NEAR EAST UNIVERSITY

PRODUCTION AND OPERATIONS MANAGEMENT

OPERATIONAL DECISION MAKING

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Graduation Project

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ABSTRACT

Production and operations management is responsible for creation of goods and services. The most important and principal function of the organization is production and operations management that involved with planning, coordinating, and executing of production activities. As a result of competitive pressures and globalization, business organizations strive to create excellent products and services through effective operational decision making. Production and operations management is an unavoidable function for creating effective and efficient goods and services, thus, production and operations management is the necessity for the survival of the busniness organization.

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REFFERENCES

I. INTRODUCTION

1.1. An Overview of the Production and Operations Management

In recent years, companies try to increase their competitive strengths through production functions. Before examining production and operations management, the meaning of "product" has to be understood. The product is the good or service that a business sells to accrue profit, so it is unimaginable to assume a business without product. In addition, organization must develop new products or services if it is to survive, because each product has a life cycle that ends with declining. Furthermore, a company able to come out faster with new, better and cheaper products, would enjoy a huge competitive advatage.

Production and improvement of goods and services in order to fulfil human needs, has been an issue since ancient times. The Great Wall of China, The Egiptian pyramids, the ships of the Roman and Spanish empires, and the roads and aqueducts of the Romans provide examples of human capability to get organized for production.*(Stevenson, 1999)* Advanced factory systems, technological developments and production of goods for sale had started in the 18th century, known as the Industrial Revolution. In its wake, goods were mainly craft-producted. This had developed to mass production that eventually led, with the more recent advances in technology, to "lean production." The most important element in today's developed production system is the advances in technology.

Production is a business activity which transforms raw materials and components into new goods and services. Production does not have to always be the route from raw materials to the finished products. Also finished goods can be transformed into new goods. As its definition implies, the essence of the production is transformation process in which resources are converted into products. The aim of this process is to add value while creating goods and services. Value added is the difference between the cost of inputs and the price of outputs. Value added determines the competency and price of the goods and services. For this reason, the greater the value added, the greater the competency of these goods and services. Value added can be further increased by improving prooductivity, that is, inincrease in the efficiency of the production process while reducing production costs.

Within an organization, production and operations management is responsible for the production process, aiming at the constant improvement of this process. It is involved with planning, coordinating and executing of production activities. In other words, production and operations management is concerned with the decision-making process pertaining to the production as a whole while at the same time, it should see that services are provided with high quality, at low cost and in the designated time. It is applied all types of companies regardless of size or product.

Production and operations management is one of the principal and important function of any organization. It improves profitability and enhances efficency and thus contribute directly to the survival of the organization. This is achieved through the perennial increase of productivity. As a result, the organization's ability to compete

globally is also enhanced, which in turn, can even contribute to the improving of the national standard of living.

1.2. Background to Operational Decision Making

Decisions play an important role in our lives. They could determine success or failure of individuals, business organizations and even nations. Decision are made daily and numerously. They can pertain to daily matters, important matters or they could be critical decisions. When problems arise, decision making is the vehicle for resolving them. The right decision would ensure the successful solition of the problem.

In the course of their activity, business organizations face problems, the resolution of which require decision making. Therefore, decision making should be regarded as a continuous process within the organization, manifesting itself through the identification and expanation of the problem, developing alternative solutions and selecting the best ones.

Decision making at any level of the organization aims at the achievement of the organization's goals. At the operational level, their number could reach hundreds. To materialise the goals of the organizations, operations managers should know both what decision must be made and how to make good decisions. Indeed the success or failue of companies may depend on the quality of their decisions.

Essentially, decisions are influenced by the type of problem, the enviroment in which they are made and experience of the manager. Effective and successful decisions take

into consideration current conditions but also, possibly, potential future considerations. Good past decisions pertaining to a specific are not necessarily the right ones for the same point when it appears today, since past situations may differ from current ones.

Operational decisions are heaviest and most important decisions within the organization. Because, the product of the organization is its the reason for existence. As a result of competitive pressures and globalization, greater levels of excellence on products and services is heavily needed. And organizations know that, success of that based on making the effective operational decisions.

1.3. Objective of the Study

The primary objective of this study is to illustriate how effective decisions are made both in qualitative and quantitative methods at the operational level. The process of operational decision making was selected, because decision making is the most critical activity within the organisation, as it may determine destiny of the rganization in the case of success or failure.

Operational decisions are made by managers. Yet, in today's competitive world, their personality and experiences may not suffice for effective decisions. There are tecniques that can assist managers in making effectual decisions and thus may provide them with unique opportunities. These decision tecniques are the subject of this study.

1.4. Structure of the Study

This graduation paper, presents to the Committee a structured discussion of operational decision making as a vital component within the entire organizational process. The approach taken in this project is of an overview of decision making and its tecniques. The case study presents the actual activities of operational decision making as exercised in Alışkan manufacturing company.

The first part of this study deal with definition of production and operations management, background to operational decision making, and objective of the study. *The second part* provides frameworks for decision making approaches, the decision process, decision making at business problems, the enviroment and conditions of decision making, and basic tecniques for decision making. *The third part* is concerned with decision making activities in the manufacturing company. *The forth and fifth parts* are final parts that covered conclusion and recommendations.

II. OPERATIONAL DECISION MAKING IN ORGANIZATIONS

2.1. Operational Decision Making

It is necessary for a business to operate and manage of all business activities. Organizations comprise hundred of decisions. At the end, all these different types of decisions have the same route which is the desire to achieve organizational goals.

While the fundemental goal of a business may well be to make a profit, the outcomes of effective decisions are not necessarily measured in terms of quality, cost effectiveness, efficiency and productivity (Russel, Taylor, 1995). However, making effective decisions in order to obtain these outcomes is the task of operations management.

An operations manager is directed to make and carry out decisions. There are quantitative methods accessible that assist managers make decisions. However, utilizing quantitative methods does not turn someone into an effective operational decision maker. An individual must have a knowledge of operations, experience, quantitative methods, and accessible information to make effective operational decisions.

2.2. Areas of Operational Decision Making

The types of decisions that include production and operations management are encourage and complete each other. Production process or the delivery of service are related with designing products and services, designing and planning the production process, locating and developing the production facility, designing jobs and work activities, and planning and scheduling the flow of products. These interraleted catagories of decision making are as follows:

2.2.1. Quality

In today's competitive world, quality is the driving force for ensuring operational decisions for success. The company aims to achieve at quality level is a strategic or top management decision that determines how a product is made or a service is delivered. So, the quality is determined by the production process or the delivery of services.

2.2.2. Designing Products and Services

Designing products is the first step in the production process. A product or service must be designed to attract customers as well as it must alsoo be cost effective. Products and services can be fine desined, but if design is too costly, it will make price also too high to be competitive. Consequently, design process will fail. Decisions related to design

include the products features, desired level of quality, the metarials to use, and resulting production costs.

2.2.3. Planning the Production Process

After design a product or service, decision must take related to developing the physical process to produce the product or deliver service. This stage consists otaining materials, determining the types of job skills, equipment, and technology needed for producing the product.

2.2.4. Laying Out Facilities

The production process must be set up, so it works efficiently and as cheaply as possible. Decision making focuses on where to locate different parts of the process in the facility to ensure that the production process works smoothly and efficiently.

2.2.5. Designing the Jobs and Work

A basic part of the production process is the work performance of people or machines and equipments. The work activity of these people define their jobs. Job design, analysis, and measurement is the area of production and operations management

concerned with making sure that jobs meet the requirements of the production process in the most efficient way.

2.2.6. Production Planning and Scheduling

Production must be planned and scheduled to meet demand. These decisions include how much material or how many parts to order, how many workers to hire, and how these workers should be shceduled on jobs and machines. For service operations the umber of serves must be established.

2.3. Decision Making Approaches

Two different approaches are studies in decision making.

2.3.1. Inutitive Decision Making

In the inutitive decision making, only inutitations and experiences are considered as a meaurement while problem defining, alternatives developing and the best alternative selecting.

The most effortless way in decision making is to apply past experiences which had granted sufficient results or to follow someone else's path, who is regarded to have been

successful in the question at hand. This is called "simulation". There is not any creative aspect in intuitive decision making. That a past decision yielded a successful result, does not mean that repeating it would result in the same way. This is because present and future circumstances are not the same as those of the past. Besides, that a company had been successful in a decision based on its particular conditions does not render automatic success when another company takes the same decision while as a matter of course its own conditions differ.

However, intuitive decision making approach cannot be disregarded altogether. Other companies' experiences or plans could be taken into consideration but only as one element in the decision making process. At the same time, scientific prospects should be emplyed in effective decision making.

2.3.2. Scientific Decision Making

Customary ways of solving problems or doing things are rejected by scientific decision making. Use of past experiences in decision making is not accepted. According to scientific decision making, companies must not rely on past decisions in this dynamic and growing industrial world. The essential aim of scientific decision making is to aloow the company to improve its performance by using scientific methods. As industry grows, scientific decision making becomes more significant and influential.

2.4. The Decision Process

The main objective of the decision process is to enhace the effectiveness of decisions. It involves a systematic approach that can be represented in five stages as follows:

2.4.1 Identification and Definition of the Problem

The initial stage of decision making is to identify the problem or decision faced by the business. Once the problem has been identified, it must be defined. The cause, or source, of the problem must be identified. In other word, the starting point of the problem have to be discovered and revealed. The goals of the organization must also be clearly defined. A stated goals helps to focus attention on what the problem actually is*(Russel, Taylor, 1995).*

2.4.2. The Listing of Alternatives

There would be no need to make decision if there was only one solition. This is, however unrealistic. To make a decision, alternative solutions must be developed and listed in a certain order so as to offer a solution to the specific problem at hand. They must all be applicable. To find applicable solutions, different possibilities, experiences and recommendations are considered. All of this is the concern of the second stage.

2.4.3. Evaluate Alternatives

To solve a problem successfully, evaluation of potential outcomes of the each alternative must be made. This is done in the third phase.

2.4.4. Selection of the Most Beneficial Alternative

After careful consideration, the best possible option is selected. Selected alternative must help the goals of the organization. It is not always the most profitable alternative. Sometimes, the effects of regulations, unions, organizations, and government have to be considered.

2.4.5. Implementation of Results

This final stage of the decision process comprises bringing the final selected best alternative into an action.

2.5. Decision Making and Business Problems

Each business is a unique organization and each business probem is unique for the manager of the business. Several business problems must be known and must be clearly understood. Those several problems are as followings:

2.5.1. Resources Problems

It is accepted that all resources are scare compared with the demand for them. Scare resources of a business leads to the need for decision making on how they should be allocated. The business is faced with problems about the use of time, staff and production capacity. Resource alocation is not only about the allocation of resources to different business functions, e.g. given equpiment available in any one department is limited, so the problem arises how best to use that equipment.

2.5.2. Replacement Problems

Equipment has a limited life and business has to make decision on whether or not to replace obsolescent or out of date machinery. This decision will be made by considering expected life cycle of the product, the cost of the machine and alternative uses of the resources.Maintenece also generates replacment problems. The failure of a machine may cause delays in the work process. On the other hand, the activity involved in repearing or replacing that machine may

cause greater delays. This causes a higher costs. So, the alternative must be chosen which involves the least cost to the business.

2.5.3. Location Problems

Location decisions are part of the long term planning of the business. The selection of location for an organization or a factory is essentially an important business problem. The location problem is totally arosen from cost and the availability of market. Several factors have to be taken account when making a decision about where to locate a factory or an organization. Each factor has a different degree of importance in each decision. But the importance of any influence on the final location decision is depend on the type of the business, the size of the business, the demand of the production process and the importance of the market*(Haizer, Render, 1993)*. Factors that influence the final location decision are:

i) Labor: A business is interested in labor with specific skills. It can be attracted to an area because there is a high concentration of labor with those skills available.

ii) Services: The major services required by a business are power, water, drainage and waste disposal*(Hammond, 1992)*. It is not very much important element in location decision in a modern indutrialized economy because they are already available. Less industrialized parts of the world this factor is more important.

iii) Transport: A good transport system in the country can allow a business freedom in its location selection. Heavy transport costs for raw materials will lead a business to move closer to its supply sources.

vi) Politics: Unstable government, government against to private enterprise and the treat of war are important factors to influence location decision making.

vii) Image of the Area: Poor image of the area is prevent to invest there.

2.5.4. Inventory Problems

The tecniques that useful for a business in this area include costing, statistical analysis of a problem and the results of market research. Inventory is the goods held on hand for the production process or sales to final customers*(Rachman, Mescon, Boveé, Thill, 1996)*. It is significat low cost and customer satisfaction as much as possible with the minimum use of resources. Decision making on inventory includes determining the right quantity of various items to have on hand and their location, use and condition. Inventory problems occur when the demand is not known with certainity.

2.6. Impact of the Enviroment for Decision Making

There are number of external and internal organizational factors that will determine the way that organizations and individuals make decisions.

2.6.1. External Enviroment

External forces generally determine organizational strategic decisions. External enviroment consists of general external enviroment and specific external enviroment. General external enviroment includes those factors outside the organization which are economic conditions, political conditions, legal requirements, social influences, globalization, and technology. Specific external enviroment includes those factors that directly relate to the achievement of an organization's goals which are suppliers, customers and competitors.

i) Economic Conditions: These apply to the approach in which resources are used and distrubuted, e.g. cost of raw materials, inflation, wage rates, etc. An organization may face with such enviromental factors, for example if inflation is high and wages are low. So, organizational decision making must point to such conditions.

ii) Political conditions: These conditions include government policies and industrial policies.

iii) Legal Requirements: These relate to legislation that is already exist. Legislation includes the rules by that society wishes to live(Lee, Newman, Price, 1999), then the rules that organizations should operate.

iv) Social Influences: Social influences include the values that society holds and demographic changes in the population. Changes in both of these are relevant to the organization.

v) Globalization: It is related to the international dimension. Globalization issues such as cultural, economic, etc. must be taken into account when entering foreign markets.

vi) Technology: Technological improvements enable organizatoions to be more cost efficient, competitive and profitable. The organization make decisions either using thechnology to make efficiency gains, or not.

vii) Suppliers: This element of the specific external enviroment is refers to number of suppliers, the quality of their products or services, and the thrusworty of supplies.

viii) Customers: An organization have to understand needs and wants of its customer is important to its organizational success. Having such understanding helps the organization to make a decision on what to produce and what to change in oder to remain in line with customer expectations.

ix) Competitors: Decision making is concerned with understanding what competitors are doing and how best to respond effectively. Competitive decision making should enable an organization to identify those aspects of its own strategies and those of existing and potential competitors which are strengths or weaknesses.

x) Labor Resources: This includes labor wage rates, the supply of skilled labor, and the supply of labor generally. Labor resources help the decision making on the account of people that can be employed at a given wage rate and weather the existing labor has the required skills*(Lee, Newman, Price, 1999)*.

2.6.2. Internal Enviroment

Internal forces impact on the peformance of the organization. Decision making in internal enviroment of the organizations consist of organizing, planning, controlling, and influencing. Such internal enviroments that influence internal decision making are:

i) Organizational Structure: Organizational structure facilitates decision making. The structural form of an organization represents the level of responsibility at authority. Organization's structure determines the way that individuals make decisions. This is

determined according to formality that exist in the organizaton. According to formality, organizational structures are defined either "mechanistic" or "organic".

Mechanistic structure comprises highly centralized decision making. Individuals would not be expected to make decisions that take them outside their jobs specifications. Most employees would only required to make routine decisions. Mechanistic structure is included also very high levels of formalization.

Conversely, organic structure having decentralized decision making and low levels of formalization. Organic organizations use less firm command and control systems. Individuals expected to make non-routine decisions.

Note that, there is no one correct organizational structure. An organization must be best fitted to factores, namely, strategy, size, technology, and enviroment*(Lee, Newman, Price, 1999)*. All of these factors must be taken account when designing appropriate organizational structure.

ii) Organizational Culture*:* Organizational culture helps to find correct way to perceive and think that will influence the decision making process. Organizational culture is related to values that accepted by the organization. Organizational culture involves low level of trust in subordinates with little or no freedom in mechanistic structure, on the contrary, it involves high levels of trust in subordinates with high degree of freedom in organic structure.

Organizational climate is an aspect of organizational culture and it determines degree of individuals are motivated to work for an organization and actively participate in decision making. In other word, organizational climate is the level of moral, and strength of feelings or belonging , care and goodwill. Organizations create culure to maximize decision making at all

levels. If individuals are motivated and feel valued they make greater effords to maximize decision outcomes.

iii) Management Style: The style of management tends to have an effect on the way in which individuals are involved in decision making. If a manager is autocratic or democratic, it will influence the decisions are made inthe organization. In order to achieve more involvement on the part of employees, managers should give greather freedom to employees when making decisions.

2.7. Decisison Making Conditions

2.7.1. Decision Making Under Ceratainity

If actual and adequate information is known about the past, present and future, decisions are made under certainity. It is very difficult to provide for such conditions. In fact, past, present and future conditions might not be known. For that reason, decision making under certainity is impossible except in extraordinary situations.

2.7.2. Decision Making Under Risk

In many businesses events are not so clear. It may be possibe to use past records of the business to assess the possibility of recurrence of events. Some quantitative techniques can be

used or managers may have experience of similar situations and use this to evaluate probability of an event.

2.7.3. Decisison Making Under Uncertainity

When decision is made, the decision maker is uncertain as to what might be future conditions and thus has no control over such conditions. Because future condition may be of high or low demand for a product, or good or bad economic condition, probability cannot be extrapolated in such a manner that may help.

2.7.4. Payoff Table

To facilitate the analysis of decision situations, the decision results are organized in to payoff tables. A payoff table is a method for organizing and illustriting payoffs from different decisions given various alternatives. A pay off is the outcome of the decision.

Figure 1. Payoff Table

	STATE OF NATURE	
Decision	a	b
1	Payoff 1a	Payoff 1b
2	Payoff 2a	Payoff 2b

2.8. Forecasting for Decision Making

A forecast is a prediction of what is expected to happen in the future. Predictions are based on past experience. Businesses generally forecast on future sales, expected production, changes in interest rates, availability of investment funds, the amount of stock to order, etc. some of these forecasts are for short period of time, others for periods of up to a year. The longer the time period involved, the greather the chance that circumstances on which the forecast was made will change.

2.8.1. Basic Forecasting Technique: Time Series Method

Time series methods take into account changes in data and project the findings into the future to help with decision making. Time series methods assume that what has occured in the pas will continue to occur in the future. They tend to be most useful for short range forecasting, although they can be used for long range forecasting.

i) Moving Average

Moving average method uses several demand values during the recent past to develop a forecast. It is useful for forecasting demand that is stable and does not display any pronounced demand behaviour. It is quick, easy and cheap to calculate and useful for short term predictions. The formula for computing the moving average is as follows:

$$MA_n = \frac{\sum_{i=1}^{n} D_i}{n}$$

n : number of peridos

D_i : demand in period i

Assume that more accurate estimates of the demand of X product is needed and first three months sales records information is shown in the figure 2.

Figure 2

Week	Sales
1	20
2	25
3	40
4	43
5	47
6	53
7	50
8	52
9	60
10	59
11	66
12	75

Three period moving average is calculated and that is average of three weeks sequence thus moving average for 2 week was calculated as follows:

$$\frac{20+25+40}{3}$$
$$= 28.34 \text{sells perweek}$$

The moving average for the next period, that is from week 2 to week four calculated as follows:

$$\frac{25+40+43}{3}$$
$$= 36 \text{sells perweek}$$

Calculations continued until drawn the table shown in figure 3.

Figure 3

Week	Sales	Moving average
1	20	
2	25	
3	40	28.34
4	43	36.00
5	47	43.35
6	53	47.66
7	50	50.00
8	52	51.67
9	60	54.00
10	59	57.00
11	66	61.66
12	75	66.67

From this table forecasts for sells for 13th week can be made. So simply, the last average calculated (66.7) will be taken. Here, three period moving average is calculated. Depending on the amount of data available a business can select three, four, ten, or fifteen period moving averages.

ii) Weighted Moving Average

In the weighted moving average weights are assigned to the most recent data. Assume previous example, recent sales informations are the most important. It is continued that the sales information in week 11 is three times more important than the information for week 9. It is calculated as follows:

$$\frac{(66\times 3)+(59\times 2)+(60\times 1)}{6}$$
$$=\frac{198+118+60}{6}$$
$$=62.67$$

It is divided by the sum of the weights (3+2+1=6). In this calculation, the weights vary from 3 to 1. if you were using five period moving average then you could use the figures 1 to 5.

2.9. The Decision Tree

Decision makers use this tecnique to know which alternative will be best. It is useful way to sorting out complex situations and logically interpret the decision options. To make a clear understanding of decision tree, we need to look "probability" and "expected value".

2.9.1. Probability

In many businesses, the probability of an event is not so clear. It maybe possible to use past records of the business to estimate the possibility of an event occuring, or maybe managers have experience of similar situations and use this to assign probability to an event.

2.9.2. Expected Value

Expected value of an event is the probability of it occuring multiplied by the benefit the business expect if it happens.For example if a business is deciding to invest $ 100,000 in a

new product, then the product has 0.6 probability of success, the expected value from a successful producing is:

0.6*$100,000=$60,000

After overlook probability and expected value, the decision tree can be drawn. The steps of decision tree are:

i) Identify the alternatives,

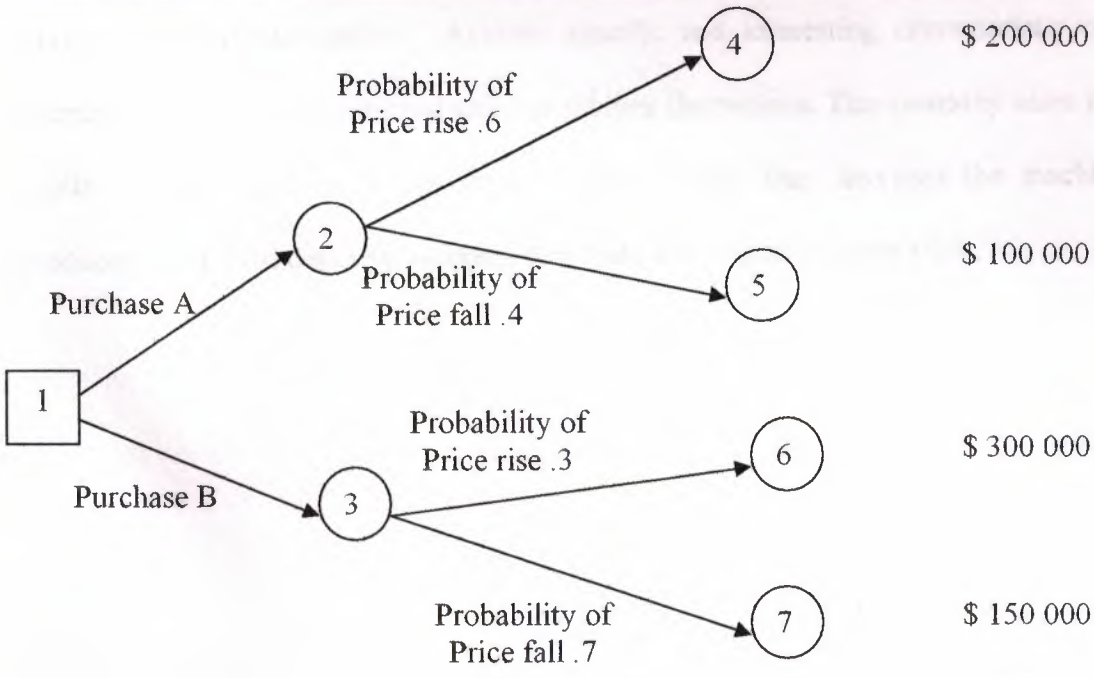
ii) Identify possible results of the action,

iii) Assign probabilities to each of results,

iv) Calculate the expected value of each result,

v) Select the alternative with the hghest expected value.

Figure 4



Expected value at node 2 = 0.6 ($200 000) + 0.4 ($100 000)

Expected value at node 3 = 0.3 ($300 000) + 0.7 ($150 000)

III. OPERATIONAL DECISION MAKING AT ALIŞKAN MANUFACTURING COMPANY

3.1. Historical Background to Alışkan Company

Alışkan Company had founded in 1982 by Yaşar Alışkan in Hamitköy. It is a family company. It produces galvanized depot, its systems, and plastic. The company had strated business with producing termosiphon and rustless metal cabs. Today also those rustless cabs are most prefered and populer ones. However, Mr. Alışkan complains importing those cabs from Turkey and said, "Some businesses imprt the cabs from Turkey but our cabs difference is their quality. Futhermore, the customers of imported metal cabs come to us for repirement. This is proof of our quality". Another specific and interesting characteristic of Alışkan company is producing their production machines themselves. The company aims to produce quality products and work fastidiously. This is why they invented the machine which produces galvanized depot by working very hard and results of many trials.

3.2. Decision Making Activities at Alışkan Company

The essential goal of the company is to produce quality products at the affordable price. Initially Alışkan company takes decisions both in long term and short term. However, most of decisions are not long term in it. The company's most of decisions are short term. There are also daily decisions are take places in the majority of short term decisions. The company emphasized several enviromental factors for the justification of withheld long term decisions. Primaily, the company decisions are affected from political issues both in and outside of the country. Recently, their decisions have been affected by uncertainty of Cyprus issue. Turkish Cypriots do not want to invest their money for depots, because it is uncertain what will happen their properties. This affect the company's sales, consequently, its decisions.

Competitors of the company have a great effect on its operational decisions. The company also consider, the capacity, size and prices of its competitors. For example, the idea of producing poleteran depot was its competitor's idea and Alışkan company inspired from this idea. Also sales conditions of the competitors have an effect on their decisions.

The company make decisions for the benefit of itself. But, because of it is a family business, sometimes decisions could be initutial.maybe it is the common charachteristic of all family businesses.

The company doesnt use a specfic forecasting method for decision making. The sales are considered for forecasting and decision making. As a result of sales for the period of a year, the sales information shows that the spring is the most profitable season for the Alışkan company. The company also make a market research before make a decision. For example, it

forecasted on galvanized depot takes place of normal depot many years ago and they started to produce it without hesitation. This is one of their accurate and effective decision. There was also the company's in accurate and un successful decision which based on insufficient marketing research. In many years ago, the new collector had came out in the German market. Alışkan company decided to use it in the depot. It was expensive but saitary. In the first year the new collector increased the sales. But in second year, it became calcerous and the customers bring them back for the exchange of the new one. At the end of this, company had loss.

IV. CONCLUSION

Production and operations management is a major function in the process of creating effective and efficient goods and services. Thus, effective operational decision making is needed to carry out operations management activities. Operational decision making is concerned with decision making pertaining to the production of goods and the providing of services with high quality, at a low cost and at the desired time. Success or failure of companies may depend on the quality of their decisions.

Effective and accurate decisions may allow the organization an advancement and competitiveness. The organization increases its profitability when the right decision is made. It may accrue loses when wrong decisions are made. Concequently, decision making is very important for the organizations. This case study examined here, of the Alışkan company, shows how right decisions result in a profit while wrong decisions result in a loss. When Alışkan company decided to produce galvanized depot, predicting it will be successful, they immediately implemented this decision. It was a right decision, the result of which has been high profits for the company. In another case, the Alışkan company relied on an inadequate market research. The company imported a collector from Germany without market research.The wrong decision resulted in a loss for a company.

Operational decision making cover wide range of decisions, from designing a product to work performance of the people on the production floor.

Intuitation does not take a large place in an effective decision making. However, intuitations and experiences could be taken into consideration, but only as one measurement in the

decision making. There are useful methods and techniques that assist managers in decision making. The decision process can be used in any type of decision. The process includes defination of a problem, listing, evaluating and selecting alternatives and implementation of results. When the alternatives are listed, evaluated and selected, several tecniques are used. Forecasting technique can be useful in listing alternatives and decision tree can be useful for evaluation and selection of those alternatives.

There are number of internal and external organizational factors that determine the way that organizations and individuals make decisions. Decisions, in every organization, are affected by these factors. In fact, Alışkan company has been affected, indeed it was hurt, by the Cyprus Issue, which is, of course, an external factor.

V. RECOMMENDATIONS

It is highly recommended to apply scientific studies and as well as several decision methods in order to make accurate and reasonable decisions in the organization. Alışkan Company has not been taking its decisions professionally. The company did not take other alternatives into consideration when it decided to import the collectors from Germany. They ignored questions of quality and warehousing although they were dealing with rather expensive components. Yet, this fact has increased the prices of depots and prevented the company to compete in price and quality. There are almost always alternatives. The company could have considered other alternatives that would be less costly and higher quality. Market reasearch also take an important role in effective decision making and here the company seems to have failed too.

Forecating is very important in decision making. In fact, the use of several forecasting techniques in decision making might be essential. It must be noted that qualitative forecasting techniques may provide unique opportunities with managers and can help them to make effective decisions and advance their company to compete worldwide. Short term forecasting is more realistic than long term forecasting. The longer the period involved, the greather the chance that circumstances may change.

In the view of interviews, it is highly recomended that the company should make its decisions professionally and while using scientific methods and qualitative techniques. Forecasting techniques should be considered in the decision process, especially in the listing alternatives. In this way the company could improve its decision making processes and its overall performance.

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