

Quick-impact Business Value Chain Analysis, Case Study of Greenhouse Production Schemes of Zahedan City

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Abstract: Industrial and commercial growing of plants with a high quantity and quality all year round success and profitability of the profession due to the relatively high initial investment it will be possible only when the manufacturer adhere to scientific principles related to the construction and equipping of greenhouses and affordable and all the conditions required for plant growth is desirable to produce and supply products with greater quality and quantity in domestic and foreign markets. This study was conducted to determine the model of Porter's value chain analysis greenhouse cucumbers in Zahedan City to identify the current status of the projects and find the strengths, weaknesses and bottlenecks in the core activities and support. The study population consisted of project managers greenhouse of Zahedan City quick-impact firms have used credit facility, a total of 60 persons, who are using Morgan table and 50 cases were selected randomly, this study was collected using semi-structured interviews and questionnaires is included on the 22 measures based on Classification Worksheet Likert scale and added value subtraction of the greenhouse owners. Data collected by questionnaire using SPSS and LISREL 8.7 Software has been processed and in data analysis, t-test and Friedman test was used which ultimately led to finding strengths and weaknesses and bottlenecks in the production of greenhouse projects in the research and according to the results of practical proposals to improve and reduce production costs and increase added value in greenhouse production was presented.

Key words: Value chain added value, quick-impact firms, greenhouse, strength, facility

INTRODUCTION

Inevitably, systematic view the status of each of the rings in an industry value chain directly and indirectly influenced by the other rings and the entire value chain, on the other hand the advantages of different regions and countries were formed in each of the rings value chain optimization can be focused on specific country or region and practically a specific product value chain activities across a range of global spread of global value chains in which case it is called (Porter, 1985). Global developments in the agricultural sector and processing industries has created new opportunities and challenges and in these circumstances the food value chains in agricultural production leads to competitive advantages are designed.

In fact, a person who as director of the manufacturer, product acts on a product becomes great intelligence, also it's possible that some of the factors of production per unit area due to the extent of planting a fall crop but despite these features, particularly its expertise in culture with accepting the risk that market conditions are

uncertain. Value chain by establishing more security in the market and the transaction costs are unnecessary and finally added value throughout the value chain increases. Of the most significant economic sectors that the government facilities crowds regulations, small businesses and soon returns to be allocated Sistan and Baluchestan Province and the facility was injected through the Agricultural Bank, the agricultural sector schemes, especially schemes are greenhouses.

The most important problems of greenhouse owners of province especially Zahedan City, the problem of repayment to the bank for agriculture and rising production costs, including fuel and other inputs are in greenhouses. Therefore, it is possible to avoid losses and make plans to improve the economy, greenhouse production through analysis of the value chain greenhouse production plans help identify constraints, bottlenecks and opportunities and the strengts of this plan to achieve productivity improvements and fixes included. The purpose of this study the model of Porter's value chain analysis, greenhouse production projects in Zahedan City.

Literature review: Systematic approach to maximize competitive advantage based on the value chain model that was introduced by Michael Porter in 1980. Based on the theoretical definition, the value chain of value-added activities that the organization and can facilitate the production process and product release and the final product for the price, competitive makes. The objective of better words, value chain analysis, analysis of the entire process, including the main activities and different infrastructures and support such activities that create added value for a product play an essential role in this analysis is the process of raw material supply, production supply, service and recycling. Value chain analysis can be used to analyze the applications mentioned processes throughout the supply chain and production and distribution and identify the contribution of each process in the value of the final product, compared with similar products and processes and identify the strengths and weaknesses of each process in the formation of values is the final product to remove weaknesses and strengths, providing favorable conditions for the product in a competitive environment (Porter, 1985).

The value chain is a set of activities that make up the work process, the real value of the product or service in procurement, production and distribution in the form of scientific analysis or cognitive processes that have the greatest share in the final value product to how to increase the added value for stakeholders, especially customers has helped ensure the survival of the organization in a competitive environment. The value chain is a series of operations that are carried in a sling for Industry (Fig. 1). The ultimate goal of establishing a value beyond the cost of doing business can be considered such acts. I focus on electronic value chain unlike traditional value chain that focuses on the customer's product.

Value chain of agricultural products: Evaluation of agricultural value chains in different regions show up to get all the rings to produce a product in a geographic region and in the other, will reduce production costs and create more efficient synergies and value creation in all circles in this situation of being a link in the value chain for increased production costs and the ineffectiveness of other rings will create their effectiveness.

Underlined the value chain: The value chain is important for reasons of reducing operating costs, improving agent performance, exposing hidden business opportunities, effective in identifying key performance contributed to the decision (Kaplinksky and Morris, 2000)

Added value: Added value in any economic activity is the difference between the value of goods and services produced and the value of goods and services used in the production flow. Added value in any economic activity, including the activity of factor income also achieved. (Page 655-Statistical Yearbook of S and B - 2010) Supply chain: all activities required to deliver the final product to the customer or all activities associated with the flow and transformation of goods from raw material to delivery to the consumer Quarter final and information flows associated with them in the overview includes three areas of procurement, production, distribution (Copacino, 1997).

Greenhouse definition: Greenhouse limited part of the culture in which all environmental factors are controllable and for dense cultivation and production out of season and outside the natural environment of the plant is built. The advantage of creating greenhouse production in open spaces include: High employment, low water

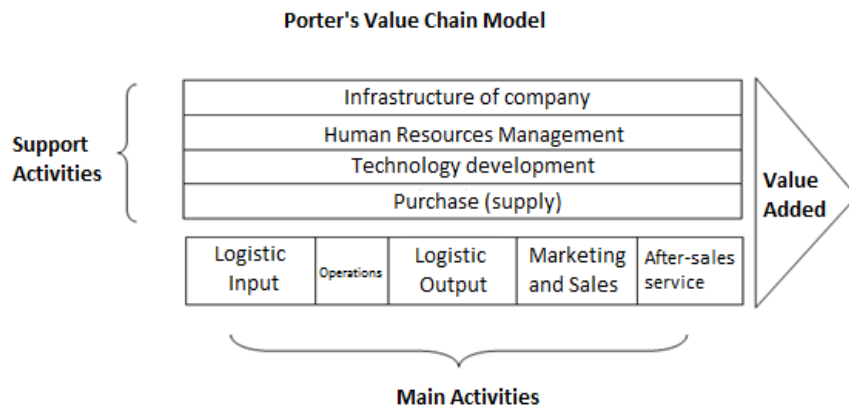


Fig. 1: A conceptual model (Porter, 1985)

consumption, increase production per unit area, using too much rather than the level, optimum use of agricultural inputs.

Research questions:

- Results, check the status indicator on the “stage within the logistics” greenhouse production (cucumbers), according to Porter’s value chain, from project managers’ greenhouse of Zahedan City
- Results of the index in the “Step operation” greenhouse production (cucumbers), according to Porter’s value chain, from project managers’ greenhouse of Zahedan City
- Results, check the status indicator on the “logistic point out that” greenhouse production (cucumbers), according to Porter’s value chain, from project managers’ greenhouse of Zahedan City
- Results of the indicators in “the marketing and sale of” greenhouse production (cucumbers), according to Porter’s value chain, from project managers’ greenhouse of Zahedan City
- Results of the index weight in the greenhouse products (cucumber) greenhouse project managers, according to Porter’s value chain in Zahedan City
- Results of the totality of the available indicators at different stages of the production of greenhouse
- Results of average wholesale prices of greenhouse cucumbers in Zahedan City in the years 2009-10-11-12
- Results of mapping the value chain of greenhouse crops (cucumber)
- Results of the worksheet calculation of value-added products greenhouse cucumber added value subtraction method
- Results support activities producing greenhouse cucumbers in the form of Porter’s value chain model

MATERIALS AND METHODS

The aim of this study is applied and descriptive in nature because it is done with the objective of findings for solving existing problems in the greenhouse of Zahedan City and is addressed to why they do not work but simply how the current situation the study of the procedure, is survey. Due to the fact that in this study, the indices in the greenhouse crops (cucumber) according to Porter’s value chain model of the greenhouse project managers of Zahedan City deals the study population included all greenhouse project managers are working Zahedan in 2012-13 are a total of 60 people that using Morgan table and 50 people were selected randomly. First of library resources to gather information theoretical

research is used to gather resources. Finally, value chain analysis and a questionnaire was used to collect quantitative data. The questionnaire has 22 questions and four component is value chain analysis.

RESULTS AND DISCUSSION

First question: The results of the existing measures “within the logistics process” greenhouse production (cucumbers), according to Porter’s value chain, from project managers’ greenhouse of Zahedan city. Average indicators related to the “input logistics” 16.44 and less than the average hypothesis 21. As a result, research findings show that the indicators examined in the “input” is less than the average. Friedman test, the components’ communication with suppliers of raw materials within the province with an average of 18.57 is the highest rank in the logistics inputs. Quantitative data show interview questions and reveals important point that is: Purchasing raw materials from within the province according to the providers in this area will increase the cost of purchasing, and also the ease of access and reduced delivery times for greenhouse owners also tend to buy raw material from suppliers inside the province increases. And the measure “Order partnerships with other units of production” to mean the lowest rank in the logistic input is 7.04. Interview questions with quantitative data matches, the result of individual purchases, increased costs can be anticipated. So, in greenhouse complexes cooperative purchase as a way to raise the bargaining power of bulk purchasing executives greenhouse and getting off the main suppliers of raw materials is suggested.

Second question: Results status indicator in the “Step operation” greenhouse production (cucumbers), according to Porter’s value chain, from project managers’ greenhouse of Zahedan city. Average indicators relating to the “operation” 15.40 and less than the average hypothesis 18. As a result, research findings show that the indicators examined in the “Operation” is less than the average in Friedman test, delivery of materials required components on a timetable with a mean of 25.14 was the highest ranking in operational stage interview questions and quantitative data. And to measure the use of technology for packaging products with an average of 9.73 is the lowest rank in the operation, interview questions with quantitative data matches, in conclusion: It is noteworthy given that the harvest is manually by workers in carton boxes of used product packaging is done bananas, the need for technology deployment package is necessary. Finally, it is recommended: Cardboard Box with less capacity and stylish design and

use specific greenhouse products packaging technology and product grading, the possibility of increasing the added value will be greater than ever. Average indicators related to the “logistics output of” 15.40 and 18 is less than the average hypothesis. The results show that the indicators examined in the “Logistics output” less than average medium in Freidman test, component “of waste in product delivery time” with average 14.25 highest rank in the logistics outsourcing that was interview questions and quantitative data show noteworthy were shown and that is: product quality and not waste a strong and important points for greenhouse owners that need to keep this standard. And in connection with other measures to carry the product with the lowest rank in the output of products with an average of 10.62 is, interview questions with quantitative data matches, the result of pickup trucks owing to address issues in this regard is not necessary in the majority of greenhouse owners

Third question: The results Status Indicator on “the marketing and sale of” greenhouse production (cucumbers), according to Porter’s value chain, from project managers greenhouse Zahedan City. T test results showed that the mean score greenhouse project managers and sales marketing stage: 9.72 obtained which is much lower than the average hypothesis 15. As a result, research findings show that the indicators examined in the “Marketing and sales” is less than the average in the test Freidman, component “distribution channels and customer communication” with the average of the highest rated 11.75 has been in the marketing and sales stage interview questions and quantitative data show that reveals important point that is: one of the strong points important for greenhouse owners in connection with the exhibitors are based in fruit and vegetables are aware of the prices, the import products from other city and other cases aware of the latest changes in the market and in accordance with their decisions. And in the two measures of advertising on sales 7.66 and 7.59 marketing with the lowest rank in the marketing and sale interviewed these two questions with quantitative data matches, as a result, given that one of the limitations, the sale is considered to be a culture of quality seeds and flavors and sizes, with advertising sales and marketing was a tremendous impact on increasing sales and creating added value. With advertising sales and marketing was a tremendous impact on increasing sales and creating added value.

Fifth question: The results of the index weight in the greenhouse crops (cucumber) greenhouse project managers, according to Porter’s value chain in the city of

Table 1:Porters value chain model

Input	Operation	Output	Sale and services
25.55	25.15	24	23.63

Table 2: t-value ratios

Variable	t-value	Considered approved
Input	5.54	Yes
Operations	8.43	Yes
Output	7.54	Yes
Sale	3.99	Yes

Zahedan. The average rating of Friedman test for indicators available in the production of greenhouse cucumber under Porter’s value chain model showed Table 1:

- The input stage with an average of 25.55 rated first
- The second stage of the operation with an average of 25.15 rated
- The output stage with an average of 24 a third
- The fourth stage of sales with an average of 23.62 rated

It is necessary that all the rings of power to generate wealth are necessary, otherwise, the value chain efficiency and added value does not fit, so should pay attention to strengths and weaknesses, strengthen weak links to the entire value chain without a weak link could be the missing link or pay to wealth creation, according to research, value chain loop from left to right in strength becomes less, thus, the right rings, the bottleneck is the value creation process and the results obtained in this study, the above mentioned cases in the value chain as well as greenhouse cucumber production is confirmed.

Sixth question: The results of the totality of the available indicators at different stages of the production of greenhouse. According to Porter’s value chain in the city of Zahedan greenhouse project managers. The t-value coefficients in the structural equation model of the relationship between variables is approved or rejected, if >2 is a relationship confirmed otherwise be rejected.

As a result, we can say that all indicators approved by the t-value ratio and the highest rate in the operations with the lowest coefficient of 8.43 and 3.99 are on sale (Table 2). And especially components: the t-value coefficients can be concluded that with the exception of Question 9 which features “a program for order” by a factor of 1.52 and question 15 as “communication with other units in carrying the product” 0.62 ratio indicates the relationship is rejected but other factors related to added value is confirmed.

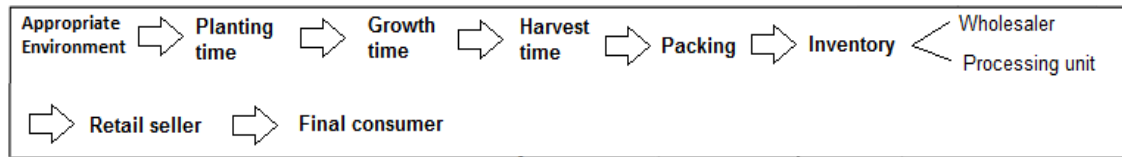


Fig. 2: Mapping of value chain

Seventh question: The results of average wholesale prices of greenhouse cucumbers in the city of Zahedan in the years 2009-10-11-12. According to the results of four-year wholesale prices can be concluded that peak price: Greenhouse cucumbers in the city of Zahedan is related to months (February-March-April). Price drop: Greenhouse cucumbers in the city of Zahedan is related to months (May-June-July). Greenhouse owners requiring planning authorities' prices in the months to change the culture or loss and other expertise related to agricultural cultivation. In order to avoid sudden changes in depreciation is added by fluctuations in product prices in the market. Price drop shock: cucumber, especially cultivated land productivity city of Jiroft that is sent to the field time and the City of Zahedan and creates a tremendous impact on decreasing market price sell of Zahedan City.

Eighth question: The results of mapping the value chain of greenhouse crops (cucumber). The mapping of the value chain have weaknesses and shortcomings are as follows:

- Appropriate Environment: A-Lack of appropriate placement for the establishment of greenhouses structures in terms of Zahedan City which are exposed to storms and winds with speeds of 90 km
- Sowing, growing period, due to weakness in the sowing and growth of the labor force and executive experience is visible and also the lack of raw materials at the right time production has decreased.
- Defects such as a missing link as "loop process" or production units pickles, cucumber soap and creams and other items can be named create this circle adjacent to the ring with wholesalers to reduce the problems caused by the market to achieve higher added value Fig.2.

Ninth question: The results of the worksheet calculation July 29, 2016 of value-added products greenhouse cucumber added value subtraction method: According to the results of interviews with greenhouse owners in completing the worksheet above are as follows Porter's value chain model:

- Input stage: 57%
- Stage operation: 14.2%
- Output stage: 4.5%
- Marketing and sale: 24.3%

The highest costs in the "input stage" with 57% and the lowest costs in the "output stage" with 4.5% reveals. The comparison of the greenhouse owners with interviews with experts: Bench marking the results of interviews with agricultural experts, the highest costs in the input stage (51%) and the lowest cost in the output stage is 4% of the subscription results. But, with the difference that: The "practical" difference cost is about 10% in an interview with the experts that the main reasons for the increase in the costs of the operation, according to experts as follows: greenhouse owners: operation step 14.2% experts: operation step 22.2%. Cost of electricity and water in greenhouse complexes to industrial agriculture unit price is calculated which is far higher than the cost of greenhouses in the villages.

Tenth question: The results support activities producing greenhouse cucumbers in the form of Porter's value chain model.

CONCLUSION

Infrastructures: The results show forecasts for greenhouse owners access to market-based complexes, built in the vicinity of asphalt road access, electrical installations and residential facilities in the complex been provided but in some cases, lack of foresight water use (land without aquifers). In the greenhouse, greenhouse owners is a major challenge which has led to increased costs cucumber production.

Human resources: Results showed that project managers and staff working in the greenhouses need for training, it's essential to learn about the latest technology in terms of achievement and culture, training in how to cultivate cucumbers and other greenhouse reduce costs and increase production and commissioning work to create added value which must be authorized through the planning and implementation of agriculture.

Technology development: The results showed that the use of heaters which consume less fuel, could have a significant impact on reducing costs.

Purchase or supply: The results showed that greenhouse owners in need of working capital at a rate of 200 million rials loan to buy raw materials due to market fluctuations:

- The association of greenhouse owners: In order to increase the bargaining power of the wholesalers and agencies responsible for agriculture (one of the requirements activists' production units)
- Create a website and the center for information exchange among greenhouse owners
- Fixed problem with water, greenhouse owners

- A decrease in interest rates during participation, forgiveness of offenses delay. Subsidies paid to the greenhouse's reception facilities is essential that cooperation with other institutions involved (with agricultural organization and agent bank) are required

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