

# **Consumers' Willingness to Choose LankaPay National Payment Card: A Conjoint Analysis**

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## **INTRODUCTION**

Consumers are complex entities whose behavior is closely linked to a set of socio-demographic and psychographic factors as well as cultural aspects. Presently, many customers choose to make payments by card as it is more convenient and secure. When choosing a payment card brand, they opt for well-known brands such as VISA, Master and AMEX as they are internationally well established and trusted by many. They also offer many benefits such as special discount schemes through their large network of reputed vendors and service providers. It is in this highly competitive climate that LankaPay is proposing to introduce a national card brand.

Soman (2001, 2003) found that the use of prepaid cards (integrated circuit cards, ICC, usually referred to as 'smart cards') increases the amount spent per transaction. However, because the money is transferred so it can be used for a specific purpose there may be an awareness that the money is 'spent'. Hence, this research tries to ascertain the success of a proposed local payment card brand by examining the mindset of potential customers.

LankaPay is a financial services organization owned by Central Bank of Sri Lanka. As a mover to diversify its operations, LankaPay is proposing to launch its very own National Card Scheme (NCS) to Sri Lankan customers. There are several international payment card brands currently operating in Sri Lanka and there are no local brands currently operating in this field. Therefore the need for a national brand is strongly felt.

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## **OBJECTIVES**

The main objective of this study is to identify the consumers' willingness to choose LankaPay national payment card and to assess how it can compete with the existing International Payment Networks in the domestic market for banking, commissioning conjoint analysis.

## **THEORY**

In order to identify the main areas of interest in this study, the researcher has perused the relevant literature in areas such as conjoint analysis, payment cards and benefits of holding payment cards. Many past researches have examined the viability of credit cards and debit cards in various other countries. Their findings are well documented, preserved and available for perusal. Therefore, a vast amount of research literature exists in this area. However, in the Sri Lankan context, the availability of the aforementioned material is very much less due to the fact that little research has been conducted locally on this subject. Nevertheless, this researcher has managed to accumulate an adequate amount of information to conduct a valid and rational study on the use of a national payment card.

According to Raghavarao et al. (2011), conjoint analysis is applied in situations where the choice made by a person on a particular product/service depends on many attributes of a product or service. These attributes have levels or "part worth" components while it described in SAGE web site, as the conjoint analysis is a marketing technique for predicting how a new product would perform when introduced to the market (Sagepub, 2018).

In the reported literature, the interest rate and benefits are highlighted as important characteristics. The same token it is evident the average interest rates of credit cards in Sri Lanka are significantly high compared to the "going rate" of lending by commercial banks. Further, there are certain monetary rewards from different service providers that make a clear segmentation in the credit card markets. (50% discounts, Rewarding for loyalty customers)

## **Conceptual Framework**

The conceptual framework has been developed to identify the relationship between different product attributes (independent variables) have an effect on the success of choosing the National Card Scheme (dependent variable).

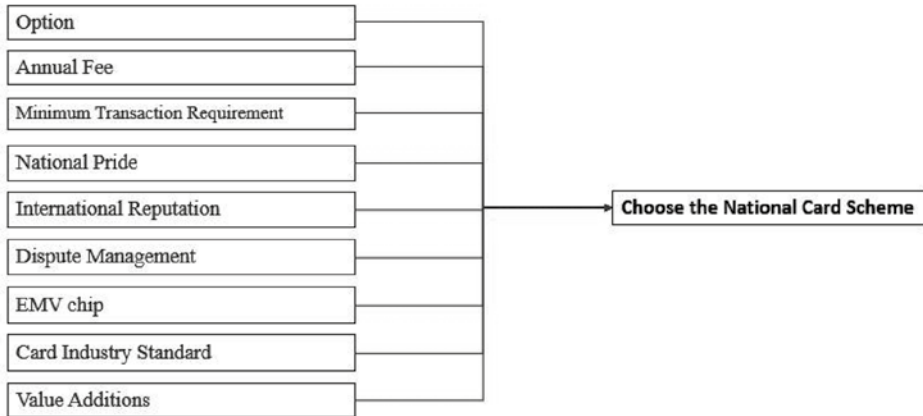


Figure 1: Conceptual Framework

Source: Composed by Author

## METHODS

According to Saunders et al. (2009), the process of conducting research can be understood as a set of concentric rings starting from the outermost edge which is the research philosophy and moving inwards, finally ending with data analysis and conclusions.

### Data Collection and Analysis

Primary data collected via a choice experiment survey employing a conjoint analysis. . Finally, the purified data are taken and analyzed using tables, graphs, and charts with the support of the SPSS Statistics software package, to derive observations and conclusions.

Target population and sampling process as follows; 81 responses were received from distributed 152 online surveys and that percentage is 53.29% as described below the table. These respondents are from various professions and living areas in Sri Lanka.

Table 1 - Responses Summary

Sample Distributed	152
Number of Respondents	81
Respondent Percentage	53.29%

### Theoretical and Functional Model of the Conjoint Analysis

Choices consist of nine attributes and several levels for each attribute. The alternative choices have been made using the method of Orthogonal Design. The following full-factorial solution is used to develop the choices.

$$U_{im} = 1 - L_i \frac{\sum_{n=1}^{L_j} \beta R_{imjm}}{\sum_{n=1}^{L_j} \beta \sum_{m=1}^{L_i} R_{imjn}}$$

where:

$U_{im}$  – the estimated utility value of level  $m$  of attribute  $i$  and

$R_{imjn}$  – the rankings for level  $m$  of attribute  $i$  and level  $n$  of attribute  $j$

The functional form of Rank order logit model is given below (Kuzmanovic, 2011).

$$y_i = \alpha + \beta_1 X_{1j} + \beta_2 X_{2j} + \dots + \beta_m X_{mj} + \varepsilon_j$$

for  $j = \{1, \dots, n\}$ , where  $X_{ij}$  are independent variables. In matrix notation, Equation 1 can be written as  $y = \alpha + \beta X + e$ , where  $X$  is the orthogonally coded design matrix of independent variables.

### RESULTS

The research has shown that out of nine hypotheses, three were provided as effective which is shown in the Table 2 and Table 3. These are OPTION; which was the choice of a particular customer as negatively significant. Secondly, Dispute Management (DM) also negatively significant and thirdly the Card Industry Standard (CIS) positively significant.

#### Rank Order Logit Output

Table 2 – Rank Order Logit Output

Variable Name	Coef.	Std. Err.	z	P> z	95% Conf	. Interval
OPTION	-0.58	0.09	-6.57	0.00	-0.75	-0.40
AF	0.00	0.00	0.24	0.81	0.00	0.00
MTR	0.23	0.17	1.34	0.18	-0.11	0.57
NP	0.09	0.17	0.5	0.62	-0.25	0.43
IR	-0.24	0.17	-1.37	0.17	-0.57	0.10
DM	-0.29	0.11	-2.57	0.01	-0.50	-0.07
EMV	0.09	0.18	0.52	0.61	-0.26	0.45
CIS	0.29	0.17	1.75	0.08	-0.04	0.62
VA	-0.03	0.17	-0.18	0.86	-0.36	0.30

## Marginal Output

Table 3 - *Marginal Output*

Variable Name	dy/dx	Delta-metho	d	P> z	95% Conf.	Interval
		Std. Err.	z			
OPTION	-0.58	0.09	<b>-6.57</b>	0.00	-0.75	-0.40
AF	0.00	0.00	0.24	0.81	0.00	0.00
MTR	0.23	0.17	1.34	0.18	-0.11	0.57
NP	0.09	0.17	0.5	0.62	-0.25	0.43
IR	-0.24	0.17	-1.37	0.17	-0.57	0.10
DM	-0.29	0.11	<b>-2.57</b>	0.01	-0.50	-0.07
EMV	0.09	0.18	0.52	0.61	-0.26	0.45
CIS	0.29	0.17	<b>1.75</b>	0.08	-0.04	0.62
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## **DISCUSSION**

The Table 3 provides the marginal output of the rank ordered logit output of Table 2. The option variable indicated as the probability of choosing another card has decreased by a factor of 0.58 (58%). It learns that the next alternative card is less preferred to the previous choice. If further explain, once the card is present, the utility of the card user is maximized regardless of the characteristic of next best alternative. Also, when increasing the level of Dispute Management (DM) by one level, the probability of choosing of the payment card will be decreased by factor of 0.29 (29%). It is because customer preferred the local dispute management than the international dispute management. The signs of the coefficient of the DM variable is also negative proving the preference of the local dispute management. However, the CIS variable has a positive impact on the choice of the card with factor of 0.29 (29%). It means consumers are aware about the card industry standards. Therefore, it helps to choosing the next card option.

## **IMPLICATIONS**

This implications of the research has several outcomes. Important findings were type of card options, dispute management and card industry standards. According to findings the type of the card and dispute management are negatively involved with the choice of the card. Therefore, in order to assure the reliability of a given card and the researcher suggest to provide more information to the card users by conducting promotions. The provision of the monthly offers for

the card and waiving of the annual fees can be taken as examples. The LankaPay card is not directly issued to the card user. Hence, there is the gap between the card user and the card provider. The provision of the card to end customers can be implemented through banks or financial institutions which significantly maintain the card industry standards.

## KEYWORDS

Conjoint Analysis, Choice Experiment, Payment Card

## REFERENCES

- Brown, G. and Patterson, N. (2012), Professional project dissertation, Harlow, Great Britain, Pearson.
- Green, P. E. and Srinivasan, V. (2008), Conjoint analysis in consumer research: Issues and outlook. *Journal of consumer research*, 5, 103-123.
- Hatton National Bank (2018). Dispute resolution procedure on credit cards. [Online] Available at: <https://www.hnb.net/images/bank-downloads/card-center/dispute-resolution-procedure.pdf>. [Accessed on 18th June 2019, 11.15am].
- Hauser, J. R. and Rao, V. R. (2002), Conjoint analysis, Related modeling and applications. In Wind, Y. and Green, P. E. (eds), *Market research and modelling: progress and prospects*. Norway: Kluwer academic publishers.
- Huang, Z. (2015), "Is it money laundering", *Journal of money laundering control*, Vol. 18 No. 4, pp. 411-424.
- Kuzmanovic, M. (2011), The nonstandard algorithm for constructing efficient conjoint experimental designs. *Yugoslav journal of operations research*, 18(1), pp.63-74. LankaClear (2019), Annual report 2018. 1st ed. Sri Lanka: LankaClear.
- Mann, R. J. (2002). Credit cards and debit cards in the United States and Japan. *Monetary and Economic Studies*, 20(1), 123-159.
- Raghavarao, D. & Wiley, J. B. & Chitturi, P. (2011), Choice based conjoint analysis models and designs. Chapman hall. reserve bank of kansas city research working paper No. 06-04, April.
- Rotman (2003), *The Effect of Payment Transparency on Consumption: Quasi-Experiments from the Field*. [online] Available at: <http://www-2.rotman.utoronto.ca/facbios/file/transparency.pdf> [Accessed 6 Oct. 2019].
- Sage (1985), "Conjoint: conjoint statistical analysis." *Journal of Marketing Research*, vol. 22, no. 2, 1985, pp. 221–222.
- Sagepub (2018), The sage encyclopedia of communication research methods. Sagepub, [Online]. Available at: <http://methods.sagepub.com/reference/the-sage-encyclopedia-of-communication-research-methods/i3200.xml>. [Accessed on 14th February 2019, 06.55pm.]
- Soman, D. (2001), Effects of payment mechanism on spending behaviour: The role of rehearsal immediacy of payments. *Journal of consumer research*, 27, 460-471.
- Soman, D. (2003), The effect of payment transparency on consumption: Quasi experiments from the field. *Marketing letters*, 14 (3), 173-183.
- Visa Annual Report, (2018). Annual report 2018. 1st ed. Visa inc: Visa inc.
- Visa inc. 2014. Visa inc. is an American multinational financial services corporation. [Online] Available at: <http://usa.visa.com/about-visa/index.jsp>. [Accessed on 18th February 2019, 09.35pm].