



## EFFECT OF PERCEIVED RISK AND UNCERTAINTIES (INTERNAL/EXTERNAL) ON THE BUYING BEHAVIOR OF BUYING CENTER

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### **Abstract**

*Buying center in Industrial environment is always under the influence of Risk and internal/external uncertainties when involved in the highly complex decision making process. Perceived risk of adoption is considered to be one of the major contributor of the buying center while arriving at the final decision.*

*The Research carried out and presented in this paper is basically representation of systematic and methodological approach for understanding Industrial buying behavior of buying center from Perceived Risk and Uncertain environmental conditions point of view. This research paper analyzes the behavior of buying center from multi-person level of analysis and evaluates one variable influence on the other. Buying Center where more than one person as well as functions participates in the decision making process, this study focuses on two factors for investigation; one, the buying center's perceived risk of adoption of new products and technology and the other is effect of uncertainties both internal and external on the decision making process. The focus industries for the purpose of this research work are metal forming Industries especially Steel Industries based out of India. The emphasis was placed on the structure of Buying Center with capability to take the decision effectively and quickly. The perceived risk of adoption and uncertainties tend to be higher with less involvement and participation of buying center in the overall decision making process. It has been observed that centralized decision making units are more inclined towards taking higher but calculated risks. Moreover, internal and external uncertainties prevailing in the business environment has a less impact on their decision making.*

**Keywords: Buying Center, Industrial Buying Behavior, Perceived Risk, Uncertainties, Metal Forming Industries.**

### **INTRODUCTION**

Organizational buying behavior studies carried out in the past resulted in the further work reflecting the multi-person and multi-function decision making process. Nicosia and Wind (1977) observed that the emerging organizational behavior research should shift their focus from a single purchaser decision making unit to a multi-person purchasing decision process known as Buying Center. Various members of buying center (Robinson, Faris and Wind, 1977) have some degree of influence on the purchasing decision process. However, the degree of active involvement of buying center members in the procurement process can vary from fairly routine situation to extremely complex. In a 'Straight Rebuy' situation, the purchaser makes the procurement decision as the complexities involved are at it minimum. On the other hand, in the 'Modified Rebuy', a group of people are involved in the decision making process. The final decision will be taken by the group after thorough investigation and analysis and not by an individual. In the 'New Task', the procurement process is still lengthy and driven by a group of Technical and commercial people residing within the organization. Since this is most complex Buy class, buying center may exercise various rounds of discussions, verify and validate all the relevant details before arriving at the final decision. Perceived risk and Uncertainties are high especially in the New Task Buy class. The researcher is of the opinion that 'Buying Center' is an appropriate unit for analysis and the focus is on the behavioral aspects w.r.t Perceived risk, Internal and external uncertainties and it effect on the decision making process.

According to Spekman and Stern (1979) buying center differs in composition not only from one company to another but also from one Buy class to other. For Example, buying group responsible procurement of less complex and routine items would be expected to differ significantly from a buying group responsible for procurement of production Equipments and machinery. Therefore, it is important to study variables affecting the buying decision process of buying center from behavioral aspect and study variations amongst them, if exists. This research paper try to investigate and analyse the two most critical variable for the purpose of this study; (1) Perceived Risk of Adoption of Buying Center and (2) Internal and External uncertainties hovering over the decision making process. The authors examined the effect of above factors on the buying center responsible for organizational buying decisions and for any buyclass.



## LITERATURE REVIEW

Webster & Wind (1972) defined Buying Center as group of people within the buying organization who are instrumental in the buying decision process of the products and Services. These members play an important role in either influencing or making the final decision of products and services. In buying center six roles have been identified as the initiator, the influencer, the decider, the user, the buyer and the gatekeeper. Depending upon the nature of the purchase and the information needed from the seller, an Individual acts in more than one role of the buying center.

A group of persons who begins the purchasing process from the organization side is known as **the initiator**. This member of the buying center known need or want in specific, and may convey it to the purchasing agent with necessary specifications. The role of initiator can be maintained by different people in the company, the product user who uses and detects an inefficiency pertaining to the product or the top management who desire is to improve the production process. The second member of the buying center is **the user**, those who actually work and uses the products or services. In the metal forming industries, the user normally has a great influence on the purchase of process lubricants. In the research conducted by Churchill et al. the user has been considered as the strongest member of decision making process because he/she is the ultimate user of the product and knows the product best. The user is primarily concerned with the product performance as well as the product's ease of use and successful operation (Turnbull & Leek 2003). User can influence the buying decision in two ways: one, the user has an expertise about the product and its usage (Rolfes 2007). On the other hand, there is a factor of influencing the decision process by refusing to work with the present materials and equipment (Webster & Wind 1972). Therefore his/her Buying Behavior diminishes the production output or the product quality (Rolfes 2007). **The influencer**, who provides information and adds decision criteria throughout the process, is the third and important role of the buying center. The influencer can be anyone from within the company (Technical Directors) or outside the company (Consultants) that influences the buying decision, directly or indirectly (Turnbull & Leek 2003). The Buying authority does not lie with the influencer formally (Webster & Wind 1972), but have a greater impact on the buying decision through providing information regarding the evaluation of potential suppliers and their products (Churchill et al. 2011). The people from marketing department, from Design and development, manufacturing, or the purchasing agent himself (Robinson, Faris & Wind 1967) can be an influencer. The forth role in the buying center is **the buyer**, those who have authority to execute the contractual arrangement and release the Purchase Order. Purchasing Manager, Materials Department will fall under this category of Buying Center. It seems that the buyer has a very little role to play in buying center but, it is actually not true. The buyer's past personal experience with the supplier and the information from similar industry can make or fail a chance of winning the contract. Therefore, the buyer is also a crucial member of the buying center.

Buying center in every organization passes through the Decision Making process depending on which type of buying situation they are dealing with. There are three major types of buying situations. At one extreme is the **Straight Re-Buy** which is fairly routine decision. A straight rebuy occurs when an organization buys previously purchased items from suppliers those who are already judged acceptable and approved. Routine purchasing with lower importance and lower risks are set up to facilitate straight rebuys. At the other extreme is the **New Task** which may call for thorough research. A company buying a product or service for the first time faces a new task situation. In this situation, the need for the product has not arisen previously so that there is very little or no relevant experience available. The members of the buying center also seek more and more information and search through various data to arrive at the final purchasing decision. The new task situation is considered to be the greatest opportunity for marketers and also pose a greater challenge. In the middle of these two extremes is the **Modified Re-Buy** which demands for some research before the final purchasing decision is made. A regular requirement for the type of product exists and the member of the buying center knows the alternatives available. Here the buying center demands for more information and also alteration to the standard normal operating norms or the normal supply procedure.

Although some major buying roles are persisting overall buying situations, the membership of buying center in any type of B2B industries is dynamic (Mattson, 1988). This means an active participation and involvement is necessary from much simple buying situation to more complex buying decision. Buying center in B2B industries cannot be restricted by limited boundaries. Various people and functions are involved in the buying center with different knowledge and expertise and at different levels in the organization. The roles everyone plays in the decision process are greatly influenced by the perceived risk of an individual and affected by environmental uncertainty. A key point to realize is all the members of buying center resides within the buying organization and factors like perceived risks and uncertainties hovering over individual has influential role in decision making. Uncertain environment both internal and external will affect the decision making process



to a greater extent. The Internal uncertainties are within the control of the buying organization whereas external influences enclose the company's environment. They are outside the firms control. (Robinson, Faris, Wind, 1967)

It is important to assess the entire decision making process of the buying organization and variable that affects directly or indirectly the entire process. This will help to know who is at the central position of the buying center and who is responsible for procurement related activities. This will also help and assign various roles each member of the buying center plays during the decision process. Table - 1 shows various function involved in the buying decision process;

It should be noted however that in different buying situations represented by multiple buying groups, the various organizational roles shown are the combination of overall functional and hierarchical levels within the organization. It may differ depending upon the buying situations and buy Class.

**Table – 1, Buying Center – Multi-Person and Multi-Functions Involvement**

Type of Product	Functions Involved							Persons Involved
	Purchase	Mfg.	Quality	Maint	Projects	Marktg	R&D	
Machinery						--		7
Lubricants						--	--	5
Chemicals						--	--	5
Greases			--		--	--	--	3
ST Chemicals					--	--	--	4
MRO		--	--		--	--	--	2
Ferrous Metals				--		--		5

## HYPOTHESIS

Two Hypotheses framed w.r.t above variable and tested,

**H<sub>1</sub>** : - *Perceived Risk of adoption is higher for organizations with low involvement and participation of buying center in the decisions making process within the group.*

**H<sub>2</sub>** : - *Members of Buying Center under the influence of higher internal and external uncertainties will attribute higher influence to the decision making process and purchasing agents.*

## METHODOLOGY

For the purpose of this research, metal forming Industries especially steel industries based in Pune industrial area of Maharashtra are studied. The sample size used for the purpose of this research work consisted of 50 people involved directly or indirectly in the decision making process. The firms selected for this work are predominantly large scale Steel Plants but also few are in the medium sized industrial segment. These industrial are mainly catering to automotive OEMs and are categorized under Business to Business (B2B) industries manufacturing automotive components. This is basically representative sample of automotive component manufacturing metal forming industries and a systematic random sampling approach is followed. Utmost care was taken in data collection with proper representation of cross functional attributes of buying center in this type of industries.

Structured questionnaire has been administered either personally or through e-mails. A covering letter and a personal call explaining the purpose of the questionnaire and assurance on confidentiality has been given to respondents. This has resulted 95% response rate. In order to complete the sample size of 50, additional 5 questionnaires sent to other members of buying center of the same type of industries and response received.

## DATA AND ANALYSIS

The militiaperson nature of the buying process has led to the concept of the *buying center* (Webster and Wind 1972). The buying center includes all organizational members involved in a purchase situation. It is an "informal, cross-sectional decision-unit in which the primary objective is the acquisition, importation and processing of relevant purchasing-related information" (Spekman and Stern 1979, p. 56). The composition of the buying center may change from one purchasing situation to the next, evolves during the purchasing process, and differs among firms. Fisher (1969) proposed a simple model to integrate the factors influencing the buying process and the degree of involvement of different functional areas of the firm, with product complexity and commercial uncertainty as the main factors affecting the process. Another widely held view of



the purchasing process was developed by Robinson and Faris (1967), who have labeled buying situations as "new task," "straight rebuy," and "modified rebuy."

The specific individuals involved in the buying decision process are likely to depend on the type of purchase situation (Brand 1972). Although much research has helped produce a general understanding of the nature of industrial buying behavior (see Bonoma, Zaitman, and Johnston 1977 or Johnston 1981 for a review), the applications of this knowledge to specific product situations are few and the results unclear (see Moriarty 1982 for an exception). Webster and Wind (1972) talk about users, gatekeepers, influencers, etc. Brand's (1972) categorization consists of general management, technical personnel, etc.

The scale used for the purpose of this research is based on the perceptual measures which are assumed to adequately and adequately result the degree of uncertainty based on the responses. Duncan (1972) study also reveal the degree of structure experienced by a particular individual and influence patterns within the groups. In an attempt to capture the relevant data, Internal and external uncertainty scales focused exclusively on purchasing related decisions. It also tried to reflect the entire range of information inputs which has a greater influence on the buying center. Specifically, a larger thrust has been given to the related factors which influence the perceived risk for adoption of new products and technology and also impact of internal and external uncertainties on the decision making. These factors may be external to the buying center but internal to the organization. For example, external factors such as Government regulations and economic conditions and internal factors such as Quality specifications, Sales Forecast, etc. can directly affect the purchasing decision and decision of the buying center.

Factor analysis has been used to analyze various dimensions of buying center conceptually representing unique characteristics of each construct. Table - 2 represents the analyzed data for various constructs. The purchasing authority dispersed among the members of the buying center or is it held by only one person representing the centrality of the decision making process ( $\alpha = 0.66$ ). This means regardless of hierarchical position the decision may be lies with the single individual and rest of the participants play various roles of the buying center. Similarly, participation in the decision making examined the extent to which the various members of the buying center were involved in the decision making process. Perceived risk ( $\alpha = 0.39$ ) measured the degree to which members of the buying center are under the influence while taking the final decision. Finally, the external and internal uncertainty ( $\alpha = 0.59$ ) which examined the extent to which purchasing related activities were influenced.

**Table 2: Factor Analysis – Buying Center Scales**

S.NO	Description	Decision Making Process	Specification and Procedures	Decision Collective/Centralized	Buying Center Division
1	An Active part in Decision Making	0.71	-0.23	0.13	0.01
2	Involvement at each stage of decision Making	0.66	-0.05	-0.08	-0.01
3	Follow Standard laid down Purchasing Procedure	-0.14	0.71	0.04	0.21
4	Responsibility clearly known and specified	-0.22	0.77	0.08	0.22
5	Technical Know-how and Information	0.12	0.14	0.76	0.08
6	Follow Previously written data and instructions	-0.05	0.66	0.11	0.09
7	Perceived risk seen as higher	0.39	0.11	0.16	-0.04
8	Under Greater influence of Uncertainties (Int/Ext.)	0.59	0.15	0.09	0.11

**Table 3: Bivariate Regression of Perceived Risk of Adoption with other variables**

Dependant Variable	b	B	Std. Error	R <sup>2</sup>	F (1,50)
Involvement in Decision Making	0.63	0.38	0.21	0.16	8.77 (P = 0.005)
Collective/Centralized Decision	0.24	0.13	0.22	0.025	1.30 (P = 0.242)
Technical Know-how, Procedures	0.13	0.01	0.20	0.003	0.89 (P = 0.044)



**Table - 4 , Bivariate Regression of Uncertainties with other variables**

Dependant Variable	b	β	Std. Error	R <sup>2</sup>	F (1,50)
Involvement in Decision Making	0.43	0.28	0.11	0.26	3.77 (P = 0.012)
Collective/Centralized Decision	0.63	0.23	0.42	0.03	4.30 (P = 0.442)
Technical Know-how, Procedures	0.18	0.14	0.26	0.06	1.23 (P = 0.144)

Table 3 and 4 summarizes bivariate regression showing the relationship between perceived risk of adoption and Uncertainties with other dimensions of buying center structure. The results indicated that there is no statistically significant relations exists between these dependants variable with other dimension of the buying center. However, there is a strong support for the hypothesized relationship between uncertainty and involvement of the member of the buying center in the decisions making process. Similarly, the results also indicated that a strong relationship exists between perceived risk of adoption and participation of the member of buying center in the entire process.

### CONCLUSION

Some of the interesting facts resulting out of this statistical data are; the information needs of buying center increases in response to conditions of higher environmental uncertainty. The various tasks within the group become less routine and less differentiated. As a result increase in shared responsibility in the decision making process contributes to a more flexible design. This results in permitting the members of the buying center to arrive at the decision more easily and quickly. Greater participation of the members of buying center will nullify the effect of internal and external environmental uncertainties and are willing to address issues pertaining to risk factors in adopting new products and technologies.

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