high and could destroy every country economic supposedly every four years money value is doubled by rate of 25% means late 42 years we spend eleven period of 4 years which money reach 2 times increased that means 4096 times although the price of US Dollar reaches to 2800 Toman but the problem is emerged that sudden move in charts that's shows now real price of inflation rate and bank interest are not uniformed and angles coefficient make great differences those days country resources (25% rate) where getting out if every country as US Dollar is paid interest it caused harmful results for them. In 42 years ago bank interest and foreign exchange are not uniformed it caused consumerist and foreign exchange recourses to annihilated.

In other words, every 4 years Iran's money value should pay interest equaling all 42 years ago that raised market cash flow. Although in first period the amount is not so high but now it reaches to 3 billion Tomans. The number is a great catastrophe and the only way to solve it is resistance economic.

The results in SMES is by every export such as spare parts or any production we see low price of foreign exchange and the low price of foreign exchange and the producer by paying 25% bank interest sooner or later go bankrupt for importer got in the goods subsidization Dollar and many times the curve gradient was low and bank interest was not enough, on the contrary of sudden curve gradient for those who expert in economic could gain great investment and practically injustice and lack of welt on uniformity in the country could be seen.

Usually in sanction period foreign investments or Iranian residence abroad draw their investments. Bear with less disadvantage and all the 25% interest disadvantage as US Dollar are caused to increase unvalued Iran's currency and getting out domestic resources.

Joint venture

In some industries SMES considering occasional situation in the country such as labor of minimum wage preparing power water gas and gasoline of low price there are not competition production (like automotive) so powerful producers use net subsidization and Iranian attractive market and west Asia productions could have high qualified ones.

Cooperation between countries and companies could develop toward qualified and competition productions, rapidly pave the path to supply domestic market and even for



export so that in Iran there are infrastructure in automotive industry and labors in every producing need to be specialist and have modern technology specially produce modern planning and molding.

Considering all the situation, cooperation with automotive producers is so affective because it leads to decreased the price of cars and on the other hand the short distance of west Asia could be sent the production by east Asian and European producers from Iran to the market and foreign exchange could flourish the effective production. In Iran many of automotive companies are established with infrastructure that by modern technology and planning could become as a powerful producer in automotive and spare parts industry.

So is recommended to automotive companies to cooperate with powerful foreign companies to pave the way for qualified and exporting based production till SMES in Iran is more activated and powerful.

Training

One of the SMEs needs is trained persons in various fields. In present world we see technology changes daily could annihilated traditional jobs and those are needed in technical skills only specialist in SMES are left. So present training is not expertise one and could not take and account as a necessity for society.

a student after twelve years education learned only general learning but it is obligated specialized learning is performed from the childhood thus specialized schools for training should be established. For example, the art of weaving carpet is taught and a student could gain a certificate in weaving carpet. In fact the student after twelve years in education period become as a specialist weaver in carpet.

A society could eliminate the problems concerning dexterity and all the fields based on interest genetic society needs by training skills so entrepreneurial situation could be performed of the youth age. We should answer to the question: why in the country that everything be very cheap to the price even we could say they are free of charge! For example, power in every h/Kw is 0.1 cent and as well gas is 3 cent and energy consumptions almost are free of charge or even water is 0.1 cent and monthly labor wage is 100 dollars.

Why production is not export based because someone who does not know dressmaking is better than who knows a little about making a dress. For he/she knows how to tear down a cloth. We should train persons in

childhood and youth age in many specialized fields till productions become export based. Of course, in many theory fields we make wonderful progress but there are few technical labor forces and when the youth be familiar with SMES unfortunately learning age is finished or become no effective so lack of specialized and extra specialized in every field even in art sports and technical ones should be necessary.

Today, having art license or painting diploma is not useful but it's better to gain specialized diploma in portraying. Thus, are society needs are specialized persons in every field even in sport. If student gain football diploma and a full day and night educate in football field as specialist, we could say he could be successful in SMES as specialist football player. One of the main problems of automotive in Iran is lack of specialized technical persons for example such as machining molding spare parts planning and qualified production but in instructive learning and enough infrastructure energy and labor wage at low price we could be rapidly one of the powerful automotive producers in the world and could establish many of



SMES. Meanwhile spare parts companies would prepare spare parts and be as a spare parts exporter.

Conclusion

According to the results of previous seasons, among the 11 indicators that were extracted, three main effective factors were identified, which are training, joint venture and Interest. For this reason, the company has taken steps to use this result. For this reason, these topics can be suggested for future research.

- How can applied education replace the current methods of the country's education system?
- What are the practical ways to use the potential of universities in industry to reform an inefficient education system?
- What criteria should be considered for a joint venture with other companies?
- What should a joint venture look like and what strategies should be used?
- What are the characteristics of industry interest in a resistance economy?
- What effect do cultural and political factors have on creating interest?

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