ANALYZING THE DIFFERENCE OF e-BANKING SERVICES BETWEEN BANK CENTRAL ASIA AND BANK MANDIRI IN MANADO

ANALISIS PERBEDAAN LAYANAN PERBANKAN ELEKTRONIK ANTARA BANK CENTRAL ASIA DAN BANK MANDIRI DI MANADO

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Abstract: e-Banking is an electronic payment system that enables customers of a bank or other financial institutions to conduct a range of financial transactions through the financial institutions' website. e-Banking has been widely used in developed and developing countries in the world. In Indonesia, the total users of e-Banking has increased since 2012 with 13.6 million of e-Banking users until 2016 with 50.3 million of e-Banking users. The aim of this study is to analyze the difference of e-Banking services between Bank Central Asia and Bank Mandiri in Manado. This research is a quantitative research and uses independent sample *t*-test. The sample size of this research is 100 customers of Bank Central Asia and Bank Mandiri in Manado. The results showed that e-Banking services based on Banking Mobile Application (Mobile Banking, Internet Banking, and SMS Banking) of Bank Central Asia and Bank Mandiri in Manado have a significant difference while the Automated Teller Machine (ATM) between Bank Central Asia and Bank Mandiri in Manado showed that there is no significant difference. The recommendation based on the results is Bank Mandiri have to more develop its e-Banking system application to maintain and create more customer delight.

Keyword: e-banking, banking mobile application, mobile banking, internet banking, sms banking, automated teller machine.

Abstrak: *Perbankan elektronik adalah sistem pembayaran elektronik yang memungkinkan nasabah bank atau lembaga keuangan lainnya melakukan serangkaian transaksi keuangan melalui situs web lembaga keuangan. Perbankan elektronik telah digunakan di negara maju dan berkembang di dunia. Di Indonesia, total pengguna perbankan elektronik telah meningkat sejak 2012 dengan 13,6 juta pengguna hingga 2016 dengan 50,3 juta pengguna. Tujuan dari penelitian ini adalah untuk menganalisis perbedaan layanan perbankan elektronik antara Bank Central Asia dan Bank Mandiri di Manado. Penelitian ini merupakan penelitian kuantitatif dan menggunakan uji t sampel independen. Ukuran sampel dari penelitian ini adalah 100 nasabah Bank Central Asia dan Bank Mandiri di Manado. Hasilnya menunjukkan bahwa layanan e-Banking berbasis Banking Mobile Application (Mobile Banking, Internet Banking, dan SMS Banking) Bank Central Asia dan Bank Mandiri di Manado memiliki perbedaan yang signifikan sedangkan Automated Teller Machine (ATM) antara Bank Central Asia dan Bank Mandiri di Manado menunjukkan bahwa tidak ada perbedaan yang signifikan. Saran dari hasil tersebut adalah Bank Mandiri harus mengembangkan aplikasi sistem perbankan elektroniknya untuk menjaga dan menciptakan lebih banyak kepuasan pelanggan.*

Kata Kunci : *perbankan elektronik, aplikasi mobile perbankan, internet perbankan, sms perbankan, anjungan tunai mandiri.*

INTRODUCTION

Research Background

In Indonesia, banking practices have spread to remote rural areas. Financial institutions form of banks in Indonesia are in the form of Commercial Banks, Rural Banks (BPR), Islamic Banks, as well as the People's Bank Syariah Financing (BPRS). Recently, BCA and Bank Mandiri are competing to become the best bank by improving the service for customers' convenience. Reported from Kompas.com on September 2016, BCA and Mandiri are currently compete to be the best service provider for electronic money in Indonesia due to new regulations from the government to pay toll fees via electronic money or known as e-toll.Bank Central Asia (BCA) is an Indonesian bank founded on August 10, 1955. In 2016 BCA overtook DBS Bank of Singapore as Southeast Asia's biggest lender by value, with a market capitalisation of US$24.5 billion (S$34.2) billion while Bank Mandiri, headquartered in Jakarta, is the largest bank in Indonesia in term of assets, loans and deposits. Total assets as of Q3 2012 were IDR 588.4 trillion (or USD 59.8 billion). It also has Capital Adequacy Ratio (CAR) of 16.08% (including market risk), Return on Asset (RoA) of 3.45%, and Return on Equity (RoE) of 22.18%. As of September 2012, Bank Mandiri is the first largest bank in Indonesia by total assets.

Electronic banking is introduced as a channel where bank customers can conduct banking financial activities of non-cash electronically via the bank's website. E-banking has been widely used in developed and developing countries. According to Daniel (1999:82), electronic banking as the delivery of banks' information and services by banks to customers via different delivery plat forms that can be used with different terminal devices such as personal computers and mobile phone with browser or desktop software, telephone or digital television. Electronic banking provides convenience, lower service charges, more accessible information about bank accounts, and an attractive option for busy people since it saves time to go to the bank branches and gives 24 hours access. Customers can perform non-cash transactions at any time with ease and comfort with access via a computer network (the Internet). Innovation banking services through internet technology is expected to reduce transactional costs and queues that occur at the offices of the bank.

The problems that often arise in the use of e-Banking are the application used does not respond to customer demand, length of operation, and sometimes has errors. Reported from detikFinance.com in December 2014, there was damage to the mobile banking system of BCA that customers can not perform the balance checking process, so customers could not use the application service to conduct transactions. Meanwhile, Bank Mandiri's mobile banking application known as Mandiri Mobile experienced delays in accessing information and making transactions. Another problem is that there is no notice via BCA's SMS banking for customers who have transferred money, so customers feel aggrieved because there is no transfer receipt notification, which actually should be sent by BCA through SMS Banking. The same thing happened to a customer of Bank Mandiri when buying credit but did not get the purchase report via SMS Banking, so the customer felt that the purchase of credit was not successful when actually the credit had been received. When the customer checked the balance, it was already IDR.221.000 as reported by detikFinance.com in August 2016. BCA's ATM machine is also damaged when the customer inserts the debit card to make the transaction, but the debit card does not come out again, so it is detrimental to customers who have to take care of the card that has been sucked into the ATM machine by paying the administrative cost when it is not actually the customer's fault. Another problematic ATM case occurs to Bank Mandiri's customer who wanted to withdraw money with the sum of IDR.1.000.000 but only got IDR.100.000, but when the customer checked the balance it had been reduced by IDR.1.000.000 as reported from detikFinance.com in November 2014. From the problems that have been described previously, the researcher is interested to conduct a research with the title: *Analyzing The Difference of e-Banking Services Between Bank Central Asia and Bank Mandiri in Manado.*

Research Objectives

Based on the research problem above, the objective of this research is to anayze the difference of e-Banking services between Bank Central Asia and Bank Mandiri in Manado.

LITERATURE REVIEW

Marketing

According to Kotler (2009:132) "One of the shortest definitions of marketing is meeting the needs of profitability". There is also a sense of marketing, namely: The American Marketing Association, in Kotler, (2009:133), offer to follow the formal definition of marketing: "Marketing is an organizational function and a set of processes for creating, communicating, and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders".

e-Banking

According to Daniel (1999:78), electronic banking as the delivery of banks' information and services by banks to customers via different delivery plat forms that can be used with different terminal devices such as personal computers and mobile phone with browser or desktop software, telephone or digital television. Ovia (2001:13), argues that electronic banking is a product of e-commerce in the field of banking and financial services. In what can be describe as business to consumer domain for balance enquiry request for cheque books recording stop payment instruction balance transfer instruction account opening and other forms of traditional banking service. In simple words, e-banking implies provision of banking products and services through electronic delivery channels. Electronic banking has been around for quite some time in the form of automatic teller machines (ATMs) and telephone transactions. In more recent times, it has been transformed by the internet –a new delivery channel that has facilitated banking transactions for both customers and banks.

Mobile Banking

According to Tiwari R and Buse S (2007:28), Mobile banking (also known as M-banking) is a term used for performing balance checks, account transactions, payments, credit applications and other banking transactions through a mobile device such as a mobile phone or Personal Digital Assistant (PDA). According to Al-Jabri and Sohail (2012:380), Mobile banking can help to make full access to the details and transactions of personal bank accounts, as well as making credit installment and utility bill payments and transferring funds. customers who use mobile banking must register for all service through bank website and download the mobile banking application to their phones, once the application are install you can use this service free of charge the only cost you have to pay is the normal communication by the mobile operators.

Internet Banking

According to Yang, Whitefield and Boehme (2007:338), Internet banking is one of the technologies which is fastest growing banking practice now a days. It is defined as the provision of information or service by a bank to its customers over the internet. According to Wu, Hsiah and Heny (2006:118), as compared with traditional banking labour is replaced by machine very significantly (computer networks) which is low in cost and is available easily 24/7. According to Furst, K Lang and Nolle (2000:16), Internet Banking is defined as the usage of Internet and telecommunication networks to deliver banking services to customers. Customers can inquire information and carry out most banking services such as account balance inquiry, inter-account transfers, and bill-payment via the Internet. According to Leong, Srikanthan and Hura (1998:1538), Internet banking is a web application based on client/server architecture in which Internet technology plays an important role. Similar to all Internet transmission of information, with Internet banking security is an important concern for banks and customers.

SMS Banking

According to Chaffey, Ellis, Mayer, and Johnston (2009:41), Short Messaging Service (SMS) generally called 'texting' as a form of e-mail but it creates communication between mobile phones rather than personal computers. According to Fill (2005:9), the financial industry can get benefits from this SMS service as it is same as e-mail and likewise sales promotion and brand awareness can be created by using mobile marketing. The SMS banking modality has the unique advantage of reach. The vast majority of handsets support SMS, whereas less than half support mobile Web and even fewer support mobile applications. This mix may change over time as advanced handsets become more widely available, but text messaging is and will continue to be the most used feature of a Smartphone. Further, performing mobile transactions is generally far quicker via SMS

than via modalities that require multiple navigation steps for the consumer to find the correct Web page to execute a desired transaction.

Automated Teller Machine (ATM)

According to Fenuga OJ (2010:2), Automated Teller Machine (ATM) is a machine where cash withdrawal can be made over the machine without going in to the banking hall. It also sells recharge cards and transfer funds; it can be accessed 24 hours/7 days with account balance enquiry. According to Adeniran (2014:10), among the development in the banking services delivery is the introduction of Automated Teller Machine (ATM) that intends to decongest the banking halls as customers now can go to any nearest ATM outfit to consummate their banking transactions such as: cash withdrawal, cash deposit, bill payments, and transfer of fund between accounts. Idris (2014:18), is of the view that Automated teller machine (ATM) among others was one of the services introduced by banks with the objective of providing customers quick access to their finances, as well to reduce cost of such access.

Previous Research

Worku G, Tilahun A, and Tafa MA (2016) has conducted research about The Impact of Electronic Banking on Customers' Satisfaction in Ethiopian Banking Industry (The Case of Customers of Dashen and Wogagen Banks in Gondar City). This research talks about the impact of electronic banking performance to the customers' satisfaction in Ethiopian Banking Industry. The results of this study is there is a relationship between demographic characteristics and customer satisfaction in e-banking than ordinary banking. Fozia (2013) conducted research in India about the Comparative Analysis of Customer Perception toward e-Banking Services Provided by Selected Private and Public Sector Bank. The results of the study showed there are good number of customer in every group like student, service class, business class and professionals, it shows that they all are keen interesting in using the e-banking services. D. N. V Khrisna Reddy and M. Sudhir Reddy (2015) conducted a research about Customers Perception and Satisfaction towards Electronic Banking in Khamman District. The research performed quantitative method and the results can be concluded that around 70 % of people have positive perception & are satisfactory with E-Banking Services. Still people of these areas are not using all the E-banking services frequently because they less knowledge about computer and internet; so they feel hesitation in using E-banking services. So banks should improve their promotional and communication strategies to make aware the customers regarding IT services and buildup positive perception to improve the level of usage of E-Banking with high level of satisfaction

Conceptual Framework

Figure 1. Conceptual Framework

Hypothesis

H_0: There is no significant difference of e-Banking services based on Banking Mobile Application and Automated Teller Machine (ATM) between BCA and Bank Mandiri customers.

H_1: There is significant difference of e-Banking services based on Banking Mobile Application and Automated Teller Machine (ATM) between BCA and Bank Mandiri customers.

RESEARCH METHODOLOGY

Type of Research

This research is a quantitative and comparative approaches. According to Maholtra (2009, Page 48), Quantitative research seeks to quantify data. It seeks conclusive evidence based on large, representative samples and typically involving some form of statistical analysis.

Place and Time of Research

The place of this research will be conducted in Manado on November 2017.

Population and Sample

The population in this research is all the customers of Bank Central Asia and Bank Mandiri in Manado. The sample in this research is 100 customers from both banks.

Data Collection Method

The primary data of this study gets from the results of questionnaires. The secondary data collected in varied of sources and the sources are books, journals, articles, thesis, and websites.

Operational Definition of Research Variable

Electronic banking as the delivery of banks' information and services by banks to customers via different plat forms that can be used with different terminal devices such as personal computers and mobile phone with browser or desktop software, telephone or digital television.

Data Analysis Method
Validity Test

To analyze the validity of questionnaire, Pearson Product Moment was used. If probabiility of correlation is less than 0.05 (5%) then the research instrument is considered valid.

Reliability Test

Reliability tests in this study using Cronbach's Alpha formula. If Alpha is less than 0.6 the it is unreliable.

Normality Test

The distribution of data with normal distribution pattern (data distribution is not skewed to the left or right). If the probability value > 0.05 then population is normally distributed.

Independent Sample T-test

The independent-samples *t* test evaluates the difference between the means of two independent or unrelated groups. That is, we evaluate whether the means for two independent groups are significantly different from each other. This *t-test* is to analyze the difference of e-Banking services between Bank Central Asia and Bank Mandiri based on Banking Mobile Application (Mobile Banking, Internet Banking, and SMS Banking) and Automated Teller Machine (ATM).

RESULT AND DISCUSSION

Validity Test Result

Table 1. Correlations

		BCA	Bank Mandiri	TOTAL
BCA	Pearson Correlation	1	.692[**]	.910[**]
	Sig. (2-tailed)		.000	.000
	N	100	100	100
Bank Mandiri	Pearson Correlation	.692[**]	1	.929[**]

	Sig. (2-tailed)	.000		.000
	N	100	100	100
TOTAL	Pearson Correlation	.910**	.929**	1
	Sig. (2-tailed)	.000	.000	
	N	100	100	100

**. Correlation is significant at the 0.01 level (2-tailed).
Source : SPSS 22, 2017

The value could be classified as a good variable when the significant level below 0.005 and the correlation values are above 0.30.

Reliability Test Result

Table 2. Reliability Statistics

Cronbach's Alpha	N of Items
.815	2

Source : SPSS 22, 2017

Reliability test result in the Table 2 the Alpha Cronbach has a value 0.815, it proves the data is reliable.

Normality Test Result
Table 3. Normality Result

Tests of Normality				
CUSTOMER		Kolmogorov-Smirnov[a]		
		Statistic	df	Sig.
MOBILE_BANKING_APP	BCA	.111	50	.165
	MANDIRI	.118	50	.078
ATM	BCA	.112	50	.157
	MANDIRI	.110	50	.178

Source: SPSS 22, 2017

Based on the Table 3 above further decisions are resulted as follows:
1. It appears that a significant column (Asymp. Sig (2-tailed)) for Consumer Attitude is 0.064 or more than 0.05 then the probability of H_0 received population mean of Consumer Attitude normally distributed.
2. It appears that a significant column (Asymp. Sig (2-tailed)) for Social Influence is 0.072 or more than 0.05 then the probability of H_0 received population mean of Social Influence normally distributed.

Independent Sample T-test
Independent Sample T-test for e-Banking Services of Bank Central Asia and Bank Mandiri in Manado Divided between Banking Mobile Application and Automated Teller Machine (ATM) Services

Table 4. Group Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Banking Mobile	50	3.8102	.49299	.06972
Application	50	3.5904	.50428	.07132
ATM	50	3.6908	.55851	.07899

50	3.7314	.49093	.06943

Source: SPSS 22, 2017

From table 4 shows that the mean of Banking Mobile Application of Bank Central Asia is 3.81 while the mean of Banking Mobile Application of Bank Mandiri is 3.59. The mean of ATM of Bank Central Asia is 3.69 while the mean of ATM of Bank Mandiri is 3.73. From the result above shows the mean of Bank Central Asia on Banking Mobile Application is bigger than Bank Mandiri. While the mean of Bank Mandiri on ATM is bigger than Bank Central Asia. It means that, customer prefer and feel comfortable to use Banking Mobile Application of Bank Central Asia than Bank Mandiri, while customer prefer and feel comfortable to use ATM of Bank Mandiri than Bank Central Asia.

Table 5. Independent Sample T-test for e-Banking Services between Bank Central Asia and Bank Mandiri

Independent Samples Test									
		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
BANKING_MOBILE_APPLICATION	Equal variances assumed	.030	.863	2.204	98	.030	.21980	.09973	.02188	.41772
	Equal variances not assumed			2.204	97.950	.030	.21980	.09973	.02188	.41772
ATM	Equal variances assumed	1.097	.298	-.386	98	.700	-.04060	.10516	-.24929	.16809
	Equal variances not assumed			-.386	96.414	.700	-.04060	.10516	-.24933	.16813

Source : SPSS 22, 2017

In the table above can be seen that the value t=0.810 with a significance of p=0.420 (p>0.05) indicates that H$_0$ is accepted which means there is no significant difference in purchase intention based on consumer attitude between male and female customers of counterfeit wakai shoes.

In the table above can be seen that the value t=1.046 with a significance of p=0.298 (p>0.05) indicates that H$_0$ is accepted which means there is no significant difference in purchase intention based on social influence between male and female customers of counterfeit wakai shoes.

Discussion

This research attempts to answer the problem statement as has been expounded earlier in this thesis. Hence, this research has identified the difference of e-Banking services between Bank Central Asia and Bank Mandiri. Research has considered all sources of theories, books, journals and other supporting sources in

constructing the whole research. Questionnaire is used to collect data and Likert scale is used to score the data. Then, the data are analyzed with Independent Sample *t*-Test. This method is useful to know the difference of e-Banking services between Bank Central Asia and Bank Mandiri. e-Banking is a tool of banks nowadays to delivery information and the customer can conduct a transaction with ease. According to Abid and Noreen (2006, Page 14), electronic banking defined as any use of information and communication technology and electronic means by a bank to conduct transactions and have interaction with stakeholders. Magembe BAS and Shemi AP (2002, Page 19), defined electronic banking (e-Banking) is nothing but e-business in banking industry. e-Banking is a generic term for delivery of banking services and products through electronic channels, such as the telephone, the internet, the cell phone, etc. The concept and scope of e-Banking is still evolving. It facilitates an effective payment and accounting system thereby enhancing the speed of delivery of banking services considerably. Ovia (2001, Page 8), argues that electronic banking is a product of e-commerce in the field of banking and financial services. The data of The Financial Services Authority (OJK) Indonesia revealed that the total of e-Banking user is increasing since 2012 is 13.6 million users and in 2016 become 50.3 million users.

Comparison of e-Banking Services between Bank Central Asia and Bank Mandiri Based on Banking Mobile Application (Internet Banking, Mobile Banking, and SMS Banking)

Banking Mobile Application is a term used for performing balance checks, account transactions, payments, credit applications and other banking transactions through a mobile device such as a mobile phone or Personal Digital Assistant (PDA).

The results showed that there is significant difference on e-Banking services based on Banking Mobile Application between Bank Central Asia and Bank Mandiri. By looking at the mean result from table 4.4, the mean value of Banking Mobile Application of Bank Central Asia is higher than Bank Mandiri. It indicates that, the services of Bank Central Asia on Banking Mobile Application is better than the Banking Mobile Application of Bank Mandiri. In this case, Bank Mandiri should more develop the system or application of their banking mobile application (Mobile Banking, Internet Banking and SMS Banking). Therefore, Bank Central Asia is statistically better than Bank Mandiri in term of Banking Mobile Application (Internet Banking, Mobile Banking, and SMS Banking).

Comparison of e-Banking Services between Bank Central Asia and Bank Mandiri Based on Automated Teller Machine (ATM)

Automated Teller Machine (ATM) is a machine where cash withdrawal can be made over the machine without going in to the banking hall. It also sells recharge cards and transfer funds; it can be accessed 24 hours/7 days with account balance enquiry. According to Adeniran (2014, Page 7), among the development in the banking services delivery is the introduction of Automated Teller Machine (ATM) that intends to decongest the banking halls as customers now can go to any nearest ATM outfit to consummate their banking transactions such as: cash withdrawal, cash deposit, bill payments, and transfer of fund between accounts.

The results showed that there is no significant difference on e-Banking services based on Automated Teller Machine (ATM) between Bank Central Asia and Bank Mandiri. It means that Automated Teller Machine (ATM) between Bank Central Asia and Bank Mandiri still have the same or not much different or affected equally. It can be seen, the ATM features between Bank Central Asia and Bank Mandiri have several similar services such as pay bills, cash deposit and others. In addition of the result, the ATM of Bank Central Asia and Bank Mandiri can be easily found in many places in Manado.

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CONCLUSION AND RECOMMENDATION

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Conclusion
1. There is significant difference of e-Banking services between Bank Central Asia and Bank Mandiri in Manado measured by Banking Mobile Application (Mobile Banking, Internet Banking, and SMS Banking).
2. There is no significant difference of e-Banking services between Bank Central Asia and Bank Mandiri in Manado measured by Automated Teller Machine (ATM).

Recommendation
1. As can be seen from the discussion, Bank Central Asia has higher value rather than Bank Mandiri of Banking Mobile Application (Internet Banking, Mobile Banking, and SMS Banking). So, Bank Mandiri should more develop the services based on mobile application to maintain the customer loyalty and to create more customer satisfaction and delight.
2. For the Automated Teller Machine services between Bank Central Asia and Bank Mandiri the result showed that there is no siginifant difference, recommendation for both banks are to keep maintaining the performance of Automated Terller Machine services to create more customer satisfaction, loyalty and delight to use the services.
3. The results of this study can be used as a reference for the development and deepening of marketing management knowledge, especially electronic bank services.

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