The Impact of Lean Thinking on the Management of Supply Chain Processes

(Case Study: Building Projects Housing Foundation of Islamic Revolution in Iran, Golestan Province)

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Abstract

Present objective of the study the effects of pure thinking on the management of the supply chain housing construction projects Foundation in Gulistan province. Research methodology used in this study, descriptive and of solidarity. All statistical community managers and experts active construction projects in the time of the study can be - that their number is estimated at 370 people. The number of 189 people. For the sample was selected. In this study sampling method is random. Gathering information tool that it was standard questionnaires to confirm the validity of experts and professors expert. For reliability questionnaire Cronbach's and other related indicators used their results confirm that represents the reliability of the questionnaire. The questionnaire using factor analysis was confirmed by LISREL software. Research hypotheses were examined using multivariate regression. Research results showed that pure thinking on the management of the supply chain construction projects in the Gulistan province. It also intended to determine the value, making the uninterrupted pursuit of perfection and impact. Pure and fairly new management to reducing time, cost and waste and raising the quality of the pure of construction, and its interaction with supply chain management in order to achieve their objectives and principles.

Key Words: Supply Chain, Lean Management, Islamic Revolution Housing Foundation, traction systems, building management, regression.

1. Introduction

Passing from different periods, extremism and radicalism product market and the emergence of knowledge and information, companies and organizations with new challenges. On the basis of competitive advantage to organizations that goes with a focus on customer value creation and to the pure organizations and their process try appoint and won the competition in the business world today. Organizations that can products and services, with high quality and low prices and timely and taste in accordance with their customers to different markets. Supply chain management, including the factors that

clearly played a major role in the competition with each other organizations. Current organization's more over the turnover and movements in line with the needs of customers and surpass the customer requirements and less on the quality of the product and compete against each other and the role of supply chain management in the competitions. Lean Thinking, management thinking is to compete in the present age should learn it so that we can increase our productivity construction. According to statistics from the authorities are reported to have been planning and management of the country, the weighted average execution time of the national plan for the year 82 ended in Iran, about 11 year. While the managers of the private sector in the construction of bias the timing of the construction projects in the private sector to an average of 11 months more than anticipated amount are related. While in the countries of the industrial development of these numbers from about 2.5 shorter than the figure reported in Iran. On the other hand the current status of Iran in terms of materials consumption is 8 times higher than worldwide consumption. To improve the situation, in addition to improve and construction technology needs to improve management tools in this field. Lean Thinking is one of these tools. This model, the first time in the plant's production line Toyota and quickly and improve the advantages of it to the level of organization, its scope and boundaries of the organization, contractors and suppliers, partners and customers and underlies the formation of the value chains inside and outside. Pure perspective can be management philosophy and the new leadership in order to eliminate waste and implementation of continuous improvement and creating value for key stakeholders in the context of various tools and techniques. Although this technique in recent years, the dominant philosophy improvement in manufacturing organization's in a decade various reports of the use of this approach in service companies also published studies and on the basis of the argument that this philosophy can be implemented in construction, along with the management of the supply chain construction projects. This study is trying to influence of pure thinking on the management of the supply chain housing construction projects Foundation Gulistan province to investigate the.

Housing foundation of the Islamic Revolution in the history of 21 April 1358 year to Ayatollah Khomeini, founder of the Islamic Republic of Iran in order to provide housing, and the development of the country's villages and Imran and the construction of housing units in cities within the framework of the policies and programmers the Government of the Islamic Republic of Iran has been formed. Housing foundation of the Islamic Revolution in a central office in the capital (Tehran) and 31 branches in governorates capitals and more than 278 sub - branches in the level of the country's cities. In addition to seven administrative organization practically in order to carry out special responsibility for housing Foundation in connection with the development of housing in the cities and villages, and low - income categories and reconstruct areas affected by disasters in charge of the functions. To achieve the goals of the executive management of housing Foundation with the adoption of measures to solve the problems and facilitate the problems facing long - term goals housing Foundation. That in this regard pure thinking management and

implementation of supply chain management, also in the process of construction projects, her way to achieve their objectives foundation and a decrease in time for housing projects, thus reducing the current spending – makers. So long because of the majority of construction projects in the country after a waste of resources in the wake of this research is the role of pure thinking in the management of the supply chain housing construction projects Foundation Gulistan province and the proposed solutions to improve the current situation and the promotion of it.

2. Research overview

2.1 The importance of necessity of research

The reasons for the necessity of supply chain management: According to the investigation in the United States, about 85 percent of the supply chain management company budgets allocated and costs of transporting goods and storage, about 11 percent of gross domestic product (GDP) in the US. As well as inventory cost approximately 81 Eli 85 per cent of its GDP, according to the country. Statistics likely in the third world countries and developing an optimal systems aren't to higher levels and the importance of investing in the supply chain management. The importance of supply chain management more when it is clear that the process of decision - making and the sensitivity of the positive and negative consequences and after any decision on the entire supply chain. Some of the main reasons for adoption, terming it and supply chain management can be enumerated as follows: (Ghazanfari and Fathullo, 1385).

- Increased competition at the global level
- Reduce costs and minimum pricing for all the products and services
- Globalization trade and an increase in trade relations
- Diversity in customer requirements and the need for flexibility production lines
- To increase the speed of change technology and the emergence of new technologies.

Toyota pure approach that is based on the principle of 14. One of these principles on how the interaction and cooperation with partners, suppliers and focuses on the principle that it is ready to Creating a strong relationship and reciprocal with all the partners and assistance to those who support scientific progress and improve because of better internal processes . Notable successes Toyota car sales in the market as a result of the implementation of a pure approach, supply chain managers to the challenge of brought to the principles of pure thinking for better management of the supply chain activities. With regard to supply chain management problems and the definition of pure, limpid supply chain management strategy to eliminate these problems through the process of pure.

3. Research background

2.1. Domestic background research

- 1) The Lal Masjid (Red Mosque) and Garakani (1393) Rahmati thinking role in managing the supply chain construction projects. In this paper, this is a fairly new management to reducing time, cost and waste and raising the quality of the pure of construction, and its interaction with supply chain management in order to achieve the purposes and principles that discussed.
- 2) Shafi'i and Tarmst (1393) study the impact of supply chain management processes carried out on competitive advantage and organizational performance SAPCO. The results showed that supply chain management directly competitive advantage and organizational performance is affected. Also competitive advantage to the organizational performance is meaningful. But the intervention of competitive advantage, the relationship between supply chain management and organizational performance. The fitness test and model fitness model indicates its suitability for complex supply chain is Sopko.

3.2. Foreign literature study

- 1) Kyvranflh and Tarafdar (2014), in a study entitled Effect of supply chain information strategy on the 205 service chain performance and the performance of organizations have shown that supply chain strategy, supply chain strategies on information systems and supply chain performance affect the company's performance.
- 2) Diana Bratyk (2011) in a study as to achieve a competitive advantage through supply chain to investigate factors such as strategic resource, partnerships, customers, the sharing of information and sharing of information quality, delivery terms and payment product innovation. The results showed that the conditions necessary to remain competitive and increase profitability worldwide, including efficient management of suppliers, understand and update the supply chain.

3.3. Conceptual Model Research

According to the literature and study the resources, the conceptual model research to examine the impact of pure thinking on the management of the supply chain is presented as follows.

Research conceptual model (Jones and Mike, 2002 and Ohno)

4. The theoretical framework

4.1. definitions theoretical research

The supply chain.

Several definitions for the supply chain that there are two examples of the following:

Donald Water supply chain consists of a series of activities and organizations knows so that artery between them in the primary supplier to the End User Certificate (Water, 2003).

Christopher (1998) the supply chain network of organizations consists of upstream and downstream supply chains with processes and activities in the form of products and services to final consumers are creating value.

Supply chain management

The management of the supply chain is a combination of art and science that in order to improve access to raw materials, construction of products or services and pass it to handle - customer. Supply chain management is the integration of information flows associated with their supply chain activities and also through improvements in supply chain relationships to achieve reliable and sustainable competitive advantage, is included; Therefore, the management of the supply chain is the process of integration of supply chain activities and related information flows through improving and co - ordinate the activities in the supply chain production and supply product (ladonne, 2002).

Pure thinking

Pure thinking is a better way to organize customer relationship management, supply chain, product development and manufacturing operations. Pure thinking with minimal possibilities of the highest possible. To achieve these goals thinking of the following principles:

- Accurate determination of the value of any given product
- Identify the value stream of product
- Make a move without interruption in the value chain
- Allowing the buyer to pull out the value of production

- Pursuit of perfection

Pure Thinking principles include the value of any product, identify the value stream, creating movement in the value chain, allowing the buyer to pull out the value of production is the pursuit of perfection.

4.2. Research Hypothesis

The main research hypothesis

- Pure Thinking on supply chain management of construction projects in Golestan province affected housing foundation.

Secondary research hypotheses

1. On the value of supply chain management housing construction projects Foundation Gulistan province.
2. Value stream identification on the management of the supply chain housing construction projects Foundation Gulistan province.
3. Create move without a break in the value of the supply chain management, and housing construction projects Foundation Gulistan province.
4. Tensile system, the management of the supply chain housing construction projects Foundation Gulistan province.
5. Kamal chase on the management of the supply chain housing construction projects Foundation Gulistan province.

5. Research Method

Given the current study research variables in terms of data collection and analysis techniques, a descriptive solidarity. Is considered the application, User is considered. Is a researcher-made questionnaire using Likert impact on supply chain management, lean thinking construction projects are measured. Community Housing Foundation research managers and experts in construction projects in Golestan province who worked in 1394 and at least until the end of summer 1394 are continuing their activities. According to available data, the number of statistical community about 370 people. The number of samples with the formula of Cochran 189 people.

6. Data Analysis

6.1 Inferential statistics

In Table 1 the descriptive statistics study is based on gender, age, education separate.

Table 1 - gender, age, education and background of the respondents

percent	surfeit		
79.4	150	woman	gender
20.6	39	man	
100	189	total	
1.53	3	less than 25	age
36.92	30	26 - 35	
42	79	36-45	
16.41	31	46-55	
3.14	6	More than 55	
100	189	total	
29.2	55	diploma	education
19.4	37	Associate Degree	
39.4	74	Bachelor	
12	23	MA	
• / 100	189	total	

6.2. Inferential statistics

6.2.1. Kolmogorov-Smirnov test (KS)

Normal distribution: H0

Data distribution is not normal: H1

Table 2: Kolmogorov-Smirnov

result	significant level test	admit test	Number	Variable
Is normal.	1/22	0/45	189	Valorization
Is normal.	1/79	0/78	189	Identify the value stream
Is normal.	0/43	0/52	189	Make a move without interruption
Is normal.	0/71	0/41	189	Traction system
Is normal.	0/94	•/٥٣	189	Pursuit of perfection
Is normal.	0/57	0/49	189	Supply Chain Management

With regard to a significant level are larger test 0.05 assumption of zero and normality was confirmed.

6.2.2. Research findings and conclusions they

The findings confirmed the original hypothesis

Sig amount obtained by regression hypothesis is less than 05/0. So the null hypothesis is rejected, and it can be concluded that pure thinking - linear relationship with supply chain management housing construction projects Foundation Gulistan province. And its impact on the dependent variable explanation and significant coefficient standard, according to a change in pure thinking makes 743 / 0 change in the management of the supply chain housing construction projects Foundation Gulistan province.

The results confirmed research hypotheses

Of the five sub hypothesis, the hypothesis of the first, third and fifth was confirmed. In other words, making the impact of the value of uninterrupted and confirmed his identity and value stream and tensile system. Note that this manufacturer that creates value. This first issue of the hypothesis is confirmed. Right to determine the value, the first step in the line of thinking is pure, and that the way to a product or service is wrong, the leading loss. The third side hypothesis, according to research results in the fourth season. When the value of accurately and firm solid economic value stream a certain product has mapped and lossy are eliminated , then turn next step comes pure thinking that is to mobilize the value creating steps.

By the fifth research hypotheses examine the impact of pursuing Perfection on the management of the supply chain. This hypothesis, according to the results in the fourth season. When organizations to determine the true value, the total value of flow, creating value - creating steps to create a continuous movement of certain products have - nots are taken hand and let the customer value of the firm to extricate fifth principle pure thinking, i. e., is wanted. With regard to the results of what can be achieved stated that , in order to become a pure construction project , the appropriate beds for internalizing pure thinking at all levels to prepare ; internalizing the close ties with attitudes and values of governing the organization and its staff . With regard to the results obtained and material expressed lean management can be the ultimate goal of supply chain in construction projects in the Gulistan province and the continuous flow of demand , supply chain networks and liquidity to improve the level of customer service. So all lean management is trying to take the right decisions, as well as the adoption of tools and techniques, the balance between the amount of circumstances demand, raw materials and liquid. The balance should be so that led to the creation of continuous trends in the entire supply chain.

7. Practical proposals

7.1. management proposals and applied research hypothesis according to confirm the main

From the other side of the managers building projects should strive to the principles of pure used in the supply chain, and that these principles and bases to make significant chains, flexible and creative compliance. And the integration of supply chain management, surprising. Experts and specialists, a reduction in the supply chain Losses, increase its

profitability and create more flexibility in the supply chain that some of these areas of by solid foundations. Lean to eliminate these drawbacks and respond to customer demand ways with the supply chain organization for the following characteristics:

- Organizing suppliers and ranked according to their functionality them;
- Transfer design tasks products to the supplier companies in the first place.
- According to the system's approach to design and the total production;
- Non - interference in production issues such as gender parts and how to build them;
- Organization and management of second - tier suppliers that only in the process of building and engineering skills; first by the supplier
- The exchange of information and the methods of production between the second - tier suppliers and improve the methods
- Partnership and investment in the firm's suppliers and the supplier First Class

7.2. proposals management and application, according to confirm the secondary research hypotheses

1. Focusing on an actual goal, namely to focus on a particular proposition or a certain order or tested the product and getting it from start to finish.
2. Ignoring the traditional borders, jobs, jobs routes, functions, and organizations to a solid.
3. Rethinking work tasks in order to remove hair

These three steps should be performed simultaneously; this principle, all structures or activities that cause Muda are produced during manufacturing and increases wait times, detect and remove it.

According to electronic logistics of other important issues that need to be on construction projects in the province of Gulistan housing Foundation. Electronic sets logistics measures that took place on the Internet, trucks and factories, stores and end users at the right time to each other. Electronic logistics on integration of multiple functions.

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