

PERCEIVED PERSONAL RISK: AN EXAMINATION ACROSS  
DEMOGRAPHIC GROUPS OF PURCHASING EXECUTIVES

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Abstract

In organizational buying, perceived risk has two aspects: personal risk and corporate risk. This paper examines the amount of perceived personal risk faced by various demographic groups of purchasing executives. The findings indicate that the stress and anxiety caused by perceived personal risk are somewhat universally experienced by purchasing executives in the modified rebuy. Consequently, coping mechanisms may be useful to purchasing executives in any size company, regardless of years of purchasing experience, years worked for present employer, or income level. In addition, the findings indicate that attempts to identify high personal risk perceivers can not depend upon these easily observed demographics.

INTRODUCTION

The concept of perceived risk has received considerable research attention since Bauer's (1960) proposal that buyer behavior could be viewed as instances of risk taking. While most of these studies have been conducted in the consumer sector, there have also been several major articles on perceived risk in organizational procurement. This high level of research attention is justified because perceived risk is such a central issue in the examination of buyer behavior.

There is general agreement among most scholars that perceived risk is present for any purchase involving: (1) a choice among alternative market offerings, and (2) uncertainty concerning the consequences of the purchase. These two considerations suggest that virtually all consumer as well as industrial purchases present some degree of risk to buyers.

While buyers in the consumer and industrial sectors are similar in the sense of being faced with choices among alternative market offerings in the selection of goods, the nature of the potential negative consequences each faces is different. In the consumer goods sector, products are purchased for the personal or household use of the buyer. Thus, all of the potential negative consequences are directly faced by the person making the purchase. In fact, no published research has even attempted to distinguish between personal and household risk.

In the industrial sector, however, the purchasing executive is seldom the user of purchased goods or services. Consequently, most of this research has examined perceived risk based on the potential for negative consequences to the buying corporation. These studies have been productive, but the potential for negative consequences to the purchasing executive should also be considered. In fact, Newall (1977) carried the proposition one step farther and argued that there are

two distinct types of perceived risk in organizational buying: buyer risk (personal risk), and company risk (corporate risk).

This paper examines the concept of perceived personal risk among purchasing executives. Specifically, the objective of the research is to determine whether particular demographic factors can effectively predict who may experience the stress and anxiety associated with higher levels of perceived personal risk. While no previous research has provided such a comprehensive examination of this issue, several earlier studies have addressed related issues or helped clarify research approaches. This literature is reviewed in the next section.

Review of the Literature

In 1960, Bauer proposed looking at consumer behavior as an instance of risk taking. Bauer's concept of perceived risk was based upon the premise that because any purchase competes for an individual's resources, there is a degree of risk involved with the uncertainty associated with the consequences of a given purchase decision. Those consequences relate not only to a given purchase and the degree of satisfaction therewith, but also to alternative purchases foregone at the time due to the purchase of the selected offering. From that seminal article, the concept of perceived risk has evolved and now encompasses purchase decision-making at both the consumer and industrial levels.

In an early study of supermarket purchase decisions, Cunningham (1967) operationalized Bauer's concept of perceived risk, based on the components of uncertainty and consequences. A perceived risk scale was constructed from a matrix measuring perception of the two components in terms of certainty and danger. Values were assigned to each response category, which were then multiplied to form a combined index value of perceived risk.

A study by Newall (1977), while not necessarily the first example of an application of perceived risk in the study of industrial buyer behavior, is nevertheless a viable reference point for the present research. Newall not only made the transition in applying perceived risk from consumer to industrial buyer behavior, but also introduced a distinction within industrial buying behavior--buyer risk and company risk. With regard to buyer risk, several conclusions were reported. One notable finding was that a factor identified as psychosocial risk (the extent to which a buyer feels accountable for the consequences of a purchase decision) occurred more frequently in large companies. Other demographic associations with risk were also examined.

Earlier studies of industrial buying behavior incorporated the concept of risk, even though risk was not the only object of those efforts. Cardozo (1968) and Cardozo and Cagley (1971) utilized risk/risk avoidance as a basis for segmenting industrial markets. Wilson (1971) looked at the buyer's need for certainty/uncertainty as a basis for determining decision-making styles. And, Robinson, Faris, and Wind (1967) cited risk reduction as one of the determinants of industrial buyer behavior.

Other notable studies of industrial buyer behavior which also incorporate perceived risk include Spekman and Ford (1977), Choffray and Johnston (1979), Ryan and Holbrook (1982), and MacCrimmon and Wehring (1986). Spekman and Ford (1977) measured the perception of uncertainty among buying center members. Their study shows that purchasing personnel perceive more uncertainty concerning the external environment than do non-purchasing buying center members. The buyer was found to deal with that environmental uncertainty by risk reducing behaviors such as vendor screening.

Choffray and Johnston (1979) attempted to measure personal and organizational risk as perceived by different organizational members. The participants who perceived the highest levels of personal consequence of a posed buying situation were found to be the lowest - and highest - level participants in the organization, resulting in a U-shaped distribution in terms of organizational level.

Ryan and Holbrook (1982) studied the degree of stress involved in a decision of fleet managers to lease an automotive fleet. They found more stress to be perceived by the managers in joint decision situations than in either sole decision or delegated decision situations. This finding is parallel to Newall's (1977) finding of higher perceived risk in larger companies due to the inability to routinize decisions via the structured, company purchase procedure.

MacCrimmon and Wehring (1986) studied risk-taking behavior among corporate personnel. They found that managers in large firms were more risk-averse than average, and managers in small firms were more risk-taking. Younger managers were more risk-taking than older managers. And managers with higher incomes were found to take more risks than their lower paid counterparts.

The aforementioned Robinson, Faris and Wind (1967) study established the buyclass taxonomy from which the new task, modified rebuy, and straight rebuy types of buying situations were established.

Overall, the concept of perceived risk has been incorporated into the Webster and Wind (1972) model of organizational buying behavior. The Webster and Wind model has been cited as the underlying basis for many of the studies of industrial buyer behavior which incorporate risk. In this study, the risk component being measured, related to the model, is an examination of the consequences component of perceived risk as defined by Webster and Wind.

## Sample

In order to empirically examine perceived personal risk across various demographic segments of purchasing executives, a mail survey was conducted. The sampling frame was the most recent membership roster of the Sixth District of the National Association of Purchasing Management. Names of purchasing executive members were randomly drawn from rosters of the Akron, Canton, Cleveland, and North-Central Ohio Chapters.

A follow-up mailing was sent ten days after the initial wave. A total of 143 surveys was received of the 298 originally mailed. The rate of response was 48 percent, which is considerably higher than that found in many similar mail surveys conducted in the industrial sector. In addition to the relatively high rate of response, confidence in the generalizability of the data set is enhanced by the wide range of demographic data reported by the responding purchasing executives.

## Buyclass Studied

Respondents were informed that all of their responses should be based upon a modified rebuy type of buying situation. This was done to provide a common frame of reference for all respondents. The following directions were provided at the top of the first page of the survey instrument.

**This questionnaire is based upon the buying situation described below. Please read the situation and then respond to the subsequent questions. Your replies to the questions are to be based upon your reaction to a very similar buying situation, should it occur within YOUR organization.**

The service of a current vendor has recently deteriorated in terms of price, quality, and delivery. The product purchased from the vendor is of very high importance to your firm. This vendor, however, is presently the sole supplier of the product, due to a high initial set up charge required by all potential suppliers of the product.

As the buyer of the particular product, you wish to obtain a replacement vendor who will perform better. You hope to accomplish this before the present vendor creates an excessive burden upon your firm.

The product being purchased is precisely detailed with purchasing specifications, and you have a high degree of autonomy with regard to vendor selection. This type of buying situation is commonly referred to as a Modified Rebuy. That is, a buying situation in which the product remains the same, but the supplier is changed.

The modified rebuy was selected over new task or straight rebuy because it provides the best combination of risk and buyer autonomy. Nauman, Lincoln, and McWilliams (1984) have shown that

the purchasing agent's influence is greatest in the straight rebuy (66.7%), followed by the modified rebuy (55.6%), and the new task (40.6%). The straight rebuy may, however, provide very little perceived personal risk to the purchasing executive due to the familiarity and repetitive nature of purchases within that buyclass. The modified rebuy, on the other hand, still provides considerable buyer autonomy while generating considerably more perceived risk. In fact, Newall (1977) reported that purchasing executives experienced their highest level of perceived risk for the modified rebuy situations.

#### Measuring Perceived Personal Risk

For the modified rebuy situation described above, respondents were asked to indicate the certainty of each of the series of ten potential negative personal consequences if the chosen supplier failed to satisfactorily perform the required tasks. A three-point scale [not certain (1), somewhat certain (2), and very certain (3)] was used. For each of these same ten potential negative consequences, the respondents indicated the seriousness of these outcomes on a three-point scale [annoying but not serious (1), somewhat serious (2), and very serious (3)]. This measurement approach is very similar to that employed by Dash, Shiffman, and Berenson (1976).

The product of the certainty and seriousness scales was computed for each of these ten items. Consequently, the perceived personal risk scores ranged from 1 to 9. Cunningham (1967), and Lumpkin and Massey (1983) have provided convincing arguments in support of the validity of this two component (certainty and seriousness) approach for measuring perceived risk.

#### Analysis Techniques

Four separate Multivariate Analysis of Variance (MANOVA) procedures, each relating to a particular demographic grouping of the respondents, were performed. In each case, the ten perceived personal risk scores represents the criterion variables. In essence, MANOVA was employed to determine whether the overall perceived personal risk profiles indicated a significant statistical difference across the particular demographic grouping being examined. MANOVA is a useful statistical technique when there are multiple interval scaled criteria variables (ten perceived personal risk measures) and one categorical predictor variable (the particular demographic grouping under investigation).

In principal, MANOVA is similar to univariate analysis of variance. The multivariate approach, however, is concerned with the detection of significant differences among the population (demographic group) centroids, rather than with the differences attributable to each of the individual criterion variables (the perceived personal risk measure). If MANOVA indicates statistically significant overall group separation, the analysis typically proceeds to the examination of univariate F-ratios for each criterion variable in the model to determine the extent of its individual statistical association with the categorical predictor variable.

The research results can be very succinctly summarized: perceived personal risk does not appear to systematically differ to a statistically significant extent across the demographic groups examined.

The first demographic grouping analyzed was the size of the company where the respondents work. Three approximately equal size categories were established and MANOVA was conducted. These results are shown in [Table 1](#). While a statistically significant overall difference was detected at the  $\alpha = .0242$  level, none of the individual perceived personal risk items was individually related to company size in the univariate tests. Consequently, the relationship between company size and the perceived personal risk experienced by purchasing executives is tenuously defined, at best. An examination of the mean values shown in [Table 1](#) does not indicate any systematic relationship.

The second application of MANOVA was for years of purchasing experience. Again, three approximately equal size groups were defined and perceived personal risk was examined across these three groups. As shown in [Table 2](#), neither the multivariate nor any of the univariate tests indicated statistically significant differences. Even though one might expect that purchasing executives with more experience would have lower levels of perceived personal risk, the data did not support this proposition.

[Table 3](#) shows the results of the third application of MANOVA. Three groups of approximately equal size were defined on the basis of the purchasing executive's length of service to his or her present employer. Perceived personal risk scores from a failed modified rebuy were then examined over these length of service groups. The overall multivariate test did not indicate statistically significant group separation. Consequently, there is little research justification for examining the univariate tests. They are presented for the reader's inspection, however. The variable "your next performance review will be less favorable" did show a statistically significant difference across the three length of service groups in this univariate test. More recently hired purchasing executives indicated greater perceived personal risk on this dimension. None of the other univariate tests was statistically significant (at the .05 level). Consequently, there is again little evidence of any systematic relationship between the demographic variable and overall perceived personal risk.

The last demographic variable examined was income level of purchasing executives (see [Table 4](#)). The MANOVA results across income groups indicated no statistically significant differences in overall perceived personal risk scores. Also, none of the univariate tests was statistically significant at the .05 level. Consequently, one would again conclude that perceived personal risk does not appear to be systematically related to this demographic variable. Purchasing executives at every income level experienced similar degrees of perceived personal risk.

TABLE 1  
MANOVA Results: Company Size

Perceived Risk Component	F-Ratio	Level of Significance	Mean Value for Each Group <sup>1</sup>		
			Small <sup>2</sup>	Medium	Large
I. Overall multivariate test <sup>3</sup>	1.78	.0242			
II. Univariate tests					
-- You will lose status among your peers.....	2.41	.0942	2.49	2.32	3.11
-- The status of the purchasing department will decrease.....	2.04	.1347	3.05	3.71	3.97
-- You will feel personal dissatisfaction....	1.73	.1812	6.78	6.75	5.95
-- You will have less chance for promotion....	1.33	.2673	2.51	3.14	3.14
-- Your personal popularity will diminish.....	.79	.4571	1.71	2.07	1.75
-- Company profits will be lower.....	.72	.4869	5.63	4.82	5.32
-- You will lose your job.....	.48	.6189	2.15	2.07	2.39
-- Your relations with the users of the purchased product will be strained.....	.40	.6679	4.88	4.82	5.25
-- Your next raise will be smaller.....	.20	.8213	2.90	2.86	2.65
-- Your next performance review will be less favorable.....	.17	.8398	3.54	3.71	3.39

<sup>1</sup> Where risk is computed as the product of seriousness and certainty. Higher values indicate greater risk.

<sup>2</sup> Where "small" reflects companies with annual sales of \$20 million or less, "medium" reflects sales of \$21 million to \$250 million, and "large" reflects sales of \$251 million or more.

<sup>3</sup> Wilk's criterion.

TABLE 2  
MANOVA Results: Years of Purchasing Experience

Perceived Risk Component	F-Ratio	Level of Significance	Mean Value for Each Group		
			Few <sup>1</sup>	Intermediate	Many
I. Overall multivariate test	1.27	.1983			
II. Univariate tests					
-- You will lose status among your peers.....	2.35	.0998	3.12	2.28	2.72
-- You will feel personal dissatisfaction....	1.81	.1683	6.81	6.58	5.85
-- Your next performance review will be less favorable.....	1.26	.2871	3.95	3.18	3.33
-- Your personal popularity will diminish.....	.50	.6081	1.74	1.68	1.94
-- You will lose your job.....	.45	.6387	2.40	2.08	2.20
-- You will have less chance for promotion....	.33	.7215	2.81	3.15	2.87
-- Your next raise will be smaller.....	.21	.8140	2.61	2.90	2.76
-- The status of the purchasing department will decrease.....	.18	.8368	3.56	3.45	3.74
-- Your relations with the users of the purchased product will be strained.....	.13	.8795	5.19	4.95	4.96
-- Company profits will be lower.....	.05	.9505	5.42	5.28	5.24

<sup>1</sup> Where "few" reflects under 10 years, "intermediate" reflects 10 to 15 years, and "many" reflects more than 15 years of purchasing experience.

#### DISCUSSION

Purchasing executives from a variety of demographic groups are faced with considerable stress and anxiety in the form of perceived personal risk. They recognize the fact that every buying decision can offer personal as well as corporate consequences.

As the advancement opportunities for employees with purchasing backgrounds continues to increase, more purchasing managers aspire to top management positions. At the same time, they realize that every buying decision can influence their own political situations within their companies. This

compounds their stress and anxiety levels as they attempt to position themselves for the possibility of further advancement up the corporate hierarchy.

While some level of stress may increase productivity, too much stress can lead to much lower output and significant decreases in the quality of life for employees. Aware of this, many corporations have developed formal, company-sponsored programs for stress management. The results of this research indicate that no demographic group of purchasing executives escapes the tension of perceived personal risk. Buyers working for any size company, regardless of years of purchasing

TABLE 3  
MANOVA Results: Years Worked for Present Employer

Perceived Risk Component	F-Ratio	Level of Significance	Mean Value for Each Group		
			Few <sup>1</sup>	Intermediate	Many
I. Overall multivariate test	1.11	.3347			
II. Univariate tests					
-- Your next performance review will be less favorable.....	4.41	.0140	4.23	3.50	2.76
-- You will lose your job.....	2.93	.0570	2.57	2.33	1.80
-- You will have less chance for promotion.....	2.82	.0633	3.48	2.85	2.49
-- You will feel personal dissatisfaction	2.51	.0852	6.50	6.98	5.78
-- Your next raise will be smaller.....	2.31	.1030	3.20	2.80	2.27
-- You will lose status among your peers..	.58	.5604	2.89	2.78	2.49
-- Company profits will be lower.....	.30	.7434	5.11	5.58	5.27
-- Your personal popularity will diminish	.22	.8004	1.73	1.90	1.76
-- Your relations with the users of the purchased product will be strained....	.22	.8038	4.84	5.08	5.18
-- The status of the purchasing department will decrease.....	.13	.8779	3.73	3.55	3.49

<sup>1</sup>Where "few" reflects under 8 years, "intermediate" reflects 8-16 years, and "many" reflects more than 16 years with the current employer.

TABLE 4  
MANOVA Results: Income Level

Perceived Risk Component	F-Ratio	Level of Significance	Mean Value for Each Group		
			Low <sup>1</sup>	Intermediate	High
I. Overall multivariate test	.98	.4891			
II. Univariate tests					
-- You will feel personal dissatisfaction	2.74	.0688	6.80	6.46	5.47
-- Company profits will be lower.....	2.683	.0761	5.57	4.61	6.00
-- The status of the purchasing department will decrease.....	2.13	.1238	3.84	3.04	4.00
-- Your next performance review will be less favorable.....	1.14	.3229	3.82	3.13	3.27
-- You will lose your job.....	1.10	.3348	2.20	2.00	2.53
-- You will have less chance for promotion	1.04	.3578	3.08	2.59	3.17
-- Your next raise will be smaller.....	.93	.3961	3.04	2.50	2.57
-- Your relations with the users of the purchased product will be strained....	.62	.5379	5.31	4.76	4.90
-- Your personal popularity will diminish.	.14	.8665	1.86	1.72	1.80
-- You will lose status among your peers..	.13	.8775	2.80	2.61	2.67

<sup>1</sup> Where "few" reflects income less than \$32,500 per year, "intermediate" reflects \$32,500 to \$42,500, and "high" reflects more than \$42,500.

experience, time spent with current employer, or level of income face similar degrees of perceived personal risk.

Therefore, participation in these programs should not be restricted to any particular demographic group of purchasing executives. The results indicate that all groups can equally benefit from such planned programs.

This research also indicates that attempts to predict which purchasing executives are high personal risk perceivers will be relatively difficult. Hutt and Speh (p. 156, 1985) among others, suggest that risk perceptions may be an effective micro-segmentation basis in industrial marketing. Researchers interested solely in the

behavior of purchasing executives, too, would benefit from being able to easily identify likely high personal risk perceivers. The demographics examined in this study would enable relatively easy identifications of probable high personal risk perceivers, had statistically significant findings been determined. Unfortunately, such identifications will have to rely upon other, more difficult to apply proxy or actual measures.

#### REFERENCES

References may be obtained from the authors.