DEPARTEMENT TOEGEPASTE ECONOMISCHE WETENSCHAPPEN

ONDERZOEKSRAPPORT NR 9675

Perceived Risk and Risk Reduction Strategies in Mail-Order versus Retail Store Buying

by

D. Van den Poel

J. Leunis

Katholieke Universiteit Leuven

Naamsestraat 69, B-3000 Leuven

ONDERZOEKSRAPPORT NR 9675

Perceived Risk and Risk Reduction Strategies in Mail-Order versus Retail Store Buying

by

D. Van den Poel

J. Leunis

D/1996/2376/77

Perceived Risk and Risk Reduction Strategies in Mail-Order versus Retail Store Buying

Dirk Van den Poel & Joseph Leunis

Dirk Van den Poel: Doctoral student at Catholic University of Leuven (K.U.Leuven)
Naamsestraat 69, B-3000 Leuven, Belgium
Telephone: (32 - 16) 326 945
Fax: (32 - 16) 326 732
Email: Dirk.Vandenpoel@econ.kuleuven.ac.be

Joseph Leunis: Marketing Professor at Catholic University of Leuven (K.U.Leuven)
Naamsestraat 69, B-3000 Leuven, Belgium
Telephone: (32 - 16) 326 947
Fax: (32 - 16) 326 948

This paper is an extension of our presentation at the 19th Annual Macromarketing Conference, August 1994, Boulder, Colorado and at the Frontiers in Services Conference at Vanderbilt University, October 1994, Nashville, Tennessee.

Perceived Risk and Risk Reduction Strategies in Mail-Order versus Retail Store Buying

Abstract

This study examines the differential impact of perceived risk upon two alternative channels of distribution, namely specialty store and mail-order buying, for different product categories. Given the critical role of perceived risk in limiting mail-order buying different types of risk relievers and their potential for reducing perceived risk have been analyzed.

This study confirms the general belief that mail-order buying is not only more risky than buying the same product in a specialty store but it also indicates that the level of perceived risk seems to be highly influenced by the value of the product.

Although mail-order companies may reduce this competitive disadvantage by using the appropriate risk relievers the results clearly indicate that risk relievers differ considerably in effectiveness. "Money-back guarantee" and "offering products with positive ratings of consumer organizations" are among the better risk relievers.

1. INTRODUCTION

Mail-order sales in Belgium reached only 20 billion BEF in 1990 or a relatively small 1.8 % of total retail sales. In a European context this figure rates low compared to the 4.2 % in Germany, 3.0 % in the United Kingdom and 2.6 % in the USA.

Potential explanations for the relative unimportance of mail-order sales in Belgium are numerous. The large number of stores[1], the small size of the country and the resulting nearness of shopping facilities may be enough reasons for mail-order retailing to be a poor alternative. (Leunis 1990) Another explanation may be that for many potential customers a higher risk is associated with mail-order buying.

In this context, the purpose of the paper is to investigate the differences in perceived risk in alternative channels of distribution, in particular between mail-order and specialty store buying. The relevance of the perceived risk concept lies in the fact that certain types of risk may be higher in the typical catalog buying situation than in a specialty store purchase, e.g. the inability to physically inspect products, the lack of personal contact and the lower level of overall information about the products. Moderating factors for these differences between the two buying situations will be identified.

Given the critical role of perceived risk in limiting mail-order buying, different types of risk relievers and their potential for reducing perceived risk will be thoroughly investigated. These findings may have immediate implications for managerial action. The use

---

[1]Number of stores per 1000 inhabitants in Belgium in 1990 is 11.4. Comparative figures for e.g. France and Germany are 9.1 respectively 5.5.

of different product categories and of a larger proportion of non-student respondents allow for some generalizability of the results.

This article is divided into five parts. In the second section the two major concepts, perceived risk and risk relievers and especially their role in mail-order buying are being discussed. The third section presents the data collection procedure. The empirical results are discussed in detail in the fourth section. The major conclusions and suggestions for further research are presented in the final section.

2. MAIL-ORDER BUYING: THE ROLE OF PERCEIVED RISK AND RISK RELIEVERS

The discussion of the two main concepts, risk perception and risk relievers, will be followed by a review of the background literature. This section will be finished with a formulation of the different hypotheses which provided direction for this study.

2.1. Concepts

Every purchase decision is accompanied by some degree of uncertainty about the consequences of the purchase. It seems to be equally true that any business, manufacturer or distributor, may undertake actions to reduce the risk as perceived by potential customers and as such may facilitate their purchase decision. Intuitively, it seems also straightforward that potential customers may take some actions on their own to reduce the level of perceived risk.

2.1.1. Perceived Risk

The concept of perceived risk has been introduced in the marketing literature by Bauer (1960). Major research efforts by e.g. Gillett (1970), Dash et al. (1976) and Hoover et al.

(1978) were directed toward this concept during the 1970's. After the topic seemed to have lost the researchers' interest for almost a decade it reemerged in the literature in the second half of the 1980's.

Dunn et al. (1986) defined the concept as the expected negative utility associated with the purchase of a particular product or brand. Perceived risk has been conceptualized as a multidimensional dual component (probability of loss & importance of loss) phenomenon (Dunn et al. 1986; Verhage et al. 1991, etc.).

$$\text{Perceived Risk} = \sum_{i=1}^{n} \text{probability (loss)} \times \text{importance (loss)}$$

for i = 1,2, ... , n dimensions.

Several risk dimensions have been suggested to operationalize the concept i.e. financial, social, performance, physical, psychological, economic, opportunity, and time loss (Gemünden 1985).

In the literature, some attention has been paid to the question of whether to use an additive or multiplicative relationship of the risk components. Although Bettman (1973) discussed this problem in great detail, he was not able to reach a final conclusion.

Yates and Stone (1992) supported a multiplicative relationship: the importance of a loss and the likelihood of a loss should combine interactively. Because of its intuitive appeal, a very important loss should only contribute considerably to the perceived risk measure if a large probability of loss exists; the multiplicative formulation has been used in this paper.

Taking into account two risk dimensions (financial and performance risk), perceived risk for buying a particular product by mail-order respectively in a specialty store can be measured as follows:

MAILRISK = Probability (financial loss) x Importance (financial loss)
+ Probability (performance loss) x Importance (performance loss).

SPECRISK = Probability (financial loss) x Importance (financial loss)
+ Probability (performance loss) x Importance (performance loss).

In addition, a third measure of perceived risk was introduced in the analysis, i.e. the difference in perceived risk of buying a given product by mail-order versus buying the same product in a specialty store (Spence et al. 1970). This risk measure is defined as follows:

DIFFRISK = MAILRISK - SPECRISK

The result of this expression may be expected to be positive as buying by mail-order is generally considered to be more risky (cf. infra Hypothesis 1).

2.1.2. Risk Reduction Strategies

Every purchase decision involves risk to some degree. Following the definition of perceived risk it is clear that the risk involved may be reduced by either decreasing the probability of a failure and/or by decreasing the severity of the loss.

In this context, Roselius (1971) defined a risk reliever as a device or action, initiated by the buyer or seller, which is used to carry out a risk reduction strategy. It seems evident that the buyer can devise a tactic to reduce his uncertainty, but that distributors and manufacturers also have the opportunity to find ways to reduce the risk perceived by their customers. For a list of the different risk relievers, we refer to table 1.

2.2. Perceived Risk and Risk Reduction Strategies in Mail-Order Buying

Several studies have dealt with the relationship of mail-order buying and perceived risk. Spence et al. (1970) reported differences in risk perception for a particular product class between buying by mail and buying from a store and/or salesperson.

They concluded that (potential) consumers perceived more risk involved in the mail-order situation than in the store/salesperson situation. However, they found no evidence that mail-order buyers perceive significantly less risk in mail-order buying than did non-buyers.

Taylor (1974) suggested that these results may have followed from the way risk was being measured[2](namely as a single component risk concept). This hypothesis was later confirmed by the findings of Schiffman et al. (1976).

In their 1970 study Spence et al. also found that risk perception differed among members of different socio-economic groups. Perceived risk was found to be related to the level of education (the more education, the lower the perceived risk) and to the level of income (the higher the income, the lower the perceived risk).

The definition of perceived risk allows automatically for perceived risk to be highly influenced by the product class involved. Although the probability of a loss may be the same for two different products, the importance of the loss may differ considerably. Peter and Ryan (1976) confirmed this hypothesis in their study.

---

[2]Taylor (1974), p. 58.

In most descriptive models of buying decisions in consumer behavior (e.g. Howard-Sheth model (Howard & Sheth 1969), the Engel-Kollat-Blackwell model (Engel et al. 1990), the Sheth model (Sheth 1973)), the possibility is included for experience with previous purchases (satisfaction or dissatisfaction) to have a (major) impact upon future buying behavior. Festervand et al. (1986) found that mail-order buyers with prior satisfactory purchase experience perceived significantly less risk than mail-order buyers with prior unsatisfactory purchase experience.

Spence et al. (1970) have shown that mail-order buying is perceived to be more risky than retail store buying. As already mentioned in section 2.1.2. mail-order companies may be expected to try to overcome this competitive disadvantage by offering risk relievers to their (potential) customers. However, it is to be expected that not all actions may be equally effective.

This competitive disadvantage may even become more of a problem as some authors such as McCorkle (1990) have pointed out that the future growth opportunities for catalogers are dependent upon their ability to broaden the customer base. It seems evident that a clear understanding of the reasons why many people do not buy by mail-order is an important issue. An understanding of the effectiveness of the different risk reduction devices seems therefore to be equally important.

In table 1, a summary of some major risk relievers is presented. A distinction is made between actions undertaken by the mail-order companies to reduce perceived risk and actions undertaken by the (potential) customers.

Table 1 - Overview of Risk Relievers under consideration in this study

Initiated by	Risk Reliever
Mail-order company	1. Money-back guarantee 2. Mail-order company only carrying well-known brands 3. Possibility to see the products in advance 4. Extended product warrantees
Customer	5. Loyalty to well-known products 6. Buying the most expensive product 7. Good rating by consumer organization 8. Positive word-of-mouth information 9. Brand loyalty 10. Consulting multiple mail-order catalogs 11. Mail-order company loyalty

The literature with respect to risk relievers is not only limited, but the results reported are very often contradicting. Major findings of Roselius (1971) indicated that not all risk relievers are equally effective in their risk reducing ability. One device in particular, money-back guarantee was found to be evaluated very unfavorably. Brand loyalty and major brand image were consistently ranked highest among all types of risk relievers. However, Hawes and Lumpkin (1986) found money-back guarantee to be among the most important risk reduction techniques.

The controversy about the effectiveness of money-back guarantee as a risk reliever and the fact that this device is frequently used as a risk reduction strategy in direct mail (Akaah and Koragaonkar 1988) makes it an interesting research topic.

Much of the risk literature has been criticized because of either limiting their research to one product category only or considering mainly inexpensive products. Whereas research of the first type does not allow for generalizability, the latter type may suffer from the fact that risk is relatively unimportant (Gemünden 1985).

To overcome the criticism of many previous studies, six non-food product categories were selected for this study taking into account different levels of involvement, purchase frequency and monetary value.

2.3. Hypotheses

The underlying theory and the empirical research to date on the role and importance of perceived risk with respect to mail-order buying permit us to formulate a set of formal hypotheses. They can be grouped into two broad groups: H1-H6 are related to the perceived risk concept, and H7-H8 refer to the risk reduction strategies.

According to Spence et al. (1970), Peter and Ryan (1976), Hawes and Lumpkin (1986) and Festervand et al. (1986) the following hypotheses are offered:

H1: Perceived risk in mail-order buying is greater than in specialty store buying.

H2: Perceived risk increases for more complex expensive product categories.

The existing theory of consumer and shopping behavior suggests that differences in both buying and shopping behavior may exist among different socio-economic groups. In this respect it may be expected that socio-economic groups may differ in terms of risk perceptions. Intuitively, it also seems logical to expect that mail-order buyers consider less risk to be involved in mail-order buying than non-buyers. This leads to the following hypotheses:

H3: Mail-order buyers perceive less risk in mail-order buying than non-buyers.

H4: Differences in risk perception exist among different socio-economic groups.

The underlying theory of consumer behavior generally recognizes that past experience (satisfaction or dissatisfaction) may have an impact upon future buying behavior. Existing empirical research directly related to mail-order buying (Festervand et al. 1986) offers some support for this thesis. Accordingly, the following hypothesis is formulated:

H5: A mail-order buyer's risk perception is dependent upon his (her) prior purchase experience.

Finally, buying a product by either mail-order or in a specialty store involves some risk (MAILRISK versus SPECRISK). Intuitively it seems logical to expect potential buyers of a product to be easier inclined to buy by mail-order when the differences between both types of perceived risk (DIFFRISK) are small. This leads to the following hypothesis:

H6: Products which are actually bought by mail-order rate low on differential perceived risk.

Acceptance of H1 leads to questions of how to reduce this competitive disadvantage for mail-order companies by risk relievers. Although the existing literature with respect to risk reduction strategies and their role in reassuring potential mail-order buyers is rather limited the following hypotheses about the effectiveness of different risk relievers can be formulated:

H7: Risk relievers differ in their effectiveness in reducing (or eliminating) risk.

H8: The ranking of the effectiveness of risk relievers is the same for different types of respondents (including mail-order buyers and non-buyers, heavy versus light users, ...) .

3. METHOD

This study was conducted in the framework of a seminar on retailing. The students were asked to interview respondents with respect to their mail-order buying behavior or attitude. Sample characteristics are briefly discussed in section 3.1. The questionnaire and some measurement problems are discussed in sections 3.2. and 3.3. respectively.

3.1. Sample Characteristics

Three hundred personal interviews were conducted in Belgium using a quota sampling method. The students were asked to interview six respondents of which at least three must have bought once a product by mail-order. No further directions were given with respect to the sample characteristics. What differentiates the present study from most of the past research (e.g. Jasper and Ouellette 1994) is that here, only one third of the sample consisted of students, which overcomes at least some problems of generalizability.

Table 2 - Characteristics of the sample

Characteristics		**Sample percentage (in %)**
Gender	female	65.6
	male	34.4
Age	18-24	36.8
	25-30	12.8
	31-36	4.7
	37-42	3.9
	43-48	12.0
	49-54	17.8
	55-60	5.8
	60-88	6.2
Occupation	students	29.4
	non-students	70.6
Mail-order	buyers	57.4
	non-buyers	43.6

A total of 282 usable questionnaires were available for further analysis. In table 2, the major characteristics of the sample are summarized.

3.2. Questionnaire

A questionnaire was developed that first asked the respondents to rate the probability of a risk occurring when a product is being bought either by mail-order or in a specialty store.

In order to keep the questionnaire manageable, only the two most important types of risk have been considered, i.e. financial and performance risk. Perceived financial risk is defined by McCorkle (1990) as "... concern over any financial loss that might be incurred because of the product purchase". Concern about whether the product will perform as expected is known as perceived performance risk.

In questions 2 and 3 the respondents were asked to rate the importance of performance loss and financial loss in case the product under consideration is bought by mail-order respectively in a specialty store.

The questions 4 to 8 probed to what extent the respondents already bought by mail-order, their frequency of mail-order buying, the number of mail-order companies they ordered from, their general level of satisfaction with mail-order buying as well as which product categories they already bought by mail-order.

In question 9 the respondents were asked to express on a 7-point scale to what extent they considered four different actions initiated by mail-order companies[3] to reduce performance risk respectively financial risk, to be reassuring or not. The respondents were

asked in a similar way to express their belief in seven actions which they themselves could take to reduce both types of risks.

Questions 11 to 18 were related to different socio-demographic characteristics.

To overcome criticism as formulated e.g. by Gemünden (1985) and to allow for generalizability of the results six non-food product categories were considered in the study. They were essentially selected taking into account different levels of involvement, purchase frequency and monetary value. Obviously, the products had to be readily available by mail-order. The actual product categories were: books, table-cloths, clothing, refrigerators, stereo-equipment and sofas.

3.3. Measurement

The discussion of the questionnaire in the previous section may have made it already clear that no special problems existed with respect to the measurement of the different variables involved.

However, the measurement of perceived risk needs some clarification. Using the 7 point scale as suggested by Dunn et al. (1986) the respondents were asked to rate the probability and the importance of financial risk and performance risk of buying a product either by mail-order or in a specialty store[4].

---

[3]Cf. table I for an overview of the risk relievers investigated.

[4]The formulation of these questions was as follows:

Probability of (a certain type of) loss:	highly improbable						highly probable
	1	2	3	4	5	6	7
Importance of (a certain type of) loss:	very unimportant						very important
	1	2	3	4	5	6	7

Then, the original rating scores were transformed using the following formula: (Score - 1)/6. This resulted in adjusted scores ranging from 0 to 1. The formulas of MAILRISK and SPECRISK (cf. supra section 2.1.1) resulted in scores ranging from 0 to 2 and the corresponding DIFFRISK measure ranges from -2 to 2.

4. FINDINGS

In section 4.1. general results with respect to mail-order buying behavior are represented. In sections 4.2. and 4.3., the results relating to perceived risk respectively risk reducing strategies are presented. Finally in section 4.4, the relationship between both concepts is discussed.

4.1. General Findings

In table 3 some relevant characteristics of the mail-order buyers are presented. The table shows e.g. that more than half of the people that already bought by mail-order did so with only one mail-order company.

Table 3 - Characteristics of mail-order buying respondents

Characteristics		Sample percentage (in %)
Order frequency	1 - 2 times a year	76.2
	3 - 5 times a year	20.1
	> 5 times a year	3.0
Number of mail-order company's they buy from	1	56.2
	2	32.7
	> 2	11.1
Products bought by mail-order	Clothing	70.4
	Books	67.5
	Table-cloths	20.0
	Stereo-equipment	3.1
	Refrigerators	1.9
	Sofas	1.9

4.2. Perceived Risk

Hypothesis 1 and Hypothesis 2

It is generally assumed that people are convinced that more risk is involved when buying a product by mail-order than buying that same product in a specialty store.

In table 4 the perceived risk measures are presented for all products and for both buying situations. T-tests have been performed to test for statistically significant differences between the mean values of perceived risk.

Table 4 - Overall and product specific means of perceived risk in two buying situations (n = 282)

Perceived Risk	Buying situation		T-Test
	Mail-order[5]	Specialty store[6]	
Average over all products	0.41	0.16	**22.0***
Books	0.14	0.08	**7.6***
Table-cloths	0.21	0.09	**10.3***
Clothing	0.44	0.16	**17.3***
Refrigerators	0.52	0.19	**18.8***
Stereo-equipment	0.55	0.19	**20.3***
Sofas	0.62	0.22	**24.1***

(*) All t-tests are at least significant at a p-value of 0.0001

Whereas the results reported in table 4 are completely in line with the findings of Hawes & Lumpkin (1986) and Festervand et al. (1986), they allow to draw the following specific conclusions:

1. the respondents perceive buying products by mail-order in general to be more risky than to buy them in specialty stores;
2. the same conclusion holds for all six product categories. On the basis of a single factor anova analysis (with "product" as a factor with 6 levels) it may be concluded that

[5]In this column the MAILRISK values are reported.
[6]In this column the SPECRISK values are reported.

perceived risks differ significantly over the different product categories. However, not all pairwise contrasts were significant at the 5 % level;

3. the perceived risk in both buying situations differs considerably over all product categories;
4. the level of perceived risk seems to increase, quite understandably, with the monetary value of the products considered. An average for low-value product categories (books, table-cloths and clothing) and for high-value product categories (refrigerators, stereo-equipment and sofas) was calculated: both averages were statistically different;
5. all differences in perceived risk are statistically significant.

Hypothesis 3

Although mail-order buying is generally considered to be more risky it may be expected that mail-order buyers perceive significantly less risk in mail-order buying than non-buyers. In table 5 the corresponding findings have been reported.

Table 5 - Overall and product specific perceived risk of mail-order buying in the subgroups of mail-order buyers and non-buyers.

Perceived Risk[7]	Mail-order buyers ($n_1 = 162$)	Non-buyers ($n_2 = 120$)	T-Test
Average over all products	0.39	0.44	**-2.16***
Books	0.12	0.16	**-1.92****
Table-cloths	0.21	0.22	-0.66
Clothing	0.41	0.48	**-2.56***
Refrigerators	0.50	0.55	-1.62
Stereo-equipment	0.52	0.58	**-1.90****
Sofas	0.60	0.64	-1.44

** These values are significant at least at a p-value of 0.06
* These values are significant at least at a p-value of 0.05

[7]Values in this matrix are MAILRISK scores. The relationships between the differences in perceived risk of the specialty store versus mail-order was also examined. These differences were not statistically different.

The main conclusions to be derived from table 5 are as follows:

1. for all product categories combined the hypothesis is confirmed: mail-order buyers perceive less risk to be involved when buying by mail-order than non-buyers;
2. the hypothesis is also confirmed for three product categories. Even for the statistically insignificant differences, the direction of the difference always corresponds to the expected one;
3. the same sequence among the product categories is observed, which corresponds to their monetary value. A two factor anova analysis was performed, which resulted in two highly significant main effects (i.e. product category & mail-order buyer versus non-buyer), but which did not reveal any interaction between product category and buyer versus non-buyer.

Hypothesis 4

Some studies have reported differences in perceived risk between different socio-economic groups. No such conclusions could however be derived on the basis of this study for groups determined by age, level of education, car availability or family size, except for the impact of area of living. The study indicated some statistically significant differences between respondents living in an urban area and respondents living in a rural area. The results are reported in table 6.

Table 6 - Relationship between area of living and differences in perceived risk between mail-order buying and specialty store buying.

Differential Risk	**Area of living**		**T-Test**
	Rural areas	**Urban areas**	
Average over all products	0.29	0.24	**2.14***
Books	0.05	0.06	-0.66
Table-cloths	0.12	0.11	0.23
Clothing	0.31	0.25	1.73
Refrigerators	0.36	0.31	1.40
Stereo-equipment	0.42	0.32	**2.64****
Sofas	0.46	0.37	**2.79****

** These values are significant at a p-value of 0.01
* This value is significant at the 0.05 level

The results in table 6 indicate that in general (all product categories combined) a significant difference in the differential risk perception (operationalized by the DIFFRISK variable) exists between respondents living in urban areas compared to respondents living in rural areas. Respondents from rural areas experience larger differences in perceived risk between the two buying situations than respondents living in towns or suburbs.

Further analysis of mail-order buyers only did not permit to detect any differences in terms of socio-demographic characteristics. However, while investigating the potential impact of some behavioral characteristics of mail-order buyers such as their order frequency, the number of mail-order companies they buy from, only the latter proved to be statistically significant. These results are reported below.

Table 7 - Mail-order buyers: relationship between number of mail-order companies people buy from and differences in perceived risk between mail-order buying and specialty store buying.

Differential Risk	**number of mail- order companies**		**T-Test**
	1	**>1**	
Average over all products	0.26	0.20	**2.02***
Books	0.06	0.03	**2.02***
Table-cloths	0.12	0.11	0.17
Clothing	0.28	0.18	**2.32***
Refrigerators	0.33	0.29	0.75
Stereo-equipment	0.36	0.29	1.36
Sofas	0.43	0.34	1.89

** These values are significant at a p-value of 0.01
* This value is significant at the 0.05 level

On the basis of the results represented in table 7 the following conclusions can be derived:

1. mail-order buyers buying from more mail-order companies have in general a smaller differential risk than buyers from one mail-order company only;
2. the hypothesis is confirmed for two individual product categories only: however the relationship is always in the right direction, i.e., the mail-order buyers purchasing through several mail-order companies clearly show a lower differential perceived risk.

Hypothesis 5

Satisfaction with past purchases is expected to have a positive impact upon a potential customer. In this context it may also be expected that satisfied mail-order buyers perceive considerable less risk with mail-order buying than dissatisfied buyers. The results are reported in table 8.

Table 8 - Mail-order buyers: relationship between prior satisfaction and perceived risk.

Differential Risk	Satisfied buyers	Dissatisfied buyers	T-Test
DIFFRISK Average over all products	0.18	0.36	**-3.03****
Books	0.01	0.09	-1.33
Table-cloths	0.07	0.20	**-2.10***
Clothing	0.14	0.48	**-3.97****
Refrigerators	0.28	0.44	-1.72
Stereo-equipment	0.28	0.46	**-2.39***
Sofas	0.35	0.46	-1.26

** These values are significant at a p-value of 0.01
* This value is significant at the 0.05 level

These results strongly support the hypothesis that positive prior purchase experience reduces the differential perceived risk, albeit not significantly at the level of every product category (but even in this case the relationship is in the right direction).

Hypothesis 6

In order to test the hypothesis that products, actually bought by mail-order, rate low on differential risk, all product specific DIFFRISK measures were ranked and assigned values from 0 (= the first in the ranking = the lowest differential risk) to 5 (= the highest risk difference). In table 9, it can be noticed that the overall average ranking is 1.06, which is much closer to 0 than to 5. This leads to the acceptance of the hypothesis that products which are actually bought by mail-order rate low on differential perceived risk.

Table 9 - Mail-order buyers: average ranking of products.

Products	Number of observations	Mean ranking
Average over all products	267	1.06
Books	110	0.56
Table-cloths	32	0.63
Clothing	114	1.61
Refrigerators	3	1.00
Stereo-equipment	5	1.80
Sofas	3	2.33

4.3. Risk Reducing Strategies

Two types of risk relievers can be distinguished on the basis of who controls the device. The first type of risk relievers are initiatives that mail-orders companies can use to alleviate the perceived risk of their (potential) customers. The second type includes risk relievers which are controlled by the (potential) customers.

Hypothesis 7

It is generally accepted that mail-order companies may profit from reducing the perceived risk of their (potential) customers. In order to overcome their competitive disadvantage mail-order companies may therefore use different risk relievers.

It is also fair to assume that (potential) customers, when planning to buy by mail-order, may try to reduce the risk by resorting to different strategies. It seems however normal to expect that not all risk relievers are equally effective.

Table 10 - Ranking of risk relievers according to their mean score for all respondents.

	Performance Risk			Financial Risk		
1.	5.05	MO[8]	Money-back guarantee	5.43	MO	Money-back guarantee
2.	5.04	CU	Good rating by consumer organization	4.76	CU	Good rating by consumer organization
3.	4.88	CU	Positive word-of-mouth information	4.38	CU	Positive word-of-mouth information
4.	4.84	MO	Possibility to see the products in advance	4.27	MO	Possibility to see the products in advance
5.	4.59	CU	Loyalty to well-known products	4.22	CU	Loyalty to well-known products
6.	4.50	CU	Brand loyalty	4.09	CU	Brand loyalty
7.	4.43	MO	MO cy only carrying well-known brands	4.07	MO	MO cy only carrying well-known brands
8.	4.25	MO	Extended product warrantees	4.06	MO	Extended product warrantees
9.	3.95	CU	Mail-order company loyalty	3.78	CU	Mail-order company loyalty
10.	3.22	CU	Buying the most expensive product	3.26	CU	Consulting multiple mail-order catalogs
11.	3.18	CU	Consulting multiple mail-order catalogs	3.08	CU	Buying the most expensive product

In table 10 the risk relievers are ranked using their mean score (over all respondents) in order of effectiveness.[9] On the basis of the results presented in this table, the following conclusions can be drawn:

1. the respondents clearly perceive differences in the effectiveness of the different risk relievers;
2. the rank order is identical for the first nine risk relievers for the two dimensions of risk considered in this study;
3. the results indicate that risk relievers under control of the mail-order companies are on average evaluated to be more effective in reducing risk than initiatives under control of customers;
4. "Money-back guarantee" ranks highest for both types of risk but especially so with respect to reducing financial risk;

---

[8]MO means that the use of this risk reliever is under control of the mail-order company, CU means that it is under control of the customer.

[9]Almost the same rank order was obtained when the concept of Net Favorable Percentage as suggested by Roselius (1971) was used to measure the perceived effectiveness of the risk relievers.

5. the results also show the importance for a mail-order company to carry products that have a "Good rating by consumer organization": the latter device may be seen as a proxy variable for the importance of information search in buying situations[10].
6. The relatively high rating of "See products in advance" is in line with the findings of Cox and Rich (1964) which investigated telephone shopping. This may imply that even having a highly illustrated catalog does not alleviate the concern of not being able to see the products in advance;
7. the low rating of "Buying the most expensive product" is probably due to the fact that it is difficult for people to admit that this is a desirable strategy.

4.4. Perceived Risk and Risk Relievers

Hypothesis 8

The results indicate that the (potential) customers perceive major differences in the effectiveness of the different risk relievers. The question arises to what extent this perception of effectiveness may be influenced by the type of (potential) customers.

The ranking of risk relievers on the basis of their perceived effectiveness were therefore further analyzed for different groups of (potential) customers such as different age groups, gender, mail-order buyers versus non-buyers, heavy users versus light users, satisfied versus dissatisfied mail-order buyers, customers buying from several mail-order companies versus customers buying at one catalog company. The major conclusion to be drawn from these additional analyses is that the rankings of risk relievers shown in table 10, with minor

---

[10]See Gemünden (1985) for a meta-analysis of findings w.r.t. the relationship of perceived risk and information search.

exceptions remain the same. This conclusion remains valid even when using small subsamples.

The following minor exceptions to the general ranking are found:

1. heavy users of catalog buying rank "Mail-order company loyalty" much higher than light users;
2. people older than 32 years (which is the median of our sample data) do significantly pay less attention to the "Money-back guarantee" and only rate it at the fourth position in their risk reliever ranking;
3. dissatisfied buyers evaluate "Positive word-of-mouth communication" both for financial and performance risk less favorable than in the overall ranking. Moreover, dissatisfied clients rate "Possibility to see the products in advance" and "Mail-order company only carrying well-known brands" much higher. Satisfied mail-order customers on the other hand rate "Mail-order company only carrying well-known brands" lower than the overall average or any other subgroups.

It is safe to expect that it is very difficult for mail-order companies to attract (potential) customers who perceive mail-order buying to be highly risky (compared to in-store buying). In order to decrease their risk perception mail-order companies should have a clear understanding of what the role of risk relievers may be for these (potential) customers. It is clear that finding several significant differences could result in specific steps for managerial action.

The rankings of risk relievers for this subgroup of high differential risk perceivers[11] (the upper 25 % DIFFRISK quantile) are reported in table 11. The ranking with respect to financial risk is similar to the ranking of the overall sample (cf. table 10). However, in the case of performance risk "money-back guarantees" only rates third after "offering products with a good rating by a consumer organization" and "positive word-of-mouth information".

Table 11 - Ranking of risk relievers according to their mean score for a high DIFFRISK subgroup

	Performance Risk			Financial Risk		
1.	4.85	CU	Good rating by consumer organization	4.92	MO	Money-back guarantee
2.	4.69	CU	Positive word-of-mouth information	4.51	CU	Good rating by consumer organization
3.	4.63	MO	Money-back guarantee	4.32	CU	Positive word-of-mouth information
4.	4.50	MO	Possibility to see the products in advance	4.25	MO	Possibility to see the products in advance
5.	4.48	CU	Loyalty to well-known products	4.15	CU	Loyalty to well-known products
6.	4.38	CU	Brand loyalty	4.11	MO	MO cy only carrying well-known brands
7.	4.19	MO	MO cy only carrying well-known brands	3.89	CU	Brand loyalty
8.	3.95	CU	Mail-order company loyalty	3.72	MO	Extended product warrantees
9.	3.73	MO	Extended product warrantees	3.66	CU	Mail-order company loyalty
10.	2.95	CU	Consulting multiple mail-order catalogs	2.98	CU	Buying the most expensive product
11.	2.88	CU	Buying the most expensive product	2.82	CU	Consulting multiple mail-order catalogs

5. CONCLUSIONS

The study confirms that mail-order buying is perceived by (potential) buyers to be more risky than buying the same product in a specialty store. The results also indicate that the level of perceived risk seems to be highly influenced by the value of the product: the higher the value of the product the higher the level of perceived risk. Moreover, as the value of the product rises, the difference in perceived risk between the two buying situations becomes larger too.

---

[11] A similar approach was used by Roselius (1971).

The major conclusion to be derived from these results is that mail-order companies have a major competitive disadvantage vis-à-vis specialty stores. The results seem to indicate that this competitive disadvantage is higher the higher the value of the products offered.

In order to overcome this competitive disadvantage and to present itself as a "better" alternative channel of distribution able to provide greater economic utility to (potential) mail-order buyers, the sector should make use of the proper risk relievers.

In this respect the study offers clear indications as to the effectiveness of a number of risk relievers. "Money-back guarantee" and "offering products with positive ratings of consumer organizations" are consistently found to be among the better risk relievers. Both can to some extent be managerially controlled.

The results also indicate as may be expected that satisfied customers perceive mail-order buying to be much less risky than dissatisfied buyers. Moreover, the "positive word-of-mouth information" is also considered to be a highly effective risk reliever. Findings indicate that the ranking of risk reliever effectiveness as shown in Table 10 is very stable and does not differ according to any subgroup except for a minor change for the group of respondents showing a high difference in perceived risk between the two buying situations.

6. RECOMMENDATIONS FOR FUTURE RESEARCH

An important first result was the fact that more than half of the mail-order buying respondents in our sample purchased products by mail with only one catalog company. This remarkable finding suggests that "Store loyalty" is much higher in the mail-order buying situation than in the traditional channel. This is certainly an issue for further investigation.

Although the study offers some interesting results for mail-order companies it must be realized that these results have been obtained on the basis of a relatively small sample. To increase the value of the findings to the sector a similar study on a larger scale seems to be appropriate.

To generalize the findings, the role of perceived risk and risk relievers should be investigated for different types of product classifications e.g. experience versus search goods, durable goods versus non-durables.

Finally, to increase the generalizability of the results, the study should be replicated for different types of non-store retailing. Knowledge of the role of perceived risk and of the impact of different risk relievers across different types of non-store retailing may contribute to the further success of a growing sector.

7. REFERENCES

Akaah I., and Koragaonkar P.K. (1988), "A Conjoint Investigation of the Relative Importance of Risk Relievers in Direct Marketing," *Journal of Advertising Research*, (August/September), 38-44.

Bauer R. A. (1960), "Consumer Behavior as Risk Taking," in R.S. Hanock (ed.), *Dynamic Marketing For a Changing World,* Chicago, Illinois, 389-98.

Bettman J.R. (1973), "Perceived Risk and Its Components: A Model and Empirical Test," *Journal of Marketing Research*, **10** (May), 184-190.

Cox D. F., and Rich S. U. (1964), "Perceived Risk and Consumer Decision Making - The Case of Telephone Shopping," *Journal of Marketing Research*, **1** (November), 32-39.

Dash, J., Schiffman, L. F., and Berenson, C. (1976), "Risk and Personality-Related Dimensions of Store Choice," *Journal of Marketing*, **40** (January), 32-39.

Dunn M.G., Murphy P.E., and Skelly G.U. (1986), "Research Note: The Influence of Perceived Risk on Brand Preference for Supermarket Products," *Journal of Retailing*, **62** (Summer), 204-216.

Engel J.F. et al. (1990), *Consumer Behavior*, 6th edition, Chicago, Illinois, The Dryden Press.

Festervand T. A., Snyder, D. R., and Tsalikis J. D. (1986), "Influence of Catalog versus Store Shopping and Prior Satisfaction on Perceived Risk," *Journal of the Academy of Marketing Science*, **14** (Winter), 28-36.

Gemünden H.G. (1985), "Perceived Risk, and Information Search. A Systematic Meta-Analysis of the Empirical Evidence," *International Journal of Research in Marketing*, **2** (No. 2), 79-100.

Gillett, P.L. (1970), "A Profile of Urban In-Home Shoppers," *Journal of Marketing*, (July), 40-45.

Hawes J.M., and Lumpkin J.R. (1986), "Perceived Risk and the Selection of a Retail Patronage Mode," *Journal of the Academy of Marketing Science*, **14** (Winter), 37-42.

Hisrich R.D., Dornoff R.J., and Kernan J.B. (1972), "Perceived Risk in Store Selection," *Journal of Marketing Research*, **9** (November), 435-9.

Hoover, R.J., Green, R.T., and Saeger, J. (1978), "A Cross National Study of Perceived Risk," *Journal of Marketing*, **42** (July), 102-108.

Howard J.A., and Sheth J.N. (1969), *The Theory of Buyer Behavior*, New York, John Wiley and Sons.

Jasper C.R., and Ouellette S.J. (1994), "Consumers' Perception of Risk and the Purchase of Apparel from Catalogs," *Journal of Direct Marketing*, **8** (Spring), 23-36.

Leunis, J. (1990), *La Vente à Distance en Belgique*, Association des Entreprises de vente à distance, Brussels.

Lumpkin J.R., and Hawes J.M. (1985), "Retailing Without Stores: An Examination of Catalog Shoppers," *Journal of Business Research*, No. 13, 139-151.

McCorkle, D.E. (1990), "The Role of Perceived Risk in Mail Order Catalog Shopping," *Journal of Direct Marketing*, **4** (Autumn), 26-35.

Nunally J.C. (1978), *Psychometric Theory*, 2nd edition, McGraw-Hill Book Company, New York.

Peter J.P., and Ryan M.J. (1976), "An Investigation of Perceived Risk at the Brand Level," *Journal of Marketing Research*, **13** (May), 184-188.

Roselius T. (1971), "Consumer Rankings of Risk Reduction Methods," *Journal of Marketing*, **35** (January), 56-61.

Schiffman L. G., Schus, S., and Winer L. (1976), "Risk Perception as Determinant of In-Home Consumption," *Journal of the Academy of Marketing Science*, **4** (Fall), 753-763.

Sheth, J.N. (1973), "A Model of Industrial Buyer Behavior," *Journal of Marketing*, **37** (October), 50-56.

Shimp T. A., and Bearden W.O. (1982), "Warranty and Other Extrinsic Cue Effects on Consumers' Risk Perceptions," *Journal of Marketing Research*, **9** (June), 38-45.

Spence H.E., Engel J.F., and Blackwell R.D. (1970), "Perceived Risk in Mail-Order and Retail Store Buying," *Journal of Marketing Research*, **7** (August), 364-369.

Taylor J.W. (1974), "The Role of Risk in Consumer Behavior," *Journal of Marketing*, **38** (April), 54-60.

Verhage B.J., Yavas U., and Green R.T. (1991), "Perceived Risk: A cross-cultural phenomenon?," *International Journal of Research in Marketing*, **7**, 272-303.

Yates J.F., and Stone E.R. (1992), "The Risk Construct," in J.F. Yates (ed.), *Risk-Taking Behaviour*, 3-25.