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Article

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FINANCIAL TRANSACTIONS THROUGH BANKING AGENCY SELECTIONS IN THAILAND

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Abstract:

This quantitative research is based on the data collected from an online questionnaire completed by a representative sample of 860 respondents; the Discriminant Analysis was used for data analysis and to create the group classification equation. The findings demonstrated that the factors influencing the selection of banking agents include age, career, marital status, savings, frequency of counter service uses, opinion of agent system and overall banking agent. These variables were used to form a model function of group selection. Furthermore, unstandardized discriminant equations were used to predict group membership, with 70.8 percent predicting correctly. Apart from this, our suggestion for future studies is to observe a population differing in age because each person has different opportunities and, as such, a different potential to access the new technology. Since opinions of banking agents played an important role in this study, financial institutions must ensure that the safety policies protecting banking agents' clients are of the same standards as those of the appointing financial institutions.

Keywords:

Financial Transaction, Banking Agent, Agent Selection

JEL Classification: A14, G20, G29

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Citation:

1. Introduction

Technological changes have influenced the banking industry to such an extent that every company is trying to maintain its existing customer base and accelerate the expansion of a new customer base, causing intense competition. Therefore, many banks have developed financial products and services which meet clients' needs and create the best customer satisfaction in order to attract customers leading to decreasing costs. One of the recent reliable technologies which the banks use to connect and service their customers who live far from bank branches is mobile banking or internet banking. The growth of mobile banking has not only increased the number of client accounts but also increased the volume and total value of the software; hence, mobile banking is necessary for continuous improvements in banking services. The changes in user behaviour regarding financial transactions has led many commercial banks to adapt to this change by creating a full range of financial services in every online channel, together with improving the safety of the online system. Nowadays, the number of internet banking users is increasing day-by-day, so this phenomenon has caused many commercial bank branches to close in recent years because the role of the physical branches is reduced and the costs of each branch, such as rental fees, employee salaries, electric bills and other expenses, are increasing. Therefore, it is not worth the investment, especially branches not located in shopping malls since there are only a few clients visiting the banks during business hours. According to the aforementioned reasons, this research is interested in studying the financial transactions achieved through banking agents, which are currently being provided by many providers such as the local commercial banks of Thailand, e.g. Kasikorn Bank, Krung Thai Bank and Bangkok Bank, etc. The aims of this study are to study people's attitudes towards the changes of financial institutions in providing banking services through banking agents, to handle the positive and negative impacts of banking services provided by the banking agents and to apply the findings to implement service improvements and other further applications.

2. Conceptual Framework

Independent Variables are customers' personal information, including gender, age, education, career, monthly income, savings and attitude to banking agents.
Dependent Variable is the awareness and the use of banking agents (e.g. Post Office, 7-Eleven, Boon Term and Term Sa bye) to conduct financial transactions.

3. Terms and Definitions

Banking agent: This is a juristic person who is assigned by a financial institution (Bank of Thailand, n.d.) to act on behalf of a bank to provide financial services to customers under the Bank of Thailand's guidelines and conditions of approval.

Post office: This is a banking agent approved by six or seven local banks that are situated in every local administrative government, particularly in rural areas. (Thairathonline, 2011)There are 1,700 branches which implement bank@post services such as opening new accounts, withdrawals, deposits and money transfers.

7- Eleven: Convenience stores like 7-Eleven)Sanguanprasit, 2018) can provide financial services because there are counter services staffed by banking agents (the representatives of the bank) where the clients are able to withdraw, deposit and transfer money through 13,000 available counters.

Boon Term: Forth Smart Service Public Company Limited has the largest network in Thailand through "Boon Term Online Top-Up Machine" which is spread over 130,000 units nationwide (Boonterm, 2015); therefore, Boon Term is a convenient method which achieves the demands

of bank customers who want to access the banking services, including deposits and money transfer services, 24/7.

Term Sa bye: The highlight of this online top-up cabinet (TermSabyeplus, n.d.) is kiosks prepaid with different functions and services. These top-up cabinets are installed in front of many convenience stores and are appointed by two local banks for transferring money only.

4. Methodology

The population in this study is a group of people who have often used the bank counter services and the samples are selected by the non-probability sampling technique called the convenience selection. The data was collected via an online questionnaire which was completed perfectly and subsequently checked to ensure the information was accurate. The gathered data was then analysed by discriminant analysis methods to identify a set of prediction equations based on the independent variables used to classify individuals into groups (Bruin, J. 2006). There are two possible objectives in using the discriminant analysis: (1) finding a predictive equation to classify new individuals and (2) interpreting the predictive equation to better understand the relationships that may exist among the variables. In discriminant analyses, the dependent variable must be a "categorical variable". The values of a categorical variable serve only to named groups. This means a subject can belong to one and only one of the groups indicated by the categorical variable.

5. Results

The results from the 860 respondents who answered the questions regarding the awareness and use of four bank agents are shown in the following tables:

Table 1: A post office as a banking agent

Awareness and/or Use	Frequency	Percent
Not known about a banking agent	96	11.2
Known but not used	389	45.2
Known and used	375	43.6
Total	860	100.0

Table 1 reveals that 45.2 per cent of people knew about, but had not used, a post office as a banking agent, while 45.2 per cent of people knew about and had used a post office as a banking agent.

Table 2: A 7-Eleven (Counter Service) as a banking agent

Awareness and/or Use	Frequency	Percent
Not known about a banking agent	45	5.2
Known but not used	237	27.6
Known and used	578	67.2
Total	860	100.0

Table 2 shows that the percentage of respondents who knew about and used a 7-Eleven (Counter Service) as a banking agent accounts for 67.2 per cent, whereas 27.6 percent of people knew about but had not used a Counter Service as a banking agent.

Table 3: A Boon Term as a banking agent

Awareness and/or Use	Frequency	Percent
Not known about a banking agent	111	12.9
Known but not used	378	45.0
Known and used	362	42.1
Total	860	100.0

Table 3 illustrates the percentage of respondents who had known about but not used a Boon Term as a banking agent accounts for 45.0 per cent, while 42.1 per cent of people knew about and had used a Boon Term as a banking agent.

Table 4: A Term Sa Bye as a banking agent

Awareness and/or Use	Frequency	Percent
Not known about a banking agent	99	11.5
Known but not used	482	56.0
Known and used	279	32.4
Total	860	100.0

Table 4 indicates that the percentage of respondents who had known about but not used a Term Sa Bye as a banking agent amounted to 56.0 per cent, while 32.4 percent of people had known about and used a Term Sa Bye as a banking agent.

As this research used discriminant analysis to test its hypotheses regarding the classification of four banking agents, including post office, 7-Eleven, Boon Term and Term sa bye, it is necessary to screen respondents who used only one service. The dependent variable stated that respondents must be a member of only one group, so the sample who met the criterion for the analysis totalled 480 users, meaning the rest used more than one banking agent. The findings are shown in the following table.

Table 5: Banking agent (meet criterion for analysis)

Banking agents	Frequency	Percent
Post office	48	10.0
7-Eleven	296	61.7
Boon term	58	12.1
Term-sa-bye	78	16.3
Total	480	100.0

In Table 5, the findings show that 7-Eleven is the most popular banking agent, accounting for 61.7 percent of users, followed by Term-sa-bye, Boon term and post office, accounting for 16.3 percent, 16.3 percent and 10.0 percent, respectively.

In weighting personal factors to be numeric independent variables in the hypotheses, the deployment for scoring can be shown in the following table:

Table 6: Weighting personal factors by Chi-square value

Personal Data	Chi-square Value	Weighted Score
Age	307	30
Education	65	6
Status	101	10
Income	128	13
Savings	216	21
Career	207	20
Total	1024	100

From Table 6, the proportion of personal factors weighting values and the total Chi-square value indicates that the highest points are age, amounting to (30), followed by savings (21), career (20), income (13), status (10) and education (6).

Table 7: Personal factors scoring allocation

AGE	Frequency	Percent	Weight
Under 20 years	144	30.0	8.99
20-29 years	136	28.3	8.48
30-39 years	60	12.5	3.75
40-49 years	88	18.3	5.49
50 years and over	52	10.8	3.24
Total	480	100.0	30 points
EDUCATION	Frequency	Percent	Weight
Undergraduate	222	46.3	2.94
Bachelor's degree	212	44.2	2.81
Master's or higher	46	9.6	0.61
Total	480	100.0	6 points
STATUS	Frequency	Percent	Weight
Single	358	74.6	7.36
Married	120	25.0	2.47
Widowed/divorced/separated	2	.4	0.04
Total	480	100.0	10 points
MONTHLY INCOME	Frequency	Percent	Weight
Under 10,000 baht	172	35.8	4.475

	Frequency	Percent	Weight
10,001-20,000 baht	186	38.8	4.85
20,001-30,000 baht	98	20.4	2.55
30001-40000 baht	24	5.0	0.625
Total	480	100.0	13 points
SAVINGS PER MONTH	Frequency	Percent	Weight
3000 baht and under	206	42.9	9.05
3001-6000 baht	110	22.9	4.83
6000-12000 Baht	122	25.4	5.36
More than 12000 baht	42	8.8	1.86
Total	480	100.0	21 points
CAREER	Frequency	Percent	Weight
Government officers/employees of state enterprises	24	5.0	1.01
Company employees/contractors	140	29.2	5.90
Business owner/self-employed	48	10.0	2.02
Tenant/freelancer	26	5.4	1.09
Student	242	50.4	10.19
Total	480	100.0	20 points

The independent variables for discriminant analysis are assumed to have linear relations with the independent variables. If one of the independent variables has a high correlation with another or is a function (e.g., the sum) of other independents, the tolerance value for that variable will approach 0 and the matrix will not have a unique discriminant solution. There must also be low multicollinearity of the independents, as shown in the following table:

Table 8: Test of collinearity between independent variables

Independent Variables	Collinearity Statistics	
	Tolerance	VIF
Frequency of counter use	.439	2.276
Opinion of agent system	.533	1.877
Opinion of overall bank agent	.779	1.284
Age	.171	5.859
Education	.335	2.986
Marital Status	.385	2.594
Income	.530	1.888
Savings	.351	2.848
Career	.315	3.173

Table 8 demonstrates that the variance inflation factor (VIF) values are, broadly, not above 5, with the exception of age, which has a tolerance value close to 0. The VIF values of more than 4 or 5 are sometimes regarded as being moderate to high, with values of 10 or more being regarded as very high (Bock, 2018). This means that the independent variables have no collinearity problems; however, age may cause a slight collinearity impact to this study, although it would not be problematic.

Discriminant analysis is highly sensitive to the heterogeneity of variance-covariance matrices among independent mean groups; therefore, before accepting the final conclusions in a critical study, the equality of group means need to be tested as represented in the following table.

Table 9: Tests of equality of group means

Independent Variables	Wilks' Lambda	F	df1	df2	Sig.
Frequency of counter use	.929	11.573	3	452	.000
Opinion of agent system	.737	53.700	3	452	.000
Opinion of overall bank agent	.971	4.470	3	452	.004
Age	.567	114.866	3	452	.000
Education	.961	6.139	3	452	.000
Marital Status	.765	46.253	3	452	.000
Income	.851	26.343	3	452	.000
Savings	.807	36.146	3	452	.000
Career	.712	60.952	3	452	.000

Table 9 conveys that all independent variable group means are different at the significance level of 0.05. This is not in line with previous assumptions, or else there is a violation of the assumption. Furthermore, this also assumes that minor deviations are not important and will not have a problematic effect on the prediction of discriminant function.

Table 10: Variables in the discriminant analysis

Independent Variables	Tolerance	F to Remove	Wilks' Lambda
Age	.367	29.072	.417
Opinion of agent system	.686	25.557	.409
Career	.423	10.479	.373
Saving	.436	9.559	.371
Marital Status	.517	13.320	.380
Frequency in using counters	.720	9.887	.372
Opinion of overall bank agent	.822	2.571	.355

The findings in Table 10 insignificant two of the independent variables, education and income, from being variables in the analysis; the other seven variables were remained in the discriminant analysis.

Table 11: Wilks' Lambda test of coefficient significance

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 3	.349	473.411	21	.000
2 through 3	.741	134.584	12	.000
3	.950	23.176	5	.000

From Table 11, Wilks' Lambda indicates the significance of the discriminant function, as shown in the following table.

Table 12: Discriminant function coefficients

Independent Variables	Function		
	1	2	3
Frequency in counter using	-.064	-.387	.230
Opinion of agent's system	-.732	1.689	-1.516
Opinion of bank agent	-.315	-.130	.544
Age	.445	.447	-.557
Marital Status	.217	.233	-.376
Savings	-.151	.056	.660
Career	.068	-.267	.217
(Constant)	-.409	-7.819	3.291

Unstandardised coefficients

From Table 12, the discriminant function coefficients illustrate the following three unstandardised equations:

D_1= -.409+.068 Career-.151 Saving +.217 Marital Status+.445Age -.315 Opinion to bank agent-.732 Opinion to agent's system-.064 Frequency in counter using

D_2= -7.819-.267 Career+.056 Savings +.233 Marital Status+.447Age -.130 Opinion to bank agent1.689 Opinion to agent's system-.387 Frequency in counter

D_3= 3.291+.217 Career+.660Savings -.376 Marital Status-.557Age +.544 Opinion to bank agent-1.516 Opinion to agent's system+.230 Frequency in counter

Table 13: Classification results (a)

Original (Count)	Predicted Group Membership				Total
	Post Office	7-Eleven	Boon Term	Term Sa Bye	
Post Office	24(50.0%)	0(0.0%)	24(50.0%)	0(0.0%)	48(100%)
7-Eleven	18(6.1%)	230(77.7%)	30(10.1%)	18(6.1%)	296(100%)
Boon Term	8 (13.8%)	0(0.0%)	50(86.2%)	0(0.0%)	58(100%)
Term Sa Bye	6(7.7%)	0(0.0%)	36(46.2%)	36(46.2%)	78(100%)

(a) 70.8 of original grouped cases correctly classified.

From Table 13, we can see that the discriminant unstandardised equations detailed in Table 12 correctly predict 70.8 per cent of group membership.

Discussions and Conclusions

The findings reveal that the age, marital status, savings, career, frequency of counter use, opinion of agent system and opinion of bank agent factors have an influence on the selection of financial transactions through banking agents. The characteristics of the customers (Malek et al., 2017) who use the services are different. Career and age group affect the use of a bank representative in a shop, and this enables bank customers to conveniently access local banking services. This finding is similar to the research results showing that career impacts banking agent selection; however, this study also focuses on marital status and savings as important factors in choosing a bank agency. Users with low incomes can make transactions through bank representatives without having to waste time and travel expenses even though this investigation found that income does not affect the use of a bank agency, although savings does.

According to the opinion of Sandec Wycliffe (2012 refer to Mwende et al., 2015), banking agents and systems make banking more convenient for customers, particularly regarding traveling, as when a large number of customers use the services there can be long waiting times. Additionally, customers who use the services must also consider transportation costs. However, since 2010, significant service improvements have been made in the banking sector by launching a bank representative. Financial service delivery channels are an innovation allowing people in remote areas to access financial services. Agent banks could reduce the cost of delivering financial services to people in remote locations. One of the problems regarding access to financial services is that banks are not necessarily located near the customers; therefore, the customers need to travel long distances to access banking services and people living in remote areas outside the banking system are unable to access services. The solution is taking advantage of third-party agency networks as a banking agent, reducing the cost of transaction management and being available for services such as cash transactions and account opening (Lyman, et al, 2008)

According to the conclusion of Ivantury and Timothy (2006), bank customers receive three benefits: a reduction in transaction costs, longer opening hours and shorter distances to banks, allowing people in remote areas to use the services. In order to increase access to banking services and to define the bank products offered by the agent banks, it is acknowledged that most respondents (86%) strongly agree that the bank agency is more cost-effective in providing banking services to customers and this saves time because customers do not need to travel long distances (Mwende et al., 2015)

This study's findings relate to Saeju (2018), which explain that appointing convenience stores as banking agents is highly beneficial for clients residing in remote areas because the clients could access banking activities at the closest banking agent store; therefore, they do not need to visit distant bank branches resulting in the decreasing cost of establishing new branches and cash delivery. In addition, Sajjapong (2018) state that even though the aim of appointing the banking agents is to provide smooth and convenient services for the clients, its processes have to be conducted under the strict guidelines and conditions of the Bank of Thailand, so the official banking agents are the ones who have got the perfect qualifications to meet the requirements of the banking agent guidelines.

Recommendations

Policy recommendations**:** Since opinions of the banking agent play an important role in this study, financial institutions must ensure that the safety policies of the banking agent for their clients are of the same standards as those of the appointing financial institutions.

Academic recommendations: Further studies are recommended to observe the population in different age groups, particularly elders because this generation tends to be ignored and so they might struggle in a digital world. Since the acceptance of financial transactions through banking agents could grow in the older population, it is assumed that there might be an increase in senior users in this banking method.

Acknowledgment

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