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### **Credit Card Selection Criteria: Singapore Perspective**

*by*

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## **Credit Card Selection Criteria: Singapore Perspective**

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### **Abstract**

This study used factor analysis to examine credit card selection criteria among Singaporeans. The results showed that convenience of use and protection, economics, and flexibility were the main drivers, while the reputation of card was the least important in determining credit card selection in Singapore. Demographic results showed that high-income earners, the better educated, the elderly, married and the professional preferred the convenience-protection factor to the economic-promotional factor. Females were shown to value the promotional factor more, while males preferred the economic factor. The ethnic Malays placed a greater emphasis on the economic factor than did the ethnic Chinese. The results also showed that the number of credit card owned in Singapore is positively related to education, income, age group, and marital status. Those holding a single credit card stressed the economic factor more than those holding many cards. In Singapore, the higher income earners, the better educated, older adults, females, married, and both Chinese and Indians are more receptive to paying their monthly credit card balances in full. The results demonstrated that Singaporeans do not view the credit card selection criteria much differently from respondents from other developing and advanced nations.

**Keywords:** credit card selection, credit card usage, banking regulation, factor analysis.

## **1. Introduction**

The use of credit for consumer purchases is widespread in today's economy. In Singapore in 1998, consumer credit fueled 10.6 percent of GNP while the level in the United States approached 15.3 percent (Singapore Department of Statistics, 1999). The liberalization of the banking industry and the entry of foreign banks under qualifying full bank (QFB) licenses, meanwhile, has greatly increased the number of credit cards available, and hence spending, in the city-state. The rollover balance for credit and charge cards in Singapore amounted to S\$2.42 billion in 2002, according to the Monetary Authority of Singapore (MAS) (2003), hence creating a healthy source of profits for credit card issuing companies and banks.

Credit spending, and credit cards in particular, has been singled out as the tool that fueled indiscriminate spending (Durkin, 2000). Recent data from the MAS showed that banks in Singapore wrote off as much as S\$124 million in credit card debt in 2002, a rise of 56 per cent over the previous year and ten times higher than in 1989 (*The Straits Times*, March 14, 2003). The social effect of a credit-ridden society cannot be underestimated nor overlooked.

Asia is still an untapped market as far as the credit card industry is concerned. Lafferty Financial Consultancy Group, for example, estimated that in 2000, consumers in Australia, Hong Kong, India, Japan, Korea, Singapore and Taiwan had disposable incomes totaling S\$4.46 trillion, not much less than Europe's S\$5.01 trillion. However, only 7.3 percent of that sum was spent through credit cards in Asia compared to 35 percent in the United States. This, coupled with the liberalization of the financial sectors in this part of the world, has resulted in the rapid proliferation of

credit card companies and financial companies providing other types of consumer credit.

In Hong Kong, HSBC is offering Palm Pilots and Standard Chartered is offering DVD players to those who sign up for a credit card. One can also get up to HK\$15,000 in just 30 minutes through the “Cash in a Flash” service provided by Aeon Credit. In Japan, it is even more convenient -- just visit one of 1,500 ATMs run by consumer-finance companies like Takefuji. By standing in front of the camera and entering personal details, a loan will pop out of a debt-vending machine in less than 10 minutes (Yoon, 2001). In Singapore, gifts for signing up for a credit card range from umbrellas to shopping vouchers.

The motivation for this research was twofold. As Singapore’s financial markets have traditionally been heavily regulated, and since the population has been customarily frugal in its credit spending, what started as a convenient means of spending could inadvertently be used as a source of unsecured credit leading to additional and unexpected risk in the financial market. So, the first part of this paper concentrates on providing an overview of the credit card industry in Singapore.

Next, the research analyzes Singapore’s diverse society in search of variation among demographic groups as far as credit card selection criteria are concerned. Specifically, the paper seeks to (1) examine the credit card selection criteria among consumers in Singapore and (2) explore whether measurable differences exist between the various demographic groups in Singapore with respect to credit card selection criteria. We then discuss possible reasons governing Singaporeans’ credit card selection criteria.

Despite the importance of consumer credit, virtually no literature or research exists on the basic attributes of credit cards in Singapore. Therefore, this article identifies and quantifies some of the major determinants of credit card selection. The next section deals with background and relevant literature followed by sections on methodology, findings, and conclusion.

## **2. The Singaporean Credit Card and Charge Card Market**

The market for credit and charge cards has grown substantially over the years, but has levelled off, somewhat, over the last few years, no doubt because of the aftermath of the Asian economic crisis and a dramatic slowdown in the Singaporean economy throughout 2002. According to the Monetary Authority of Singapore (2004), there were approximately 2.63 million main cards and 994,000 supplementary cards in use in May of 2004. The majority of these can be classified as credit providing, such as VISA and MasterCard, or exclusively entertainment/travel, such as American Express and Diners Club. Total credit card billings grew by 4.3 percent to S\$12.47 billion in 2003; less than the 8 percent growth that was experienced in 2002 relative to 2001, but this is still dramatically much less than the 18 per cent growth witnessed from 1999 to 2000.

Rising unemployment and pay cuts, coupled with households being more cautious with their expenditures have affected consumer spending. Nonetheless, 409,813 new cards (main and supplementary) were issued in 2002 compared to the 353,500 in 2001 – a jump of 16 percent. However, credit card bad debts rose 56 percent to S\$124 million in 2002; more than double its peak in August 2002 relative to the same month

in 2001 (*The Straits Times*, October 1, 2002). Furthermore, personal bankruptcies rose 11 per cent from 2001-2002.

Singapore's consumer watchdog, the Consumer Association of Singapore (CASE), has urged banks to lower interest rates on credit card debt, but with little success. With credit risks expected to increase because of the economic slump, a new database called the Singapore Consumer Credit Bureau was launched in October 2002 to help banks pool information on consumers to better manage their risks (*The Straits Times*, February 1, 2002). Banks that participate are able to disclose and, in turn, receive information, such as credit histories of customers, from the bureau, when assessing the credit-worthiness of their customers. This development is likely to increase credit business, leading to more competitive pricing of credit facilities, and lowering credit loan defaults and delinquency rates.

The Singapore Banking Act provides guidelines and regulates the business of banking in Singapore, including credit card issuance and activities. It requires credit card holders to meet the following criteria: (1) a minimum age limit of 21 years; (2) a minimum annual income of S\$30,000, although banks and card issuers may set higher annual income requirements; and (3) a maximum credit limit on each card restricted to an amount equal to twice the monthly salary of the cardholder. Guidelines on supplementary card holders include the following: (1) a minimum age limit of 21 years; (2) a maximum of two supplementary cards per principal card; and (3) the maximum credit limit allowed on each principal card held, together with any supplementary card(s), restricted to an amount equal to twice the monthly salary of



the principal cardholder. Table 1 compares various credit card features currently offered by the card-issuing companies and banks in Singapore.

### **3. Literature Review**

Despite extensive international research on credit cards, little has been published on the Singapore context. One goal of this study is to close this gap. The research literature on credit and charge cards is varied and extensive.

Soman and Cheema (2002) found that consumers viewed the size of the credit limit available to them as a signal of their future income potential and hence, were more inclined to spend to the available credit limit. Consumers who were granted lower amounts of credit were likely to infer that their incomes would be low, and hence were less likely to use credit, and vice versa for consumers who had large amounts of credit. Supporting the importance of the credit limits, Lunt (1992) found that a generous credit limit, quality customer service, fair credit card fees, and interest rate were the factors that count at the point of sale.

Gross and Souleles (2002) observed that increases in credit limits generate an immediate and significant rise in debt. Liquidity constraints would disproportionately affect young and low-income people, and people with low credit scores. Paquin and Squire-Weiss (1998) showed that the personal bankruptcy rate can be explained by the supply of consumer credit, the consumers' capacities to service their debts, interest rates and the conditions of the job market. Another study revealed a general consensus that the consumers' lack of understanding in the use of credit is a problem in the credit markets (Lee and Hogarthe, 1999). An increase in consumer

understanding in the use of credit can lessen the associated debt rather than just awareness itself, i.e. mandatory disclosure of information, such as credit card interest rates, may not necessarily help consumers make better credit decisions (Warwick and Mansfield, 2000). A number of studies found that credit card defaults and personal bankruptcies over the past decade were closely related to the contemporary rise in the household debt burden (Ausubel, 1997, Kowalewski, 1997, Morgan and Toll, 1997).

Studies that have focused on the relationship between credit card use or selection, and attitudinal, demographic and/or socio-economic characteristics include those of Slocum and Matthews (1969, 1970), who discovered that social class affects consumer attitudes towards credit card usage within certain income categories. Research by Kinsey (1981), Barker and Sekerkaya (1992), Wasburg et al. (1992), Heck (1987), Arora (1987), Mandell (1972) also found high income to be an important determinant for increasing the number of credit card accounts as well as higher credit card usage. However, Choi and DeVaney (1995) found income to be not significant in the use of credit cards, and Danes and Hira (1990) discovered credit card usage among lower and middle-income families to be more than that among higher income families. Mandell (1972), Kinsey (1981), Danes and Hira (1990), Barker and Sekerkaya (1992), Kaynak et al. (1995), found that as the education level increased and awareness of consumer credit prevailed, there was a increased tendency to use credit cards frequently. Canner and Lockett (1992) supported the same theory, when they observed that the amount charged each month by credit card users increased with the level of education.

Demographic research, moreover, suggested that the middle-aged group was more likely to hold and use credit cards more extensively (Kinsey, 1981; Arora, 1987; Barker and Sekerkaya, 1992; Kaynak and Halcar, 2001). However, other studies also showed that young and better educated were more receptive to credit cards (Chan, 1997; Crook et al. 1992; Amine, 1989) and credit card ownership seemed to decline with age (Wegner, 1988). Interestingly, credit card companies that procured customers when they were teenagers benefited because these customers were shown to have a long tenure (Hultgren, 1998; Weiner, 1987). However, these findings may not be generalisable to Singapore because of legal guidelines that impose a minimum annual income and age limit on cardholders.

Where gender is concerned, Kinsey (1981), and Slocum and Matthews (1970) found sex and marital status to be significant determinants of credit selection and usage. Several authors, like White (1975), and Adcock et al. (1977), suggested that single males were more likely to use credit cards than females. Contradicting this, both Kinsey (1981) and Arora (1987) found females used their credit cards more frequently, while Armstrong and Craven (1993) found that females tended to have a higher average number of credit cards than males. Ingram and Pugh (1981) concluded that fewer bank credit cards were held by single member households, young married couples, retired individuals, and sole survivors.

Over the past three decades, there has been a significant increase in the holding and use of general-purpose credit cards with a revolving feature as well as balances outstanding. Zhu and Meeks (1994) analyzed consumer credit use in low-income families by testing the relationship between the ability and willingness to use credit

and the outstanding credit balance, and discovered that age and employment status were significant determinants of the amount of credit outstanding. Younger households and those employed full-time were found to have higher outstanding credit balances as compared to the elderly or the unemployed. The elderly were viewed to have greater control over their expenditures and had more opportunities to ask for emergency financial aid from other sources. A number of studies identified that credit card users tended to overspend relative to those who use cash or checks (Soman, 2000; Feinberg, 1986; Hirschman, 1979). Feinberg (1986), especially, concluded that credit cards facilitate spending, including the motivation, probability, and amount spent.

Literature on the selection and use of credit cards for convenience and protection purposes vs. for economic and promotional reasons can be found as early as Slocum and Matthews, (1969), who found that people in the lower socio-economic classes used their credit cards more for installment financing while people in the higher socio-economic groups used credit cards for convenience. Supporting this and more, Canner and Cynrak (1986) showed that the major reason for credit card use was convenience, and this factor was positively correlated with income, age, and relative financial liquidity. In contrast, a liberal attitude toward borrowing is related to the use of revolving credit (Canner and Cynrak, 1986). A supporting study also found that the ease of payment and the risk of carrying cash were major reasons for using a credit card, and these coincided with Kinsey's (1981) findings. People with higher incomes, better education and married couples were more receptive to convenience than credit features (Barker and Sekerkaya, 1992). Another supporting research revealed that consumers with lower and middle incomes and with high school or lower education

are likely to value credit features more than the service features, such as safety and convenience (Kaynak et al. 1995). More recently, Kaynak and Harcar (2001) attributed consumers' perceptions of ease of use of credit cards to the evolution of it. Social acceptability and easy access to cash were also seen as push factors for the use of credit cards.

Durkin (2000) observed that consumers favored the convenience associated with card-based open-ended credit lines. He further stated that consumers used credit cards not just as a substitute for cash and checks, but also as a source of revolving credit. Lee and Hogarthe (2000) distinguished between convenience and revolving credit card users. They observed that convenience users utilized credit cards as a mode of payment and typically paid their balances in full, but revolvers used their card as a mode of financing, and chose to pay the interest charges on the unpaid balance. At least one study has shown that the convenience users were more likely to be high-income, older adults, who were more inclined to pay their credit card balances in full (Moschis, 1990). Lee and Hogarthe (2000) further concluded that convenience users preferred to have a card with no annual fee and other enhancements, such as frequent flyer miles, than a low interest rate, which the revolvers would mostly prefer. Chang and Hanna (1992) identified two types of benefits related to the search for credits, direct benefits such as interest rates and finance charges, which are closely linked to the economic-promotional factor, and indirect benefits, such as money management, greater savings and convenience from using appropriate credit, and gains in financial knowledge, which are somewhat tied to the convenience-protection factor.

Interestingly, in a broad study of factors related to credit card selection in Greece, Meidan and Davos (1994) found that local acceptance, international acceptance, and security (convenience-protection factor) were the major drivers, while the status symbol of the card was least important. This is supported by at least three Turkish surveys. First, according to Barker and Sekerkaya (1992), the most important reason for using a credit card was the ease of payment and diminished risk of carrying cash (convenient-protection factor). Second, Kaynak et al. (1995), showed that the “availability of emergency funds through credit cards”, “convenience during travel”, and “shopping without paying cash immediately” (convenience-protection factor) were the most important factors for the use of credit cards, at least during difficult times. Third, Kaynak and Harcar (2001) cited social acceptability and easy access to cash (convenience factor) as key factors for the use of credit cards. Finally, moving to a different culture, in a Hong Kong study that involved active and inactive cardholders, Chan (1997) found that economic factors, like a “long interest-free repayment period” and a “low annual fee” for the credit cards were the most important deciding factors for using the cards.

#### **4. Methodology**

The purpose of this study is to ascertain the reasons for selecting a particular credit card. A list of 15 variables influencing card selection was adopted from Meidan and Davos (1994) and revised to suit present trends in Singapore. Twenty-two such variables were identified as relevant (Table 2).

##### **4.1 Data Collection**

A survey of consumer perceptions on credit card selection was conducted in November, 2002, and the data collected via a random sample of 596 cardholders from the business centre as well as the western, eastern, and northern parts of Singapore. Fieldwork was conducted in the form of street-intercept interviews at high human traffic locations. Respondents had to own a credit card issued in Singapore. Questionnaires were distributed to these individuals who then completed them on site. Four trained interviewers were engaged in the selection process at each location.

In addition to asking the questions used to identify the respondents' credit cards and demographic profiles, the main part of the questionnaire sought to identify the primary reasons for selecting a particular credit card over other cards. All 22 questions were anchored on a Likert-type scale ranging from (1) highly unimportant to (5) highly important. Through the review of the literature, and from our understanding of the credit card market in Singapore, five factors were identified as potentially "important" reasons for credit card selection in Singapore. They were economic reasons, reputation of the card, convenience perceived in using the card, protection offered in case of loss, and promotional activities (Table 2).

Since these five factors may not be directly observed or identified, a list of twenty-two variables were acknowledged and categorized as contributing to each of the five factors (Table 2). The value of the factors was determined by computing the weighted sums of their respective variables. We further computed the ratio of the mean scores of each variable to the total sum of the mean scores of all 22 variables to yield the weighting of each variable. For example,

Weighting of variable a1=

$$\frac{a1}{a1+a2\dots+a7+b1\dots+b4+c1\dots+c4+d1\dots+d3+e1+e2+f1+f2}$$

Such a weighting scale was employed to account for the relative importance allocated to the selection of variables by the cardholders. Moreover, the sum of the weightings added to one. The value of the factor was subsequently derived as in the following example:

Factor 3: Economics =

$$\frac{\sum_{i=1}^4 ci}{\sum ai + bi + ci + di + ei + fi} = 0.047 + 0.043 + 0.052 + 0.052 = 0.194$$

where  $ai$ ,  $bi$ ,  $ci$ ,  $di$ ,  $ei$ , and  $fi$  characterize the mean scores of the important variables for the cardholders. The resulting equation denotes the relative importance of each of the four variables that make up the economics factor. In this example, it shows that 19.4 per cent of the total importance attached to choosing a particular card could be linked to this particular factor. The relative importance of all the remaining factors was similarly calculated.

## 5. Factor Analysis Results

Table 2 shows the mean score and the relative importance of each variable that contributes towards credit card selection among Singaporeans. The factor analysis suggested that the factors that determined credit card selection in Singapore, in their order of importance, were: (1) Convenience and protection (36.2%), (2) Economics



(19.4%), (3) Flexibility (17.9%), (4) Promotion (12.5%), (5) Reputation (7.2%), and (6) Travel economics (6.8%).

### **5.1 Convenience/Protection**

The combination of convenience and protection of the credit card was found to be the most important factor (36.2%) in determining credit card selection in Singapore. It was determined by seven variables: “wide acceptance in Singapore”, “wide acceptance overseas”, “acceptance in most modern establishments”, “protection when the card is lost or stolen”, “worldwide emergency assistance”, “provision of insurance when traveling”, and “protection against loss/defects of products purchased using the card”. Among these seven, the “protection when the card is lost or stolen” and “wide acceptance in Singapore” were found to be the top two most desired variables, with a total mean score of 4.65 and 4.61 respectively. In contrast, the “provision of insurance when traveling” was the least important criterion (total mean score of 4.27) of this factor.

Interpreted as protection in Singapore and abroad, the issue of whether card users will be held responsible for credit card charges incurred while the card was stolen or lost was clearly one of the major deciding factors for credit card selection among Singaporean card users; accounting for the highest total mean score of 4.65 among all 22 criteria. Most banks make cardholders liable for bills charged on a lost card until the loss is reported (*The Straits Times*, November 22, 2002). A case in point was a local cardholder whose credit cards were stolen after he was attacked and left unconscious in a neighboring country’s hospital for many days. The cards were used while he was hospitalized. While the card-issuing local bank refused to waive more

than S\$2,000 of the credit card bill incurred while he was hospitalized, another foreign QFB bank agreed to waive payments of more than S\$6,000 on his other credit card, pending investigation (*The Straits Times*, March 16, 2002). Does the foreign QFB have a better policy for handling this issue (investigate then readily absorb the loss) than the local bank (continue to hold card holders responsible)? We are sure many Singaporean cardholders would like an assurance of the answer when they make their credit card choice.

In Singapore, VISA and MasterCard, followed by American Express and Diners Club, were the most widely accepted credit cards by most modern establishments, such as restaurants, movie and concert theatres, and hotels. The popularity of these cards was reflected in the type of credit cards owned by our respondents. Both VISA and MasterCard constituted 75 percent of the total credit cards owned by the respondents in our sample, as compared to 16 percent for American Express and 9 percent for Diners Club. Singaporean cardholders use their cards mainly for restaurants, buying clothes and shoes, followed by entertainment and travel services (Gan, Maysami, Koh, 2005). These needs are satisfied, as indicated by the high relative importance on the convenience/protection factor.

## **5.2 Economics**

Singaporean cardholders ranked Economics as the second most important factor (19.4%) in determining credit card selection in Singapore. It was identified by four variables: “no joining or annual fee”, “higher credit limit”, “level of cash advance”, “low interest rates”. “Low interest rate” and “no joining/annual fee” were found to be

the top two most desired variables, with a total mean score of 4.48 and 4.47 respectively.

At the time of the writing, most credit card companies and card-issuing banks in Singapore charged an annual interest rate of 24%, with the exception of Maybank's eCard and Flash card (15%), and American Express blue and gold cards (21.99-23.99%). In addition, most of them charged an annual fee for their credit cards, again with the only exceptions being Maybank's eCard and Flash card (Table 1). As of May, 2003, the prevailing annual fees charged by banks in Singapore ranged from as low as S\$18 (POSB MasterCard) to as high as S\$60 (American Express, Citibank, Diners Club) for classic cards.

The level of cash advance made available by the credit card companies and card-issuing banks in Singapore ranged from a conservative flat amount of S\$800-S\$1,000 (OCBC, DBS, Diners Club) to 70-80% of credit limit (HSBC, UOB). Standard Chartered Bank even offered a 30% of credit limit for the first 6 months and thereafter a generous 100% of credit limit for cash advances. There were, typically, an additional cash advance fee of 3-5% plus an interest rate of 3-5% charged on cash advances. Maybank and Standard Chartered Bank, however, charged interest at 24% on cash advances. As will be explained later, there are significant variations in the 'level of cash advance' between the highly educated and those with lower educations, and between the higher income groups and those in the lower income brackets.

As mentioned earlier, the maximum credit limit allowed on each card is restricted by the local Banking Act to an amount equivalent to two times the monthly salary of the

cardholder, regardless of how many supplementary cards were held. And in order to qualify for a credit card, a cardholder must earn a minimum annual income of S\$30,000. This translates into a minimum monthly salary of S\$2,500 or an effective credit limit of S\$5,000 per principal cardholder. If the principal cardholder has one or two additional supplementary cards, then the credit limit would be reduced to S\$2,500 or S\$1,667 per card, assuming the credit limit is shared equally by each principal and supplementary cardholder.

### **5.3 Flexibility**

Interpreted as flexibility of use in Singapore, this factor was ranked third (17.9 per cent) in importance by Singaporean cardholders. It was represented by four variables: “zero interest installment facilities”, “access to statement/ balance & ability to pay electronically”, “ability to ask for a temporary credit limit increase”, and “availability of supplementary cards”. Among these four, “zero interest installment facilities” was found to be the most attractive variable, with a total mean score of 4.23, followed by “access to electronic payments” and “the availability of supplementary cards”.

Credit card issuing banks often tie-up with retail giants such as Best Denki, Harvey Norman, Courts to offer “zero interest installment facilities” on big ticket consumer durables such as personal computers, television, hi-fi systems, and refrigerators.

The availability of supplementary cards was found to be a significant difference between requirements of the highest income group (> S\$70,000 p.a.) and the lowest income groups (< S\$49,000 p.a.). The results were not surprising in view of the fact that 60% of the respondents earned less than S\$49,000 per year and the restricted

credit limit allowed per card (principal plus one or two more supplementary cards) under the Banking Act. For those who earned at least S\$49,000 per year, or a minimum effective salary of approximately S\$4,000 per month, or an effective minimum credit limit of S\$8,000, the more supplementary cards they possessed, the more the minimum effective credit limit per card would be reduced -- to S\$2,667 (principal card plus two supplementary cards) or to S\$4,000 (principal card plus one supplementary card), assuming that the credit limit was shared equally by both the principal and supplementary cardholders. As mentioned earlier, the minimum credit limit per card would be even lower for those who earned S\$30,000 per year, i.e. S\$1,667 to S\$2,500.

#### **5.4 Promotion**

Being the fourth in terms of relative importance (12.5%), the promotional factor was determined by three variables: “special discounts in selected outlets”, “road show with instant application approval/gift promotion”, and “loyalty and rewards program”. The “loyalty and rewards program” was found to be the most important variable with a total mean score of 3.96, whereas “road show with instant application approval/gift promotion” was deemed the least important.

Most loyalty and rewards programs are linked to the number of points accumulated from purchases using the credit card. The rewards range from retail store or restaurant vouchers to luxurious hotel stays and holiday packages. Some co-branded and affinity credit cards that are issued by local banks are linked with lifestyles. Examples are the local banks’ links with certain major telecommunication companies, airlines and departmental stores, such as UOB/SingTel, Citibank/Cathay Pacific,

OCBC/Robinson, and DBS/Takashimaya. The rewards are such that for instance points earned by UOB/SingTel can be used to offset the telephone bill. In other instances, an additional 5% discount can be applied to merchandise bought at a Robinson department store by OCBC/Robinson cardholders; and points accumulated by Citibank/Cathay Pacific cardholders can be converted into airline frequent flyer mileage to redeem a free air ticket.

### **5.5 Reputation**

Reputation (7.2% in importance) represents the symbolic aspect of credit card usage. It was interpreted as indication of prestige and was determined by only two variables, “status symbol” and “brand name”. “Brand name” was seen to be the more important variable of the two, with a total mean score of 3.62, followed by “status symbol”, with a total mean score of 2.63, the lowest among the 22 variables.

“Status symbol” was seen as an unimportant variable, as respondents do not consider the ownership of credit cards a form of status symbol. In fact, when respondents were asked whether they agree with the statement “Status symbol is an important factor to look for when applying for a credit card”, their responses were mostly “highly unimportant”. This means Singaporeans use credit cards for practical purposes rather than as a form of status symbol. A similar finding was found with the Greek credit card holders (Meidan and Davos, 1994).

### **5.6 Travel Economics**

Travel economics is the last factor that includes only 2 attributes – “commission free traveler’s checks”, and “no deposit for car hire”. “No deposit for car hire” was deem

as less important of the two, with a total mean score of 2.81. A reason for its low level of importance might be that the respondents do not actually hire cars sufficiently frequently to warrant such a feature. Given the small geographic size of Singapore, coupled with the convenient public transport system, there is little need for Singaporeans to hire cars for travel around the country.

## **6. ANOVA Tests**

With regard to the credit card selection criteria, a one-way analysis of variance (ANOVA) was carried out to examine whether respondents from various demographic profiles differ significantly from one another on any of the 22 variables. The demographics collected from the survey were education, income, age, marital status, occupation, and ethnicity. Consistent with many other research findings, we found significant differences for education, income, and age and to a lesser extent for marital status, occupation, gender, and ethnicity. We only analyze and discuss in detail the ANOVA results for education. Other demographic variations will be reported subsequently. Post hoc tests, using the Bonferroni test, were carried out by running a t-test between every two groups within each demographic variable. For instance, a t-test was run between two educational qualification groups, to determine which two groups were significantly different from each other, i.e. multiple comparisons.

### **6.1 Descriptive Data**

Table 4 presents the demographic composition and credit card profile of the survey sample expressed in terms of frequency of response and percentage for each category.

Nearly 40 per cent of the cardholders are degree holders and belong to professional occupations (46%). The sample contained 60 percent males and 40 percent females, with the majority (34.2%) in the lowest income range (S\$30,000-\$39,999) of cardholders. Again, this was not unexpected given the strict earning requirements imposed under Singaporean regulations. The largest responding age group was 26 to 35 years of age (37%), followed by 36 to 45 year-olds, somewhat in line with national demographic data. The Chinese and Malay respondents accounted for 90.7 percent of the total sample, which is nearly identical to the national statistics on the ethnic composition of the Singaporean population. The majority of our respondents (64%) owned 1-2 credit cards and VISA accounted for 47 per cent of the total credit cards owned. While 64 percent of the respondents preferred to pay their monthly credit card bill in full, only 20 percent had procured a new credit card account and only 6 percent had transferred their balance to another credit card account during the previous year.

## **6.2 ANOVA Results**

From the ANOVA as shown in Table 5, significant differences between groups with different educational qualifications were found for 8 variables from four main factors.

Table 6 shows the significant findings from the post hoc tests on credit card selection criteria using the Bonferroni test. A tick (✓) signifies a statistically significant difference between the individual educational groups on credit card selection criteria at a 95 percent confidence levels (p-value < 0.05).



Under the “convenience/protection” factor, significant differences in means were found for three variables, namely “wide acceptance locally”, “acceptance in most modern establishments”, and insurance provision when traveling”. For the “wide acceptance locally” variable, the post hoc tests showed significant differences between the means of graduate degree holders and almost all other qualification groups (tertiary, diploma, O level). Apart from that, significant differences in the means for “acceptance in most modern establishments” were also observed between those who hold graduate degrees and those with tertiary education, and again between the graduate degree holders and the diploma holders. The lower means of the graduate degree holders show that the better educated in Singapore do not necessarily regard the “convenience of use” factor as more important than the less educated cardholders. As for the “protection” part of the factor, significant differences were found for “insurance provision when traveling”, between the graduate degree holders and almost all other educational groups (tertiary, diploma, A Level).

For the “economics” factor, significant differences were found between the different educational qualifications groups for “level of cash advance”, “low interest rates”, and “higher credit limit”. For level of cash advance, significant differences were found between the means for the graduate degree holders and those of all other educational groups. Significant differences in means for low interest rate were also found between the means of the graduate degree holders and almost all other groups (tertiary, diploma, A Level). As for the “higher credit limit” variable, significant differences were again seen between the means of the graduate degree holders and the college graduates, and again between those of graduates and the diploma holders. Compared to other educational groups, the graduate degree holders had much lower means for

“level of cash advance”, “low interest rate”, and “higher credit limit”, which imply that they placed less importance on the economic factor when selecting a credit card. This result coincides with some findings that the better educated cardholders are less likely to value credit or economic features more than their less educated counterparts (Kinsey, 1981; Barker and Sekerkaya, 1992; Kaynak et al. 1995).

The significant differences in means for the “promotional” factor, as represented by a “road show with instant application approval/gift promotion”, were also found between the graduates and diploma holders, and between the graduates and A level certificate holders. The comparatively lower mean of the highest degree holders shows that they placed less importance on both economic-promotional and “credit” factors. This is in line with a study in which most respondents, who had general awareness of free enhancements, actually thought a card without free perquisites to be more valuable than one that came with them, and only a handful said they would use one card rather than another because of the enhancements provided (Schlossberg, 1998).

The O level certificate holders placed less emphasis on the “no deposit for car hire” variable, showing a significant difference in means between them and almost all other educational groups (A level, diploma, tertiary). This shows that cardholders with only O Level education were less likely to view “no deposit for car hire” as a deciding factor in choosing a credit card than the other groups. This may be due to the fact that they seldom see a need for car hire, with public transportation being easily accessible in a small island such as Singapore.

In fact, within the graduate-degree holders themselves, if we compare the mean scores of all four significant variables (“higher credit limit”, “level of cash advance”, “low interest rate”, and “road show with instant application approval/gift promotion”) for the “economic-promotion” factors with the three significant variables (“wide acceptance locally”, “acceptance in most modern establishments”, and “insurance provision when traveling”) from the “convenience/protection” factors, we can see that, except for “low interest rate” (with a mean score of 4.03), all of the variables from the “convenience-protection” factors demonstrated higher mean scores than those from the “economic-promotion” factors. This implies that highly educated Singaporeans deemed “convenience/protection” factors as relatively more important than “economic-promotion” factors, thus lending support to a number of studies previously mentioned (Kinsey, 1981; Barker and Sekerkaya, 1992; Kaynak et al. 1995).

### **6.3 Other ANOVA Findings**

Further multiple comparisons using post-hoc tests showed significant differences in means between various income groups (Tables 7 and 8) for both economic and promotional factors. Compared to the lower income groups ( $\leq$  S\$49,999 per annum), the highest income earners ( $\geq$  S\$70,000 per annum) placed less importance on economic variables, such as “level of cash advance” and “low interest rate”, as well as promotional variables, such as “special discounts in selected outlets” and “road show with instant application approval/gift promotion”, when it came to choosing a credit card. Once again, this is consistent with a number of findings that higher income earners put less weight on credit features such as economic and promotional factors than those with lower incomes (Kaynak et al. 1995; Barker and Sekerkaya, 1992;

Canner and Cyrnak, 1985, 1986; Kinsey 1981, Slocum and Matthews, 1969). Surprisingly, the same richest group considered “loyalty and reward programs” as more important than those who earned less (S\$50,000-59,999). This may be due to the fact that the rich incur higher expenditures and generate higher outstanding balances on their credit card, resulting in higher accumulated reward points, and thus have a better chance of redeeming a free airline ticket or a dream vacation package.

The older age groups valued the “convenience” and “protection” factors more than did the younger groups, but considered “promotion” as a less important factor than did their younger counterparts (Tables 9 and 10 in the Appendix). This is consistent with the positive relationship found between age and the convenience factor by some studies (Canner and Cyrnak, 1985, 1986; Kinsey, 1981; Slocum and Matthews, 1970). Specifically, when compared to their younger cohorts, the middle-aged group (36-45 years old) (33% of the sample) regarded the “ability to ask for a temporary credit limit increase” (a general convenience factor) and “protection when card is lost/stolen” (a protection factor) as more important attributes when choosing credit cards. Not surprisingly, the same middle-aged group viewed ‘special discounts in selected outlets’ as less important than those who were below 35 years old. Furthermore, our oldest respondents ( $\geq 56$ ) cared less for “loyalty and rewards programs” than almost all other younger age groups ( $\leq 25, 26-35, 46-55$ ) when it came to selecting credit cards. All these findings suggest that older Singaporeans care less for promotional factors, lending support once again to the negative correlation between age and “economic-promotional” or credit features previously determined (Canner and Cyrnak, 1985, 1986; Kinsey, 1981; Slocum and Matthews, 1970). The descriptive statistics from our study show that the elderly owned fewer cards than the

younger cardholders, supporting the findings of a study by Wegner (1988), and suggesting that elderly Singaporeans are more loyal to a single card company or bank. Moreover, some viewed the elderly as having greater control over their expenditures and thus better opportunities to ask for emergency financial aid from other sources (Zhu and Meeks, 1994).

Furthermore, those who were married regarded “special discounts in selected outlets” (a promotion) as less important than the singles. The professionals, managers or executives, considered “protection against loss/defects of products purchased using the card” (a protection factor) as a more important variable than their counterparts in production and blue collar work. This finding is consistent with those of Barker and Sekerkaya, (1992), Kinsey (1981) and Slocum and Matthews (1970), that professionals and married couples are more receptive to service (or convenience-protection factor) rather than credit features (or economic-promotion factor). This is in contrast to the group labeled “others”, which consisted of mostly housewives and sales and service workers, who thought that “status symbol” was an important variable in deciding credit card selection. This coincides with a similar finding by Barker and Sekerkaya (1992) for Turkish consumers in which many salaried workers viewed credit cards as a form of luxury for the “elite”.

A number of studies have found gender to be a significant determinant for credit card selection and usage (Slocum and Matthews, 1970; Kinsey, 1981; Arora, 1987). The gender variation demonstrated in our study was such that, while females viewed the promotional factor, such as “special discounts in selected outlets”, as more important than males, the males put more weight on practical economic factors, such as “cash

advance” and “a temporary credit limit increase”. Interestingly, Kaynak and Harcar (2001) found that females and teenagers were more likely to use their credit cards to buy clothes and personal goods while males and the senior citizens used their cards for groceries and dining. Not surprisingly, the Malays, who typically earned lower incomes than the Chinese, on average, were more likely than the Chinese to consider “cash advance” (an economic factor) as a deciding factor when choosing credit cards.

In addition, the ANOVA and post-hoc tests showed significant differences in means between the groups with various credit card profiles. Following a number of results from research on credit card ownership and usage, our sample also demonstrated that the number of credit cards owned is positively related to education (Chan, 1997; Barker and Sekerkaya, 1992; Danes and Hira, 1990; Canner and Cynrak, 1985, 1986; Kinsey, 1981; Mandell, 1972), income (Kaynak and Harcar, 2001; Barker and Sekerkaya, 1992; Wasburg et al. 1992; Heck, 1987; Arora, 1987; Canner and Cynrak, 1985, 1986; Kinsey, 1981; Mandell, 1972), middle-age (Kaynak and Harcar, 2001; Barker and Sekerkaya, 1992; Arora, 1987; Kinsey, 1981), profession (Barker and Sekerkaya, 1992; Kinsey, 1981), and marital status (Barker and Sekerkaya, 1992; Arora, 1987; Kinsey, 1981; Ingram and Pugh, 1981; Slocum and Matthews, 1970). In addition, compared to multiple card owners, single credit card owners from our survey regarded highly the economic factors such as “no joining/annual fee”, “level of cash advance”, and “low interest rate”. This is as expected and is supported by the positive relationship between the number of credit cards owned and level of income and education, implying that lower income and less educated groups, who typically owned not more than a single credit card, tended to rate the economic features of the credit card as more important deciding factors when choosing a credit card.

Finally, our survey results showed that cardholders who paid their monthly balance in full were likely to be those in the highest income brackets, highly educated, aged 56 and above, female, married, and either Chinese or Indian. This is supported by at least one other finding (Moschis, 1990), that showed that higher income, older adults are more likely to pay their credit card balances in full as compared to the younger and lower income earners. Specifically, our results show that cardholders who pay their monthly balances in full are more inclined to emphasize less the economic factors, such as “higher credit limit”, “level of cash advance”, and “no deposit for car hire”, than those who pay the minimum or partial monthly balances. Those who did not pay their monthly card balances in full represented 36% of the respondents, and they were more likely to be credit revolvers. This is again somewhat supported by a recent study (Lee and Hogarthe, 2000), which stated that, while the credit revolvers would mostly prefer a card with “low interest rate”, the convenience or prompt payers preferred a card with “no annual fee”, and other enhancements, such as frequent flyer mileage.

## **7. Conclusion**

To summarize, this study of credit card selection among Singaporeans found that convenience, protection, and economics were the main drivers, while the reputation of card and travel economics were less important in determining credit card selection in Singapore. The convenience/protection attributes were found to constitute the most important factor in determining credit card selection in Singapore. One reason for the importance placed on wide acceptance in Singapore and modern establishments might be that credit cardholders in Singapore would prefer to use their cards for a large

variety of purposes. A study by Gan, Maysami, Koh (2005) found Singaporean cardholders use their cards mainly for dining at restaurants, purchasing clothes and shoes, followed by entertainment and travel services. When it comes to security concerns, Singaporeans were not any different in their responses than cardholders in other countries such as Greece and Turkey (Meidan and Davos, 1994; Barker and Sekerkaya, 1992; Kaynak et al. (1995); Kaynak and Harcar, 2001). This is in contrast to a study (Chan, 1997) in Hong Kong that found economic factors, like “long interest-free repayment period” and “low annual fee”, to be the most important deciding factors for the use of credit cards. While the prestige factor represents the symbolic aspects of credit card usage, the credit card as a status symbol was seen as the least important of all 22 attributes. Thus, Singaporeans tend to use credit cards for practical purposes more so than its status symbols.

Analysis by demographic factors shows that the high income earning and the better educated Singaporeans place less value on the economic-promotional factors when it comes to credit card selection. Singaporeans who are older, married and professional are inclined to weight the convenience-protection factor more than the economic-promotional factor. From a gender perspective, female Singaporeans seem to value the promotional factor more, while their male counterparts showed a preference for the economic factor. In terms of ethnicity, the minority Malays were deemed to place a greater emphasis on the economic factor than did the predominant Chinese in Singapore. In addition, our results showed that the number of credit cards owned by Singaporeans is positively related to education, income, middle-age, and marital status. Single credit card owners stress economic factor more than the multiple card holders. In Singapore, the higher income earners, the better educated, older adults,



females, married, and both Chinese and Indians are more receptive to paying their monthly credit card balances in full.

The current research findings will be of interest to regulatory agencies, such as the Monetary Authority of Singapore, in formulating control measures, as well as to the consumer protection/interest agencies, such as CASE. Additionally, credit card issuing companies and banks in Singapore will benefit from the finding of this research in designing the many features of their credit cards, as well as in their marketing campaign.

The results of the current study reveal that Singaporeans view the attributes for holding credit cards in much the same way as respondents in the United States, and some European and Middle Eastern countries. Future research could expand on the nature of possession of local cards as opposed to international cards, which was the primary focus of the present study. In addition, spending patterns and the types of expenditures will provide a rich opportunity for further research among Singaporean credit and charge cardholders.

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**Table 1: A Comparison of Credit Card Features Offered by Various Banks in Singapore**

	Amex	Citibank	Diners	DBS	HSBC	Maybank	OCBC	StanChart	UOB
<b>Minimum Income Required ( p. a.)</b>	Gold: \$48,000 Blue: \$30,000	Silver: \$30,000 Gold: \$40,000 Foreigner: \$60,000	\$30,000	Classic: \$30,000 Gold: \$45,000 Foreigners: \$60,000	Classic: \$30,000 Gold: \$48,000	Classic: \$30,000;	Clasic: \$30,000; Gold : \$48,000; Foreigners: \$60,000	Classic/ Gold: 30,000; Platinum: \$120,000; Foreigners: \$80,000.	Classic: \$30,000; Gold: \$48,000; Foreigners: \$80,000
<b>Entrance Fee</b>	Free	Free	Photo card: 2 yrs free, No photo card: 1 yr free	Free	Free	Free	Free	Free	Free
<b>Interest Free Period</b>	21 days	55 days	60 days	55 days	50 days	50 days	52 days	53 days	55 days
<b>Annual Interest Rates</b>	23.99%	24%	24%	24%	24%	eCard & flash Card: 15% Millennium Card : 24%	24%	24%	24%
<b>Minimum Payment</b>	Higher of 3% of current balance or \$50	Higher of 3% of current balance or \$50	5%	Higher of 3% of current balance or \$50	Higher of 3% or \$50	Higher of 3% or \$30	Higher of 3% or \$50	Higher of 3% or \$50	Higher of 5% or \$50
<b>Replacement of Stolen /Lost Card</b>	\$10	Free	Free	Free	Classic:\$20 Gold: free	\$30	First time: Free; Charge subsequently.	\$20	Classic: \$10 Gold: \$20
<b>Late Payment Charge</b>	\$25	\$25 for bal < \$1K; \$35 for bal \$1K-3K, \$40 for bal > \$3k	Higher of 5% or \$25	\$35	\$20	Higher of 5% or \$20	\$35	\$35 for bal < \$1K; \$45 for bal \$1K-3K, \$60 for bal > \$3k	Higher of 5% or \$25
<b>Annual Fees</b>	Blue: \$60 Gold: \$160	Silver: \$60 ; Gold: \$150	\$60, supplement ary card:	POSB:\$18, Classic: \$120; Gold	Classic: \$36; Gold: \$125	eCard/Flash card; Free, Millenium	Classic: \$36; Gold: \$150	Classic: \$60 ; Gold: \$150	Classic: \$36; Gold: \$125; Lady's Gold:

			\$30	DBS/Amex: \$150		Classic: \$30			\$150
<b>Fees on Insufficient Funds</b>	\$50 for returned chequecheck; or rejected Giro;	\$25 for returned cheque check or rejected Giro	\$50 for returned cheque check or rejected Giro	\$20 for returned cheque check or rejected Giro	\$20 for returned cheque check or rejected Giro	\$40 for returned cheque check or rejected Giro	\$30 for returned cheque check or rejected Giro	\$50	\$40 for returned chequecheck, \$10 for rejected Giro
<b>Unsecured Credit (p. a.)</b>	Line of Credit: 17.95%	Ready Credit: 17.95%		Cashline: 16.5%	Personal Line of Credit: 15%	Creditable: 15.88%	Prestige Credit: 16.88%	SmartCredit: 17.9%	Cashplus: 15.8%
<b>Payback Period</b>	21 days	25 days	30 days	55 days	20 days	20 days	22 days	22 days	51 days
<b>Cash Advance</b>	20% of credit limit	\$2,000	\$1000 (overseas only)	\$1,000	70% of credit limit	Classic: \$1000, Gold: \$2000	\$800	30% of credit limit 1st 6 mths, 100% thereafter	75% of credit limit
<b>Cash Adv Fee</b>	5%	Higher of 3% or \$10	4%	Higher of 3% or \$10	\$4 + 3% of amt withdrawn	Higher of 5% or \$15	Higher of 3% or \$10	Higher of 5% or \$15	Higher of 3% or \$5
<b>Cash Adv Interest</b>	4%	2%	4%	2%	2%	2% monthly 24% per annum	2%	2% monthly 24% per annum	2%

Sources: *The Straits Times* (2002), "At a Glance: Credit Card and Unsecured Credit Lines," p. L10, November 28; Various credit card brochures from various local banks, November 2002, updated in March 2003 & November 2005. Currencies quoted are in Singapore dollars.

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**Table 2: Factor Analysis Findings on Credit Card Selection Criteria among Singaporeans**

	<b>Total Mean Score</b>	<b>Relative Importance</b>	<b>Factor Relative Importance</b>
<b>Factor 1: Convenience &amp; Protection</b>			36.2%
a1: Protection when Card is Lost/Stolen	4.65	0.054	
a2: Worldwide Emergency Assistance	4.29	0.050	
a3: Wide Acceptance Abroad	4.59	0.053	
a4: Acceptance in Most Modern Establishments	4.60	0.053	
a5: Insurance Provision when Traveling	4.27	0.049	
a6: Wide Acceptance Locally	4.61	0.053	
a7: Protection against Loss/Defects of Products Purchased Using Card	4.37	0.050	
<b>Factor 2: Flexibility</b>			17.9%
b1: Access to Statement/ Balance & Ability to Pay Electronically (Internet, ATM)	3.97	0.046	
b2: Ability to Ask for Temporary Credit Limit Increase	3.92	0.045	
b3: Zero Interest Installment Facilities	4.23	0.049	
b4: Availability of Supplementary Cards	3.34	0.039	
<b>Factor 3: Economics</b>			19.4%
c1: Higher Credit Limit	4.11	0.047	
c2: Level of Cash Advance	3.71	0.043	
c3: Low Interest Rate	4.48	0.052	
c4: No Joining/Annual Fee	4.47	0.052	
<b>Factor 4: Promotion</b>			12.5%
d1: Special Discounts in Selected Outlets	3.79	0.044	
d2: Road Show with Instant Application Approval/ Gift Promotion	3.00	0.035	
d3: Loyalty and Rewards Program	3.96	0.046	
<b>Factor 5: Travel-Economics</b>			6.8%
e1: Commission Free Traveler's Checks	3.16	0.036	
e2: No Deposit for Car Hire	2.81	0.032	
<b>Factor 6: Reputation</b>			7.2%
f1: Status Symbol	2.63	0.030	
f2: Brand Name	3.62	0.042	

**Table 3: Factor Influencing Card Selection in Singapore:  
Variable Loadings and Factor Relative Importance**

Important Criteria for Card Selection	Factor 1: Convenience /Protection	Factor 2: Flexibility	Factor 3: Economics	Factor 4: Promotion	Factor 5: Travel-economics	Factor 6: Reputation
Protection when Card is Lost/Stolen	0.718					
Worldwide Emergency Assistance	0.697					
Wide Acceptance Abroad	0.689					
Acceptance in Most Modern Establishments	0.643					
Insurance Provision when Traveling	0.634					
Wide Acceptance Locally	0.559					
Protection against Loss/Defects of Products Purchased Using Card	0.558					
Access to Statement/ Balance & Ability to Pay Electronically		0.750				
Ability to Ask for Temporary Credit Limit Increase		0.733				
Zero Interest Installment Facilities		0.580				
Availability of Supplementary Cards		0.428				
Higher Credit Limit			0.794			
Level of Cash Advance			0.723			
Low Interest Rate			0.456			
No Joining/Annual Fee			0.395			
Special Discounts in Selected Outlets				0.765		
Road Show with Instant Application Approval/Gift Promotion				0.734		
Loyalty and Rewards Program				0.615		
No Deposit for Car Hire					0.686	

Commission Free Traveler's Checks					0.667	
Status Symbol						0.849
Brand Name						0.503
Eigenvalue	3.252	2.651	2.326	1.875	1.590	1.283
Percentage of Variance	14.78	12.05	10.57	8.52	7.23	5.83
Cumulative Percentage of Variance	14.78	26.83	37.40	45.92	53.15	58.98
Factor Relative Importance (%)	36	18	19	13	7	7

**Table 4: Credit Card and Demographic Characteristics of the Sample**  
(N = 596)

	<b>Total</b>	<b>%</b>
<b>Part I: Credit Card Profile</b>		
<b>Number of Credit Cards Owned</b>		
1	195	33
2	185	31
3	124	21
4	54	9
5 or more	34	6
<b>Type of Credit Cards Owned</b>		
VISA	532	48
MasterCard	304	27
American Express	176	16
Diners Club	101	9
Others	4	0
<b>Typical Monthly Credit Card Payment</b>		
Entire Balance	383	64
Between Minimum and Entire Balance	128	22
Minimum Balance	81	14
<b>New Credit Card Account Owned in the Past Year</b>		
Yes	118	20
No	474	80
<b>Transferred Balance in the Past Year</b>		
Yes	33	6
No	559	94
<b>Part III: Demographic Profile</b>		
<b>Gender</b>		
Male	353	60
Female	239	40
<b>Ethnic Group</b>		
Chinese	469	79
Malay	68	11
Indian	51	9
Others	4	1
<b>Age Group</b>		
25 and below	71	12
26 - 35	218	37

36 - 45	193	33
46 - 55	103	17
56 and above	7	1
<b>Educational Qualification</b>		
Graduate Degree Holder	67	11
Tertiary Degree Holder	166	28
Diploma Holder	201	34
GCE "A" Level	41	7
GCE "O"/"N" Level	115	19
Others	2	0
<b>Marital Status</b>		
Married	368	62
Single	215	36
Divorced	9	2
<b>Occupation</b>		
Professional, Manager or Executive	271	46
Sales and Service Worker	129	22
Self-Employed and Businessman	76	13
Clerical and Other White-Collar Worker	66	11
Army/Police/Security Staff	12	2
Production, Transport and Other Blue-Collar Worker	9	2
Others	29	5
<b>Annual Personal Income</b>		
S\$30,000 - S\$39,999	200	34
S\$40,000 - S\$49,999	152	26
S\$50,000 - S\$59,999	116	20
S\$60,000 - S\$69,999	54	9
S\$70,000 and above	63	11

Note: The totals for different variables may be different due to some missing values.

**Table 5: Significant Findings of the ANOVA of Credit Card Selection Criteria by Education in Singapore**

Variables	Mean Scores					F	Sig.
	Graduate	Tertiary	Diploma	A Level	O Level		
<b>Factor 1: Convenience/Protection</b>							
Acceptance in Most Modern Establishments	4.30	4.69	4.63	4.66	4.58	3.273	0.011
Insurance Provision when Traveling	3.85	4.30	4.37	4.44	4.25	3.779	0.005
Wide Acceptance Locally	4.19	4.75	4.68	4.46	4.58	6.005	0.000
<b>Factor 3: Economics</b>							
Higher Credit Limit	3.58	4.25	4.24	4.12	3.98	5.596	0.000
Level of Cash Advance	2.94	3.85	3.88	3.83	3.64	7.041	0.000
Low Interest Rate	4.03	4.53	4.54	4.83	4.44	4.960	0.001
<b>Factor 4: Promotion</b>							
Road Show with Instant Application Approval /Gift Promotion	2.66	2.82	3.19	3.39	2.99	4.291	0.002
<b>Factor 5: Travel-Economics</b>							
No Deposit for Car Hire	2.73	3.01	2.82	3.46	2.34	6.477	0.000

**Table 6: Significant Findings from Post Hoc Tests\* on Credit Card Selection Criteria by Education**

Variables	Education Level	Graduate	Tertiary	Diploma	A Level	O Level
<b>Factor 1: Convenience/Protection</b> Wide Acceptance Locally	Graduate		√	√		√
	Tertiary	√				
	Diploma	√				
	A Level					
	O Level	√				
Acceptance in Most Modern Establishments	Graduate		√	√		
	Tertiary	√				
	Diploma	√				
	A Level					
	O Level					
Insurance Provision when Traveling	Graduate		√	√	√	
	Tertiary	√				
	Diploma	√				
	A Level	√				
	O Level					
<b>Factor 3: Economics</b> Higher Credit Limit	Graduate		√	√		
	Tertiary	√				
	Diploma	√				
	A Level					
	O Level					
Level of Cash Advance	Graduate		√	√	√	√
	Tertiary	√				
	Diploma	√				
	A Level	√				
	O Level	√				
Low Interest Rate	Graduate		√	√	√	
	Tertiary	√				
	Diploma	√				
	A Level	√				
	O Level	√				
<b>Factor 4: Promotion</b> Road Show with Instant Application Approval/ Gift Promotion	Graduate			√	√	
	Tertiary					
	Diploma	√				
	A Level	√				
	O Level					
<b>Factor 5: Travel-Economics</b> No Deposit for Car Hire	Graduate					
	Tertiary					√
	Diploma					√
	A Level					√
	O Level		√	√	√	

\*Significant differences at 95% confidence levels.

**Table 7: Significant Findings of the ANOVA of Credit Card Selection**

**Criteria by Annual Income Level in Singapore**

Variables	Mean Scores					F	Sig.
	30-39.9k	40-49.9k	50-59.9k	60-69.9k	> 70k		
<b>Factor 2: Flexibility</b>							
Availability of Supplementary Cards	3.40	3.47	3.32	3.15	2.91	2.844	0.024
<b>Factor 3: Economics</b>							
Level of Cash Advance	3.69	3.84	3.94	3.65	3.16	3.992	0.000
Low Interest Rate	4.50	4.60	4.51	4.38	4.16	2.352	0.003
<b>Factor 4: Promotion</b>							
Special Discounts in Selected Outlets	3.97	3.82	3.72	3.53	3.45	3.779	0.005
Road Show with Instant Application Approval /Gift Promotion	3.29	3.14	2.88	2.51	2.47	8.228	0.000
Loyalty and Rewards Program	4.00	3.93	3.83	3.80	4.31	2.630	0.034



**Table 8: Significant Findings from Post Hoc Tests\* on Credit Card Selection Criteria by Annual Income Level**

Variables	Income Level	\$30k-\$39.9k	\$40k-\$49.9k	\$50k-\$59.9k	\$60k-\$69.9k	> \$70k
<b>Factor 2: Flexibility</b> Availability of Supplementary Cards	\$30k-\$39.9k					√
	\$40k-\$49.9k					√
	\$50k-\$59.9k					
	\$60k-\$69.9k					
	> \$70k	√	√			
<b>Factor 3: Economics</b> Level of Cash Advance	\$30k-\$39.9k					
	\$40k-\$49.9k					√
	\$50k-\$59.9k					√
	\$60k-\$69.9k					
	> \$70k		√	√		
Low Interest Rate	\$30k-\$39.9k					
	\$40k-\$49.9k					√
	\$50k-\$59.9k					
	\$60k-\$69.9k					
	> \$70k		√			
<b>Factor 4: Promotion</b> Special Discounts in Selected Outlets	\$30k-\$39.9k					√
	\$40k-\$49.9k					
	\$50k-\$59.9k					
	\$60k-\$69.9k					
	> \$70k	√				
Road Show with Instant Application Approval/ Gift Promotion	\$30k-\$39.9k				√	√
	\$40k-\$49.9k				√	√
	\$50k-\$59.9k					
	\$60k-\$69.9k	√	√			
	> \$70k	√	√			
Loyalty and Rewards Program	\$30k-\$39.9k					
	\$40k-\$49.9k					
	\$50k-\$59.9k					√
	\$60k-\$69.9k					
	> \$70k			√		

\*Significant differences at 95% confidence levels.

**Table 9: Significant Findings of the ANOVA of Credit Card Selection Criteria by Age Group in Singapore**

Variables	Mean Scores					F	Sig.
	≤ 25	26-35	36-45	46-55	≥ 56		
<b>Factor 1: Convenience/Protection</b> Protection when Card is Lost/Stolen	4.22	4.55	4.75	4.75	4.86	2.981	0.019
<b>Factor 2: Flexibility</b> Ability to ask for Temporary Credit Limit Increase	3.54	3.90	3.96	4.12	4.57	3.227	0.012
<b>Factor 4: Promotion</b> Special Discounts in Selected Outlets	4.11	3.92	3.60	3.66	3.29	4.456	0.001
Loyalty and Rewards Program	4.01	4.05	3.84	4.04	2.71	3.962	0.006

**Table 10: Significant Findings from Post Hoc Tests\* on Credit Card Selection Criteria by Age Group**

Variables	Age Group	≤ 25	26-35	36-45	46-55	≥ 56
<b>Factor 1: Convenience/Protection</b> Protection when Card is Lost/Stolen	≤ 25	█				
	26-35		█	√		
	36-45		√	█		
	46-55				█	
	≥ 56					█
<b>Factor 2: Flexibility</b> Ability to Ask for Temporary Credit Limit	≤ 25	█			√	
	26-35		█			
	36-45			█		
	46-55	√			█	
	≥ 56					█
<b>Factor 4: Promotion</b> Special Discounts in Selected Outlets	≤ 25	█		√		
	26-35		█	√		
	36-45	√	√	█		
	46-55				█	
	≥ 56					█
Loyalty and Rewards Program	≤ 25	█				√
	26-35		█			√
	36-45			█		
	46-55				█	√
	≥ 56	√	√		√	█

\*Significant differences at 95% confidence levels.