

ANALYZING CUSTOMER PREFERENCE TOWARDS PAYMENT SYSTEM: CASH, DEBIT CARD AND CREDIT CARD

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ABSTRACT

Payment system is a tool of payment that purposes to help activity of buyer and seller transaction easier. In this modern area it is required to the instrument payment which easier to bring and practical for usage. Payment system covers the legal and regulatory framework, institutions and mechanisms used to transfer funds in order to settle liabilities arising from economic activities. This research is purposed to analyze the usage of three payment system: cash, drbit card and credit card. This research used the Analytical Hierarchy Process (AHP) as the analyzed data of this research. Population in this research is mainly 200 civil servants in Manado who have been using there payment system. The sample of this research is 30 respondents of purposive random sampling. Results shows that the most of payment system used based on criteria and subcriteria is credit card. Subcriteria based on are considered by respondents to choose. Promotion, experience, privacy and reducing time considered as factors in the priority security criteria that are highly important in choosing and using the payment systems.

Keywords: *payments system, debit card, credit card, purchase decision.*

INTRODUCTION

Research Background

The payment system is evolving over time. There are many choices of payment systems which are offered to consumers. By doing a payment system using either card or cash, it is greatly assist the process of the global economic development. With advanced information systems more consumers are using the electronic payment system. Increased use of debit and credit cards as payment made decreasing demand for the currency itself. This brings a good impact on the community because it is considered more efficient and better able to stimulate economic activity. Prior to the payment using existing cards, payment were done in cash and checks. Along with the development of payment systems electronic payment system comes with various facilities provided for the cardholders. That makes credit cards and debit cards as payment system to be a common thing in the society.

Electronic payment card comprises or credit card (credit card), charge card, debit card (debit card), and a cash card. There is a significant difference between the cards, both the function and the consequences of its use. Credit card is one of the means of payment by way of credit consumers can shop even when they do not have the cash money. Basically, it is consumer shopping in a way of debt. Moreover, consumers are allowed to pay the debt by installments of a certain minimum number of total transactions. The minimum payment amount is usually amounting from 10 to 20 percent of the outstanding balance. However, the consequences of the rest of the unpaid amount will bear interest at the amount of which depends on the issuing bank (issuer). Generally the credit card interest rate currently ranges between 3-4 per cent per month. In addition they must pay interest, and if the consumers pay too late, they will be charged a late fee (late charge).

The money is taken immediately out of the customer bank account when use debit card. In fact, with credit, the household is billed for purchases at the end of the month and pays within the grace period any further. Carried over the balance on a credit card, the consumer does not pay interest. Credit cards also offer the option to convert the balance to uncollateralized loans with zero transaction costs. Most credit cards offer rewards (cash back, airline miles, gift certificates, warranties on purchases, charitable donations) or below-market interest rate. (Fusaro, 2009)

Comparison function of using cash and cards can be seen from several factors: the level of security, acceptance, easy of use, transaction cost, extra cost, privacy, durability, control, convenience, safety, access credit, innovation, and rewards. The use of cards over cash for considered safe payment system. However, if viewed from the level of acceptance of cash is more acceptance. In terms of easy of use of cash is considered more convenient to use, in terms of transaction cost cards are considered to have an edge in the payment transaction.

Debit cards and credit cards are considered more practical in the payment system. Yet some people still consider the use of cash easier and uncomplicated. In Indonesia especially in Manado, the payments system: credit card, debit card and cash are a common payment systems that people use to all transactions. Every payment system has benefit for the users, choosing of payment systems based on the user decision to use the payment system.

Research Objective

To identify which of the three payment system: credit card, debit card, and cash are preferred by Civil Servant in Manado.

THEORITICAL FRAMEWORK

Marketing

Marketing is about identifying and meeting human and social needs. Marketing has been defined as an organization function and a set of processes for creating, communicating, and delivering value to customers and for managing customer relationship in ways that benefit the organization and its stakeholders. Kotler (2009:45).

Consumer Behavior

The term consumer behavior is defined as the behavior that consumers display in searching for, purchasing, using, evaluating, and disposing of products and services that they expect will satisfy their needs. Consumer behavior focuses on how individuals make decisions to spend their available resources (time, money, effort) on consumption-related items. Schiffman and Kanuk (2007:3).

Consumer Decision Making

Consumer decision making is the process of making purchase decision based on cognitive and emotional influence such as impulse, family, friends, advertisers, role models, moods, and situations that influence a purchase. Schiffman and Kanuk (2007:3).

Payment system

e-Payment is defined here as the transfer of an electronic value of payment from a payer to a payee through an e-payment mechanism. e-Payment services exist as web-based user-interfaces that allow customers to remotely access and manage their bank accounts and transactions (Weir, 2006)

Debit card

Debit card is one of the most widely used systems for e-payment. The debit card method combines the features of the Automatic Teller Machine (ATM) card with Internet banking. When customers pay with a debit card, money is automatically deducted from their bank accounts. In contrast with credit cards, the expended

money comes directly from a bank account. Many banks issue a debit card that can be used in places where credit cards are not accepted. When users pay with a debit card, the payment is processed as a debit transaction (Abrazhevich, 2004).

Credit card

Credit cards are the most frequently used form of e-payment (Hsieh, 2001). Two important issues associated with the credit card method are security (Stroborn, 2004) and privacy, since consumers’ transaction records can be tracked through their credit cards (Laudon and Traver 2001). The credit card method involves an irreducibly complex transaction-structure (Hsieh 2001, Wright 2002). Compared to other EPS, it is not appropriate for small value transactions, transactions involving less than a dollar (Kalakota and Whinston 1996).

Cash

A form of liquid funds given by a consumer to a provider of goods or services as compensation for receiving those products. In most domestic business transactions, a cash payment will typically be made in the currency of the country where the transaction takes place, either in paper currency, in coins or in an appropriate combination.

Conceptual Framework

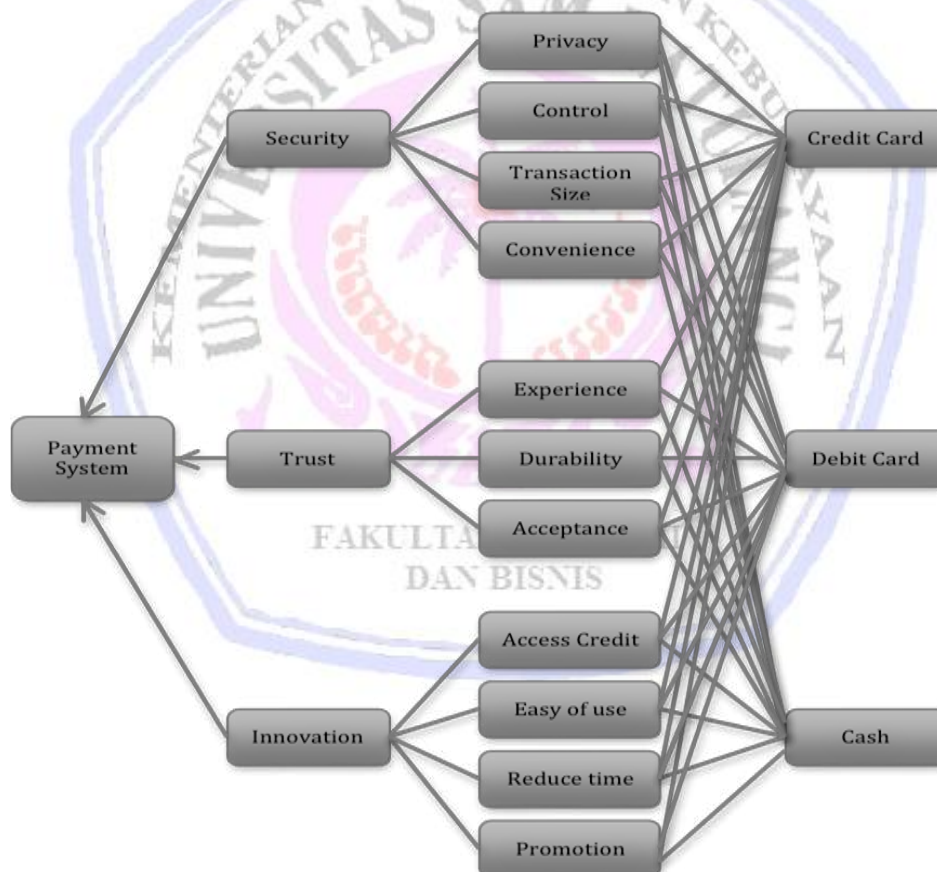


Figure 1. Conceptual Framework

Source: Theoretical Review, 2013

RESEARCH METHOD

Type of Research

This research is qualitative research. Qualitative research is research that relies on the collection of qualitative data. The collection data based on precise measurement using structured and validation data instrument. This type of research is an exploratory research. Exploratory research is a type of research conducted for a problem that has not been clearly defined. Exploratory research helps determine the best research design, data collection method and selection of subjects, and sometimes it even concludes that the problem does not exist.

Population and Sample

Population is generalized to the object/subject which have certain quantity and characteristic that is required by researcher to studying and to gain conclusion (Sekaran and Bougie, 2009:262). The population in this research is 200 Civil Servants who has been used three payment system in Manado.

The sample size of this research consist of 30 respondents. The sampling design is convenience sampling that is considered as the best way of getting some basic information quickly and efficient. The sampling design is a saturated sample that is considered as the best way of getting some basic information effective and more accurate (Sekaran and Bougie, 2009:263).

Operational Definition and Measurements of Research Variables

This research defines the variables into:

1. Credit Card , credit card can be defined as a card issued by a financial company giving the holder an option to borrow funds, usually at a point of sale. A credit card charge interest and are primarily used for short term financing.
2. Debit Card , debit card (also known as a bank card) is a card that provides the card holder electronic access with a PIN (Personal Identification Number) to the personal bank accounts to make transactions. When using debit card for transaction, the system payment will automatically deduct the personal account and transfer to the vendor once a product or service is bought.
3. Cash , Cash can be defined as asset to the business is usually considered to be on of the current assets. Cash is issued as a payment method for people to determine the level of purchasing.

Data analysis Technique

The Analytic Hierarchy Process (AHP) is due to Saaty (1980) and is often referred to, eponymously, as the Saaty method. General steps in Analytical Hierarchy Process (AHP) are:

1. Develop pairwise comparison matrix for each decision alternative for each criterion. In a pairwise comparison, two alternatives are compared according to the criterion, and one is preferred. These comparisons are made by using a preference scale, which assigns numeric values to different levels of preference. Then a pair-wise comparison matrix summarizes the pairwise comparisons for a criterion. The preference scales for pairwise comparisons are as follow:

Table 1. Preference Scales of Pairwise Comparison The Saaty Rating Scale

Preference Level	Numerical Value
Equally preferred	1
Equally to moderately preferred	2
Moderately preferred	3
Moderately to strongly preferred	4
Strongly preferred	5
Strongly to very strongly preferred	6
Very strongly preferred	7
Very strongly to extremely preferred	8
Extremely preferred	9

Source: Coyle 2004. in Taylor, 2007:410.

2. Synthesization

The next step in AHP is to prioritize the decision alternatives within each criterion. Steps in synthesization are:

- a. Sum the values in each column of the pairwise comparison matrices.
 - b. Divide each value in each column of the pairwise comparison matrices by the corresponding column sum- these are normalized matrices.
 - c. Average the values in each row of the normalized matrices- these are the preference vectors.
 - d. combine the vectors of preference for each criterion into one preference matrix that show the preference for each criterion.
3. Develop a pairwise comparison matrix for the criteria.
 4. Compute the normalized matrix by dividing each value in each column of the matrix by the corresponding column sum.
 5. Develop the preference vector by computing the row averages for the normalized matrix.
 6. Compute an overall score for each decision alternative by multiplying the criteria preference vector by the criteria matrix.
 7. Rank the decision alternatives, based on the magnitude of their scores computed in step 6.

Taylor (2007:404) noticed AHP is based primarily on the pairwise comparisons on a decision maker uses to establish preferences between decision alternatives for different criteria. The normal procedure in AHP for developing these pairwise comparisons is for an interviewer to elicit verbal preference, using the preference scale.

Making Consistency Index and Consistency Ratio

The next step in AHP in consistency index that measures the degree of inconsistency in pairwise comparison. There are a few steps in making consistency:

1. Multiply the pair wise comparison for the each criterion by the preference vector for each criterion
2. Divide each of value by corresponding weights from the criteria preference vector
3. Averages the value by summing them and dividing by amount of criterion.

If consistency index (CI) is 0, it means the company would be a perfectly consistent decision maker. However, if not, means that degree of inconsistency that is acceptable. An acceptable level of consistency is determined by comparing the consistency index (CI) to a random index, RI, which is the consistency index of a randomly generated pairwise comparison matrix. The random index has the values show:

Table 2. Random Index Values

N	2	3	4	5	6	7	8	9	10
RI	0	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.51

Source: Coyle 2004. in Taylor, 2007.

In general, the degree of consistency is satisfactory if $CI/RI < 0.10$. If $CI/RI > 0.10$, then there are probably serious inconsistencies and AHP results may not be meaningful.

Discussion

This research is designed to find out the best payment systems based on consumer decision making from the security, trust and innovation. Analytical Hierarchy Process is used as a multi- criteria decision making method that helps the decision maker facing a complex problem with various subjective criteria provided. Through this method, the strength and weakness of each alternatives towards criteria provided may be evaluated in the results. Discussion the result of this research based on the respondents data result and researcher perspective are explained.

Pairwise Comparison for The Main Criteria Analysis

In the Analytical Hierarchy Process (AHP), the criteria developed as the measurement of the usage of payment system are compared to each other to determine the relative importance or weight of the criteria itself, to rank the criteria from the most important to least important. The criteria with the highest average weight indicate to the priority criteria among others.

The most important criteria to be considered by Payment Systems is Security, as the privacy and control of customer and the size of transaction. Security is identified as the highest criteria compared to two others. As the requirement of using AHP method, the respondents should be those who have experienced each alternatives provided, which are the three payment systems. There are according to levels of consumers decision making (Schifman and Kanuk, 2007) the respondent can be concluded in "Routinized response behavior". In this level, consumer have experience with the product and service category and a well-established set of criteria with which to evaluate the brands they consider. So in this research, according to the respondents, the security of the payment system becomes the highest factor for the decision making in the usage of payment systems.

The second one is innovation. Innovation sub criteria consists of access credit, easy of use, reducing time and promotion. Customer in a process decision making chooses the payment systems by seeing the benefits of the payment system itself. Innovation measures the customer who choose the easy of use of the payment system, reducing time taken by the customers decision when choosing the payment system. To fulfill the customer wants, many company gives the solution of access credit. Promotion pushes the customer decision making. All of sub-criteria are considered important in customer decision making to choose which payment system they will use.

The last position is trust. Trust is experience, convenience and acceptance. Trust obtains the lowest result on customer perspective on using and choosing payment systems. Customers who have had bad experience and feel inconvenience using the payment system is the factor that leads to the lowest rank for trust. The acceptance of payment system makes customers choose payment methods that are convenient to use and accepted in all outlets.

Pairwise the Overall Subcriteria Towards Alternatives and Strength of Each Alternatives

The result shows credit card is at the first place in the hierarchy when it comes to privacy, control, experience, access credit, reducing time and promotion. While Debit Card get the first place in transaction size and convenience. Finally cash gets the highest in acceptance and ease of use. The three main criteria pairwise the overall criteria towards alternatives, security has the highest score of all. Security has three sub criteria: privacy, control, and transaction size. The highest position is this criteria is privacy and Credit Card as alternative gets highest position. Innovation has four criterias: access credit, easy of use, reducing time and promotion. Based on this research the highest position is promotion and the highest alternative is Credit Card. In the criteria trust, the highest position is experience. The highest alternative in experiences is credit card. Fusaro (2006), in the research Debit vs Credit: A Model of Self-Control, Evidence From Checking Accounts Consumers show that people preferred to use card (debit card) than cash and it is different with the result of this study. The research silimary with my study, but have the different result. Based on the respondents answers and the criteria in this research, credit card is mostly used as a payment system.

CONCLUSION AND RECOMENDATION

Conclusion

This research's findings are concluded as follows:

1. Security of the payment system is the most important factor that influences the customer in deciding which payment system to be used. With the sub criteria privacy, control and transaction size this criteria become the most factor that are considered by the customer in choosing the payment systems. From the research, security is ranked as the most important priority criteria. Following, the priority criteria is innovation with subcriteria access credit, ease of use, reducing time and promotion. The last is trust with experience, durability and acceptance.
2. From three criteria and for sub criteria, Credit Card get six highest sub criteria, which are privacy, control, experience, access credit, reducing time and promotion. Credit card is the most used payment system out of debit card and cash.
3. With the Analytical Hierarchy Process method, the results identified the strength of each payment system in Manado. Below are the result for each alternative:
 - a) Credit cards strength in privacy, control, experience, access credit, reducing time and promotion.
 - b) Debit Card's strength in transaction size and convenience.
 - c) Cash's strength are acceptance and ease of use.

Recommendation

Based on the conclusion, there are recommendations as follows:

1. Payment system should put more attention on security. Security is the most important factor that influence the customers in choosing the payment system to be used. Payment system with strong security will make many users use it.
2. Cash and Debit Cards, which both have the highest in two alternatives sub criteria should focus more on security. Using cash in big transaction size makes it inconvient fo customersto debit cards are more convenient than using cash in big transaction. But for acceptance, cash are accepted anywhere and any merchant with minimum transactions.
3. In Manado has many potential customers in shopping and style, and they will choosing to use payment systems that give many benefits for them. They will choose payment systems which have a high security, access credit, reducing time, control, experience and promotion.

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