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Integrated Marketing Communications for Fintech Products: Empirical Study on Agribank eMobile Banking by VNPAY

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Abstract. The main research purpose of this article is to empirically test the implementation of Integrated Marketing Communication (IMC) tools of VNPAY for eMobile banking as a digital banking product in Agribank Vietnam. From that assessment, business should have a better grasp of the effectiveness of their fintech IMC implementation through a great customer understanding. Having reviewed the major contents of previously published works globally, the authors form an analysis framework for regression and CB-SEM examinations. The regression model has come with the CE variable as the dependent one (trend in using Agribank eMobile Banking application), and other 5 groups of independent variables. The SEM model, on the other hand, has been formed with 7 unobservable latent variables and 35 indicators. The paper employs inductive reasoning. The major method conducted is the mixed one (qualitative research for preliminary study and quantitative research for formal data processing). The IMC campaigns of VNPAY have been approached through the use of Multivariate Regression analysis, along with CB-SEM analysis with the aids of JASP and Lavaan syntax. In general, the research has successfully found a connection between the trends of using an eBanking fintech software of Vietnamese customers and integrated marketing communication efforts of the application developer. In addition, the study also helps confirm the theory of Marketing through profoundly understanding customers to trigger their interests towards digital products in the financial - banking sector. Its practical contributions relate to better understanding the effectiveness of IMC tools for digital space, digital products, and digital services; clarifying the digital behavior of customers towards digital banking products; and providing good reference conclusions for digital banking application developers

about the IMC operational development model. The major value of the research lies in the areas of management science, marketing management for fintechs and digital customer behavior.

Keywords: eMobile banking, fintech product, omni-channel marketing, VNPay, Vietnam

1. Introduction

Cashless payment has been an investment focus of the developed countries because the modern payment technologies and processes offer distinctive advantages (Routray, S. et al., 2019). A cashless society will have to ensure that transactions are conducted through the digital space with electronic banking applications and e-wallets on people's smartphones (Blazenka Knezevic et al., 2021). Therefore, this is a good opportunity for developers of electronic financial applications to serve the derivative needs that any finance - banking institutions have to fulfill to meet the demands of their increasingly digitalized customer community.

For Vietnam, it is crucial to examine the cashless payment market of the country. According to a report of the State Bank of Vietnam in 2019, the country's total non-cash payment volume is among the lowest in the ASEAN region (only 4.9%), whereas Thailand has the proportion of 59.7%, and Malaysia of up to 89% (VA, 2019). However, though nearly all of the Vietnamese people have already owned their bank account, the total transaction value via the Internet and smartphones is only 1.76 trillion VND (around 76 million USD) by the end of 2019. In the first quarter of 2020, with the outbreak of the COVID-19 pandemic, the value of online transactions has increased remarkably by over 21% over the same period in 2019 (Khue Nguyen, 2020). The data in Figure 1 and Figure 2 have also shown that nearly 65% of the population are in the most innovative and developing age groups, which are highly affected by digital technology. These age groups have also become an important market with the potential for the development of non-cash payment in Vietnam market. This really created a good chance for application developers.

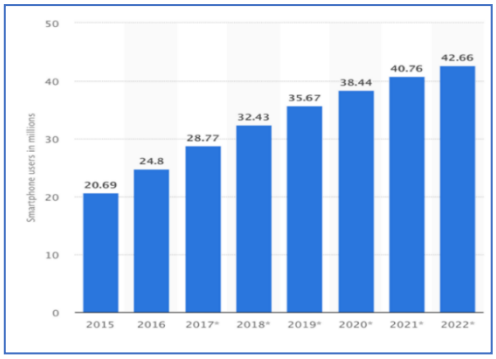


Fig. 1: Smartphone ownership in Vietnam.
Source: J. Degenhard (2021)

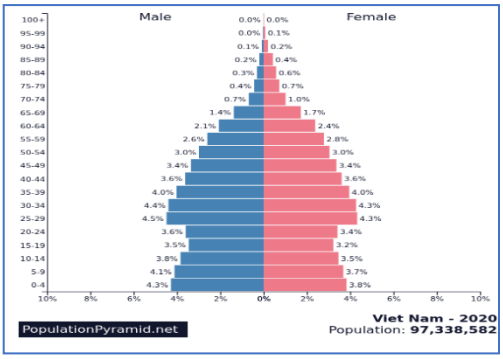


Fig. 2: Population ratio pyramid in Vietnam.
Source: UN (2020)

In that context, VNPAY's Board of Management has realized that it is necessary to take timely actions to promote cashless payment and its corresponding applications to its business partners, especially the banks, which introduce customers to a new habit with a safer and more secure transactional opportunity. Therefore, new technologies have been developed to meet this e-banking demand. The technologies

such as Quick Response Code (QR Code), Near Field Communication (NFC), Card Information Digitization (Tokenization), Authentication Fingerprint, Face Recognition, One-Time Password authentication (OTP), Artificial Intelligence (AI) to detect fraud have all been integrated to create a more powerful payment system of VNPAY (Lin, C., 2017). In addition to strong pressures of competition in finance-banking application market in Vietnam, VNPAY has been implementing IMC campaigns to create a habit of using electronic payments via banking applications to its partnered banks' registered customers. This, in turn, increases the number of newly registered customers.

However, the current Marketing campaigns of the Company have been invested with huge budgets, yet without an in-depth analysis of customer personas, so it is a vexing problem for VNPAY to review scientifically and systematically. It also poses a large research gap that needs to be filled for the specific context of developing fintech applications in Vietnam as well as evaluating the effectiveness of IMC campaigns and strategies of a digital banking application like in VNPAY.

2. Literature Review

2.1. Marketing and digital marketing

The term Marketing is still a concept that has not been fully defined and understood by business managers. Some consider Marketing to be sales, advertising or market research, while all of which are just components of Marketing. Marketing includes a series of activities that are not productive but actually contribute to and create value to goods and services. The goal of Marketing is to help businesses maximize profits through the value exchange process to satisfy market needs by a strategy of specific actions (Kevin Lane Keller, Philip Kotler, 2015). Peter Drucker has mentioned that the ultimate goal of Marketing is to make selling redundant by attracting customers naturally to purchase a product or to push a product to customers (Peter F. Drucker, 1973). Sales and advertising are only not just parts of a broader Marketing mix, they are also a set of Marketing tools that work together to meet customer needs and build customer long-term relationships.

From a macro-economic perspective, Marketing is a social and administrative process by which individuals and/or organizations obtain what they want through creating and exchanging value with the others. In a business context, Marketing involves building profitable relationships based on the exchange of value with customers. Therefore, Marketing can be defined as a process, in which a business creates value for its customers, builds relationships with them to gain value in return from them (Philip T. Kotler, Gary Armstrong, 2017). According to the definition of the American Marketing Association, Marketing is all of the activities ranging from the production of products, communications, and distribution to the exchange of customer value with partners and with the whole society (AMA, 2017).

As for Digital Marketing, it is widely known as the use of digital media channels or social networks to advertise brands to reach a variety of customers. This type of Marketing is deployed in social networks, searching engines, the Internet, mobile devices or other digital channels. Digital Marketing needs new and modern ways of reaching customers and understanding their digital habits (AMA, 2017). Undeniably, Digital Marketing has changed the way business units communicate with customers. Moreover, Digital Marketing management usually utilizes 5 major digital platforms, where businesses deliver messages to their online target customers (Dave Chaffey, Fiona Ellis-Chadwick, 2019). Firstly, the digital device platform includes digital devices, such as smartphones, tablets, laptops, and vending machines. Second, social networking platform comprises several dotcom platforms, such as Facebook, Instagram, Google, and Twitter. Third, the media platform includes digital media like email, SMS messaging, and searching engines. Fourth, the data platform includes digital data with extensively confidential information about customers. Fifth, the technology platform includes digital technologies for creating different customer experiences from the website, mobile applications, in-store arrangements or email campaigns.

The concept of Marketing has been introduced and developed from traditional business models to digital business models with the sole goal of serving the right needs of the online customers to increase good profits. Digital Marketing does not replace traditional Marketing. On the contrary, these two concepts successively support each other throughout the customer mixed-mode (online and offline) journey (Vida Davidavičienė et al., 2020). In the early stages, traditional Marketing played a vital role in creating initial attention and interest with customers. At the interaction stage, customers often want to get closer to the business. This is the time when Digital Marketing performs its roles. The most important roles among those are to drive actions and to encourage customers to stay with the brand longer. Fortunately, Digital Marketing effectiveness is more measurable than traditional Marketing (Philip Kotler et al., 2017).

2.2. Extended marketing mix

Before deciding on the tools of Marketing Mix, the company is to identify the target market and the positioning of the product and brand in its Marketing strategy. Experienced marketers normally think about the long-term effect, which means choosing a set of Marketing tools that helps a business nurture its lifetime customer base and increase future sales through a higher brand equity. To do so, marketers need data processing skills, collaboration skills, and relationship building skills. All of those help in deciding a more effective Marketing Mix. Boom and Bitner have offered an extended Marketing mix, especially for the service Marketing, by adding a people element, a process element, and a physical evidence element to form 7Ps (Dave

Chaffey, PR Smith, 2017). It is commonly acceptable to classify e-commerce and digital communication channels into this class of service.

The online world, in its turn, allows businesses to create a huge variety of products and services (Product) to serve their wide range of customers in all different walks of life. The digital communication means, at first, help inform customers about the core value of the products and its outstanding features from others in the comparative sense. Secondly, the Internet has drastically changed the price system of the product. The pricing strategy (Price) nowadays has been put under a tremendous pressure as the price structure and price selection have become more and more complex. Prices will have to be flexibly adjusted according to customer psychology because customers are able to search for the products with the lowest prices through searching engines. The distribution system (Place) is another important factor in the successful Marketing of any company. Whether a business has an ideal product or service, which has been offered online or offline, the rule remains the same. It is an ever-lasting demand in enhancing the appearance of products with the target customers at the right customer touchpoint. Thus, marketers today need to constantly think about an omni-channel distribution to ensure that the product or service is easily available to a wide range of target customers, for them to take actions at any places (Jaas, A., 2022). Digital media (Promotion) are facing new challenges, such as integration, creativity, globalization and investment resources. To overcome the obstacles and noises, they have been making use of most of the advantages, such as dynamism and carefulness, to help build trusting relationships between brands and loyal customers.

As for the human factor (People), employees are certainly the decisive determinant of the businesses' success. In fact, a great service before or even after a sale requires being provided with a love for the product or service by a well-trained staff. Automated services are still great in Digital Marketing concept. But the human element can hardly be underrated. The coordinated activities between machines and humans need to be balanced in service supply. However, it is also important to note that recruiting, training, motivating staff to ensure their ability in creating great customer experiences are always costly. Customers today seek for more compelling reasons (Physical Evidence) to purchase products or services from the websites, applications or the emails they receive. The design, layout or the professionalism of the contents will be judged by comments, reviews and score rating from the customer pool. In one hand, the reputation of a business can be rooted from security technologies, awards, partner lists and many other proofs that the company can provide. Offline activities, on the other hand, will be evaluated by customers through the physical settings, delivery vehicles, and uniforms of the staff. Both physical and digital evidences need to be managed rigorously to gain trust from the market. Last but not least, a good servicing process that may bring customers into a once-in-a-life-time journey could create strong competitive advantages. There have been many

practical cases where poor processes have resulted in reduced revenue and lowered brand impacts. The final P in the extended Marketing Mix, Process, helps liberate the customers from the agony they might have with the product, leaving a huge impact on the image of the organization and the business (Dave Chaffey, PR Smith, 2017).

2.3. Integrated marketing communications in banking sector

The concept of IMC refers to the combination of Marketing and Communications tools that a business utilizes in a certain period of time for broadcasting information and building good image of the product or service. Most businesses apply a dynamic promotion mix that really affects the customers in the market, but there are also some that rely mainly on a single promotion tool. In the new context of information clustering, modern businesses often use an IMC system to convey their valuable messages to customers, thereby convincing them to buy more and to stay longer (Kenneth E. Clow, Donald Baack, 2018). The five pillars of IMC tools include: Advertising, Sales Promotion, Public Relation, Personal Selling and Direct Marketing.

The American Association of Advertising Agencies have coined one of the first definitions of IMC: Integrated media Marketing is a new approach in Marketing communications that helps organization achieve its Marketing objectives through the effective and collaborative use of complementary forms of communication. Recognition of the "integrated" value of communication tools such as Advertising, Public Relation, Personal Selling, Sales Promotion and Direct Marketing in a comprehensive and strategic plan to deliver information clearly, and to maximum communicative effects (Belch George, Belch Michael, 2021). The composite elements of a Marketing and Communications not only work together to produce consistent results, but also help businesses define efficient communication methods and build relationships with customers, who, in their turns, reciprocate revenue to the business voluntarily. IMC, in this sense, is a strategic business process used to plan, develop, execute, and evaluate compelling, measurable, and coordinated brand communications programs with integrated impacts on customers, employees and other stakeholders, inside and outside the businesses. The purpose of IMC is not only to increase revenue in the short term, but also to build brands and increase loyal stakeholder value in the long term (Robyn Blakeman, 2018).

According to Philip Kotler and Gary Armstrong, IMC is a synchronous and unified combination of the Marketing and Communication tool sets to convey the message of core values to customers to convince them to buy within a trustworthy relationship with the merchants. The strong impacts of the IMC consist of three kinds of changes: in consumer behavior, in Marketing strategies and in Communication technology (Philip T. Kotler, Gary Armstrong, 2017). In that sense, the trend of mobile banking has completely revolutionized the way customers use banking and financial services (Shu, Z. et al, 2020). Today, customers can check their account

balances, transfer money, and pay for almost any kinds of services on their mobile devices. Being able to do all of the financial errands on such devices, customers are satisfied with the convenience within just a few simple steps for solving their life issues (Justyna Kozlowska, 2016). Once logged into their account, customers will have a wide selection of features. The customer's transactional portal has been already capable of handling most financial services with no difference from when the customers have to sit across and meet several bank staff at the branches. The applications on the smartphone have been widely popularized, changing behaviors such as going to the counter or calling the support hotlines. Financial processing requirements are now in the palm of customer hands wherever they are (Luigi Wewege, Michael C. Thomsett, 2020).

The skyrocketing number of smartphone users has prompted a digital bank to research and develop digital products to serve and retain its loyal customers. Digital banking is another state-of-the-art concept which depicts the fact that a bank, staying mostly online, provides services (online transactions, checking bank accounts and browsing payment history) on several Internet platforms. Digital banking activities revolve around four main areas: deposit and lending activities, brokerage activities, payment operations and exclusive business (Michiel van den Broek, 2014). Thus, the implementation plan of IMC for digitized products in the banking industry is basically and completely exploitable based on the basic theory of IMC. However, the characteristics of the banking industry have uniquely sensitive points, compared to other service industries, so the conveyed messages or the choices of communication channels will have to be carefully considered, especially in a large bank or a giant state-owned bank.

The IMC strategy of the banks needs to solve difficult problems that are typical to the industry. First, banks are having a rather poor brand identity among the cluster of information regarding banking and finance. Thus, it is difficult for most people to differentiate between them. Second, the specific services of the bank have not been properly understood by most customers It takes time to get a bank customer to understand without consulting the bank staff. This hinders the process of automatic banking transaction proliferation. Third, banks can easily find that most of their communication media refer to "money" contents but lack the considerations on what customers really care about, such as safety, security, convenience, or saving time and costs. This normally ruins the experiences they have.

Today, banks are trying very hard to become more personalized and friendly by creating a more powerful informatic system that shine in front of customers (Lin-Lin Zhang & Ha-Kyun Kim, 2020). These efforts stem from three backlog reasons in the past. First, banks often give an abstract and vague message, then it is hard for customers to understand the bank's products after receiving it. The banks, for that reason, need to contemplate about the benefits that their customers can receive from the promotional campaigns. Second, banks normally are having many similar

products, from savings products to credit and bancassurance, so customers always need a consultant or financial advisor by their side when making their financial decisions. Third, banks are very different from retail stores, while they are the place where customers listen to not only financial advices but also financial safety measures, which require a great customer understanding (Chowdhury, M. et al. al, 2021). There are two major types of communication that are suitable for the banking industry. They are organizational advertising and brand advertising. Both types have to consider the following issues: the Marketing budget the segmentation of target audiences, and the content-rich message that can stimulate the desires from its target audiences.

3. Methodology

In this study, the authors have carried out two main steps: preliminary research and formal research. The basic content of the research revolves around the Agribank eMobile Banking application and the effectiveness of IMC tools with current potential customers. Preliminary research is carried out through qualitative approach. This method is used to discover, adjust and supplement observed variables used to measure research concepts. Qualitative research is also carried out through focus group discussion technique. Afterward, formal research is carried out by quantitative research approach. This method is conducted through interviewing consumers who have already owned Agribank bank accounts by detailed questionnaires. The results are used to verify the analysis framework as well as the theoretical model chosen.

Preliminary research: the authors used the focus group discussion method because of its suitability to adjust and supplement the measurement scale to help complete the survey questionnaire with a denominator. The purpose of the focus group discussion is to explore and calibrate the measurement scales for tools in IMC. This is the premise for the quantitative research process. Specifically, the questionnaire was prepared in advance by the authors, commencing with the introduction of the author group and the reasons for organizing the group discussion. Discussion participants will have to think about and contribute to the criteria that make IMC tools effective. The authors, then, organize focus group discussions and interviews with 11 participants, including 4 men and 7 women, aged between 25 and 40. All are professionals and communicators at VNPAY Company, having an Agribank account and living in Hanoi.

Scale in the study: based on the theory of IMC in the Vietnamese context, the adjustment has been made to be fitted with the consumers, based on the results of qualitative research and focus group discussions. Accordingly, the scales are adjusted and supplemented based on the concluding results of both men and women. The author team has designed survey questions on a 5-level Likert scale, allowing customer rating on each question. The authors, then, rely on each average value for the Interval Scale to evaluate the effectiveness of IMC tools integrated in the Marketing campaigns.

Formal research: the authors have chosen Agribank eMobile Banking application to conduct the survey, which focuses on the potential customers as the individuals who have already owned an Agribank accounts. Therefore, the selection results are based on surveys conducted at Agribank branches in Hanoi.

Sample size: Exploratory factor analysis (EFA) needs to collect data sets with at least five samples on one observed variable, $N \geq 5*x$ (where N is sample size, x is total number of observed variables) (Joseph F. Hair Jr. et al, 2016). In addition, to conduct regression analysis, the sample size needs to be ensured according to the formula $n \geq 50 + 8*p$; Where:

- n: sample size

- p: number of independent variables of the model

The sample size in this study is based on the formula $N \geq 5*x$. Accordingly, with 32 observed variables (for EFA and Regression), the minimum sample size in this study are 32 x 5 = 160 samples. In order to reduce sampling error, this survey is to collect as much research data as possible. Therefore, in this study, the sample size should be more than 200. Sampling has been carried out according to the convenience method (non-probability) by direct interviewing with customers through questionnaires. The survey was conducted online within the territory of Vietnam at the end of 2021. Specifically, the number of research samples in this paper is 248.

Descriptive analysis: used to analyze the demographic attributes of the research samples such as age, occupation, monthly income. In addition, using this analyzing approach for the samples represents two groups of basic statistical parameters, namely concentration and dispersion. The concentration level is expressed through the parameters: mean, median, and mode. The dispersion level is, otherwise, expressed through the parameters: variance or standard deviation, and the range of variation.

Verification and evaluation of the scale: There is a need to check the reliability and validity of the scale. Based on the reliability coefficient (Cronbach's Alpha), the item-total correlation helps eliminate the observed variables that do not contribute to the description of the concept to be measured. And, the authors will rely on the reliability coefficients if excluded (Cronbach's Alpha if Item deleted) to evaluate the removal of the observed variable to improve the Cronbach's Alpha. The concept is then to be measured and fitted with EFA method. Criteria, used when making scale reliability assessment, can be excluded from the model with the observed variables which have Item-total correlation coefficient of less than 0.3. The larger the Alpha coefficient is, the higher the internal consistency. It is also the standard for choosing the scale when the Cronbach Alpha > 0.6 (David J Ketchen, Donald D Bergh, 2007).

Exploratory factor analysis: After removing the variables that do not ensure reliability through Cronbach's Alpha analysis, the method of factor analysis has been used to determine the convergent validity, discriminant validity and to reduce the

number of estimated parameters by group of variables. In fact, in order for the scale to reach convergent value, the single correlation coefficient between variables and factors (factor loading) must be greater than or equal to 0.5 to be of practical significance. To achieve discriminant validity, the difference between the factors must be greater than or equal to 0.3 (Joseph F. Hair Jr. et al, 2016). However, it is worthwhile to consider the intrinsic value before making a decision to remove or not to remove a measured variable. The number of factors was determined based on the Eigenvalue, representing the variation explained by each factor. The number of factors is determined in the factor with the minimum Eigenvalue of 1, while the factors with the Eigenvalue of less than 1 will be excluded from the model (Kyriazos, T., 2018). Variance explained criteria: the total variance extracted must reach 50% or more; that is, the common part must be larger than the particular part and the error (from 60% or more is considered good).

Correlation analysis: to test the linear correlation between the variables in the model, between the dependent variable and each independent variable, and between the independent variables. Before conducting regression analysis, it is important to perform the correlation analysis. Two variables with highest correlation coefficient among all: these two have a fairly close relationship (usually the intermediate variable and the dependent variable). The authors use the Pearson correlation coefficient to quantify the linear relationship between quantitative variables. The closer the absolute value of Pearson's coefficient is to 1, the stronger the linear correlation between these two variables. In the research model, it is expected that there is a tight linear correlation between the dependent variable and the independent variables.

+ Sig < 0.05: variables are correlated with each other and are of statistical significance.

+ R < 0: negative correlation, R>0: positive correlation.

+ $|R| \rightarrow 1$: the close correlation

Multiple regression analysis: After completing the analysis and evaluation of the reliability of the scale and testing the conceptual validity of the scale, the variables that do not guarantee the convergent validity are to be excluded from the model until the parameters are grouped by variables. The determination of the relationship between these groups of variables as well as the relationship between the independent variables (component factors) and the group of dependent variables in the research model is done by analytical multiple regression method. The value of the new variable in the research model is the average value of the observed components of that variable. And, the value of the components is automatically calculated from the weighted average of the observed standardized variables.

The initial regression model has the following form: $Y = \beta_0 + \sum n_i=1 \beta_1 X_i + Ɛ$, where:

β_0: Origin coordinate.

β_1: The slope corresponding to the X_i explanatory variables.

Ɛ: error.

Hypothesis testing: assessing the fit of the regression model: R^2, and Adjusted R^2; Hypothesis testing the fit of the model; Hypothesis testing the significance of regression coefficients; Determining the influence levels of factors affecting the Trend of installing and using Agribank eMobile Banking application (CE). The factor with a larger β coefficient has a higher influence than other factors in the research model. R^2 is the rate of change of the dependent variable, explained by all the independent variables ($R^2 \geq 0.25$: fairly close correlation). Adjusted R^2 is the independent variable that explains how many % of the variance of the dependent variable. The value Sig. < 0.05 shows that the variables included are statistically significant at the 5% level of significance. Therefore, the independent variables in the model have a relationship with the dependent variable. If the VIF of any independent variable is >10, then the variable has almost no value to explain the variation of Y in the multiple regression model. In normal practice, if VIF > 2, care should be taken in interpreting the regression weights.

The following research hypotheses are, then, put forward:

H1: The more effective that Personal Selling tools are combined with Media Advertising on television, the more possible the trend of installing and using Agribank eMobile Banking application.

H2: As the effectiveness of Direct Marketing tools increases, the trend of installing and using Agribank eMobile Banking application also increases.

H3: As the effectiveness of the Advertising tools increases, the trend of installing and using Agribank eMobile Banking application also increases.

H4: As the effectiveness of the Promotion tools increases, the trend of installing and using Agribank eMobile Banking application also increases.

H5: As the effectiveness of the Public Relation tools increases, the trend of installing and using Agribank eMobile Banking application also increases.

From the results of descriptive analysis, correlation analysis and regression analysis, the authors will describe the potential customers, the effectiveness of the current Marketing strategy (IMC) and offer solutions to the Company's IMC activities for Agribank eMobile Banking application.

In order to have a broader perspective and a more thorough evaluation in the research, the path diagram method through using the SEM model has been added with the support of JASP 16.3 and Lavaan syntax software. By checking the heterogeneity, validity (convergence, structure, discriminance) and the reliability of the formed SEM model, the study will access the appropriateness of the result model, which has been formed to measure the impact, relationship and correlation between latent variables and observed variables. Specifically, the latent variables are: CE11 (the trend of using

Agribank eMobile Banking software from Advertising), CE22 (the trend coming from Direct Marketing), CE33 (the trend coming from Personal Selling), CE44 (trends coming from Promotions), CE55 (trends coming from Public Relation), GCU (Great Customer Understanding, combining influences from CE1 to CE5), BBA (Bank Brand Awareness, combining influences from the observed variables of Sex, Age and Income).

4. Research Findings and Discussion

4.1. Assessing the status of IMC strategy of Agribank eMobile Banking application

Budgeting

After interviewing 11 experts at VNPay and 11 staff who are implementing IMC strategies and campaigns of Agribank eMobile Banking application, the respondents have all agreed that the IMC strategy for Agribank eMobile Banking application should be budgeted according to the percentage of revenue that the Board of Management determines and desires. More specifically, VNPAY is currently deploying a budget for the IMC strategy of Agribank eMobile Banking application, accounting for 1% of total revenue. At VNPAY, managers do not choose to set a budget based on competitors parity principle.

Advertising

The effectiveness of the advertising tool is assessed by 7 variables. The average value of the variables in the advertising tool ranges from 3.06 to 3.46. The standard deviation of the variables in the advertising tool ranges from 0.866 to 0.960. In which, variable AD1 has 109 objects rated as "Normal" (accounting for 44%); variable AD2 has 100 objects rated as "Normal" (accounting for 40.3%); variable AD3 has 115 objects rated as "Normal" (accounting for 40.3%); variable AD4 has 99 objects rated "Agree" (accounting for 39.9%); variable AD5 has 118 objects rated as "Normal" (accounting for 47.6%); variable AD6 has 95 objects rated "Agree" (38.3%); variable AD7 has 89 objects rated "Normal" (35.9%). The results also show that the Cronbach Alpha coefficient is 0.758. The correlation coefficients of the total variables are all higher than the limit (0.30), while the smallest coefficient is AD7 = 0.337. Alpha coefficient of all variables is less than 0.758, then the results of the observed variables for the advertising effectiveness scale are consistent with this study.

Promotion

The effectiveness of promotional tools is evaluated by 4 variables. The mean values of the variables in the promotional tools ranged from 3.06 to 3.28. The standard deviation of the variables in the promotional tool ranges from 0.835 to 1.008. In which, variable PO1 has 104 objects rated as "Normal" (41.9%); variable PO2 has 105 objects rated as "Normal" (42.3%); variable PO3 has 113 objects rated as "Normal" (45.6%); variable PO4 has 98 subjects rated as "Normal" (39.5%). The

results also show that the Cronbach Alpha coefficient is 0.736. The correlation coefficients of the total variables are all higher than the limit (0.30), while the smallest coefficient is PO4 = 0.486. Alpha coefficient of all variables is less than 0.736, then the results of the observed variables for the scale of promotional effectiveness are consistent with this study.

Personal Selling

The effectiveness of the personal selling tools is assessed by 6 variables. The mean values of the variables in the promotional tools ranged from 3.18 to 3.30. The standard deviation of the variables in the promotional tool reaches values from 0.873 to 0.933. In which, variable PS1 has 96 objects rated as "Normal" (38.7%); variable PS2 has 99 objects rated as "Normal" (39.9%); variable PS3 has 97 objects. rated object as "Normal" (39.1%); variable PS4 has 93 objects rated as "Normal" and 93 objects rated as "Agree" (39.5%) respectively; variable PS5 has 97 subjects rated as "Normal" (39.1%); variable PS6 has 99 objects rated as "Agree" (39.9%). The results also show that the Cronbach Alpha coefficient is 0.947. The correlation coefficients of the total variables are all higher than the limit (0.30), while the smallest coefficient is PS6 = 0.775. Alpha coefficient of all variables is less than 0.947, and then the results of the observed variables for the personal selling effectiveness scale are consistent with this study.

Public Relation

The effectiveness of the public relation tools is assessed by 4 variables. The mean values of the variables in the public relation tools ranged from 3.30 to 3.37. The standard deviation of the variables in the promotional tool ranges from 0.899 to 1.049. In which, variable PR1 has 87 subjects rated as "Agree" (accounting for 35.1%); variable PR2 has 83 objects rated as "Normal" (33.5%); variable PR3 has 94 respondents Subjects rated as “Agree” (37.9%); variable PR4 had 95 subjects rated as “Normal” (38.3%). The results also show that the Cronbach Alpha coefficient is 0.746. The correlation coefficients of the total variables are all higher than the limit (0.30), while the smallest coefficient is PR4 = 0.475. Alpha coefficient of all variables is less than 0.746, and then the results of the observed variables for the Public Relation efficiency scale are consistent with this study.

Direct Marketing

The effectiveness of the Direct Marketing tools is assessed by 5 variables (after the variable deleted). The mean values of the variables in the Direct Marketing tools range from 3.38 to 3.52. The standard deviation of the variables in the promotional tool ranges from 0.962 to 1.057. In which, variable DM1 has 101 subjects rated as "Normal" (40.7%); variable DM2 has 94 objects rated as "Normal" (37.9%); variable DM3 has 81 subjects object rated as "Agree" (32.7%); variable DM4 has 91 objects rated as "Normal" (36.5%); variable DM5 has 91 objects rated as "Agree" (36.7%). The results also show that the Cronbach Alpha coefficient is 0.793. The correlation

coefficients of the total variables are all higher than the limit (0.30), while the smallest coefficient is DM6 = 0.339. Alpha coefficient of variable DM6 = 0.806, which should be removed. After removing the variable DM6, the results show that the Cronbach Alpha coefficient is 0.806, and the remaining variables' figures are all less than 0.806, so the results of the observed variables for the Direct Marketing effectiveness scale become consistent with this study.

Campaign effectiveness

The effectiveness of the Integrated Media Marketing campaign is evaluated by 2 variables (after the variable deleted). The average value of the variables evaluating the effectiveness of the IMC campaign reached values from 3.37 to 3.38. The standard deviation of the variables in the promotional tool ranges from 1.013 to 1.109. In which, variable CE1 has 87 subjects rated as "Agree" (accounting for 35.1%); variable CE2 has 83 objects rated as "Agree" (33.5%). The results show that the Cronbach Alpha coefficient is 0.616. The variable CE2 has a total correlation of 0.272, while the variables CE3 and CE5 have a total correlation of 0.296 lower than the limit (0.30), then the variables CE2, CE3, CE5 should be removed. After removing CE2, CE3, CE5, the results show that the Cronbach Alpha coefficient is 0.662, and the remaining variables' figures are all smaller than 0.662, so the results of the observed variables for the trend scale are consistent with the study.

In fact, since the beginning of 2020, the Marketing department has successfully implemented 13 Marketing communication campaigns. By the end of September 2020, Agribank eMobile Banking has reached a total of 11,890,077 downloads on both Appstore and Google Play application portals. The total number of customers activating and using has reached 3,904,188 customers. Besides, the total number of newly registered customers has reached 4,176,739 customers. The average number of downloads has also reached an average of 7,887 times per day. The average number of customers activating and using is measured at 4,384 customers per day. In addition, the average number of newly registered customers has reached 5,302 customers per day (VNPAY, 2020).

4.2. Results of exploratory factor analysis

The authors have put the observed variables of the following scales into the EFA: the advertising effectiveness evaluation scale (AD), the promotional effectiveness evaluation scale (PO), the Personal Selling effectiveness evaluation scale (PS), the Public Relation effectiveness evaluation scale (PR), and the Direct Marketing effectiveness evaluation scale (DM) (the observed variable DM6 removed due to the Alpha coefficient after DM6 deleted is 0.806, greater than 0.793).

The results of factor analysis show that the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) index is 0.871 > 0.5. This proves that the data used for factor analysis is completely appropriate. In principle, the criterion of the factor analysis method is that the KMO index must be greater than 0.5 (G. David Garson,

2003). Bartlett test: Chi - Square statistic of the Barlett's test has reached the value of 3086,386 and had a significance level of sig = 0.000 < 0.05; this has shown that the data used for factor analysis is appropriate and that the variables are similarly related to each other.

The number of extracted factors is 6. In which, the first factor includes the variable AD1 of the Advertising effectiveness which has been combined with all the component variables of the Personal Selling into a new variable, which we temporarily call the Personal Selling effectiveness, PS (AD1, PS1, PS2, PS3, PS4, PS5, PS6). Then, the authors re-run Cronbach Alpha for the effectiveness of Personal Selling (PS) with 7 observed variables of PS, and found that Cronbach's Alpha coefficient reached 0.947 and the lowest total correlation coefficient reached 0.716. This is a suitable and reliable result. We should note that the bad variable AD3 which has been loaded onto 2 groups of factors (1 and 3), this variable is retained by the difference in loading of 0.677 – 0.348 = 0.329 > 0.3 (Nguyen Dinh Tho, 2014). However, variable AD3 is kept with loading difference of 0.677 under factor 3. The second factor includes all the component variables of Direct Marketing effectiveness, DM (DM1, DM2, DM3, DM4, DM5). The authors re-run Cronbach Alpha for direct Marketing effectiveness with 5 observed variables of DM. The results are consistent, while the reliability with Cronbach Alpha is 0.806 (Note that the bad variable AD7 is eliminated by the difference in loading of 0.589 – 0.350 = 0.239 < 0.3). The third factor includes 4 variables AD2, AD4, AD3, AD5 of AD of the advertising effectiveness, Cronbach's Alpha coefficient of this variable is 0.767. The fourth factor includes 4 variables PO1, PO2, PO3, PO4 of the effectiveness of sales promotion; its Cronbach's Alpha coefficient reached 0.736. The fifth factor includes the AD6 variable of the combined advertising performance with two variables PR1, PR2 of the PR performance (PR1, PR2, AD6). The authors run Cronbach Alpha for these variables with Cronbach Alpha reaching 0.723, but the value of Cronbach's Alpha coefficient if the AD6 deleted has reached 0.777 > 0.723, so the variable AD6 is excluded. The Cronbach Alpha coefficient after the AD6 deleted has reached 0.777, which is a suitable result. The sixth factor has been totally eliminated.

The total variance extracted is 65,490 (greater than 50%), which shows that the 6 extracted factors can explain nearly 65.5% of the variation of the data. This is an acceptable result. However, the Eigenvalue of factor 6 is 0.977 < 1, so we have to remove factor 6. The total variance extracted is 61.732% (greater than 50%), which shows that 5 extracted factors can explain nearly 61.7% of the variation in the data. This is also an acceptable result. Moreover, the Eigenvalue of all 5 factors is greater than 1. The results of this EFA show that all variables have satisfactory factor loading coefficients (factor loading > 0.5).

Table 1: Result of exploratory factor analysis, independent variables.

Observed variables	Factor					
	1	2	3	4	5	6
PS2	0.891					
PS4	0.879					
PS3	0.861					
PS5	0.858					
PS1	0.851					
PS6	0.815					
AD1	0.747					
DM3		0.768				
DM4		0.764				
DM2		0.752				
DM5		0.668				
DM1		0.586				
AD4			0.769			
AD2			0.746			
AD3	0.340		0.692			
AD5			0.629			
PO1				0.777		
PO3				0.750		
PO2				0.695		
PO4				0.665		
PR1					0.827	
PR2					0.826	
AD7		0.350			0.589	
AD6					0.527	
PR4						0.852
PR3						0.738
Eigenvalue	7.404	3.132	1.843	1.582	1.319	0.943
Extracted Variance (%)	30.849	13.051	7.679	6.592	5.495	3.931
Cronbach's Alpha	0.947	0.806	0.767	0.736	0.777	
KMO	0.877					
Bartlett (Sig.)	0.000					
Total variance extracted	63.666					

Source: Survey of the authors (2021)

After conducting EFA for independent variables, the authors have conducted EFA for the dependent variables, Trend in using (CE), including 2 observed variables (CE1 and CE4). Bartlett's test: Sig. = 0.000 < 0.05: observed variables are correlated with each other in the population; KMO coefficient = 0.05 shows that the factor analysis is relatively consistent with the research data. Factor analysis has extracted an Eigenvalue = 1,495 >1, which means satisfactory. Value of variance extracted:

74.739% > 50% is also satisfactory. All observed variables have satisfactory factor loading coefficients (factor loading > 0.5). Thus, the scale "Trend in using" reaches the convergent value.

Table 2: Results of exploratory factor analysis, dependent variables.

Observed variables	Factor
	1
CE1	0.865
CE4	0.865
Eigenvalue	1.495
Extracted Variance (%)	74.739
Cronbach's Alpha	0.662
KMO	0.500
Bartlett (Sig.)	0.000
Total variance extracted	74.739

Source: Survey of the authors (2021)

4.3. Results of multiple linear regression analysis

After testing the suitability and reliability, the factors affecting the trend of using Agribank eMobile Banking application continue to be tested for significance in the theoretical model through regression analysis to know specifically about the weight of each component in affecting the usage trend. Before conducting the regression, the author team needs to conduct variable coding. The values of the coded variables are calculated as the mean of the observed variables: F_PS: Personal Sales Efficiency; F_DM: Effective Direct Marketing; F_AD: Advertising Effectiveness; F_PO: Effectiveness Promotion; F_PR: Effective Public Relation; F_CE: Trend efficiency.

At the first step of conducting multiple linear regression analysis, it is to consider the linear correlations between all variables. If there are many variables, it is necessary to consider in general the relationship between each independent variable and the dependent variable and between the independent variables as well. The researchers must pay attention to any close correlations between the independent variables because such correlations can greatly affect the results of multiple regression analysis, e.g. causing multicollinearity (Hoang Trong, Chu Nguyen Mong Ngoc, 2008).

This correlation coefficient matrix shows the correlation relationship between the dependent variable (CE), usage trend for independent variables, as well as the correlation between the independent variables. The correlation coefficient of the variable Trend of using social media with the independent variables is greater than 0.3 except for the variables: Personal Sales (PS) of 0.192, Advertising (AD) of 0.178 and Promotion (PO) of 0.148. Basically, we can explain the independent variables in this research model that can also be included to explain the trend of using Agribank

eMobile Banking application. In addition, most of the Sig. values of the independent variables and the dependent variable are ≤ 0.05, so the independent variables have a linear correlation with the dependent variable. Besides, the correlation Sig. values of the independent variables are all greater than 0.05, so when analyzing regression, it is necessary to pay attention to the problem of multicollinearity.

Table 3: Correlation matrix between variables.

Factor		F_BQ	F_DM	F_AD	F_PO	F_PR	F_CE
F_BQ	Pearson correlation	1	0.000	0.000	0.000	0.000	0.192**
	Sig. (2-tailed)		1.000	1.000	1.000	1.000	0.002
F_DM	Pearson correlation	0.000	1	0.000	0.000	0.000	0.405**
	Sig. (2-tailed)	1.000		1.000	1.000	1.000	0.000
F_AD	Pearson correlation	0.000	0.000	1	0.000	0.000	0.178**
	Sig. (2-tailed)	1.000	1.000		1.000	1.000	0.005
F_PO	Pearson correlation	0.000	0.000	0.000	1	0.000	0.148*
	Sig. (2-tailed)	1.000	1.000	1.000		1.000	0.020
F_PR	Pearson correlation	0.000	0.000	0.000	0.000	1	0.470**
	Sig. (2-tailed)	1.000	1.000	1.000	1.000		0.000
F_CE	Pearson correlation	0.192**	0.405**	0.178**	0.148*	0.470**	1
	Sig. (2-tailed)	0.002	0.000	0.005	0.020	0.000	

*Notes: ** and * indicate statistical significance at the 5%, and 10% level respectively.*

Source: Survey of the authors (2021)

After checking the level of correlation between variables, the authors are to conduct regression analysis. The Enter method is used. According to this method, all five independent variables (F_PS, F_DM, F_AD, F_PO, F_PR) and one dependent variable (F_CE) will be included in the model at the same time and we have the following results:

Table 4: Summary of general parameters of the research model.

Model	R	R^2	Adjusted R^2	Estimation of standard error	Durbin-Watson
1	0.689[a]	0.475	0.464	0.73198680	2.013

Source: Survey of the authors (2021)

The results of multiple linear regression analysis show that the adjusted R^2 is 0.464, smaller than that of $R^2 = 0.475$. This shows that the model now becomes safer because it does not inflate the model's goodness of fit. The adjusted R^2 coefficient is 0.464, which means that the model's compatibility is 46.4% or it can be understood as 46.4% of the variance of the Trend of using Agribank eMobile Banking, which is

explained by five components regarding the IMC tools. In Table 5, the significance level of the F-test is satisfactory (Sig. value = 0.000 < 0.05). This proves that the regression model is suitable.

Table 5: Results of ANOVA analysis.

Model		Sum of squares	df	Squared Mean	F	Sig.
1	Regression	117.335	5	23.467	43.798	0.000[b]
	Residual	129.665	242	0.536		
	Total	247.000	247			

Source: Survey of the authors (2021)

Variance Inflation Factor (VIF) are all less than 2, which proves that there is no multicollinearity in the model. Also, Sig. coefficients of 5 factors in Table 5 are all less than < 0.05; therefore, these factors are all accepted. Moreover, these factors are meaningful to explain the impacts on the trend of using Agribank eMobile Banking application. From Table 6, we can see the importance of each component affecting the usage trend through the standardized regression coefficient. Specifically, Personal Selling (PS) effectiveness is 0.192; Direct Marketing (DM) effectiveness is 0.405; Media Advertising (AD) effectiveness is 0.178; Promotion (PO) effectiveness is 0.148; and the Public Relation (PR) effectiveness is 0.470. From the results of the regression analysis, we can conclude that: accepting the hypotheses H1, H2, H3, H4, H5, which have a positive impact on the variable of brand consumption trend.

Table 6: Regression coefficients.

Model		Unstandardized regression coefficients		Standardized coefficients	t	Sig.	Multicollinear Statistics	
		B	Standard Error	Beta			Error	VIF
1	(Const.)	$-3.838 * 10^{-7}$	0.046		0.000	1.000		
	F_PS	0.192	0.047	0.192	4.120	.000	1.000	1.000
	F_DM	0.405	0.047	0.405	8.695	.000	1.000	1.000
	F_AD	0.178	0.047	0.178	3.811	.000	1.000	1.000
	F_PO	0.148	0.047	0.148	3.172	.002	1.000	1.000
	F_PR	0.470	0.047	0.470	10.091	.000	1.000	1.000

Source: Survey of the authors (2021)

Based on the whole analysis process, we can explain the results as follows:

When customers tend to install and use Agribank eMobile Banking application, they must know about that application on the media and through the general public or via the counter teller support. Customers are also familiar with Sales Promotion messages to save costs for their daily expenses. For which, they are receiving positive information on press, which always suggests and notifies them on the application to use as a utility in their digital life.

In short, some of the major achievements that can be seen from the results of the research are:

- Advertising effectiveness comes along with 3 factors AD2, AD4, AD6 with the values of 3.35, 3.43, and 3.46 respectively. This is better than average performance. We can see that the advertising campaigns of the Agribank eMobile Banking application that VNPAY has deployed achieve high accuracy in information and strictly comply with advertising laws. In addition, a large portion of customers remember the message in the company's advertisements.
- The Promotion effectiveness comes along with PO3 factor at the value of 3.28, which is having a good effect. This is because the promotional campaigns of the Agribank eMobile Banking application are consistent with the customers' personalized account status.
- The Personal Selling effectiveness shows that the PS2, PS6 factors come with values of 3.30 and 3.28, respectively, which proves a good effect. This is mainly because of the fact that the operators are much ready to answer any questions from customers about the Agribank eMobile Banking application.
- The Public Relation effectiveness shows that 4 factors (PR1, PR2, PR3, PR4) have achieved better than average results. This emphasizes that the Public Relation campaigns of Agribank E-Mobile Banking have created a good trust with the company's customers, setting a good foundation for product branding.
- Finally, the results of Direct Marketing effectiveness come with 5 factors (DM1, DM2, DM3, DM4, DM5), which have achieved better than average. The authors firmly believe that the Direct Marketing campaigns of Agribank eMobile Banking was effective, while most of the customers have received a whole-hearted services and wonderful value-added accolades from VNPAY.

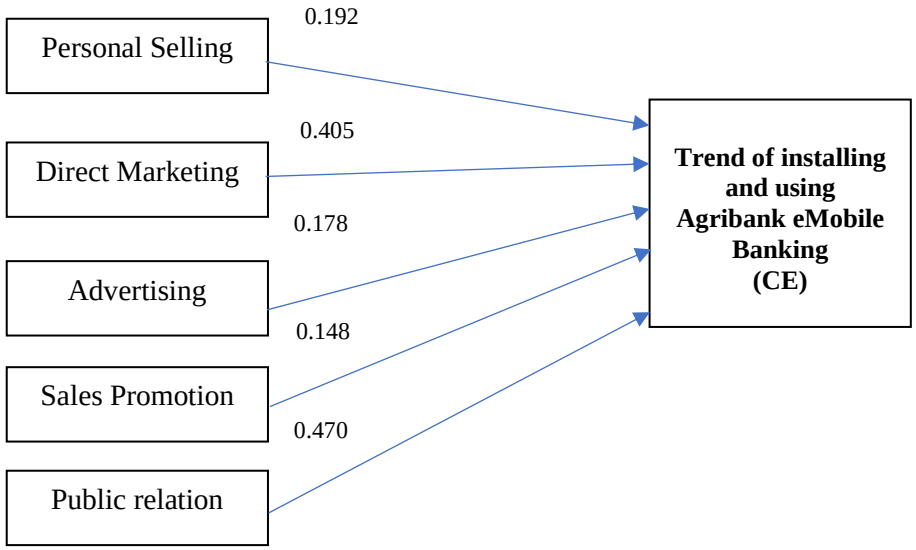


Fig. 3: Trend of Agribank eMobile Banking using (pattern conceptualized).

Source: Proposed by the authors (2022)

The model that tells the correlation relationship between the variables in the study can be generalized (Figure 3). Thus, the standardized regression equation between the dependent variable CE and the independent variables PS, DM, AD, PO and PR can be formulated as follows:

CE = 0.192*PS + 0.405*DM + 0.178*AD + 0.148*PO + 0.470*PR

In which, we can see that Public Relations and Direct Marketing activities have the largest weight in influencing the trend of using eMobile Banking (Agribank) software provided by VNPAY, respectively. This can be explained by the current digital marketing, because online communication channels take up a lot of users' times that can be spent for fintech. Almost all touch points in the digital space have the strongest impact on them when making a decision on an online banking mobile application. Besides, the role of Personal Selling and Advertising is ranked after the two factors just mentioned. This shows that fintech products like Agribank eMobile Banking can be best marketed through two-way interactive connections and even through a trialog between customers themselves with the businesses. Those interactions are done online. Face-to-face interactions such as personal selling also lay an impact, but to a lesser extent. Finally, the most underrated component is the Promotion in motivating users to adopt this application. This is a conclusion that may go against what many people are thinking in practice.

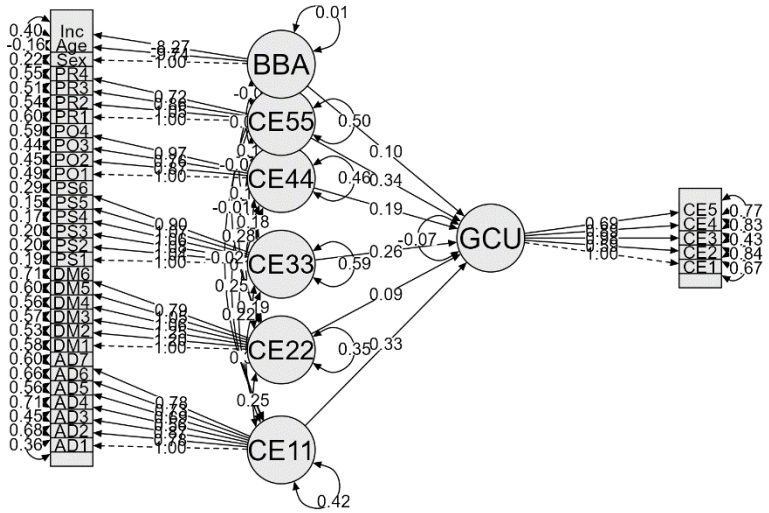
4.4. Results of structural equation modeling analysis

These are the results of SEM-CB analysis for 254 observed samples, with 7 latent variables (CE11, CE22, CE33, CE44, CE55, GCU and BBA). Statistical analysis has shown that the data on fit indices of Model 1 is much better than that of Model 2 (the model that has the BBA latent variable to be left out).

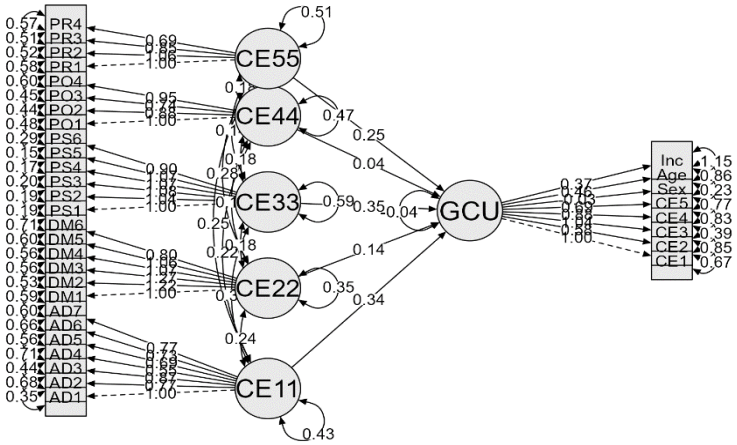
Fit indices		
Index	Model 1	Model 2
Root mean square error of approximation (RMSEA)	0.069	0.086
Goodness of fit index (GFI)	0.922	0.897
Comparative Fit Index (CFI)	0.928	0.886
Tucker-Lewis Index (TLI)	0.920	0.876
Bentler-Bonett Non-normed Fit Index (NNFI)	0.920	0.876
χ^2/ df	2.206	2.876

Path diagrams

Model 1:



Model 2:



Thus, Model 1 should be applied because there has been a good fit between the survey data and the built model. This is statistically acceptable when RMSEA < 0.8, GFI, CFI, TLI and NNFI indexes are all greater than 0.9, and χ^2/ df is between 1 and 3 (A.Maydeu Olivares, C.García Forero, 2010). Accordingly, the great customer understanding (GCU) of VNPAY will play the role of an endogenous latent variable, which is indirectly affected by Marketing activities in IMC and basic demographic characteristics of customers (Sex, Age and Income). The impacts will be led through the exogenous latent variables (BBA, CE11, CE22, CE33, CE44 and CE55). The result of that influence is the readiness to use the Agribank eMobile Banking application (measured by the observed variables CE1, CE2, CE3, CE4 and CE5) that VNPAY has developed, corresponding to the groups of tools used in IMC.

5. Conclusion

Despite the impressive achievements which have been thoroughly examined above, IMC activities for Agribank eMobile Banking application still has to overcome these followings:

Firstly, the Marketing strategy has not achieved the number of new customers in registering, activating and using customers as set out by the Board of Management.

Second, the Advertising tools have been currently consuming a lot of money while identifying the potential audiences is not quite effective. While the factors AD1, AD5 have even reached the average index, the research results show that the communication channels chosen are not well-utilized.

Third, the Promotion tools are facing fierce competition from direct competitors. About brand switching, the young customers easily choose to move to other competitors to receive better deals. While the PO4 factor has only reached the average index, the research results show that the promotional programs have not obtained the excitement from customers. This, consequently, has not stimulated them to recommend to their communities and relatives.

Fourth, the Personal Selling tools are receiving a lot of negative comments from customers. Agribank application salesmen are often negatively evaluated on media. The factors PS1, PS3 have only reached the average index. This shows that the salesmen have not taken enough initiatives to introduce the Agribank eMobile Banking application to their customers. In addition, sales support tools have not been reached easily.

Fifth, Direct Marketing tools play a big role in encouraging and reminding customers to use services on the application. However, the tools have not reached customers with a reasonable frequency. This has not created a needed friendly image in front of its customers.

Sixth, the current Public Relation tools have been considered to be well implemented by VNPAY, while the events and related information of Agribank eMobile Banking application are closely monitored to be free from communication risks. However, the cost for establishing good relationships with partners is accounting for a large proportion of the total budget. Moreover, the human resources to perform professional Public Relation work are still very limited in reality.

In general, the final IMC strategy model proposed by the authors is based on the fundamental theories of IMC and the objective results of the research. This concept shall be very useful when adopting the omni-channel Marketing in the new context for the eMobile Banking applications. For which, the research has tried to analyze the market and the evidences of the successful applications in the same industry in practice. New strategies will need to be observed and fine-tuned due to the coming market movements.

The limitations of this study: Firstly, the study has been conducted with mainly urban respondents, so the generalizability is not so high for the whole country, because each market has its own characteristics online. Due to differences in lifestyle, income, interests and culture, factors affecting the trend of using Agribank eMobile Banking application can be different. Secondly, the study has not considered the service fees as an affecting factor on the trend of installing and using Agribank eMobile Banking application. These weaknesses are also some suggestions for directions of the further researches.

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References

AMA. (2017). Definitions of Marketing. Retrieved from American Marketing Association: https://www.ama.org/the-definition-of-Marketing-what-is-Marketing/.

Belch, G. & Belch, M. (2021). Advertising and Promotion: An Integrated Marketing Communications Perspective. New York: McGraw-Hill Education.

Blakeman, R. (2018). Integrated Marketing Communication: Creative Strategy from Idea to Implementation. Maryland: Rowman & Littlefield.

Blazenka, K. (2021). Differentiation of E-commerce consumer approach by product categories. *Journal of Logistics, Informatics and Service Science, 8*(1), 1-19. DOI:10.33168/LISS.2021.0101.

Chowdhury, M. (2021). Blockchain application in banking system. *Journal of Software Engineering and Applications, 14*(7), 298-311.

Clow, K. E. & Baack, D. (2018). Integrated advertising, promotion, and marketing communications. London: Pearson.DOI:10.4236/jsea.2021.147018.

Chuan, L. (2017). The evolution of e-commerce payment. *Technology and Investment, 8*(1), 56-66. DOI:10.4236/ti.2017.81005.

Dave, C. & Ellis-Chadwick, F. (2019). Digital marketing: Strategy, implementation and practice. London: Pearson.

Dave, C. & Smith, P. R. (2017). Digital Marketing Excellence: Planning, Optimizing and Integrating Online Marketing. London: Routledge.

David J. Ketchen, Donald D. Bergh. (2007). Research methodology in strategy and management, 4, Stamford, CT: JAI Press.

Degenhard. J. (2021, 07 20). Forecast of the number of smartphone users in Vietnam from 2010 to 2025. Retrieved from Statista: https://www.statista.com/forecasts/1145936/smartphone-users-in-vietnam

Drucker, P. F. (1973). Management : tasks, responsibilities, practices. New York: Harper & Row.

G. David Garson. (2003). Technological teleology and the theory of technology enactment: The case of the international trade data system. *Social Science Computer Review, 21*(4), 425-431. DOI:https://doi.org/10.1177/0894439303256371.

Hair, J. Jr. (2016). Joseph F. Hair Jr, G. Tomas M. Hult, Christian M. Ringle, Marko Sarstedt. California: Sage Publications, Inc.

Hoàng, T. & Ngọc, C. N. M. (2008). Phân tích dữ liệu nghiên cứu với SPSS. TP.Hồ Chí Minh: NXB Hồng Đức.

Jaas, A. (2022). E-marketing and its strategies: Digital opportunities and challenges. *Open Journal of Business and Management, 10*(2), 822-845. DOI:10.4236/ojbm.2022.102046.

Keller, K. L. & Kotler, P. (2015). Marketing Management. London: Pearson.

Kotler, P. (2017). Marketing 4.0: Moving from Traditional to Digital. New Jersey: John Wiley & Sons.

Kotler, P. T. & Armstrong, G. (2017). Principles of Marketing, Global Edition. London: Pearson.

Kozlowska, J. (2016). Designing services – overview of basic methods. *Journal of System and Management Sciences, 6*(1), 26-38. Retrieved from http://www.aasmr.org/jsms/Vol.6/Vol6_No.1_3.pdf

Kyriazos, T. (2018). Applied psychometrics: Sample size and sample power considerations in factor analysis (EFA, CFA) and SEM in General. *Psychology, 9*(8), 2207-2230. DOI:10.4236/psych.2018.98126.

Nguyễn, K. (2020, 05 09). Thanh toán không tiền mặt "đẩy" số hoá ngân hàng. Retrieved from Ngân hàng nhà nước Việt Nam: https://www.sbv.gov.vn/webcenter/portal/vi/links/cm100?dDocName=SBV411613.

Nguyễn, Đ. T. (2014). Phương pháp nghiên cứu khoa học trong kinh doanh. TP. Hồ Chí Minh: NXB Tài Chính.

Olivares, A. M. & García-Forero, C. (2010). Goodness-of-fit testing. In E. B. Penelope Peterson, *International Encyclopedia of Education, 8-Volume Set, Third Edition* (pp. 190-196). Amsterdam: Elsevier Science. DOI:https://doi.org/10.1016/B978-0-08-044894-7.01333-6.

Routray, S. (2019). A move towards cashless economy: A case of continuous usage of mobile wallets in India. *Theoretical Economics Letters*, 9(4), 1152-1166. DOI::10.4236/tel.2019.94074.

Shu, Z. (2020). Digital transformation of traditional Chinese banks. *Open Journal of Business and Management, 8*(1), 68-77. DOI:10.4236/ojbm.2020.81005.

UN. (2020). Population Pyramids of the World from 1950 to 2100 (Vietnam 2020). Retrieved 07 11, 2022, from Population Pyramid: https://www.populationpyramid.net/viet-nam/2020/

van den Broek, M. (2014). Understand banks & financial markets: An introduction to the international world of money and finance. Kindle Edition.

VA. (2019, 10 16). Hệ sinh thái số sẽ thúc đẩy thanh toán không dùng tiền mặt. Retrieved from Ngân hàng nhà nước Việt Nam: https://www.sbv.gov.vn/webcenter/portal/vi/links/cm100?dDocName=SBV401890

Vida D. (2020). Identification of the opportunities to improve customer's experience in e-commerce. *Journal of Logistics, Informatics and Service Science, 7*(1), 42-57. doi:10.33168/LISS.2020.0104.

VNPAY. (2020). Báo cáo tổng kết CTKM Agribank 2020. Hà Nội: Vietnam Payment Solutions JSC.

Wewege, L. & Thomsett, M. C. (2020). The Digital Banking Revolution How Fintech Companies Are Transforming the Retail Banking Industry Through Disruptive Financial Innovation. Berlin: Walter de Gruyter Inc.

Zhang, L. –L. & Kim, H. –K. (2020). The influence of financial service characteristics on use intention through customer satisfaction with mobile fintech. *Journal of System and Management Sciences, 10*(2), 82-94. DOI:10.33168/JSMS.2020.0206.