

# Analysis Tracking Online Payment System

Sudarno, Bambang Eka Purnama

**Abstract** — Payment is an important factor in a purchase transaction. Ease of payment is a convenience factor in shopping. The easier way of payment of the service users will be more comfortable in the shop. The conditions will be different if the groceries are many and varied and the quality but the payment difficulties. In this research will be investigated whether the payment model most widely used on the Internet. This research aims to produce a model of how the survey the most widely used on the Internet. The benefit of this research is as a reference for users and merchants to use payment models are much in demand and are commonly used on the Internet. The method used is the categorization of websites, analyze and find the payment model used by the web commerce. The results of this study were 80 respondents, 56 respondents used the BCA, Bank Mandiri 47 respondents, 36 respondents using BNI46, 10 respondents using Paypal, 13 respondents use credit cards and 15 respondents did not specify the model of payment. From the survey results look BCA most widely used.

**Index Terms** — Online Payment

## 1.1. Background

Payment is an important factor in a purchase transaction. Ease of payment is a convenience factor in shopping. The easier way of payment of the service users will be more comfortable in the shop. The conditions will be different if the groceries are many and varied and the quality but the payment difficulties. Some search engines have been able to identify the language used in a document. This identification process is usually done by recognizing a few words in a document that is a trait or quirk for a particular language, but search engines do not analyze the contents of the documents found. Consequently, for a search condition to be very limited and even led to the search results that do not have a relationship. **Handayani dkk, Fasilkom UI** Utilization of Information Technology in particular the current Internet is growing and strategic in our business activities. Use of the Internet is increasingly perceived benefit in having the ability to be accessed 24 hours and provide information that is more accurate in a relatively short time.

## 1.2. Problem Formulation

Banking is the most widely used as a means of payment on the internet

## 1.3. Limitation Problem

Companies that used for the study is an online company

## 1.4. Research Objectives

Knowing what the bank most widely and commonly used on the Internet

## 1.5. Benefits of Research

As an online payment reference for employers if it will use an online business

## 1.6. Research Methods

- a. Observation. In this method, researchers seeking data from search engines and then find a bank official portal listed on the web
- b. Capture. List of sites found on the capture to save bandwidth and as documentation

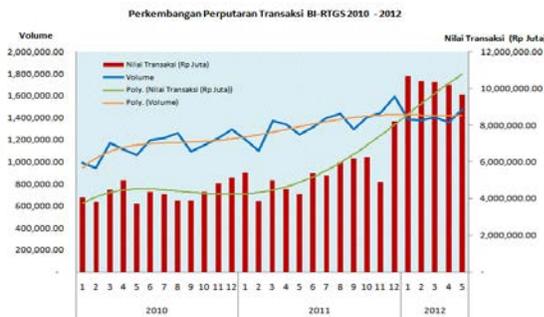
## 2.1. Payment System

Payment System is a system that deals with the transfer of a number of value for money from one party to another party. The medium used for the transfer of the value of money is very diverse, ranging from the simple use of payment instruments to the use of a complex system and involves various agencies following the rules. Authority to regulate and maintain the payment system in Indonesia implemented by Bank Indonesia as outlined in the Bank Indonesia Law. In carrying out this mandate, BI refers to the four policy principles of payment systems, namely security, efficiency, equality of access and consumer protection. Safe means any risks in payment systems such as liquidity risk, credit risk, fraud risk should be managed and mitigated well by any payment system. The principle of efficiency emphasized that penyelenggaraan payment system should be used widely so that the cost to society will be cheaper due to increased economies of scale. Then the principle of equality of access means that the central bank does not want any monopolistic practices in the implementation of a system that can hinder other players to enter. Last is the duty of all operators of payment systems to pay attention to aspects of consumer protection. Meanwhile, in relation to the institution conducting the circulation of money, the payment system is implemented with a sustained amount of cash circulating in the community and in a condition fit for circulation or commonly called clean money policy. BI (2012) Electronic payment is a payment executed electronically. In the electronic payment of money in the store, in the process and received in the form of digital information and its transfer in the initialization process through electronic means of payment. Payment is traditionally done via cash, check or credit card while electronic payments are conducted using specific software, payment card and money elektronik. Components - the main component of the electronic payment systems include the transfer of money applications, network infrastructure, regulations and procedures that govern the usefulness of the system. Customers and sellers are the main players of the electronic payment system. electronic payments not something new today. The use of electronic networks for trading dimlulai since the early 1970s has been in the financial sector. Some of the first applications involved in the EFT system (Electronics Fund Transfer). EFT is a transfer of money between financial institutions via telecommunications networks. Even the ATM machines, at first in the 1980s, is also a form of electronic payment; every time customers use ATM machines, involving transactions are processed through a computer network.

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**Barnes, Sand Hunt, (2001).** Electronic payment payments drastically improve efficiency by reducing transaction costs and allows trade in goods and services with very low values. They can also improve the convenience of payment by allowing the transactions done faster and more efficient / practical from a variety of devices that are connected to the global network. There are several different types of electronic payments, such as: e-wallet, e-cash, smart cards, and credit card payments which we are familiar with (MOTO). Each - each type of payment transaction processing has a different - different. Online payment processing is the purchase of goods or services over the Internet which typically use a credit card. Financial transactions are processed electronically and when real time. Standard process for implementing online payment processing in real time is the seller Getting an online account for a certain credit card from a bank. Select the payment will process credit card information. Integrate our website with line payment. **Deni Trihasta and Julia Fajaryan (2008)**

**2.2. Real Time Gross Settlement (RTGS)**



Source : bi.go.id (2010)

**2.3. Detail Features Credit Card With Chip**



Source : bi.go.id (2010)

**2.4. Detail Features Credit Card With Chip**

**Front:**

- a. The chip on the credit card is always placed at the front side of the card, the chip has been added to a variety of applications that can encrypt the data so that the data can be stored more safely.
- b. Card number consists of 16 digits.
- c. Card holder's name.
- d. Major credit card issuers.
- e. The validity period of credit cards
- f. Credit Card Logo Network.

**Rear:**

- a. Magnetic stripe can still be used if a credit card is used for transactions abroad.
- b. Affixing the signature panel is where the card owner's signature on a credit card owned.
- c. Verification number consisting of three digits.
- d. Address of the credit card issuing bank.
- e. Name / Logo credit card issuer.

**2.3. Mechanism Using Credit Cards Using Chip**

Mechanism of Credit Card Usage by using chip not much changed by the previous mechanism. When trading, the things that must be considered in using a credit card chip is:

- a. Credit card to the cashier that you submit will be processed by inserting the card into the machine is fitted EDC chip or known as in-dip. At the time of in-dip, cards having the encryption process first before finally online at-link's and verified by the credit card issuer is used.
- b. Once the verification process is complete, the machine is fitted chip EDC will issue a transaction receipt to be signed by the cardholder transaction.
- c. Transaction is completed. The mechanism that is as easy as the previous technology known as magnetic stripe. The thing to remember is, the transaction no longer be swiped but in-dip, if the user's credit card transactions are still using the old mechanism which means swiped credit cards and do not use Chip EDC. Bi.go.id (2012)

**2.5. Concept Website**

Web page or a web page is a display of text and graphics stored in a particular format, the format called HTML (Hypertext Markup Language). The major advantage of the HTML document is its ability to provide a link from the text and / or images to get to other parts of the document or in a document. Web server is a program running on a computer server that is responsible for providing Internet services to the computers connected to the server. In other words, the web server to serve requests from client computers, so that the web server is also used to store programs and Internet files needed by all client computers. If there is a request from a client computer, the computer server will look for what is requested by the client on the server's hard disk, if it exists then the server will give them to clients who request it. Firdausy et al

## 2.5. Online Payment

### a. PayPal

Is one of the means of payment (Payment processors) use the internet most used in the world and the safest. Internet users can buy goods on ebay, original software licenses, membership sites, business affairs, send and receive donations / contributions, send money to other PayPal users around the world and many other functions easily and automatically using the Internet. PayPal address shortcomings in traditional money transfer Check or Money order that the process can be time consuming. PayPal is like a bank account. First you create an account and fill out the account with funds from a credit card or paypal account transfer funds of others into your paypal balance, and you can already use a PayPal account to transact In February 2008 PayPal has received 190 countries and 16 currencies, Indonesia PayPal users still have to use a count of the U.S. dollar because the dollar is not in PayPal. paypalchanger.com (2012)

### b. E-Banking

E-Banking is also called Electronic Banking is a banking service that uses electronic media as the intermediary. The purpose of the Electronic Banking is a means of providing multi-channel and can also save the cost of bank transactions, customer freer, easier, and provide security for trade 24 hours a day wherever the customer is located. Electronic banking facilities offered today is divided into 3 (three) parts and each part has a working system that uses different media. Each section has its own advantages. Regarding the facilities offered from each media electronic banking, such as Media Internet Banking, Mobile Banking, ATM and other media that use electronic functions. Benefits provided electronic banking facilities accepted by the bank as well as the provider and the customer as a user. Among the bank for Business expansion, Customer loyalty, Revenue and cost improvement, Competitive advantage, New business models, and Fee Income base. Besides the benefits for customers give them the ease and speed, transactions anywhere and anytime to do and save cost and time.

### c. Cash deposit

Cash deposit is to deposit money through a special ATM for deposits, ie ATM Cash Deposit (Cash Deposit Machine). With this machine allows us to make a cash deposit at any time without skipper wants time-bound, because the machine is in operation 24 hours a day and 7 days a week. The difference this machine with an ATM machine that had long we encounter is the function of ATM machines that dispense cash is cash, being cash deposit ATMs are ATMs that accept cash. Generally there is little difference in engine components, ATM cash deposit machine do not have a mouth that can spend money, but his mouth greater function to put money. With this machine, we do not need to go to the bank to wait in line to meet jazzed to deposit money into the account. Moreover, we do not need to bank at work. This is very helpful at the us are very busy, and are fixated by office hours.

### d. Transfer Via Atm

An electronic remittance made by the purchaser at the ATM machine to make payments online to the seller. With ATM machine allows us to make transfer money anytime without

being tied to time, because the machine is in operation 24 hours a day and 7 days a week. Dimas Irawan (2011)

## 2.5. Studies Library

A similar study previously conducted by Trihasta and Fajaryanti (2008) examines the online payment system. Trihasta comparing each e-payment transactions from a variety of sources and research that has gone before. Then Trihasta to conclusions so as to get the best payment system used in transaction processing electronic payments or e-payment. Penelitiuanya results are from studies that have been done, it can be concluded that the most good and safe place to do shopping online is by using e-cash or smart cards. To e-cash (which has functions such as virtual money) password used in the use of data transmission. Smart card "MONDEX" using cutting-edge security system created by using the protocol (VTP (Value Transfer Protocol), MULTOS Operating System). And for the E-wallet is still used in the storage of personal data include online and offline e-cash. MOTO transactions through credit cards has resulted in many criminal activities (online fraud, phishing). The results of the comparison process transactions by type of transaction

Type Transaction	Transaction process
E-cash	Customers using tools such as virtual money for using transactions using a variety of methods
E-wallet	e-wallet program that automatically validate consumer payment form (only works on merchants e-payment) complex method in the process of payment through
Smart card	pengesahaan chip buyers and sellers, and has its own security system (more secure) Charging is done manually
Credit card (MOTO)	payment form (name, credit card number, PIN)

Research conducted by Andreea (2012) produced findings that the birth of "virtual companies" took place in the 1980s, brought about by the information technology revolution. Meanwhile, new technology starts with remote communication, computer and internet then reshaped the world of business. Cloud computing, a concept sometimes vague and complex as it is, is a new instrument available to companies that want to deal with the needs of IT more efficient. It comes as a natural step in the evolution of a classic network-based applications and hardware for virtualization. It brings to the table a smart approach to virtualization and new business. However making the virtual enterprise is nothing more than the internet turned into dotcoms or power turns their energy utilities. Implementation is difficult because of the confusion starts with the concept itself and leads to unregulated vendors and service providers and offer services to non-specific laws are sometimes made IT managers hope for a bag of magic beans to help them grow up the stairs to the cloud. However, some form of virtualization, both server virtualization, application virtualization or cloud computing is clearly done by more and more companies today Handayani et al conducted a

study on search engines and get the result that most existing search engines still give results that do not correspond to the keywords entered. Need for access method for re search in finding the right information in the context of the keywords entered. It is very difficult to find the results in the context of the keyword due to the lack of formal Indonesian grammar forms The need for reliable search engine is needed because of the diversity of information available today. Therefore, the research prototype developed in a way that search engines can analyze the text content of a sentence in the Indonesian language, especially to identify words that have more than one meaning. In addition to displaying the articles related to the keywords entered by the user, prototype form can also display a collection of tags (Cloud of Tags) related to the keywords entered. These tags can be used by users to search and re-classify public information becomes more specific information. Prototype development using Open Source Java way, Lucene and UIMA. After going through the implementation phase of the evaluation by several users online. Demonstrated in prototype form are operated online, that the use of semantic analysis allows users to search for articles needed Rezkiawan et al (2008), conducted research on the effectiveness of The Electronic Currency For Online Payment Methods. The result is an online payment system using Electronic Currency more and more in demand than internet banking and credit cards. Enthuses because of easy, inexpensive, practical and safe.

**3.1. Tools Used**

Tools used are portal search engine google.com. This portal is a web portal that is used to keep track of search words on the internet. This service is free



Figure 3.1. Portal google.com

Table 3.1. Table Web Category

Web Hosting	15
Computer Shop	4
Cell Phone	8
Hotel	4
Book Store	1
Fashion	3
Transportation	11
eCommerce	14
Fitness	3
Furniture	4
Electric Pulse	7
TV Kabel	3
Seminar	3

**3.2. Trial Results**

Table 3.2. Payment System

No	Banking	Total
1	BCA	56
2	Bank Mandiri	47
3	BNI	36
4	BRI	16
1	CIMB Niaga	12
2	Bank Permata	4
3	Paypal	10
4	Visa	13
5	Master Card	13
6	NA	15

**3.3. Sample Case**

**a. Web hosting Respondent**



Figure 3.2. Web Hosting Payment

**b. Cell Phone Store Sample**

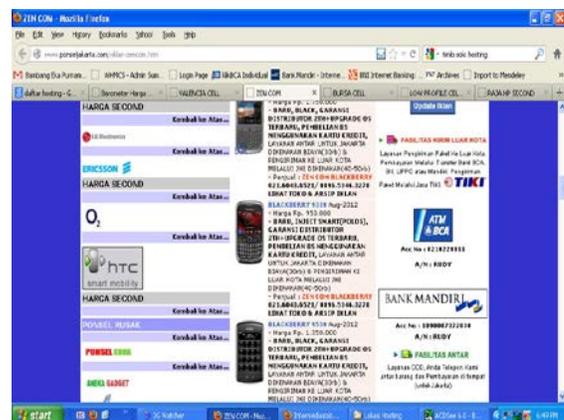


Figure 3.3. Cell Phone Store Sample

c. Tracking Computer Store



Figure 3.4. Sample Computer Store

d. Sampel Hotel



Figure 3.5. Tracking Hotel Web

e. Sample Fashion Category

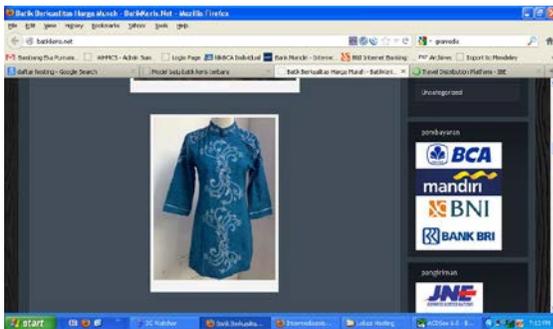


Figure 3.6. Sample Fashion Store

f. Sampel Air Transportation Category



Figure 3.7. Sample Airways Web

g. Sample Land Transportation Category



Figure 3.8. Sample Land Transportation Category

h. Sample Land Transportation Category



Figure 3.9. Sample Land Transportation Category

i. Sample TV Kabel



Figure 3.10. Sample TV Kabel

4. Resume

- a. From the results of BCA tracking data showed that the most widely used as a medium of payment
- b. Almost no hotel include payment media
- c. Paypal is widely used as a medium of payment online
- d. Credit cards are widely used as a medium of payment offline and online

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