



A new methodology to construct organization's strategies based on supply chain concept

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ABSTRACT

Today's competition is promoted from firm against firm to supply chain versus supply chain, globalization and competition is a common phenomenon so each organization should make its supply chain as a weapon against the others, in doing so this paper presented a conceptual, graphical, step by step methodology to construct supply chain strategies by integrating strategic management's theories, application and analysis and supply chain point of view to help managers to compete in the market.

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1. Introduction

Nowadays competition is promoted from firm against firm to supply chain versus supply chain therefore constructing organizational strategies based on supply chain view can make a competitive advantageous for each organization towards its rival.

Reviewing journals of SCM shows that purchasing was considered as a clerical function but in the early 1980s managers recognized effects of it in reducing cost and increasing profit so they focused on purchasing and it led them to SCM concept and today SCM is used as a competitive weapon that distinguished successful companies from others [11]. A supply chain is a set of facilities that transform raw material into final product in order to achieve profit and fulfill customer needs

Customer satisfaction [1] in customer service strategy, make or buy decision [4] in operation strategy, kinds of relationship with supplier [6] in outsourcing are some basic elements that should be considered to make a competitive supply chain.

Strategic management is a knowledge that has lots of theories, applications and tools for planning to achieve a better performance for an organization; actually the main question here is "why some firms do outperforms others?" [8]. [9] describe four main strategies "defender, prospector, analyzer and reactor.

Supply chain strategy is related to corporate strategy, business strategy, product strategy and marketing [12]. Operation strategy, outsourcing strategy, channel strategy, customer service strategy and asset strategy are key component to make a strategic supply chain management [2]. [3] developed a methodology to construct supply chain strategies based on customer satisfaction by

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the aim of strategic management and fuzzy inference system.

Supply chain management and strategic management have lots of overlapping interest but largely ignore each other [5]. Therefore integrating them can make a suitable tools for constructing strategies based on supply chain point of view, the remainder of the paper is organized as follow: the problem definition is presented in section2, the methodology is presented in Section 3, validation is presented in section 4 and section 5 is conclusions.

2. Problem definition

Today's competition is promoted from firm against firm to supply chain versus supply chain so each organization should make an strategic planning to adjust itself by this trend of competition. Strategic management has lots of theories and applications that have focused on planning but it mostly ignore supply chain, on the other hand supply chain has focused on suppliers, customers and competitors that are vital elements to be competitive for each organization, therefore integrating strategic management and supply chain management can help organizations to construct their strategic supply chain, in order to solve this problem and help the manager to do so, here a comprehensive, graphical, step by step methodology is presented.

3. Constructing organization's strategies based on supply chain view

Strategic management has lots of theories, applications and tools that help managers to do planning, also supply chain focus attention on customers, suppliers and competitors in order to achieve customer satisfaction, profit maximization and cost reduction, so by this two knowledge a methodology is suggested that use different strategic management tools

like CSF to find the gap between real current and ideal current situation and try to fill the gap by some tools like resource based view and knowledge based view then it goes to key suppliers, customers, competitors and stakeholders to analysis the best strategy toward each element of organization's supply chain like kind of relation with supplier, make or buy decisions, operation strategy, fulfilling the customer real needs, defining the equilibrium retail price also it analysis the macro environment and by this trend some rules are developed that can be used as guide lines for managers to construct their strategies based on supply chain view. Fig 1 represents the methodology.

3-1. First set

The first step of each project is making a team of experts to analysis the real situation and planning for the future, in the proposed project the expert should be chosen from different departments like supply chain, marketing and strategic management.

Understanding the organization's mission, vision, policy, value, culture and goals are the first step for understanding where the organization is, where it wants to go and where is actually going.

Filling the gap between real and ideal situation is an important action in order to make the organization ready to be planned for the future, critical success factor, organizational life cycle and functional analysis are some tools that help the team to find the problems after that by the resource based view, knowledge based view and time horizon this problems can be tackled to fill the gap between the real current situation and the ideal one.

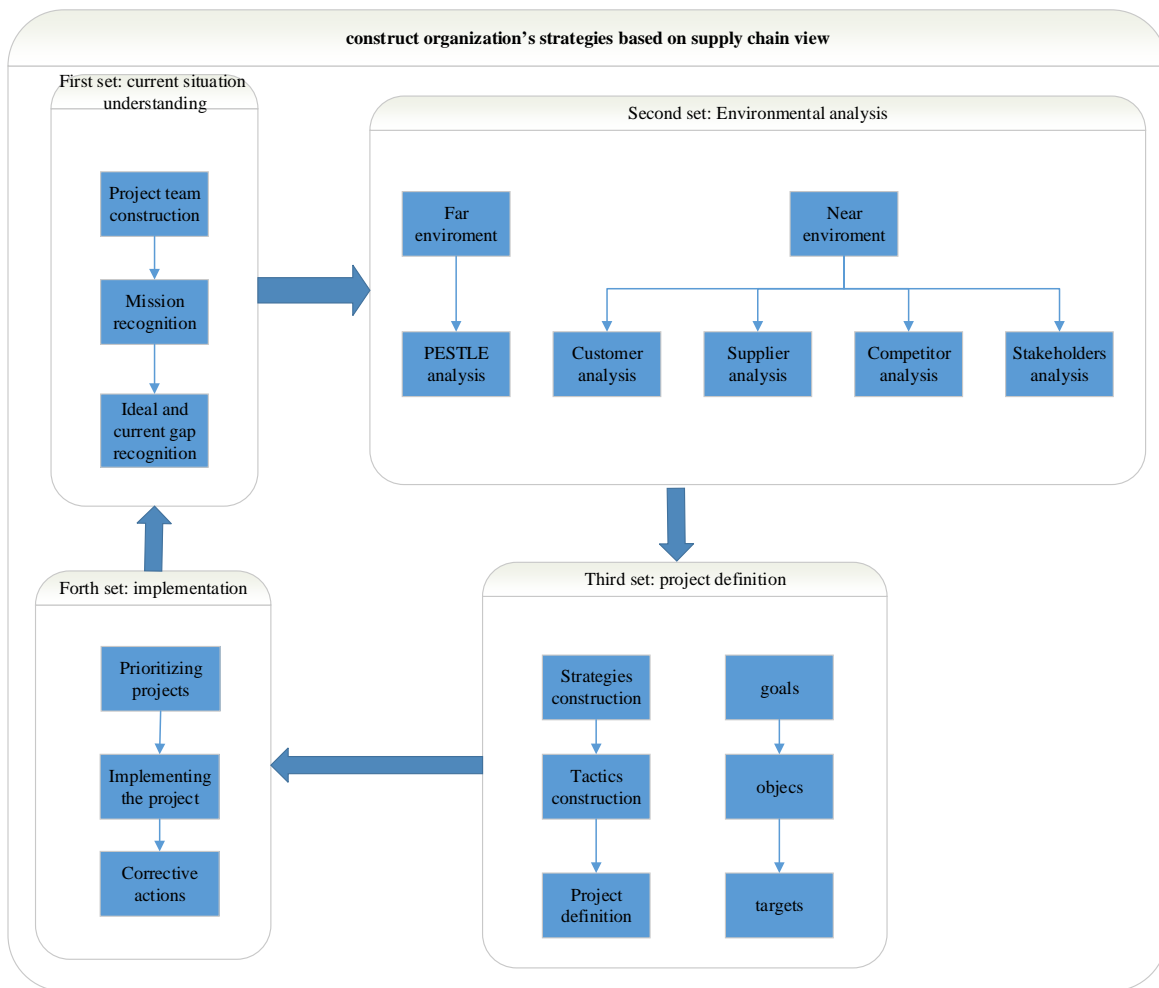


Fig.1. construct organization strategies based on supply chain view

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3-2. Second set Environmental analysis

This step is actually based on environmental analysis, totally environment can be classified into near and far. Near environment is referred to main customers, suppliers and

competitors, stakeholders and far environment is referred to general situation of a place (country and town) that the organization is work on it.

3-2-1. Near Environmental analysis

This analysis usually considers the main supply chain of the organization and can be categorized into 4 main sections: Customers, Suppliers, Competitors and Stakeholders.

3-2-1-1. Customer analysis

The final goal of each organization is to make profit and fulfilling the customer's needs is a vital act to achieve this goal so they should analysis the market perfectly and find its market target then they should fill the gap between what they are getting to theirs customers and what the customers actually

want. To fulfill this important matter the importance-performance matrix [7] by radar chart are suggested here. In this analysis every specific character can be discussed and find the gap by comparison the organization by its rival according to customer view point in every aspect of the product that offered. Following example clarify this method.

Example 1. imagine five main characters of a market, quality, cost, speed, flexibility and dependability, each criterion is scored form 1(very weak) to 9(very strong) based on Likert scale Table one shows the situation. Table 1 describes the situation.

Tab.1. importance-performance analysis

	Quality	Cost	Speed	Flexibility	dependability
competitor	9	2	9	7	6
organization	8	8	3	2	7
Importance	Very important	Fair	Important	Not important	Important

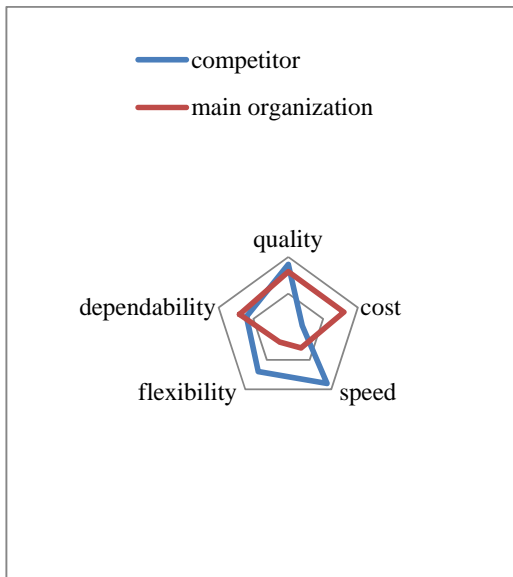


Fig. 2. Radar diagram for customer analysis

In this comparison some rules like below can be constructed as guide lines for managers.

- If criterion X is very important for the customers and organizational performance is very good in comparison with rivals then it is competitive advantageous.
- If criterion X is very important for the customers and organizational performance is very weak in comparison with rivals then it is strategic weaknesses.
- If criterion X is very important for the customers and both organizational and

competitor's performance is very weak then it is a strategic potential point.

- If criterion X is very important for the customers and both organizational and competitor's performance is very strong then it is a strategic necessities.

3-2-1-2. Competitor's analysis

The common competition in each market is on price and usually it models by game theory tools. Example 2 shows this situation

Example 2. Imagine 2 competitors are competing in the market with a substitutable product; total potential demand is constant and demand function of each supply chain is linear and price depended that has some good characteristics like traceability and easy to analysis the effect of brand loyalty and price that make it a wide spread function in marketing literature. Table 2 summarized the indexes, parameters and variables of this competition.

Tab. 2. index, parameters and variables

$D_i = \alpha_i d - \lambda p_i + \varphi(p_j - p_i)$ $i = 1, 2$ and $i \neq j$	Demand function for supply chain i
α_i	Customer brand loyalty toward supply chain i
d	Based demand
λ_i	Self-price sensitivity for supply chain i
φ	Cross price sensitivity
p_i	Price of supply chain i
p_j	Price of supply chain j
c	A unit cost of producing the product

$\alpha_i d$ is the demand for supply chain i if all prices are 0 also $\alpha_i d - \lambda_i p_i > \varphi(p_i - p_j)$ guarantee that no negative demand will be occurred.

The competition here is based on price and each supply chain simultaneously decide the retail price that maximize its profit also the profit function is defined as follows:

$$\pi_i = (p_i - c)(\alpha_i d - \lambda_i p_i + \varphi(p_j - p_i)) \quad (1)$$

Differentiating this and solving for equilibrium price for each supply chain simultaneously is concluded that equilibrium price is:

$$p_i^* = \frac{c\varphi + c\lambda_i + \alpha_i d}{\varphi + 2\lambda_i} \quad (2)$$

3-2-1-3. Supplier analysis

Make or buy decision is the main decision of each organization, generally core activity should be kept in-house and the rest should be outsource, choosing the right component to manufacture in-house and the rest to outsource and the kind of relation with suppliers have essential effects on strategic success or fail and decreasing cost of

organization, following rules can be helpful in this matter.

- If it is core activity then it should make internally.
- If it is not core then
- If supply risk is *very high* and profit impact is *very high* then partnership is *very good* strategy.
- If supply risk is *very high* and profit impact is *very low* then ensuring supply is *very good* strategy.
- If supply risk is *very low* and profit impact is *very low* then simplified purchasing is *very good* strategy.
- If supply risk is *very low* and profit impact is *very high* then bargaining is *very good* strategy.

3-2-1-4. Stakeholder’s analysis

Stakeholders are group of people or organizations that have effect on organizational performance, these stakeholders can be analysis according to their power and interest to help the organization, following rules show this matter.

- If they have much power and much interest then they are key players.
- If they have much power and less interest then they should fully satisfied.
- If they have less power and much interest then they are potential resources.
- If they have less power and less interest then they need no specific attention.

3-2-2. Far environmental analysis

Each organization generally is working in a place (country and town) also by considering global marketing every country can be selected as a place to find some suppliers or customers therefor for succeeding in the future the organization should pay attention to the total situation of the place in which it wants to work, PESTLE analysis is a very helpful tool that analysis the macro environment (political, economical, social, technological, legislation, environmental) and help the managers to make right decisions, following rules is based on this tool.

- If political stability is *very good* and economical situation is *very good* then it is a *very good* place for investments.
- If political stability is *bad* and economical situation is *bad* then it is a *bad* place for investments.
- If political stability is *very good* and economical situation is *average* and technological infrastructure is *low* then it is a *average* place for investments.
- If political stability is *bad* and economical situation is *very good* and technological infrastructure is *average* then it is a *bad* place for investments.
- If political stability is *average* and economical situation is *very bad* and technological infrastructure is *average* then it is a *bad* place for investments.

3-3. Third set

Suitable strategies, tactics and operation can be defined by the obtained information and according to each one, the goals, objects and targets can be defined. Organizational life cycle and functional analysis by the aim of resourced based and knowledge based view can help to fill the gap between current and ideal situation, CSFs are the current bottleneck that should tackled in a short time, customer analysis show the organizational weakness and straighten that can be used to construct some strategies, tactics or operation according to their character, competitor analysis is used to analysis equilibrium price, stakeholder analysis can help to use their power according to their interest and PESTLE analysis is used to make long term strategies.

3-4. Forth set

In the last step the defined projects according to their importance is ranked for implementation, after implementing them, with respect to achieved result and environmental changes corrective action will be done.

4. Validation

The presented methodology is constructed in two phases, in the first phase by studying the

related articles, books and interviewing by scholars the first version of the method is released, then it has applied in an Iranian organization, in this way some modification is done and the final version is achieved. Also following lessons have learned.

- Viewing the competition between supply chains and the needs for making strategies by this kind of view should fully explained to managers, especially top manager, in order to get their support.
- Giving attention to customer needs, kind of relationship with supplier and competition effect on final price is very critical to make a strategic supply chain as a competitive advantageous.
- Game theory has lot of ability to model the competition and make strategic management to construct strategies, tactics and operation but less attention is paid to this effective tool.
- Involving all the employees and manager can reduce their resistance towards the proposed method.
- The proposed methodology is not a fixed formula and needs some modifications according to each organization.

5. Conclusions

In this era competition is so fierce and promoted to supply chain versus supply chain, so organization should have a plan to make their supply chain as a weapon against their competitors, this paper presented a new methodology to integrate strategic management and supply chain management in order to make supply chain strategies, the presented method is broken down into 4 phase and help managers from begging the project up to end to construct strategies, tactics and operations by the aim of strategic management's tools, analysis, theories and applications and supply chain point of view.

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