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# Managing perceived risk for credit card purchase through supplementary services

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**Abstract** The present study aims to understand the significance of supplementary services as nonpersonal sources of information to consumers to handle perceived risk associated with the purchase of credit card services. The impact of supplementary services is particularly studied towards functional risk and psychological risk. The study is based on primary data collected by a survey with the help of a questionnaire administered through personal interviews. It is found that supplementary services can play a significant role in controlling functional and psychological perceived risk associated with credit card services. Marketers of credit cards can enhance the value of services to customers and can thus enhance purchase possibilities by reducing perceived risk through supplementary services that are controllable. Perceived risk in financial services marketing is an important factor from the consumers' point of view for purchase decisions and is also an issue of significance to service marketers. It is an original attempt to examine the relationship between perceived risk and supplementary services.

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## INTRODUCTION

Services are intangible dominant products that cannot be physically possessed. This very nature of services is represented through unique characteristics of services, viz., intangibility, inseparability of production and consumption, heterogeneity, perishability and lack of ownership.<sup>1,2</sup> Further, the traditional four P marketing-mix is also augmented for services with the addition of three more Ps — people, physical evidence and the process.<sup>3</sup>

Within the existing literature of services, efforts have been put forth to understand the role of all Ps with a vast scope to explore further. The present study focuses on understanding the role of supplementary services (component of first P — Service Product of the marketing-mix) towards reducing/managing perceived risk in the purchase of credit card services in India.

Credit cards come under the umbrella of financial services. While financial services are similar to other services in respect of a common knowledge base, they are considered relatively complex in nature in comparison to other services. This is due to the nature of financial services that are not only intangible

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in their physical form; they are also intangible from a mental point of view as they are not easily defined and may be difficult to understand.<sup>4</sup> Owing to a lack of complete understanding, uncertainty of purchase outcome and money involved, consumers perceive risk in the purchase of financial services. As a result, pre-purchase perceived risk with financial services is of concern for marketers because it is difficult for consumers to evaluate the services prior to purchase. According to Laroche *et al.*,<sup>5</sup> the mental dimension of intangibility is the most correlated dimension with perceived risk than the other two dimensions of intangibility, namely physical intangibility and generality. Their research has also indicated that the same is true even when the customer has knowledge of and involvement in the purchase. Thus, the challenge for marketers is to make their offers mentally tangible. One exploratory study<sup>6</sup> finds that purchasing e-banking services is perceived to be riskier than purchasing traditional banking services.

In terms of the credit card as a service product, every marketer has to provide the revolving credit facility (core service) without which the service product would not be called a credit card. It means that one can pay the amount spent through the credit card in installments (as per the conditions specified by the bank). In addition to the core service, there are a number of additional features, that is, supplementary services viz. credit card with ATM facility and cash withdrawal, offered by credit card marketers for enhancing the value of services. This study looks at these supplementary services, which might be considered a nonpersonal source of information, as a tool to handle the perceived risk associated with credit cards. Whereas the existing research shows the consumer reliance on personal sources of information to reduce perceived risk with services purchases,<sup>7</sup> this paper is an original attempt to study the relationship between supplementary services and perceived risk.

This study may help marketers to meet the challenges associated with perceived risk effectively.

The credit card is one of the known forms of financial cards in India. The last decade has seen a significant rise in the number of credit card users. According to a study commissioned by Visa International and conducted by the National Council of Applied Economic Research, India, payment cards in India (both credit and debit cards) have grown 55 per cent annually in the last seven years — from 3m in 1998 to 44m in 2004.<sup>8</sup> Credit card usage and penetration in India is still low, however, in comparison to growing affluence levels and consumer acceptance of the payment card system. The average spending through credit cards by an Indian consumer is estimated at Rs. 24,000 per annum (ie US\$533, considering US\$1 = Rs. 45).<sup>9</sup> At the same time, in the present scenario, the expected growth rate of credit card business in India is 25–30 per cent.<sup>9,10</sup> Thus, the challenge for the credit card companies is not only to attract users but also to increase spending by existing card holders.

## LITERATURE REVIEW

The study deals with different issues of perceived risk, supplementary services and credit card marketing, which are as follows:

### Perceived risk

Consumers make decisions regarding what goods or services to buy and where to buy them. The outcomes (or consequences) of such decisions are often uncertain and the consumer perceives some degree of 'risk' in making a purchase decision. This perceived risk<sup>11</sup> is defined as the uncertainty that consumers face when they cannot foresee the consequences of their purchase decisions. The degree of risk that consumers perceive and their own tolerance for risk taking are factors that influence their purchase strategies. It is important, however,

that consumers are influenced by risk that they perceive, irrespective of its actual existence.

The major types of risk<sup>11</sup> that consumers may perceive when making product purchase decisions include functional risk (risk that the product will not perform as expected), physical risk (risk to self and to others that the product may pose), financial risk (risk that the product will not be worth its cost), social risk (risk that a poor product choice may result in social embarrassment), psychological risk (risk that a poor product choice will bruise the consumer's ego) and time risk (risk that the time spent in product search may be wasted if the product does not perform as expected). Perceived risk is considered a consumer characteristic as well as a product characteristic as it may be due to various factors either associated with personal or product features.<sup>12–14</sup>

Although there is always some element of risk that accompanies all purchases, there are conceptual frameworks<sup>15,16</sup> and empirical evidence<sup>17,18</sup> that suggest that more risk is associated with services than goods. It is identified that services are perceived to be riskier than goods for all types of perceived risk.<sup>19</sup> This is due to the experiential nature of services and its characteristics, which result in a decrease in pre-purchase information for the evaluation of service products. Research<sup>20</sup> indicates that a decrease in the amount and/or quality of information is usually accompanied by a concomitant increase in perceived risk. As a result, consumers seek information from different sources when faced with risk or uncertainty.<sup>21,22</sup> In high-risk situations, consumers are likely to engage in complex information search and evaluation, and in low-risk situations, they are likely to use very simple search and evaluation tactics. The degree of perceived risk influences pre-purchase search for the decision process.<sup>7,12–14</sup>

During a pre-purchase search<sup>23</sup> for making a purchase decision, consumers first tend to recollect the relevant information from

memory and past experiences (internal search). If the consumer has had no prior experience or is unable to reach a solution through internal search, then the consumer may engage in an extensive search of the outside environment for useful information to make a choice. The information search focused on external information relevant to solving the problem is called external search. This external search includes personal sources such as friends, family, neighbours and relatives; independent sources such as magazines, consumer groups and government agencies; and marketing sources such as sales personnel and advertising. Internal information is the primary source used by most consumers most of the time. Even that information in long-term memory, however, was initially obtained from external sources. Research evidence shows that as perceived risk associated with the purchase increases, the use of personal sources is the most preferred source of external information<sup>7,24</sup> and the credibility of personal sources encourages their use in situations of high perceived risk.<sup>25</sup> Murray<sup>18</sup> has shown empirically that in the case of services, consumers engage in more word-of-mouth and personal sources of information as a risk-coping strategy.

Owing to the dominance of experience and credence qualities in services, consumers seem to seek and rely more on information from personal sources than nonpersonal sources while evaluating services prior to purchase.<sup>26</sup> According to Freiden and Goldsmith<sup>27</sup> marketing originated messages — a nonpersonal source of information — are found to be of limited direct value in consumer decisions toward professional services, which consist mainly of credence qualities.

The focus of the present study is to understand the role of supplementary services, as a nonpersonal source of information being offered and communicated by the marketer, towards perceived risk in credit card purchase.

## Supplementary services

The service as a product is essentially described as a package or bundle of different services, tangibles and intangibles, which all together form the total product. The package is divided into two main categories: the first one is the main service, which is called the 'core service'<sup>28,29</sup> or 'substantive service'. The other one is 'auxiliary services' or 'extras', which are often referred to as 'peripherals' or 'peripheral services'.<sup>29</sup> These are also known as supplementary services.<sup>30,31</sup>

The core service is the basic value provided by the service product. It is the reason to purchase or consume services. This is the reason for which any company is in business too. Supplementary services are those that facilitate and enhance use of the core services. These are services other than core that companies offer to their customers to give additional value to their products or to encourage customer loyalty.<sup>30,31</sup> Augmenting the service by building extras into the basic service is also considered as a relationship marketing strategy.<sup>32</sup> Using 'extras' as part of the service product in order to differentiate the service has also been discussed by Levitt.<sup>33</sup> In this way, the service is differentiated from those of the competitors. Having been offered these extras, the customers find them attractive as well as beneficial and therefore, prefer doing business with the company that supplies them.

Gronroos<sup>34</sup> has identified the need to breakdown supplementary services into facilitating services and supporting services from the managerial view to develop the service package effectively. Facilitating services are mandatory to the service product. If they are left out, the service package collapses. At the same time, these can be designed in such a way that they differ from the facilitating services of competitors and can become a competitive tool and, thus, help to differentiate the service offer. For example, bill statements and swipe machines are facilitating services in the case of credit

cards. On the other hand, if supporting services are lacking, the core service can be used nevertheless. The total service package, however, may be less attractive and perhaps less competitive. Thus, supporting services do not facilitate the consumption or use of the core service, but are used to increase the value and/or to differentiate the service from the competitors. For example, ATM access and cash withdrawal outside the credit limit can be considered supporting services/supplementary services in credit cards.

Related research shows<sup>35</sup> that facilitating services are considered by consumers while deciding for a credit card purchase and supplementary services are significant in providing help to consumers for pre-purchase evaluation of credit cards and to make credit card purchase decisions in the Indian environment.

## Credit card marketing

Previous research in the area of credit card marketing and consumer behaviour covers issues related to the identification of ways and means to face the saturation situation of credit card markets. There are studies on the identification and analysis of consumers' use patterns and to explore various opportunities to grow and expand credit card business. To identify an opportunity due to near saturation of Asian and Hispanic markets in USA, consumers were identified with their credit card usage patterns towards rent payments, clothing and shoe purchases.<sup>36</sup> Duffy<sup>37</sup> identified the marketing strategies for introducing affinity cards and providing value-added features like frequent user programmes, to hold on to existing card holders and to attract new ones due to the maturing credit card market.

Researchers have considered the role of demographic factors towards credit card marketing like, the relationship between age and knowledge of credit cards among students.<sup>38</sup> Kara *et al.*<sup>39</sup> identified and analysed the various factors, namely brand

name, credit line, type of card, annual fee and interest, to develop marketing strategies for the potential youth market. The important factors influencing credit card selection behaviour of college students were determined. Mathur and Moschis<sup>40</sup> studied the market of older Americans to understand their use of credit cards on the basis of expenditures, lifestyles and circumstances. Chan<sup>41</sup> identified income as an important variable to influence the credit card usage rate. The research also indicated a positive relationship between the attitude of credit card holders and usage rate. Meidan and Dimitris<sup>42</sup> investigated the main dimensions and attributes that Greek card holders consider important while selecting a credit card or a charge card. These factors include convenience to use the card in Greece, security, economy, prestige and shopping abroad. Other studies are related to the manufacture of plastic cards,<sup>43</sup> affinity cards,<sup>44,45</sup> retail credit cards<sup>46</sup> and other issues of card market that are not of relevance to this particular study.

Thus, the review of existing knowledge shows that in the case of services, consumers depend more on personal sources of information rather than on nonpersonal sources of information in order to evaluate service product prior to purchase and to handle the perceived risk. The present study investigates whether supplementary services available with a credit card (as an external: nonpersonal source of information being offered by the marketer) help in reducing the perceived risk, especially in terms of functional risk and psychological risk that are identified to be associated with the credit card purchase. It also analyses whether age and gender, as demographic factors, have any influence on consumers' perceptions of considering supplementary services as a means of reducing perceived risk.

## OBJECTIVES

1. To understand the perception of consumers regarding the role of supplementary services

towards functional and psychological perceived risks associated with credit card services.

2. To understand the function of age and gender categories towards objective one.

Objective 1 is to determine whether consumers can perceive the functional viability of the supplementary services offered with credit cards (functional risk) and also whether consumers can be satisfied with their credit card purchase decision based on supplementary services (psychological risk).

Objective 2 is the extension of objective 1, where an attempt has been made to analyse the impact of age and gender on consumer perceptions of supplementary services towards functional and psychological perceived risks with credit card purchases. As per the previous studies on credit cards, consumption patterns may differ on the basis of the age factor. Further, the changing role of women in India in terms of working status and of becoming financially independent provide a basis to consider gender as another demographic factor.

## METHODOLOGY

The research study is based on primary data collected through a survey with the help of a questionnaire. The questionnaire was administered by meeting the respondents on a one-to-one basis primarily in malls and shopping complexes (place of usage of credit card).

With regard to sampling design, the sampling unit was derived from a two-stage sampling process. First, a sample of six banks was identified as they provide credit cards and similar types of supplementary services. Then, within these six selected banks a quota sample of credit card holders was taken. Two control characteristics were taken care of — credit card holders from the identified banks and gender of the credit card holders. As per the first characteristic, 720 respondents were taken from the identified

banks (120 respondents from each bank).

In relation to the second characteristic, the sample size for each individual bank was determined on a proportionate basis (60 male respondents and 60 female respondents from each identified bank). Thus, there are a total of 360 male respondents and 360 female respondents. For the age factor of the respondents, with respect to the second objective of the study, actual responses are taken for each age group, that is, 18–24, 25–34, 35–44, 45–54 and 50+ years as 239, 200, 115, 116 and 50, respectively. A large sample was considered to ensure the adequate coverage of the characteristics including banks, gender categories and age categories.

The research plan for the study has taken into consideration the following aspects: first, the perception of consumers regarding the role of supplementary services is studied only with reference to functional and psychological risk — as revealed through pre-research interviews with selected service providers and customers. Secondly, the supplementary services identified with credit cards include services of ‘credit card acceptability for buying railway/airline tickets and for buying petrol’. This is because credit card companies in India still have to tie up with operators for the acceptance of their card. Thirdly, equal sample sizes of male and female respondents are taken for the study to draw unbiased inferences about gender perceptions towards the objective. In other words, with equal representation of both genders in the sample — similarity or differences in gender perception can be relied upon. Fourthly, in the Indian context, many people in the 55+ years of age group do not make purchases on credit. They live with whatever they can purchase within their income in hand and consider this as a matter of pride (shared by the respondents of the 55+ year age group during the questionnaire development stage). This could be the reason why only 50 people responded in the age group of 55+ years.

## **DEVELOPMENT OF CONSTRUCTS FOR MEASURING ASSOCIATION BETWEEN PERCEIVED RISK AND SUPPLEMENTARY SERVICES**

As per Dowling,<sup>47</sup> the perceived risk construct has been conceptualised and operationalised at different levels of generality or abstraction. Low-level measures focus on risk perception of (the attributes of) a single product. Medium-level measures focus on the product category and high-level measures resemble a personality trait. Dowling<sup>47</sup> believes that perceived risk at a low level of abstraction should be a more powerful predictor of consumer behaviour because fewer other variables intervene in between the risk and behaviour. Dowling and Staelin<sup>48</sup> develop the model of perceived risk and risk-handling activity based on a low level of abstraction using attributes of a product (ie, dress — a general product category). Mitchell<sup>49</sup> analyses the various models towards perceived risk measurement and shows a high reliability of the model, developed by Dowling and Staelin,<sup>48</sup> based on product attributes.

Further, Dowling<sup>47</sup> indicates that the set of adverse consequences of the product attributes chosen is part of the basic structure of any perceived risk measure because it measures the presence of perceived risk and is of prime theoretical importance. No empirical evidences are available, however, for the same. Goyal<sup>35</sup> shows that consumers consider supplementary services for making credit card purchase decisions and also have positive attitudes towards supplementary services in post-purchase evaluation. It further identifies a significant association between consideration of supplementary services before purchase and the importance of supplementary services perceived after purchase.

The present study takes into consideration the low level of measures as focused on the attributes (supplementary services) of a single product (credit card). As per the inputs given

by the experts in the related field of study (viz., service providers, academicians) and the stated objectives of the study, the construct was not based on the perceived adverse consequences of the attributes but rather on ascertaining whether the attributes (supplementary services with credit cards) help in eliminating the perceived risk.

Two constructs of ten statements each were developed (Appendix A): one for measuring association between supplementary services and functional risk and the other for measuring the association between supplementary services and psychological risk. These two constructs were put to experts' evaluation and after consolidating the experts' advice, five statements were identified under each construct for final collection of data. In the absence of any pre-developed validated scales, experts' opinions were identified as a reliable method to achieve an evaluation. Consumer perception is recorded using a five-point scale.

## ANALYSIS

### Objective 1

Table 1 reveals that on average a significant number of respondents, that is, 79.26 per cent agree (32.94 per cent strongly agree and 46.32 per cent agree) with the idea that supplementary services provide operational value. In other words, consumers perceive functional viability of the additional benefits with the card. Only 11.7 per cent of respondents disagree and a very small percentage of respondents, that is, 1.82 per cent strongly disagree with the supporting nature of supplementary services towards the functional aspect of credit cards.

Individual analysis of statements gives the clear understanding that respondents have perceived the maximum functional utility of those supplementary service features that are associated with providing financial benefits. Importance has been given to ATM access, cash advance and cash withdrawal facility

**Table 1** Consumer perception regarding supplementary services in managing functional risk with credit cards

S.N.	Statements	Response mean	Chi-square test		Responses on five-point scale (%)					
			Chi-square*	d.f.	Significance	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
F1	ATM access, cash advance, and cash withdrawal and other facilities help to meet my financial requirements effectively.	4.04	474.847	4	0.000	42.5	36.5	6.4	11.3	3.3
F2	I do not face the problem of inadequate cash because of ATM access, cash advance, and cash withdrawal facilities with my credit card.	3.92	534.958	4	0.000	28.9	49.6	8.8	10.6	2.2
F3	Through add-on card other family members can also use the credit card.	3.98	821.569	4	0.000	24.4	59.7	6.4	8.8	0.7
F4	Buying airline/railway tickets by using credit card at special counters save time.	3.94	432.694	4	0.000	36.8	38.9	6.5	17.1	0.7
F5	Additional facilities with credit card increase its usage value.	3.96	510.236	4	0.000	32.1	46.9	8.1	10.7	2.2
Average of percentages						32.94	46.32	7.24	11.7	1.82

\*Chi-square value is significant at the 0.05 level

\*\*Total respondents= 720

(F1 — mean 4.04), add-on card features (F3 — mean 3.98), as these features meet the financial requirement. Next in the order comes the facility of card acceptance at railway/airlines ticket counters (F4 — mean 3.94).

Further, chi-square values are significant for all the statements ( $p < 0.05$ ). Thus, it can be inferred that there are significant differences in the frequency of perceptions towards the statements indicating the functional utility of supplementary services available with credit cards. The examination of responses, as stated above, also reveals that supplementary services play a significant role in controlling the functional risk via performing the functional capability of credit cards. The results show that people largely agree with the statements.

On average, Table 2 shows that 46.82 per cent of respondents agree and 23.82 per cent strongly agree that supplementary services with credit cards help them to take care of psychological risk. In other words, supplementary services with credit cards give them satisfaction in making the right purchase decision. Only 4.52 per cent of respondents strongly disagree with the belief and 13.86 per cent responses are in disagreement. The remaining 11.02 per cent respondents gave no decisive view.

A closer look at the responses for statement P5 (mean 4.090) indicates that respondents have a high positive perception towards making a credit card purchase decision with additional facilities, which shows that respondents feel satisfaction by keeping additional facilities as the basis for making purchase decisions for credit cards. 84.5 per cent of responses show agreement with statement P4 (mean 4.10) that zero/limited lost card liability as a supplementary feature gives a sense of security to the consumer. There is also a high perception for statement P1 (83.5 per cent and mean 3.95), which reveals that consumers feel good as the add-on card facility gives independence to family members to make purchases as and when required and thus helps one to take care

**Table 2** Consumer perception regarding supplementary services in managing psychological risk with credit cards

S. N.	Statements	Response mean	Chi-square test		Significance	Responses on five-point scale (%)				
			Chi-square*	d.f.		Strongly agree	Agree	Undecided	Disagree	Strongly disagree
P1	My family members are not dependent on me to use credit card due to add-on card availability.	3.95	823.097	4	0.000	23.1	60.4	7.1	6.9	2.5
P2	Additional facilities like ATM access, cash withdrawal etc. with credit card provides me a sense of security.	3.64	384.389	4	0.000	17.6	46.3	22.5	9.9	3.8
P3	I prefer to have recognition and attention, if purchases are made through credit card.	2.79	198.167	4	0.000	17.5	16.8	9.3	40.1	16.3
P4	I feel myself in safe hands due to zero/limited lost card liability.	4.10	402.244	3	0.000	32.1	52.4	9.3	6.3	—
P5	I feel good about my decision to have additional facilities with my credit card.	4.09	518.033	3	0.000	28.8	58.2	6.9	6.1	—
Average of percentages						23.82	46.82	11.02	13.86	4.52

\*Chi-square value is significant at the 0.05 level

\*\*Total respondents=720



of near and dear ones. The least preference is for statement P3 (mean 2.97), which indicates that people do not use credit cards to gain attention and to show their status.

An analysis of the responses suggests that supplementary services are able to handle psychological risk with credit card holders. The chi-square values are also significant for all the statements ( $p < 0.05$ ). This infers that there are significant differences in the frequency of perceptions towards the statements indicating the psychological utility of supplementary services with credit cards.

## Objective 2

The perception of consumers, according to their age groups, towards the role of

supplementary services for controlling the functional risk perceived to be associated with credit cards is evaluated through the analysis of Table 3 with the Kruskal–Wallis one-way analysis of variance test. The chi-square values show that there are significant differences in perception ( $p < 0.05$ ) among respondents belonging to different age categories. The age group of 18–24 years sees more utility for ATM access, cash withdrawal facilities (mean rank 425.39 for statement F1 and 387.95 for statement F2), followed by the age group of 45–54 years (mean rank 386.69 for statement F1 and 378.72 for statement F2). The age group of 45–54 years gives more utility to add-on cards, followed by the 35–44 age group. Buying airline/ railway tickets are found to be of maximum

**Table 3** Kruskal–Wallis one-way analysis of variance for differences among age categories towards perception of supplementary services in managing functional risk with credit cards

S. No.	Statements	Age (in years)	N	Mean rank*	Chi-square	d.f.	Significance
F1	ATM access, cash advance and cash withdrawal facilities help to meet my financial requirements effectively.	18–24	239	425.39	54.259	4	<b>0.000*</b>
		25–34	200	309.94			
		35–44	115	316.72			
		45–54	116	386.69			
		55+	50	292.51			
		Total	720				
F2	I do not face the problem of inadequate cash because of ATM access, cash advance, and cash withdrawal facilities with my credit card.	18–24	239	387.95	19.497	4	<b>0.001*</b>
		25–34	200	353.20			
		35–44	115	295.36			
		45–54	116	378.72			
		55+	50	366.06			
		Total	720				
F3	Through an add-on card other family members can also use the credit card.	18–24	239	351.56	12.636	4	<b>0.013*</b>
		25–34	200	343.94			
		35–44	115	364.55			
		45–54	116	413.09			
		55+	50	338.16			
		Total	720				
F4	Buying airline/railway tickets by using credit card at special counters save time.	18–24	239	348.78	13.196	4	<b>0.010*</b>
		25–34	200	371.08			
		35–44	115	403.66			
		45–54	116	316.63			
		55+	50	376.72			
		Total	720				
F5	Additional facilities with credit card increase its usage value.	18–24	239	370.32	1.949	4	0.745
		25–34	200	357.66			
		35–44	115	344.25			
		45–54	116	367.80			
		55+	50	345.37			
		Total	720				

\*Mean Rank difference is significant at the 0.05 level

utility by the age group 35–44 years, followed by the age group 55+ years.

The chi-square value for statement F5 is not significant ( $p > 0.05$ ). As per the statement F5, however, the result shows that all age group respondents see the functional value of supplementary services with credit cards as they have near equal preference for the additional facilities. Thus, results infer that different age categories have preference for different supplementary services to fulfil their functional needs from credit cards.

Perception of consumers, on the basis of their age groups, towards the role of supplementary services for handling the

psychological risk perceived to be associated with credit card services is analysed with the help of Table 4 with the Kruskal–Wallis one-way analysis of variance test. Examination of the chi-square value indicates that the age groups differ significantly ( $p < 0.05$ ) in their perception towards statements P2, P3 and P5. For statements P2 and P3, the 55+ year age group perceives more psychological value, followed by the age group 35–44 years and 25–34 years, respectively. For statement P5, the age group 18–24 years prefers additional benefits with credit cards, followed by the age group 45–54 years.

It can be inferred that respondents in the age group of 55+ years show a more

**Table 4** Kruskal–Wallis one-way analysis of variance for differences among age categories towards perception of supplementary services in managing psychological risk with credit cards

S. No.	Statements	Age (in years)	N	Mean rank*	Chi-square	d.f.	Significance
P1	My family members are not dependent on me to use credit card due to add-on card availability.	18–24	239	342.19	4.784	4	0.310
		25–34	200	370.92			
		35–44	115	382.46			
		45–54	116	357.48			
		55+	50	362.89			
		Total	720				
P2	Additional facilities like ATM access, cash withdrawal, etc. with credit card provides me with a sense of security.	18–24	239	331.22	20.356	4	<b>0.000*</b>
		25–34	200	358.72			
		35–44	115	382.14			
		45–54	116	358.56			
		55+	50	462.28			
		Total	720				
P3	I prefer to have recognition and attention, if purchases are made through credit card.	18–24	239	346.19	28.539	4	<b>0.000*</b>
		25–34	200	394.14			
		35–44	115	362.78			
		45–54	116	293.90			
		55+	50	443.63			
		Total	720				
P4	I feel myself in safe hands due to zero/limited lost card liability.	18–24	239	372.92	4.176	4	0.383
		25–34	200	356.03			
		35–44	115	367.12			
		45–54	116	331.55			
		55+	50	370.96			
		Total	720				
P5	I feel good about my decision to have additional facilities with my credit card.	18–24	239	400.47	52.317	4	<b>0.000*</b>
		25–34	200	352.09			
		35–44	115	256.02			
		45–54	116	389.82			
		55+	50	375.40			
		Total	720				

\*Mean Rank difference is significant at the 0.05 level

**Table 5** Mann–Whitney *U*-Test for differences among gender categories towards perception of supplementary services in managing functional risk with credit cards

S. No.	Statements	Gender category	N	Mean rank*	U	Z	Significance
F1	ATM access, cash advance and cash withdrawal and other facilities help to meet my financial requirements effectively.	Male	360	337.00	56341.50	-3.245	<b>0.001*</b>
		Female	360	384.00			
		Total	720				
F2	I do not face the problem of inadequate cash because of ATM access, cash advance and cash withdrawal facilities with my credit card.	Male	360	338.14	56751.00	-3.125	<b>0.002*</b>
		Female	360	382.86			
		Total	720				
F3	Through an add-on card other family members can also use the credit card.	Male	360	369.05	61723.00	-1.255	0.209
		Female	360	351.95			
		Total	720				
F4	Buying airline/railway tickets by using credit card at special counters saves time.	Male	360	359.87	64572.50	-0.087	0.931
		Female	360	361.13			
		Total	720				
F5	Additional facilities with credit card increase its usage value.	Male	360	344.23	58943.00	-2.261	<b>0.024*</b>
		Female	360	376.77			
		Total	720				

\*Mean Rank difference is significant at the 0.05 level

**Table 6** Mann–Whitney *U*-test for differences among gender categories towards perception of supplementary services in managing psychological risk with credit cards

S. No.	Statements	Gender category	N	Mean rank*	U	Z	Significance
P1	My family members are not dependent on me to use credit card due to add-on card availability.	Male	360	367.31	62348.00	-1.004	0.316
		Female	360	353.69			
		Total	720				
P2	Additional facilities like ATM access, cash withdrawal, etc. with a credit card provides me a sense of security.	Male	360	397.47	51491.00	-5.075	<b>0.000*</b>
		Female	360	323.53			
		Total	720				
P3	I prefer to have recognition and attention, if purchases are made through credit card.	Male	360	378.04	58486.50	-2.359	<b>0.018*</b>
		Female	360	342.96			
		Total	720				
P4	I feel myself in safe hands due to zero/limited lost card liability.	Male	360	382.99	56702.00	-3.200	<b>0.001*</b>
		Female	360	338.01			
		Total	720				
P5	I feel good about my decision to have additional facilities with my credit card.	Male	360	352.91	62066.00	-1.110	0.267
		Female	360	368.09			
		Total	720				

\*Mean Rank difference is significant at the 0.05 level

positive perception towards the effective role of supplementary services to control psychological risk associated with credit cards.

The perception of respondents, on the basis of their gender, towards the role of supplementary services for handling the functional risk associated with credit cards is analysed with the help of Table 5 with the Mann–Whitney U-test. The results indicate that females favour the functional viability of supplementary services more than males in general as per statement F5 (significant at  $p < 0.05$ ) and also indicate more perceived utility of ATM access, cash advance and cash withdrawal facility than males as per statements F1 and F2 (significant at  $p < 0.05$ ). Both males and females have near equal preference for facilities of add-on card and airline/railway ticket purchase through credit card.

Table 6 presents the role of gender in determining the function of supplementary services in controlling the psychological risk with credit card purchase — with the Mann–Whitney U-test. It can be inferred that males perceive more psychological security with additional features as per the significance ( $p < 0.05$ ) of statements P2, P3 and P4. Further, the results show that additional facilities are perceived to provide more sense of security, safety and of recognition to males than females. Both genders, however, have near equal perception about feeling good to have additional benefits with their credit cards as per statement P5.

## CONCLUSION

It is examined whether the supplementary services are helpful in controlling the functional risk and psychological risk perceived to be associated with credit cards.

Respondents perceive that supplementary services provide and enhance the functional viability and operational value of credit cards. In other words, consumers show positive perceptions regarding the ability of

supplementary services to meet their financial requirements and manage functional risk. With respect to gender categories, females place more functional value on supplementary services than males. In case of the age categories, however, a particular age group does not perceive more functional utility of all additional benefits over other age groups. Different age categories have preferences for different supplementary services to fulfil their functional needs from credit cards. The results indicate, however, that younger people associate more functional value to supplementary services with credit cards.

There is a favourable perception of supplementary services in controlling the psychological risk too. Respondents feel mental satisfaction to have supplementary services with credit cards. Here, contrary to the perception towards functional benefits from supplementary services, in gender categories males perceive more psychological utility than females and in age categories older people draw more psychological value than younger people.

## MANAGERIAL IMPLICATIONS

1. The study has revealed that presence of supplementary services can manage consumer perceptions towards functional risk and psychological risk. It is reviewed from past studies that, in the case of services, due to lack of pre-purchase search options, there is an increase in the level of perceived risk. As a result, marketers can provide sufficient information about various supplementary services to potential consumers, which may function as a reliable source of information and can help them to make reduced risk-based decisions. In other words, more potential buyers may be converted into actual buyers.
2. The age group 18–25 years shows a positive response for the functional aspect of supplementary services, although

ranked low on psychological risk perception. The present supplementary service features, however, may not be of direct relevance to this age group like insurance for spouse and an add-on card due to their lifestyle. Marketers, therefore, can develop relevant supplementary services for this age group and can tap nontraditional users for growth.

3. One of the significant applications can be derived from the fact that supplementary services are able to address the psychological risk associated with credit card purchase for the 55+ year age group market. Thus, the 55+ year age group can be satisfied for psychological benefits of supplementary services with credit card purchase. This can result in increased usage of credit cards by this age group. This can be a significant understanding for marketers due to the fact that it is difficult to break the set traditional ways of carrying out one's activities by this age group, especially traditional ways of spending money and doing banking.
4. An interesting finding is that males perceive more psychological benefit and females perceive more functional benefits with supplementary services for credit cards. This can be a useful finding for marketers to offer credit cards as well as associated additional features. This can, however, be seen with existing female credit cards where more functional benefits are provided in terms of making purchases for ladies' items.
5. Marketers can target the segment of the 24–35-year age group by further understanding their needs and requirements and providing attractive added features with the credit cards. This is the age group where people start their career, look forward to growth opportunities, increase efforts to enhance living standards and also expand families. Owing to the growing needs, a credit card can provide the required financial support.

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## APPENDIX A

### Set of Statements Used for Developing Required Constructs for the Study

#### I Statements for measuring association between supplementary services and functional risk

1. Separate charges for some extra facilities are worth their value like petrol and railway ticket purchases.
2. Additional benefits help in meeting all my financial needs.
3. Additional benefits are appropriately designed to meet financial requirements.
4. Additional facilities with a credit card meet my expectations.
5. I would prefer to have added benefits with my credit card.

6. \*Additional facilities with a credit card increase its usage value.
7. \*Buying airline/railway tickets by using a credit card at special counters save time.
8. \*Through an add-on card other family members can also use the credit card.
9. \*I do not face the problem of inadequate cash because of ATM access, cash advance and cash withdrawal facilities with my credit card.
10. \*ATM access, cash advance and cash withdrawal and other facilities help to meet my financial requirements effectively.

\* These statements were judged to be of high value by the experts and considered as major components of the construct towards association of functional risk and supplementary services.

## II Statements for measuring association between supplementary services and psychological risk

1. Protection against loss or damage from fire for items purchased through credit card provides me with a sense of security.

2. People give recognition and attention, if purchases are made through credit card.
3. I feel proud while making purchases through credit cards.
4. It is easy to make a purchase decision on the basis of additional benefits.
5. I feel delighted to have extra benefits with my credit card.
6. \*\*I feel good about my decision to have additional facilities with my credit card.
7. \*\*I feel myself in safe hands due to zero/limited lost card liability.
8. \*\*I prefer to have recognition and attention, if purchases are made through credit card.
9. \*\*Additional facilities like ATM access, cash withdrawal, etc with credit card provides me with a sense of security.
10. \*\*My family members are not dependent on me to use credit card due to add-on card availability.

\*\* These statements were judged to be of high value by the experts and considered as major components of the construct towards association of psychological risk and supplementary services.

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