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DEVELOPING A SCALE FOR UNDERSTANDING THE IRRATIONAL CORPORATE BUYING DECISIONS OF INDUSTRIAL BUYERS

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Abstract

Marketing activities are running through suppliers to producers as well as producers to end users. Basicly the industrial buying decision makers seems as institutions but in practice they are all real people and they can't be expected to be rational every time. Thus, the purpose of this study is understanding the motives of such irrational decisions and forming a scale for evaluating the irrational buying decisions of industrial buyers. For achieving this; qualitative data collected by applying semi structured interviews based on the literature. Then a draft survey form has been established and sent to industrial buying professionals. Frequency, factor and reliability analysis has been applied on the collected data and the final form of the questionnaire has been achieved which consists of 18 questions and 5 dimensions with 0,857 Cronbach's Alpha value and 64,714% total variance explained. It can also be said that most of the irrational buying decisions are made by a collective decision making process in buying centers.

Key words: Corporate Buying, Industrial Buyer, Irrational, Inconsistency, Behavior.

Introduction

Competition in industrial markets are as hard as consumer markets. Even the consumer markets are quite heterogeneous, industrial markets are more homogeneous since every single sector produces specific products based on their profession. Because of this situation, for each sector; there are specialized suppliers and distribution channels which makes industrial markets more homogeneous than consumer markets. For these specialized professionals it is important to understand the decision making dynamics and the source of the inconsistency of the industrial buyers. That will be helpful for the suppliers to determining the methods for reaching these people's minds to convince them about their products and companies.

Presumptively, industrial buyers are accepted as rational and reasonable decision makers but yet they are all humans as Shoaf (1959) mentioned; they have personalities including humanistic contradictions. By other words, it's not possible to assume that industrial buyers are "homo economicus". In this situation, the

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buyers' personality, emotional mood, past experiences and intellect can be determinative on the buying decision.

In this research both qualitative and quantitative methods have been applied to understand the reasons behind the irrational industrial buying decisions. The qualitative data has been obtained to understand the reasons behind the irrational industrial buyer behavior and produce a questionnaire to refine as a quantitative scale.

1. Industrial Buying

Webster and Wind (1972a) define industrial buying as a decision making process of defining the need, evaluating alternatives and choosing a supplier to fulfill the need for formal organizations. Another definition says industrial buying is an action for satisfying the whole organization instead of an individual (Vani and Janani, 2016, 359).

The buying situations can be characterized as new task, modified rebuy, and straight rebuy (Robinson et al., 1967). Each situation requires a different process to fulfill the buying process successfully.

Since industrial buying is a deal between at least two different companies based on their different commercial expectations; it can not be defined as a simple process (Domaski and Guzek, 1992) so it needs a professional approach. Because of this, industrial buying is usually a collective process for organizations where many people involves (Weigand, 1968). This structure is known as buying center (Robinson, 1967).

After all it can be said that, industrial buying is a complex process which begins with the determining the need, continuing with making the buying decision between the alternatives and ends after the evaluating the consumption of the what has been bought.

1.1. Differences Between Industrial Buyers and Individual Consumers

Industrial buyers buy products for production process instead of satisfying an individual need. So, it's quite normal to consider the functionality of the product for an industrial buyer. Based on this, it can be said that the motivation of the industrial buyer is less emotional than individual consumers and this makes them more rational (Hague and Jackson, 1994: 8). On the other hand, an individual consumer is buying for being an end user but an industrial buyer buys for producing an final product. Because of this, an industrial buying process is far more complicated than an individual consumer buying process.

Marketing activities of industrial products are traditionally different than consumer products with three aspects. First, the decision making process of individual and industrial buyers are totally different. Second, the marketing methods for individual and industrial buyers are different. The third and last difference is the payment method. Industrial buyers are applying financial credits, time loans and long term payment options, so that industrial buyers should make more market research than individual buyers (Sheth, 1977: 1-3). On the other hand, at the end an individual buyer is a person who can make his/her own decision alone. But an industrial buying process usually consists; different people with different responsibilities, organizational goals, interaction and organizational choosing criterias (Choffray and Lilien, 1978: 18). So, it can be said that; even though an organizational buyer is a person, organizational buying is a structure of complex interactions and processes between different people and organizations.

1.2. Industrial Buying Models

For the last half century, many researchers have been presented a wide range of industrial buying models. The prominent models are; Robinson's (1967) buygrid framework, Wind's (1970) industrial source loyalty, Webster and Wind's (1972b) organizational buying behavior, Sheth's (1973) industrial buyer behavior model and Samli *et al.*'s (1988) international industrial buyer behavior model.

According to Robinson *et al.* (1967) there are 8 stages for industrial buying process which is the commonly used and accepted industrial buying decision process in the literature:

1. Problem recognition: A unit in production line determines a need for production process.
2. General need description: After problem recognition, the buyer would need more information for defining the best solution and interacts with other departments.
3. Product specification: Specifications of the best solution are determining in this stage. Usually technical units are more dominant at this step.
4. Information/supplier search: At this stage, the buyer makes a market research for determining the best alternatives.

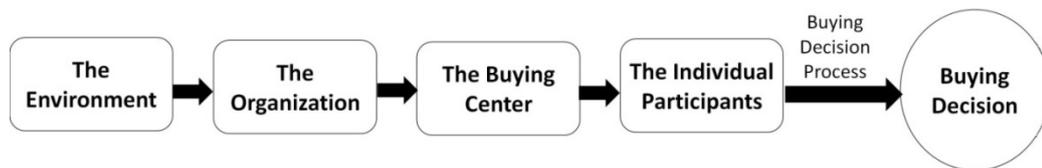


5. Proposal solicitation: Buyer asks for proposals to the chosen suppliers.
6. Supplier selection: In this stage buyer evaluates the proposals for finding the best option.
7. Order-routine specification: Buyer makes the order and informs the supplier for the following process.
8. Post purchase performance: Buyer evaluates the performance of the supplier.

Industrial Source Model (Wind, 1970: 450) is an other well known model which contains four sets of variables:

1. Task variables (quantity, quality, price, delivery and service);
2. Past experiences of the buyer;
3. Organizational variables which effect on buyers decisions;
4. Percieved factors by the buyer for simplifying the buying process.

Webster and Wind (1972b) model can be accepted as an other the ground theoretical frame for the organizational buying behavior The simplified model can be seen below.



A Model of Organizational Buying Behavior, Resource: Modified from Webster and Wind, 1972b

Later Wind and Thomas (1980) added interorganizational factors and buying classes dimensions on the Wind and Webster's (1972b) model of organizational buying behavior.

Sheth's (1973) model of industrial buyer have 4 components:

1. Personel expectations of the individuals in the process,
2. Organizational buying process,
3. Decision making process,
4. Situational factors.

In 1988 Samli *et al.* presented the international industrial buyer behavior model. This model has 6 components as below:

1. Individual factors,
2. Organizational factors,
3. Environmental factos,
4. Social/Cultural factors,
5. Role of the state and legislative regulations,
6. Uncertainty factors.

Nydick and Hill (1992) has added supplier choice as an other important factor. They determined that industrial buyers have a set of criterias for choosing the supplier. These criterias are; price, product quality, delivery and after sales services.

There are many other models in the literature about industrial buying behavior but the frame of this study has been drawn by these models mentioned above.

1.3. Buying Center

Three factors come to the forefront for the industrial buying decisions: quality, price and delivery. Additionally reliability, robustness, long economic life, power or engineering features can be desired by different sectors.

Industrial buying process is quite complex. Because decision maker should consider a set of information from different departments and people like: the end user might define the need, the prodction manager might choose the most proper alternatives from the supplier offers and finance manager may involve in the process for the payment options. The number of participants and the lenght of the process may differ sector to sector and organization to organization. Also the size of the company is an other determinant for the amount of the participants of the decision process (Hague and Jackson, 1994, 7). Briefly, the industrial buying is a process which consists of different actors from the organization.



According to Robinson *et al.* (1967) organizations have decision making units. One of these units is buying center. They define buying center as "The individuals who are related directly to the purchasing process, whether users, buying influences, decision makers, or actual purchasers are members of what can be termed a 'buying center'". That basically means, there are many departments and people in the organizations who participate in buying decision process. These participant's power, personality, their relations with other participants and suppliers, the past experiences about the similar and familiar buying processes and products may play a key role about the final decisions. Because of these all, it can be said that buying center is a dynamic decision making unit.

According to Samaniego and Guterrez (2004) there are 5 parameters related to the organizational structure which effects on industrial buying process are:

1. Size: The size of the organization has an effect on the buying processes,
2. Specialization: High level of specialization brings high level of participation on the buying process.
3. Standardization: Defined organizational processes and procedures are named as standards.
4. Centralization: When the level of centralization decreases, more participants arise in the buying decision processes.
5. Formalization: Formalization defines the amount of the relied rules and methods which are accepted and followed by the member of the organization.

Even though the buying center limits the autonomy of the industrial buyer and makes the process more bureaucratic; it decreases the risk of making a wrong buying decision and makes the process more democratic since all the relevant participants are getting involved in the process.

1.4. Effects of Personal Factors on Industrial Buying Behavior

Industrial buyers are tend to choose the best offer from the suppliers for rationalise their buying decisions. Because presumptively promoting and/or keeping their position in the organization depends on these decisions. Industrial buyers have a set of information about the main suppliers they work with but this never means that they are very competent on every possible alternative in the market. Through lack of the information about all possible alternatives, it can be said that industrial buying decisions are never free from taint (Hague and Jackson, 1994, 8).

According to Wilson (1995) Raymond Bauer was the first researcher who defined the perceived risk for the consumer behavior in 1960. Concept is basically indicates that every buying activity contains a certain amount of risk. Surely the source of this risk is the uncertainty. Bauer also indicates that the buyer struggles with this uncertainty for decreasing the perceived risk (Collins, 1998, 1).

Woodside and Vyas (1987) claim that when the level of buyer experience increases, the amount of formal and complex decision processes are also increasing.

Mello and Collins (1998) indicate that while perceived psychological risk is higher especially for the industrial buyers over 40 years old; perceived economical risk is higher for the younger ones. Perceived risk also has a negative correlation with education level (Mello and Collins, 1998, 7-8).

Industrial buyers experience and learn about the products in the supplier market. That is why some buyers trust in some certain products. This trust may cause industrial buyers to abstain looking for new suppliers or products. Even though different suppliers offer better products under better conditions, industrial buyers are skeptical about this situation (Hague ve Jackson, 199412).

According to Samaniego and Gutierrez (2004) there are two personal traits which effects on industrial buying decisions:

1. Personal effect: People who participate in the buying process reflects their motivations on the process.
2. Personal experience: Experiences of the people who participate in the buying process have an effect on the buying decisions.

Sometimes industrial buyers have encounter different buying situations which they have never experienced before. In such cases it may not be possible to make a proper risk evaluation. So that, they may have to make a subjective risk evaluation instead of objective evaluation (Collins, 1998, 1).

Belulaj and Celion (2011) defines three main categories for industrial buying. These categories and industrial buyer decisions for each category can be seen on the table below.



Category	Buyer Behavior
New Task	Buyer may not have enough information and comparing the alternatives is impossible. Buyer has to spend a lot of time for gathering information.
Straight Re-buy	Buyer is quite aware about the product and alternative suppliers. The decision making in this kind of situation is usually based on the criterias of the buyer.
Modified Re-buy	This kind of buying may occur because of many situations like changing the supplier, testing the replacement/modified products etc. In such situations, the buyers should concentrate on the new conditions carefully.

Resource: Modified from Belulaj and Celion, 2011:12

1.5. Effects of the Relation Between Industrial Buyer and Supplier on Industrial Buying Behavior

Relation between industrial buyers and suppliers continues since the beginning of the commerce. By the time, this relation becomes a kind of friendship between those two parties if the trust has built. Nowadays, this relations acquires a strategic dimension (Wilson, 1995, 2).

At that point it has to be said that even the good relations between the supplier and the buyer can make things easier for the process; industrial buyers are always keep evaluating the functional side of this relation too. Chao *et al.* (1993) suggest that industrial buyers evaluate their suppliers periodically based on the criterias they specify for establishing a sustainable relation. They offer 6 criterias for the evaluation of the suppliers:

1. Reliable deliveries,
2. Product quality,
3. Price,
4. Professionalism of the salesperson,
5. Service and responsiveness to customers' needs, and
6. The buyer-seller relationship.

Mohanty and Gahan (2012) indicate that relationship marketing has an important role since the long term relationships may bring a competitive advantage for both supplier and buyer. Since it's a matter of gaining competitive advantage, both buyer and seller would prefer to keep their relations balanced and sustainable. Surely this intention needs empathy and mutual understanding for both sides.

After all, the industrial buyer is a human and it's impossible for these people to get affected emotionally. Although the buyers evaluate the suppliers after every buying process, it can't be said that these evaluations are totally objective. Because of this, their industrial buying decisions are possibly get affected by these emotional states since they may not always able to keep their feelings outside the workplace. Industrial sellers are surely aware of this issue and they try to make the industrial buyers feel important. Sales force of the suppliers keep calling and visiting the buyers (sometimes with reasonable gifts) to build or keep the relation. No matter what the industrial buyers say; they get affected by the presentations, attitudes and manners of the sellers (Hague ve Jackson, 1994).

1.6. Effects of the Brands on Industrial Buying Behavior

Even though the industrial products are not selling on the shelves of the supermarkets, industrial buyers have to spend a huge amount of time for investigating, testing and understanding the products which they are interested. At this point, a good brand perception can make things easier for industrial buyers. If the industrial buyer have a belief in the reputation of a brand, or previously used and satisfied with the brand; the decision making process becomes less complicated for him or her. Hague and Jackson indicates that the level of brand effect on industrial buyers is above 5% (Hague ve Jackson, 1994, 5-11).

According to Chandpralart (2002), industrial buyers are also affected by the country of origin effect in addition to the supplier selection criterias. That means the brand values of the countries are also important for the decision making processes for industrial buyers.

2. The Purpose and the Importance of the Research

Industrial buying occupies an important place for the presales phase since the final product gains the characteristic features from the raw materials and semifinished goods which has been provided by industrial buyers from suppliers. Because of this, one of the key point for producing the best product relies on making the right industrial buying decisions.



This is an exploratory research which aims to determine the reasons behind the irrational buying decisions of industrial buyers and provide a groundwork for the further researches and practices.

Even there are researches in the literature about industrial marketing and industrial buyer behavior, these researches don't dwell on the irrational industrial buyer behavior which drifts apart from the ideal and expected industrial buyer behavior.

3. Method

Both qualitative and quantitative methods has been applied for this research to obtain information as much as possible. For both methods the participants' identities are kept anonymous while quantitative phase participants were not asked for any identity information; the qualitative phase participants were recorded with given codes instead of their identities. All of the participants has been informed that they could withdraw from the research any time they want.

First a semi-structured interview has been created for the qualitative data collection. Questions and the frame of the interview has been formed on the concepts and definitions from the literature. In this phase 40 industrial buying professionals from the city of Ankara have been participated for data collection.

After coding and interpreting the qualitative data, a questionnaire with 20 questions has been created to understand the concept and its dimensions. The data collection has been made by using five point Likert scale. The options were aligned as 1: Totally disagree to 5: Totally agree. An online data collection questionnaire has been formed and distributed to the participants. The participants has been chosen from Turkish LinkedIn users who defined themselves as actively working industrial buyers on their profile. 1500 invitation message for the survey has been sent randomly to the potential participants and finally 226 valid forms has been obtained at the end of this phase.

Convenience sampling has been applied for both qualitative and quantitative data collection phases. All the participants of the qualitative data collection phase has been participate in the research on condition that keeping their personal identifying information confidential. Quantitative data collection questionnaire was applied online where participants has filled the form anonymously.

In the qualitative data collection phase, many potential participants have been refused to participate in the research because of the personal and corporate privacy concerns. This was the main limitation of this research. Other limitations were geographical limitations since it was not possible to leave the city of Ankara for qualitative data collection phase and financial limitations since there were no financier for the research.

The qualitative data has been coded and analysed for the frequencies by using QDA Miner programme. Frequency, reliability and factor analysis for the quantitative data has been made by using the SPSS programme.

4. Results and Findings

4.1. Results and Findings from Qualitative Data

Based on the interviews, it can not be said that the industrial buyers have a total control and autonomy on the corporate buying decision process. Especially the end users of these products are quite dominant on the final decision. On the other hand, the end users seems to have brand obsessions and that surely drives the decision processes on an irrational ground. Participant 1/a says:

"We can not make these decisions alone in this sector. From boss to blue-collar workers, everyone is a part of it. And I have to admit that anyone in this process can change the final decision"

Participant 1/d says:

"I guess everyone but me is a part of this. I just have the final word but silently.."

Participant 2/b says:

"Usually top management and the end users are quite into this process. We make the final decisions together. If we are going to keep doing the same thing, we prepare a procedure for it"

According to the statements of the participants, the only free decision making zone is the offers which have similar delivery, price and quality features if the end users have no brand obsession for any of the offers. Participants also indicated that their opinions about the products are not considered enough in their organizations since many of them have never been an end user for the products they are buying. An other important point for this result is the low-level of risk in such decisions since there are no differences between the alternatives. On the other hand when there are procedures for the buying processes, this condition decreases the personal effects on the industrial buying decisions.



Participant 3/a says:

"We have procedures which have been specified beforehand. Also we have prepared an approved supplier list with a large group from departments to draw a frame for who we work with. As same as this, we also have an approved product list includes definitions for brand, model, type etc. So, I am making my decisions as free as I can in all these procedures and lists"

Participants 5/c says:

"The procedures and rules for buying process has been determined long ago before I started to work here. My job title here is Purchasing Manager but I believe my job is more like a Supplier Relations Manager. Well, whoever determined the rules have already get involved in the buying process right?"

Participants complained about that they can not find proper suppliers which match the key criterias of price, delivery and quality together. So, they said they choose the supplier alternatives which met the criterias the most.

Participant 5/b says:

"If there is a supplier who can handle all these price, delivery and quality trio in an acceptable level and if I don't know this company that means I am doing something wrong on my job but I don't. There is no such a supplier and it never existed"

Participant 4/a says:

"I have never ignore the criterias but sadly the suppliers do that. These issues are happening out of our control and we can not interfere until the delivery has reached us because they always expect us to believe that everything is all right. Do you think it is?"

Participant 2/d says:

"There is no best supplier here. I just try to choose the lesser worst. They usually ignore the delivery on time term. This sometimes makes us late on production too. As a precaution we have to keep extra stock and sure this has a cost for us."

Participant 1/e says:

"Supplier market is likte that. We have to admit it. Qualified or not, these are the supplier alternatives we have. Everyone is trying to do some business as possible as they can under these market conditions. You know, it is not that easy for companies staying alive in the business."

On the other hand industrial buyers seem to have social relations with the supplier and/or their agents and this may effect their industrial buying decisions. Participants stated that if there are more than one supplier which provide the same conditions; they preffer the one which they feel closer based on their personal relationship. Almost 80% of the participants of the qualitative data collection phase indicated that they have a relationship with the supplier and/or the supplier agent in their social lives. Also this might be considered as an important clue for the power of relationship marketing in Ankara.

Participant 2/e says:

"Price of some products are same all over the market. If I have to make a decision for such a product; I would definetly choose the one which I feel emotionally closer to the seller."

Participant 1/a says:

"I am working with the agents of the supplier and I have to admit that they have an effect on my decisions. Sometimes the agents resign from the supplier or supplier decides to change and send a different agent. If I don't like the new agent, I call the supplier and ask for someone else. If they don't, then their sales amount in my company would surely decrease dramatically, luckily they know that" (Note that this participant was also the owner of the company.)

Opposite to the examples above, some of the participants indicated that they preffer to keep their relatons with the supplier and/or the supplier agent in a minimum level.

Participant 5/c says:

"I preffer not to keep my relation personal with the sales representative. So, I can't say they have any effect on my buying decisions."

Participant 4/d says:

"I ususally keep our relation a bit tense. Probably they wouldn't like to hang with me because of this"

Some of the participants indicated that they are keeping the amount of the suppliers limited because they believe it's almost impossible to evaluate every alternative. They also mentioned that they are choosing the suppliers based on their past experiences and/or the procedures and criterias which specified by the organization. On the other hand it can be said that every supplier has it's own brand value for the buyers.



Buyers evaluate the brand value of the suppliers based on their performance on the price, quality and delivery. This can be interpreted that buyers also have a brand obsession but this obsession is based on supplier company instead of a product and the reason under that obsession is risk aversion.

Participant 2/a says:

"We usually evaluate the alternatives before our buying decisions. I mean we already have a pool of approved suppliers. We pick the best offer from this pool."

Participant 4/b says:

"We already got limited our suppliers, so if the offer is out of our supplier list; we do not consider about it."

Participant 3/a says:

"We usually prefer the brands which we are accustomed to and happy with. We are not lean to do business with others since it's very risky in those days."

Participant 1/e says:

"I partially consider the different brands and products. We already got a quite limited amount of suppliers and we don't make business with everyone in the market. We work with the ones we trust. Otherwise it takes so much time for evaluating the alternatives and the value of the wrong decision is so high. We also like to see our suppliers as our shareholders and this kind of relation needs some time"

Some buyers indicated that they have brand obsessions which effects on their buying decisions.

Participant 2/d says:

"These brands have a consistent performance and this never changes by the time. Their standards are high and sustainable. Others are more amateurs. Even your first evaluations are impressive, this is unsustainable because they can not keep supplying the same quality. Infact, that's why some brands are in the market from the beginning of the time and some can't keep doing business even a year long"

Participant 2/a says:

"We prefer popular brands. Because this is a matter of prestige for us."

In addition to all, the brand obsession of the end users have a considerable effect on the industrial buying decisions of the buyers:

Participant 3/a says:

"The end user of the product are craftsmen. Some of the craftsmen are obsessed with some products. Even though I supply better products for them, they reject these products. So I am not the one who have subjective tendencies on some products but these people push me to buy some certain goods you know. Whenever I buy the product they don't want the final product they produce is troubled. I sometimes feel that they are doing that on purpose of proving me that I was wrong on my decision"

Participant 1/b says:

"Employess especially the end users in the production department are causing distress really."

Participant 4/c says:

"Our production staff are obsessed with some brands and we are not able to overcome that"

Participant 2/b says:

"It's not always like that but our staff can't say no to some well known brands, that's a reality"

Participant 5/c says:

"There are popular brands in the market that's true. Infact we also have to take into account our workers who have brand obsession. I am very objective for all the brands but sometimes I feel the pressure of the obsessed employees."

65% of the participants states that they have made an unethical buying decisions in the past but they have avoided about giving the details. On the other hand, they stated that they do not feel regretted about their unethical decisions. It's understood that such decisions are not being made under the control of the industrial buying professionals. Infact such decisions seems to require a participation from the organization to share the responsibility of the risk.

4.2. Results and Findings from Quantitative Data

Frequency analysis of the demographic variables for the quantitative data can be seen below.



Age	
23-27	30
28-32	53
33-37	71
38-42	42
43-47	6
48+	24

Sectoral Experience	
1-3 years	93
4-6 years	36
7-9 years	13
10 years or more	84

Education Level	
Bachelor's	12
	5
Master's	61
Doctorate	26
Associate	14

Sector	
Health	53
Other	49
Construction	21
Defence	19
Telecommunication	15
Education	14
Technology	13
Public Services	12
Tourism	9
Real Estate	7
Logistics	6
Retail	6
Energy	2

Gender	
Male	133
Female	93

It can be said that the participants are young, well educated, experienced and mostly males from 12 identified sectors. The most of the participants are from the health sector.

Factor and reliability analysis has been applied on the quantitative data set and the results has been showed up as presented on the table below. Varimax rotation method has been applied for the factor analysis.

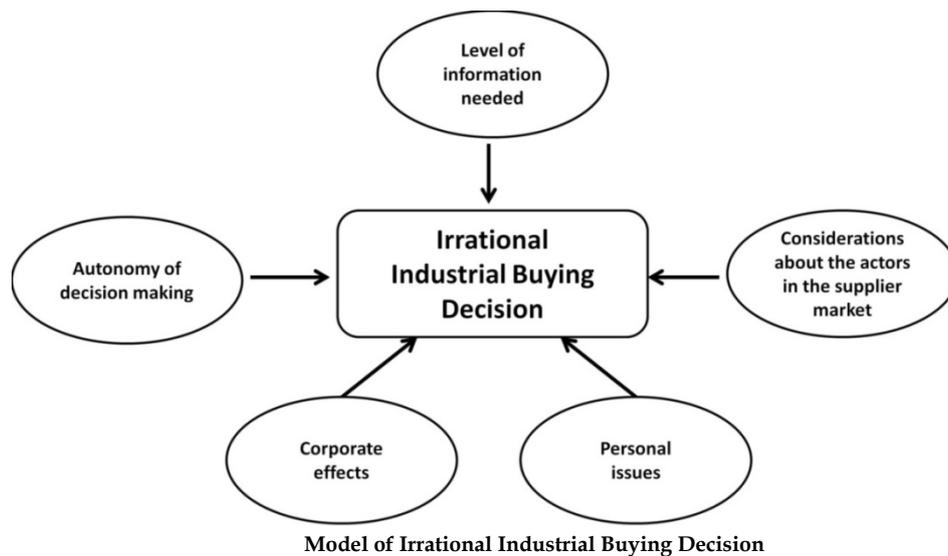
Dimensions	Statement	Factor Load	Explained Variance
Dimension-1 (Personal issues)	I may behave subjectively on my corporate buying duties	0,549	29,425
	I don't hesitate to use my corporate buying authority in unethical way	0,850	
	I may ignore the criterias about the price on my corporate buying duties	0,727	
	I may ignore the problems about the delivery processes on my corporate buying duties	0,821	
	I may ignore the quality problems of the supplier on my corporate buying duties	0,832	
	I may ignore the problems encountered because of the structural issues of the supplier market	0,735	
	My personal relations with the supplier and/or the agent of the supplier may effect my corporate buying decisions	0,700	
	I have a relation with the supplier or the agent of the supplier in my personal life	0,767	
Dimension-2 (Autonomy of decision making)	I do not hesitate to buy risky produts when I make a corporate buying decision.	0,585	9,938
	I can make corporate buying decisions by my own in my organization	0,659	
Dimension-3 (Level of information needed)	I can freely choose any alternative since they have the same features	0,771	9,874
	I evaluate every alternative before making a corporate buying decison	0,774	
Dimension-4 (Considerations about the actors in the supplier market)	I prefer to work with maximal supplier alternatives	0,765	7,840
	My positive thoughts about some brands may effect my corporate buying decisions	0,657	
Dimension-5 (Corporate effects)	Structure of the supplier market is troubled and this effects the corporate buying process in a negative way	0,743	7,637
	Top management interferes the corporate buying decisions in the organization	0,559	
	Corporate buying procedures are defined and these procedures are applied strictly	0,562	
	I believe the end users in the organization have brand obsession	0,623	
Total Variance Explained			64,714
Cronbach's Alpha Value			0,857

Table of Factor and Reliability Analysis



Cronbach's Alpha value for the questionnaire has been found 0,857. Carvalho *et al.* (2018) cited from Field (2009) and Hair *et al.* (2010); that the critical value for the Cronbach's Alpha value is 0,7 (Carvalho *et al.*, 2018, 36). Therefore the questionnaire form can be accepted as a very reliable measuring tool.

According to Hair *et al.* (2010), the factor loads should be higher than 0,5 to be accepted as significant and the Cronbach's Alpha value is desired to be above 0,60. On the other hand there were no parameters which has factor load over 0,5 on more than one factor. Hair *et al.* (2012) indicate that the acceptable value for the total variance explained should be over 60%. Finally the analysis of the questionnaire defines 5 dimensions with 64,714% explained total variance based on 18 questions. Summary of the model can be seen below.



5. Conclusion

It's not possible to say that the 40 participants of the qualitative phase are making their industrial buying decisions 100% objective and rational. Personal factors, organizational structure and other departments (especially the end users of the industrial goods and services) have an important effect on this. Participants indicated that they are aware of their irrational decisions but they will keep going on like that without any regret. This attitude has been observed almost all of the participants.

The results of the quantitative phase brings a reliable questionnaire with 0,857 Cronbach's Alpha value for 18 questions and 5 dimensions. This structure explains the 67,714% percent of the total variance.

The parameters of first dimension are defining the industrial buying decisions for the opposite side of the Chao *et al.*'s (1993) supplier performance evaluation criterias. The parameters of second and fifth dimension are intersecting with the Samaniego and Gutierrez's (2004) resolutions for the organizational structure. Based on the findings, even though the organizational structure pushes the industrial buyers for making a rational decision but the result is not always in this way.

As Collins (1998) indicates that industrial buyers are tend to decrease the perceived risk by reaching every information they can; so they try to evaluate as many alternatives as they can but the size of the markets don't let them to do that as Hague and Jackson (1994) says. Another tool for industrial buyers to decrease the perceived risk is the power of brand. The negative side of this tool is it may prevent buyers to try and search for the other alternatives. By the time, this will bring a lack of up to date knowledge for the goods and services in the market. Based on this it can be said that the third and fourth dimensions are about the perceived risk of the industrial buyer. Even though the industrial buying system looks like a mechanical structure; the components are humans and they communicate. By the time, this communication may go one step further as friendship (Wilson, 1995). As the time goes by, this may lead to an irrational buying decision because of the effect of supplier on buyer.

Finally, it can be said that industrial buyers may make irrational buying decisions under different circumstances. These irrational decisions are not always under their control because of the other members of the decision center.



For avoiding such decisions the industrial buyers should;

- Be autonomous but well inspected,
- Have a strong belief in ethical codes of the organization and community,
- Have a strong knowledge of the supplier market,

As a result it can be said that; industrial buyers may make irrational buying decisions on their corporate buying duties but rarely they have a total control on such decisions since different departments, end users and the management of the organization involves in the corporate buying decision processes.

Recommendations for researchers: Researchers may use the scale for different research subjects. It's believed that personality, organizational commitment, organizational justice, motivation, expectations, organizational culture, quality and many other concepts can be researched together with this scale.

Recommendations for practitioners: The final product is a combination of the personal labor of the employees and the quality of the physical components bought by industrial buyers. Even though the organizations can not manipulate the external business environment; they surely can change their internal environment. Under these circumstances organizations can apply 360 degree evaluation system, approved supplier lists or measuring end user and customer satisfaction levels to evaluate efficiency of the industrial buyers of their systems.

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