Identification of the Grounds for Attracting Investors Based on Finding the Missing Links in the Value Chain of Tabriz Home appliance Industry

Setareh Rezaee, Masoud Behravesh and Sajjad Matlabi

M.Sc of Economics, lecturer of Economics, Department of Economics, University Of Applied Science and Technology, Shahrdari Branch, Tabriz, Iran.

Economics Researcher, Department of Economics and Management, Bonab Branch, Islamic Azad University, Bonab, Iran.

Department of Management, Tabriz Branch, Islamic Azad University, Tabriz, Iran.

Abstract: This article aims to determine the grounds for attracting investors on the basis of identification of missing links in the value chain of Tabriz home appliance industry. To achieve this aim, we first compare the value chain of Tabriz home appliance industry with a sample industry at the national level. The main routes of producing home appliance are determined on the basis of domestic and national value chain and some solutions (including the projects about expert services, industrial networks, creating and developing investment projects) are proposed in order to deal with the focus points.

Keywords: Value chain, Industrial network, Focus points, Expert services, Investment

INTRODUCTION

While globalization and free trade are the growing trends of the present era, economic growth and development can undoubtedly only continue if countries manage to develop the activities which are newer and with greater value-adding and take on producing goods and services which help them to maintain their position and status in the competitive market. Such investment, as an effective tool can play a significant role in helping the agencies. Undoubtedly no definite and absolute approach exists to flourish industries. However, there is always a need to review the investments and propel them towards the most efficient approach in order to select the effective strategies. This cannot be achieved unless periodic studies and purposeful researches, modern and effective approaches are provided to capital owners and those active in the domain of industry. Creating value-adding and completing the production chain are among the indices, which determine the priorities in investment. Each project related to expert services, industrial networks, developmental and innovative investment projects which result in the completion of value chain are placed in the priority list. In the present situation, competition over gaining the markets has become much more difficult due to economic crisis of the free market as well as the appearance of new economic powers such as India and China to the international competition scene. In such a situation, any kind of decision or major planning at the level of region will lead serious risks without precisely understanding the potentials of the region, chain of global supply, and scientific marketing. With regard to the key role that compiling national and regional development plans play for achieving a jump in non-oil exportation, identification and awareness of different capabilities and talents of the region are necessary. In any way, adopting proper development strategies in different regions can guarantee development of trade as well as development of commercial markets for products of different fields so to pave the way for economic development of the country. There are different models for developing small and medium sized entrepreneurships. The chain value analysis at the level of agencies and inter-agencies is one of the most capable models on the basis of which it is possible to extract reliable quantitative data for decision-makings. Since selecting a project for investment in provinces requires a prospective point of view, chain value analysis model can investigate the links that have different value-adding with high credibility and thus on the basis of the province's relationship with that link, select those links for investment which can be presentable or producible sustainably and in the long-term with proper profit margin. The realization of balanced development of industry in the country and achieving a balanced model can lead to gaining regional advantages and creating sustainable employment in the country. The present article aims to present models for finding the missing links of Tabriz domestic household industry state the necessary infrastructure for sustainable development of this industry based in the value chain.

2. Review of Literature:

Identifying the missing structural links in each section of industry, agriculture, services, and support is absolutely necessary for establishing and developing such structures in a centralized complex. Special attention to completing the production chain in order to gain the maximum amount of value-adding in the production

Corresponding Author: Masoud Behravesh, Economics Researcher, Department of Economics and Management, Bonab Branch, Islamic Azad University, Bonab, Iran.
E-mail: behravesh@gmail.com.
chain of a product in the country is among the prominent features of this project. In fact, paying attention to this issue constitutes enough gain from the industrial priorities of the country and gaining a significant portion of the lost value-adding. Value chain analysis model was developed in 1985 by Michael Porter, one of the professors of management faculty at Harvard University and has been used for more than 30 years by developed and developing countries as well as by such organizations as UNIDO, UNDP, OECD and ILO.

Value Chain Model is based on networking of industries and is applicable to individual producing agencies and to a number of industrial agencies. The activities in producing organizations can be divided into support activities and primary activities that aim to provide a level of value to the customer that not only covers the costs of activities, but also provides a proper profit margin. In this model, we have suppliers on one hand and consumers on the other hand and marketing, design, construction, sales, distribution, and services work together. Production means when various activities are placed next to each other in a way that they can be regarded as one single process. Different activities are independent but form a chain when at one another's span. Economic value is formed from the first link and something is added to it until the last chain. The outcome of the final link of this chain is something that is called final product. This process, which encompasses the beginning to the end of the product and begins from the raw material and covers to the manufactured product usable by the consumer, is called the value chain. Since a prospective point of view as well as consideration of the global economy are needed for selecting a product for being invested in the province, this model can investigate different value-adding links and choose those links for investment that are in regard with the situation of the province can be produced and supplied sustainably and in the long-term. The executive steps of the research are as follows:

- The current situation will be analyzed in definable and identifiable links in the value chain of Tabriz home appliance industry.
- The value chain of home appliance industry has been studied in comparison to the similar successful product and each link has been adjusted with the similar link in a similar industrial product and then the missing links were extracted. Inter-agency value chain constitutes the stages for creating value in a chain that has the supplier of the raw materials on one end and has the final consumer on the other end. Inter-agency value chain can be proposed at national, regional, and global level.
- The focus point for manufacturing the product of home appliance industry is extracted. Focus points in value chain analysis are the points in which great and meaningful changes occur in other variances through making small changes in them.
• The main crossroad in production of home appliance have been identified with regard to local, regional, and international value chain and solutions (including projects on expert services, industrial networks, innovative and developmental investment plans) have been proposed for facing the focus points. Industrial network is the interaction of two or more product agencies with each other or with the government, competitors, distributors, consumers, material suppliers, and presenting the final product or service to the consumer. Expert service centers are the places inside the region for providing software services to production and industrial units. Incomplete projects are those that have had 40% physical progress and economic justification.

3. Geographical Location of Tabriz Home appliance Industry:
Most producers of home appliance in Tabriz are those which produce fridge, freezer, oven, gas heater, hearth, water heater and water coolers. The producers are mainly gathered in Kojaabad, Azarshahr Road, some units are in Tehran Road, Marand Road, and a few are located in Basmanj Road. A number of producers work in industrial towns. Wide distribution of producers of home appliance is not limited to geographical distribution, but it also relates to and is even worse with regard to cooperation. The majorities of large home appliance factories were partners in the past, but now work under different brand names. It should be mentioned that in Kojabad region, producers are all originally from Kojabad village and thus they have a closer relationship with one another in comparison to other factories. Moreover, they have a greater sense of competition and have motivation for progress in comparison to large factories and thus their cooperation is more than other people active in different industries. It should be mentioned that most of producers outside Kojabad region have been transferred to those locations from Kojabad.

4. Comparison between Value Chain of Tabriz Home appliance and a Successful Sample:
Analysis of the value chain provides invaluable data for decision-making. Based on the outcome of this analysis, one can say which value chain link can create more value. According to the variety of industrial products it is not possible to analyze all products in the framework of this article. In addition, home appliance industry has comparative advantage in all products except for fridge production and thus it seems necessary to develop fridge industry in order to develop appliances industry. Therefore, the most indicative product, i.e. fridge, has been analyzed.

Table 1: Value chain of Fridge in Tabriz Home appliance (Prices are Rial)

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</tr>
</thead>
<tbody>
<tr>
<td>Fridge</td>
<td>Tabriz</td>
<td>1641600</td>
<td>0</td>
<td>1208400</td>
<td>144400</td>
<td>315400</td>
<td>3310000</td>
<td>3800000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Id househo Appliances</td>
<td>43/2</td>
<td>3/8</td>
<td>3/8</td>
<td>8/3</td>
<td>87/1</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>successful national sample</td>
<td>35/7</td>
<td>7/9</td>
<td>23/4</td>
<td>7/5</td>
<td>5/8</td>
<td>78/4</td>
<td>100</td>
<td></td>
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</tbody>
</table>

Raw materials and production chains in this process include a high percentage of the costs. In order to calculate and compare the value at each stage (raw materials; production of the impact of marketing and sales) costs can be divided into sales and then the figure will be analyzed.

The data relating to the figures of value chain of home appliance production has been extracted from cognitive study of Tabriz Home appliance. In order to analyze the value chain, only one product, i.e. fridge, has been selected due to similarity and lack of access to technical and financial data of all kinds of products. In addition, one average producer in the industry has been analyzed. Analyzing the value chain with investigation of each and every available link, it seems that the figures of the industry are not far from the related benchmark. This little difference might not leave any effects on the current condition. However, for a product with wide market share, which is followed by scale production, it will be significant. In order to achieve a logical conclusion, as Porter’s model, value chain analysis will be conducted in 4 groups of supply, human force, production, and market so that to obtain a summary and design for continuing this path.
5. Current situation in the identifiable links:

5.1 Supply of Raw Materials:

It seems that when raw materials are cheap as much as a few per cents, it is indeed the result of challenges and opportunities in the geographical location. The performance of support institutions and the existing laws such as custom tariff in line with supporting the producers is not free of shortcomings because the mediatory goods in home appliance in Iran, such as Electromotor of washing machine and high-quality compressors of fridge, freezer or electronic appliances in Iran suffer from lack of advanced technology or well-known brands. If suppliers import the components, they need to follow a tariff pertaining to imported home appliance. In the same way, some raw materials such as the domestically-produced sheets enjoy certain amount of tariff deductions when they are bought in large numbers. In a cluster, however, the low volume of supplying raw materials results in mediatory purchase. For instance, purchasing goods from the representative of Isfahan Mobarakhe Foolad, 3% profit is paid for the services provided by the representative along with the 3% transportation costs which are the result of BM's distance from Isfahan and Tabriz. The impacts of other factors such as free land, lower financial costs, facilitating services and laws in the competitor countries in the international market facilitate competition. On the whole, the following problems are significant in the domain of supply:

- The high cost of transportation due to the great distance
- Mediatory purchase
- Customs tariff of supply components with customs tariffs of imported home appliance.

5.2 Production and Design:

This part is divided into production processing and Research and Development.

5.2.1. Production Processing:

When analyzing the stages and factors of production, the most relevant issue pertains to day’s technology, technical knowledge, and exploitation of resources. This stage follows the second link, that is design and R & D which guarantees product quality and innovation. Exploiting the resources can be human, financial or technological. Non-exploitations lead to an increase in the total cost of the product. For instance a machine with 3 persons has 200 productions, while the same component with another machine has 50 productions with 8 persons and this makes the competition difficult.

5.2.2. Research and Development:

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Fig. 3: Smile diagram of value chain of Tabriz household appliances
Most factories do not have a design and R & D unit. Productions of 88% of producers are reverse via engineering. Only 12% of units have design and studies and a unit that looks a bit like R&D. The producers that have design and R&D units, are faced with the problem that they produce and supply a new product to the market with a high price and soon it is produced and supplied to the market under other names, although with different quality which might even damage the credibility of the producer. A small number of units use foreign designs through the internet; while, R&D unit plays an important role with regard to the consumer and investigation of their needs and satisfying the needs. Satisfying consumer's needs increases the innovation and lifetime of an organization. The main problem with design and production is that there is no compatibility between consumers' needs and the cluster's and thus there is no investment in designing and on the whole in R & D, while they should have the highest attention since the product's nature must satisfy the customers' needs and tastes. In fact, due to reverse engineering in production, the cost of designing for cluster producers is low and almost zero. It seems that the cost of designing is paid by the competitors, ignoring the fact that the profit of this link, i.e. technical knowledge and innovation, will go to competitors. This profit will be transferred to one of the links of the value chain and will result in more value-adding, fame, and pioneering of the competitor's trade name in the global market. On the whole, the following problems are very important in the production field.

- Lack of R & D laboratories that are equipped with modern equipments and the related training centers
- Lack of quality of the products and the incapability of existing technologies and production of scale

5.3 Human Resource Management:
The existence of human force is considered one of the advantages of the cluster, but human force in the production engineering realm, which can be regarded as R&D, has not been employed.

5.4 Marketing and Sales:
This link is a vital issue in regard to sustainability of home appliance producers, and the less the marketing, the more the loss. Therefore there is no need for further explanation here. Improper competition with 30% of lack of Iran's market in supply of home appliance distracts the producers from scientific marketing of after-sales services and thinking about exporting their goods. It will create a situation in which a price game will happen between producers and thus negative competition, leading eventually to limitations in the market. On the whole, in the area of marketing and sales, inflexibility and cost in scientific marketing is a key issue:

On the whole, in any value chain there are some elements which explicitly and implicitly play an important role in determining the value of the chain. The following picture demonstrates these factors.

Fig. 4: Cause and Effect Factors in Value Chain

6. Introducing the Pressure Points of the Cluster:
Summing up the above mentioned issues, particularly with regard to value chain analysis, it can be said that the most important pressure points in home appliance industry are as follows:
- Weakness of R&D, lack of modern technology and lack of reliable quality of the product
- Lack of flexibility in the market and marketing, particularly in controlling the market

7. Strategies:
It can be said that having quality products is the winning point of household appliance industry and this can be achieved through R & D as well as enhancing technology and developing the market. Therefore, on the whole, it can be said that the strategy for developing household appliance industry is as follows:

- Creating R & D centers and source libraries
- Enhancing the level of technology
- Development of domestic and foreign marker (neighboring countries on the west and north)

8. Focus Points on Tabriz household appliance industry and the Recommended Solutions:

Based on the analyses that have been conducted, the identified focus points are as the following table. Some solutions have been proposed in order to get rid of such pressure points.

<table>
<thead>
<tr>
<th>Identified Focus Points</th>
<th>Solution</th>
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</thead>
<tbody>
<tr>
<td>Lack of compatible quality</td>
<td>Studies and creating laboratory unit, R &amp; D and shared training center  Establishing specialized service units for home appliance engineering</td>
</tr>
<tr>
<td>Lack of marketing and scientific selling</td>
<td>Studying the creation of specialized marketing network  Studying the creation of specialized purchase networks  Establishing specialized web site  Establishing permanent fair of home appliance</td>
</tr>
<tr>
<td>Lack of parent industries</td>
<td>Studying and establishing a factory for home appliance components</td>
</tr>
<tr>
<td>Lack of modern technology at production units</td>
<td>Development of electronic components factories  Enhancing technology of supply and production units  Investigation and creating a major related to home appliance at High Educational Centers</td>
</tr>
<tr>
<td>unfamiliarity with target markets</td>
<td>Studies and Researches into target markets at national and international level</td>
</tr>
<tr>
<td>Completing Production capacities</td>
<td>Completing a number of units</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table3: Table Recommended Projects for Different Areas of Tabriz Household Appliances Industry</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>Name of Project</td>
</tr>
<tr>
<td>Specialized Services</td>
<td>Studying and creating laboratory unit, R &amp; D, and shared training center  Establishing specialized service units for home appliance engineering</td>
</tr>
<tr>
<td>Industrial Network</td>
<td>Studying the creation of specialized marketing network  Studying the creation of specialized purchase networks  Establishing specialized web site  Establishing permanent fair of home appliance</td>
</tr>
<tr>
<td>Innovative</td>
<td>Studying and establishing a factory for fridge and freezer components  Studying and establishing electric components factory</td>
</tr>
<tr>
<td>Development</td>
<td>Development of electric components factory  Enhancing the technology of supply and production units  Investigation and establishing a major related to home appliance at High Education Centers</td>
</tr>
<tr>
<td>Industry Maintenance</td>
<td>Studying and researching the target markets at national and international levels</td>
</tr>
<tr>
<td>Finishing the incomplete projects</td>
<td>Washing machine, etc  Fridge  Cooler pump  Condenser  Fridge components  Fridge and Freezer  Water cooler and gas heater  Fridge and Freezer</td>
</tr>
</tbody>
</table>

9. The Projects Related to Specialized Services, Industrial Networks, and Innovative and Developmental Investment Projects:

Based on the main crossroads of household appliance production and based on the specified local, regional and international value chain and the solutions (such as the projects about specialized services, industrial networks, Innovative and developmental investment projects) are proposed in order to face the focus points as follows:

10. Discussion and Conclusion:
This article attempts to identify the grounds for attracting investors on the basis of identifying the missing links of the value chain of Tabriz household appliance industry and the value chain analysis model was used for this purpose. In fact, each stage of the value chain of producing home appliance was compared with the active sample unit at the national level. On the basis of the conducted analyses, the focus points of the home appliance industry was lack of competitive quality, lack of marketing and scientific selling, lack of modern technologies of production units, and lack of awareness about target markets. Therefore, in order to exit the focus points of the cluster, a number of recommendations have been proposed in the area of specialized services, industrial network, investment projects (innovative, development, industry maintenance, and incomplete projects). Tabriz household appliance industry, relying on research and development, human talent and enhancing the quality, innovation of products can contribute to the development of the market and can turn into a reliable and popular product at national and international markets in the next 5 years, while having the following features:

A. Filling 20% of the empty capacity in economic scale of production units of home appliance by developing and equipping the majority of active industries in order to achieve quality, innovation, and market development
B. A 20% increase in the current share of domestic market
C. At least 20% increase in the current share of foreign markets

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