**International Journal of Management and Administrative Sciences (IJMAS)**
(ISSN: 2225-7225)
Vol. 3, No. 07, (01-15)
www.ijmas.org

# The Adoption of Fintech Service: TAM perspective

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**ABSTRACT**
*In order to understand the consumer behavioral intentions in using Fintech Service, this study basis on the TAM, integrating brand and service trust to understand the influence on behavioral intention. By using convenience sampling, 440 effective consumers' samples were collected. The results showed: Brand and service trust has a significantly positive effect on attitudes toward using Fintech Service. Perceived usefulness has a significantly positive effect on attitudes toward using. Perceived ease of use has a significantly positive effect on attitudes toward using. Attitudes toward on using have a significantly positive effect on behavioral intention to use.*
***Keywords****: Fintech Service, Structural Equation Modeling, Technology Acceptance Model, Theory of Reasoned Action, Brand and service trust.*

## 1. INTRODUCTION

Under the global trend of scientific and technological, Fintech Service has become indispensable teaching materials and is the focus of new technology applications with great market potential. Fintech Service and ferments overnight, subverts the oppressive global domain of service industries.

The development of financial technology, such as electronic, digital, and Fintech Service has resulted in an ever increasing advancement in service productivity, which continues to challenge and cater to the attitudes of consumers who are accepting of new technology products to gain market opportunities. In response to the new ideas involving new technology applications with great market potential, Fintech Service have become the focus of new technological applications (Kim, Park, Choi, & Yeon, 2015). Fishbein & Ajzen (1975) proposed the Theory of Reasoned Action (TRA), and has been considered as an excellent reference model in the field of prediction or explanation of personal behavior (Figure 1)

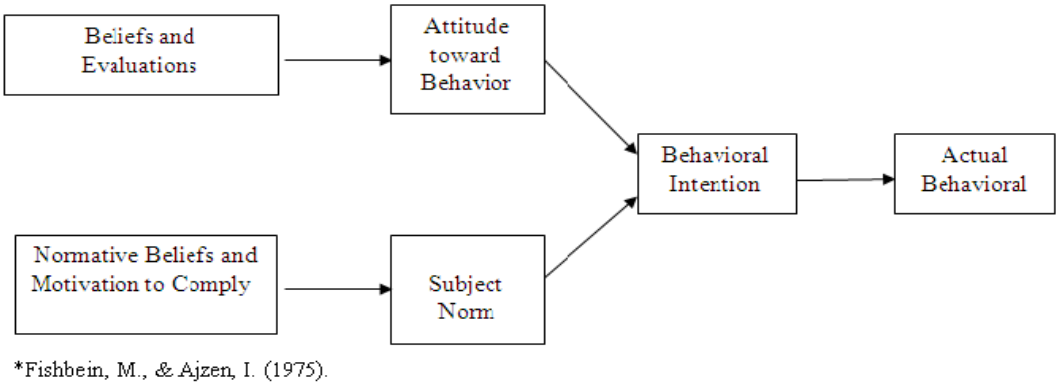


Figure 1 Theory of Reasoned Action (TRA)

Such intention model explores the relationship between attitude and behavioral intention is the Technology Acceptance Model (TAM). The TAM assumes that the key determinant of behavioral intentions is depends on a person's beliefs about their own ability to use a piece of technology and their subjective evaluation of the usefulness of that technology (Bruner & Kumar, 2005; Hernandez, Jimenez, & Martin, 2009; Morgan & Veloutsou, 2011; Palvia, 2009; Pavlou, Liang, & Xue, 2007).

Scholars seldom use the consumer's point of view to combine with the intention model to discuss factors that affected behavioral intention to use a new technology in past researches (Legris, Ingham, & Collerette, 2003; Szajna, 1996). Because the Fintech Service is an innovative high-tech product, using Fintech Service as a study subject and TAM to investigate consumers who use Fintech Service or have the potential intention to use Fintech Service to explore whether consumer attitudes concerning Fintech Service has significant effects on the behavioral intention to use Fintech Service is becoming an important issue. This study used brand and service trust as an antecedent for the control variable of attitude to discuss whether brand and service trust significantly affect consumer attitudes toward using Fintech Service and whether consumer attitudes toward using Fintech Service affect consumer behavioral intention to use Fintech Service

## 2. LITERATURE REVIEW

### *2.1. Fintech*

Financial technology, also known as Fintech, is an economic industry composed of companies that use technology to make financial services more efficient (McAuley, 2014).

According to the National Digital Research Centre in Dublin, Ireland, defines financial technology as "innovation in financial services", adding that "the term has started to be used for broader applications of technology in the space – to front-end consumer products, to new entrants competing with existing players, and even to new paradigms such as Bitcoin". Alt, and Puschmann ( 2012) indicated that Fintech refers to new solutions which demonstrate an incremental or radical / disruptive innovation development of applications,

processes, products or business models in the financial services industry. These solutions can be divided in five areas.

1. The banking or insurance sector are distinguished as potential business sectors. Solutions for the insurance industry are often more specifically named "InsurTech".
2. The solutions differ with regard to their supported business processes such as financial information, payments (such as mobile payment), investments, financing, advisory and cross-process support.
3. The targeted customer segment distinguishes between retail, private and corporate banking as well as life and non-life insurance.
4. The interaction form can either be business-to-business (B2B), business-to-consumer (B2C) or consumer-to-consumer (C2C).
5. The solutions vary with regard to their market position.

| **Sector** | **Business process** | **Customer segment** | **Interaction form** | **Market position** |
|---|---|---|---|---|
| • Bank<br>• Insurer | • Payments/Investments<br>• Financing Insurance<br>• Advisory<br>• Big data analytics and predictive modeling<br>• Security | • Retail banking<br>• Corporate banking<br>• Private banking<br>• Life/ Non life insurance | C2C<br>B2C<br>B2B | • Bank/insurer<br>• Non-bank/insurer – bank/insurer-cooperation<br>• Non-bank/insurer – bank/insurer-competition |

*2.1. Technology Acceptance Model (TAM)*

Davis (1986) proposed Technology Acceptance Model (TAM) and used this model to discuss the effect of external variables on personal internal beliefs and attitudes. He stated that TAM also considered behavioral intentions were affected by personal attitudes toward using the information system. In order to explain and predict the user's behavior of information technology more efficiently, Davis, Bagozzi, and Warshaw (1989) based on the Theory of Reasoned Action (TRA) to modify its theoretical model to fit the application of information systems context. Svendsen, Johnsen, Sørensen, and Vittersø (2013) also advocated the use of two sets of variables (perceived usefulness, perceived ease of use) to explore the user's behavior in accepting the information technology (Figure 2).

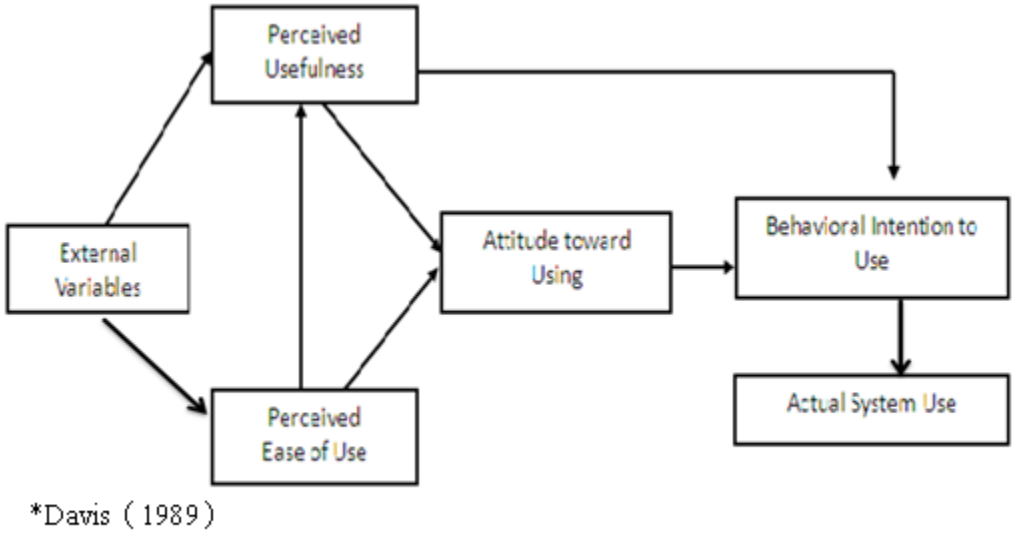


Figure 2 Technology Acceptance Model (TAM)

The concepts of TAM:

1. Attitude: the positive or negative feelings or evaluations generated when an individual uses new technologies. When a person has a higher positive attitude toward using new technology, the behavioral intention will be comparatively higher. It is determined by both perceived usefulness and perceived ease of use.
   1). the perceived usefulness is "the degree to which a person believes that using a particular system will enhance his or her job performance". On the other hand, when a user believes that the new technology is useful, the user will have a positive attitude toward this new technology.
   2). the perceived ease of use is "the degree to which a person believes that using a new technology is free from effort". When a new technology is perceived by users to be easy to use, and requires less labor and time, then the new technology is more likely to be accepted by users.
2. Behavioral intentions: the degree of a person's willingness to use a new technology.
3. External variables: The factors indirectly affect behaviors, such as the personal variables of users, system characteristics, and environmental variables.

Many scholars have focused on factors that affect the use of new technologies, including relative advantage, ease of use, compatibility, trial ability, visibility, result demonstrability, image, and voluntariness (Moore & Benbasat. 1991; Svendsen, Johnsen, Sørensen, & Vittersø. 2013). The perceived usefulness and perceived ease of use would affect the behavior of using new technologies, and would be affected by the external variables included individual characteristics, system characteristics, and organizational support (Igbaria, Guimaraes, & Davis, 1995).

This study collected the past relevant research literatures that affect the use of new technology factors, and found that indeed there are many scholars adapted TAM as the main theoretical framework and developed many empirical bases. The following table illustrates the details. (Table 1)

Table 1 the relevant research of TAM

| Scholar | Year | Theme of Study | Conclusion / Finding |
|---|---|---|---|
| Eltayeb & Dawson | 2016 | Personal Cloud Computing (PCC) | 1. Personal Cloud Computing (PCC) is a rapidly growing technology, addressing the market demand of individual users for access to available and reliable resources.<br>2. Users decided to adopt PCC may be concerned about the ease of use, usefulness, or security risks in the cloud.<br>3. Negative attitudes toward using a technology have been found to negatively impact the success of that technology.<br>4. The results shows that in spite of the potential benefits of PCC, security and privacy risks are deterring many users from moving towards PCC. |
| Cheung & Vogel | 2013 | e-learning | 1. Used the technology acceptance model to explain the factors that influence the acceptance of Google Applications for collaborative learning.<br>2. According to the results, determinants of the technology acceptance model are the major factors influencing the adoption of the technology.<br>3. In addition, the subjective norm represented by peers is found to significantly moderate the relationship between attitude and intention toward the technology. |
| Yousafzai et al. | 2010 | Information Technology | 1. An objective of information technology (IT) research is to assess the value of technology for users and to understand the factors that determine this value in order to deploy IT resources better.<br>2. This paper uses structural equation modeling to ascertain the extent to which 3 popular models of users' |

| | | | |
|---|---|---|---|
| | | | behavior—theory of reasoned action (TRA), theory of planned behavior (TPB), and technology acceptance model (TAM)—are predictive of consumers' behavior in the context of Internet banking.<br>3. The results indicate that TAM is superior to the other models and highlights the importance of trust in understanding Internet banking behavior. |
| Yu et al. | 2005 | T-Commerce | 1. Seven factors were identified: perceived ease of use, perceived usefulness, perceived enjoyment, trust, attitude, normative belief of family and friends, and subjective norm.<br>2. Perceived enjoyment is the most important factor affecting attitude and behavioral intention toward t-commerce. |
| Gefen et al. | 2003 | Business to Consumer Internet-based services | Examine the effect of social presence on consumer trust in e-services and the relative importance of consumer trust in comparison with the widely studied TAM beliefs. |
| Chen et al. | 2002 | On-line Consumers | Apply the TAM and IDT to examine consumer behavior in the virtual store context. |
| Moon & Kim | 2001 | World-Wide-Web Context | Used playfulness as an intrinsic motivation factor that reflects the user's intrinsic belief in WWW acceptance. |
| Venkatesh & Davis | 2000 | Four Longitudinal Field Studies | 1. Based on Technology Acceptance Model (TAM), used the extended model-TAM2 and longitudinal data to test four different systems at four organizations, two involving voluntary usage and two involving mandatory usage.<br>2. Both social influence processes (subjective norm, voluntariness, and image) and cognitive instrumental processes (job relevance, output quality, result demonstrability, and perceived ease of use) significantly influenced user acceptance. |
| Szajna | 1996 | Information Systems | The results confirmed that the TAM is a valuable tool for predicting intentions to use an IS. |
| Igbaria et al. | 1995 | Microcomputer Usage | 1. The tested conceptual model confirms the effects of individual, organizational, and system characteristics on perceived ease of use and perceived usefulness.<br>2. The model also confirms the influence of perceived ease of use on perceived usefulness, and the effects of perceived usefulness on perceived usage and variety of use.<br>3. Results confirm several previously proposed notions, including the effects of individual, organizational, and system characteristics on ease of use and usefulness.<br>4. The influence of ease of use on usefulness, and the effects of perceived usefulness on usage and variety of use. |
| Moore & Benbasat | 1991 | Information Technology Innovation | 1. Develop the scale to measure the perceptions of individual of adopting an information technology innovation.<br>2. 8 factors that affect the use of new technologies: relative advantage, ease of use, compatibility, trial ability, visibility, result demonstrability, image, and voluntariness |

| | | | |
|---|---|---|---|
| Davis et al. | 1989 | User Acceptance of Computer | 1. Perceived usefulness strongly influenced peoples' intentions.<br>2. Perceived ease of use had a small but significant effect on intentions as well.<br>3. Attitudes only partially mediated the effects of these beliefs on intentions.<br>4. Subjective norms had no effect on intentions. |

*Authors sorted

*2.2. The Influence of Brand and Service Trust on Attitude toward Using Fintech Service*

Trust is based on the relationships between people and people, people and objects, or people and things. The three elements of trust are benevolence, honesty, and competence (Doney & Cannon, 1997). Trust is perceived credibility and benevolence (Singh & Sirdeshmukh, 2000), involves specific beliefs in ability, benevolence, and integrity and is willing to depend on another party.

Trust has been conceptualized as a confidence (Pavlou, 2003; Pavlou & Gefen, 2004). A trustor believes a trustee will meet the trustor's needs, will be confidence in the intentions or actions of a person or a group (Carnevale & Wechsler, 1992). The trusting party expects the party to be trusted will complete a particular action without monitoring or controlling (Mayer, Davis & Schoorman, 1995). A party to be trusted will not use deception to obtain benefits and trustworthiness.

Moreover, Lee and Turban (2001) assumed that trust is a belief, expectancy, or feeling about certain items, certain antecedents will increase or maintain the degree of trust that will affect the trust of both parties on the transaction. A person will not take any unexpected action that would result in negative outcomes or risks for the trading partners (Anderson and Narus, 1990).

Because of the Fintech Service are still not popular; sometimes the users of Fintech Service need to search for the services through website. When the quality and relevant functions of the product are unclear, the brand can help consumers make a selection (Ratnasingam, 2003). Enterprises can take advantage of the reputation of their brand value, such as its stability, long history, and trustworthiness to overcome a consumer's trust question. The brand and service reputation of enterprises have positive effects on trustworthiness in consumers (Veloutsou, 2007). Heijden, Verhagen , and Creemers (2003) proposed that cognition of trust and experiences when using new technology will directly affect a consumer's purchasing attitude. When the brand and service trust of consumers is higher, the attitude toward purchasing is more positive. When consumers believe that the information provided by enterprises is honest, consumers will adopt a positive attitude toward this enterprise. Hence, the definition of "brand and service trust" in this study is "the degree of influence that company reputation, website quality, and system security have on the behavioral intention of consumers to use Fintech Service".

*2.3. The Effect of Perceived Usefulness and Perceived Ease of Use on Attitude toward Using Fintech Service*

"Attitude" is determined by both perceived usefulness and perceived ease of use. To promote a user's willingness to use a new technology, it is necessary to let potential users believe that the new technology is easy to use and that they can benefit from using it (Chau & Hu, 2002; Davis, 1986, 1989)

"Perceived usefulness" referred to that the potential users considered the new technology is useful on job performance and they can get benefit in the future. (Moon & Kim, 2001; Venkatesh & Davis, 2000). "Perceived ease of use" referred to the degree of the potential users considered the new technology is easy to use (Moon & Kim, 2001; Venkatesh & Davis, 2000).

The "usefulness" and "ease of use" of technology acceptance factors both have positive effects on "attitude". Users believe that the benefits provided by Fintech Service are useful (e.g., they can rapidly complete their work tasks) and are easy to use (e.g., they can get started without another's guidance), which is helpful for increasing users' attitude toward Fintech Service. If consumers believe that Fintech Service are more useful for their work or are easy to use, their attitude toward using Fintech Service is also higher. Thus, the perceived usefulness and ease of use of Fintech Service are cognitive factors for consumers to accept Fintech Service.

*2.4. The Effect of Attitude on Behavioral Intention to Use Fintech Service*

Most previous studies showed that attitude has a significant positive impact to the behavioral intention of individual (Venkatesh & Davis, 2000). The behavioral intention of potential users was decided subjective norms; and the behavioral intention of existing users is depend on their behavior and attitude.

A consumer's "attitude toward using" and "willingness of using" Fintech Service should have a significantly positive relationship. When consumers sense positive evaluations, they will believe that using Fintech Service is a good experience and increase their willingness of using them. In addition, when consumers believe that using Fintech Service is a convenient and practical tool, they would recommend using them, the other consumers' attitude toward using Fintech Service will be affected and increased. Hence, the attitude has a positive effect relationship with behavioral intention to use.

*2.5. Research Hypotheses*

In this study, TAM is used as the foundation, and referenced relevant literature to cconstruct a holistic conceptual framework. Figure 3 depicts the hypothesized relations examined in this investigation.

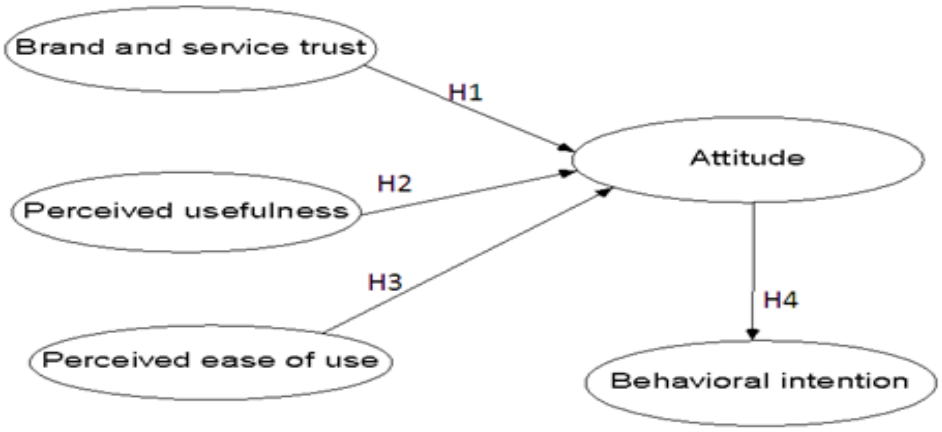


Figure 3 Hypothesized Model

$H_1$: Brand and service trust has a significant positive effect on a consumer's attitude toward using Fintech Service

$H_2$: Perceived usefulness will have a significant positive effect on a consumer's attitudes toward using Fintech Service.

$H_3$: Perceived ease of use will have a significant positive effect on a consumer's attitudes toward using Fintech Service

$H_4$: Consumer's attitude toward using Fintech Service has a significant positive effect on behavioral intention to use Fintech Service

## 3. METHODS

*3.1. Data Collection*

According to statistic of the Directorate General of Budget, Accounting and Statistics (DGBAS) of Executive Yuan, although the manufacturing sector accounted for the proportion of the overall economic have declined, but the output value are continuing to grow. (Table 2) This study aims to realize the intention of using Fintech Service of manufacturing industries. Therefore, it is appropriate to conduct the survey among the engineers of manufacturing industries.

Table 2 Statistic of the Directorate General of Budget, Accounting and Statistics (DGBAS) of Executive Yuan, R.O.C. (Taiwan)

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| The GDP(%) of the industrial structure | | | | | | | | | |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Agriculture | 2.42 | 2.36 | 2.43 | 1.98 | 1.85 | 1.75 | 1.69 | 1.68 | 1.8 |
| Industries | 31.88 | 31.22 | 29.9 | 29.09 | 27.62 | 27.58 | 26.56 | 25.58 | 24.64 |
| Manufacturing Industries | 25.18 | 24.81 | 24.02 | 23.76 | 22.73 | 23.07 | 22.48 | 21.95 | 21.13 |
| Service Industries | 65.7 | 66.42 | 67.66 | 68.93 | 70.53 | 70.66 | 71.75 | 72.73 | 73.56 |
| Contribution to economic growth rate (%) | | | | | | | | | |
| Total | 100 | 100 | 100 | 100 | --- | 100 | 100 | 100 | 100 |
| Agriculture | -0.76 | -3.08 | 0.87 | 0.35 | --- | 2.12 | 0 | -1.15 | -1.71 |
| Industries | 24.58 | 17.14 | 27.48 | 29.29 | --- | 38.12 | 30.9 | 40.2 | 36.92 |
| Manufacturing Industries | 20.79 | 16.48 | 29.91 | 30.16 | --- | 39.53 | 35.28 | 37.07 | 34.47 |
| Service Industries | 76.18 | 85.93 | 71.65 | 70.36 | --- | 59.76 | 69.39 | 60.96 | 64.55 |
| The structure of employment in all industries（%） | | | | | | | | | |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Agriculture | 9.57 | 8.85 | 8.25 | 7.78 | 7.52 | 7.5 | 7.27 | 6.56 | 5.94 |
| Industries | 38.16 | 37.93 | 37.21 | 37.23 | 36 | 35.24 | 34.83 | 35.21 | 35.79 |
| Manufacturing Industries | 28.01 | 28.11 | 27.74 | 27.97 | 27.57 | 27.11 | 27.06 | 27.29 | 27.42 |
| Service Industries | 52.26 | 53.22 | 54.54 | 54.99 | 56.48 | 57.26 | 57.9 | 58.23 | 58.27 |

This study distributed 80 copies of the pretest questionnaire and used the data of the pretest questionnaire to perform reliability analysis. The values of Cronbach α coefficient of the 5 dimensions were all larger than the standard value of 0.7. Therefore, this study used the pretest questionnaire as the formal questionnaire. Using convenience sampling, this study collected the questionnaire data from the engineers of manufacturing industries in Industrial Park. 500 copies of the questionnaire were distributed, and 440 valid copies were collected, the percentage of valid questionnaires was 88%.

*3.2. Measures*

The questionnaire included sections comprising questions about brand and service trust, perceived usefulness, perceived ease of use, attitude, behavioral intention, and finally demographic characteristics. Response to the items was measured on four-point Likert-type scales anchored by “strongly disagree” (1) and “strongly agree” (7).

3.2.1. Brand and service trust

The operational definition of brand and service trust is “The degree of effect on consumer trust toward enterprises that provide Fintech Service by brand and system security” (Gefen & Straub, 2003; Pavlou, 2003; Singh & Sirdeshmukh, 2000); the list of attributes of brand and service trust was selected from

a developed scale from prior research (Gefen & Straub, 2003). A factor analysis on the samples resulted in the number of items has been reduced from 7 to 3.

3.2.2. Perceived usefulness

The operational definition of perceived usefulness is "Consumer belief as to the degree of helpfulness of using Fintech Service" (Davis, 1989). The list of attributes of perceived usefulness was selected from the developed scale by Davis (1989). The factor analysis on the samples resulted in the number of items has has been reduced from 6 to 4.

3.2.3. Perceived ease of use

The operational definition of perceived ease of use is "Consumers believe that the use of Fintech Service is easy and does not require too much effort to learn" (Davis, 1989). The list of attributes of perceived ease of use was also selected from a developed scale by Davis (1989) and Saadé (2007). The factor analysis on the samples resulted in the number of items has been reduced from 6 to 4.

3.2.4. Attitude

The operational definition of Attitude is "The degree of a consumer's positive and negative evaluations on using Fintech Service" (Ajzen, 2002; Halilovic & Cicic, 2011). The list of attributes of perceived ease of use was selected from a developed scale by (Ajzen, 2002; Halilovic & Cicic, 2011). The factor analysis on the samples resulted in the number of items has been reduced from 5 to 3.

3.2.5. Behavioral intention

The operational definition of behavioral intention is "The subjective judgment of consumers on the possibility of willingness to use Fintech Service in the future" (Ajzen, 2002). The list of attributes of perceived ease of use was selected from a developed scale by (Ajzen, 2002). The factor analysis on the samples resulted in the number of items has been reduced from 5 to 2.

*3.3. Procedures*

The proposed model were tested with a LISREL (version 8.51) procedure of structural equation modeling (SEM), and the maximum likelihood method of estimation and the two-stage testing process were adopted. Prior to LISREL analysis, the multi-item constructs were tested by exploratory factor analyzing (EFA) each set of scale items using the principal axis with varimax method provided in SPSS (version 12.0). The underlying factors derived from EFA were represented as indicators to measure a construct. This procedure may help to reduce multi-collinearity or error variance correlations among indicators in the confirmatory factor analysis of the measurement model followed by the structural model.

A number of additional goodness of fit measures is used to assess model fit. These include root-mean-square error of approximation (RMSEA), incremental fit index (IFI), comparative fit index (CFI), normed fit index (NFI), and relative fix index (RFI) (Jöreskog & Sörbom 1996). Acceptable model fits are indicated by GFI and CFI values exceeding .90 and RMSEA values below .08 (Browne & Cudeck 1993).

## 4. RESULT

The sample demographics of this study were illustrated in Table 3. The multi-item constructs in Table 4 were tested by exploratory factor analyzing (EFA) each set of scale items using the principal axis with varimax method provided in SPSS. The measure scale composite reliabilities (Cronbach's alpha) ranged from 0.73 (Attitude toward using) to 0.87 (Behavioral intention to use). Cortina (1993) has indicated that scales possessing a reduced number of items, 0.60 and above may be acceptable.

Table 3 Demographic information of the participants

| Characteristic N=440 | | | |
|---|---|---|---|
| Variable | Description | Frequency | Percentage (%) |
| Gender | Male | 170 | 38.63 |
| | Female | 270 | 61.36 |
| Marital Status | Married | 245 | 55.68 |
| | Single | 195 | 44.31 |
| Age | 21-30 | 228 | 43.86 |
| | 31-40 | 132 | 30.00 |
| | 41-50 | 45 | 10.22 |
| | Over 50 | 35 | 7.95 |
| Education | Below Senior High School | 74 | 16.81 |
| | College | 278 | 63.19 |
| | Above college | 88 | 20.00 |

Table 4 Factor analysis results of all measurement items

| Factors | Mean | S.D. | Factor loading | α | Item label -Item description |
|---|---|---|---|---|---|
| Brand and service trust (BS) | | | | *0.82* | |
| Mean=4.54 S.D.=1.14 | 4.43 | 1.13 | 0.84 | | I have confidence in Fintech Service provided by enterprises (BS3) |
| | 4.45 | 1.10 | 0.82 | | I believe the transaction process and results of Fintech Service are correct(BS 4) |
| | 4.53 | 1.12 | 0.85 | | I believe the transaction system of Fintech Service is secure (BS 7) |
| Perceived usefulness (PU) | | | | *0.84* | |
| Mean=4.60 S.D.=1.16 | 4.45 | 1.30 | 0.83 | | I think using Fintech Service can make reading more efficient (PU 1) |
| | 4.31 | 1.28 | 0.80 | | I think using Fintech Service will not be limited by time and location restriction, which is helpful for me (PU 3) |
| | 4.56 | 1.13 | 0.85 | | I think using Fintech Service can make life more convenient (PU 6) |
| | 4.33 | 1.20 | 0.82 | | I think I can rapidly obtain information using e Fintech Service (PU8) |
| Perceived ease of use (PEU) | | | | *0.80* | |
| Mean=4.40 S.D.=1.22 | 4.59 | 1.22 | 0.84 | | I think it is easy to download application programs from internet using Fintech Service (PEU 1) |
| | 4.68 | 1.16 | 0.81 | | I think it is very easy to complete transactions using Fintech Service (PEU 2) |
| | 4.57 | 1.11 | 0.78 | | I think it is easy to get started using Fintech Service without reading the service manual (PEU4) |
| | 4.36 | 1.20 | 0.78 | | I think it is easy to learning Fintech Service without spend too much time (PEU 6) |
| Attitude toward using (A) | | | | *0.75* | |
| Mean=4.59 S.D.=1.18 | 4.83 | 1.13 | 0.83 | | I think it is very convenient to look up information using Fintech Service anytime and anywhere. (A 1) |
| | 4.04 | 1.10 | 0.83 | | I think using Fintech Service is a good idea. (A 2) |
| | 4.06 | 1.18 | 0.76 | | I like the idea of using Fintech Service. (A 4) |
| Behavioral intention to use (BI) | | | | *0.86* | |
| Mean=4.35 S.D.=0.82 | 4.79 | 1.25 | 0.86 | | I want to use the services provided by Fintech Service (BI1) |
| | 4.59 | 1.28 | 0.86 | | I want to use Fintech Service to connect information (BI 3) |

*4.1. Measurement Models: Confirmatory Factor Analysis*

Measurement models for all the constructs to be used for the subsequent structural equation modeling were created, and goodness of fit of these models was tested using confirmatory factor analysis (CFA).

The measured indicator variables depicted with squared boxes in Figure 4 represent respondents' mean scores of the items, along with their raw scores of the questionnaire items for brand and service trust, perceived usefulness, perceived ease of use, attitude and behavioral intention.

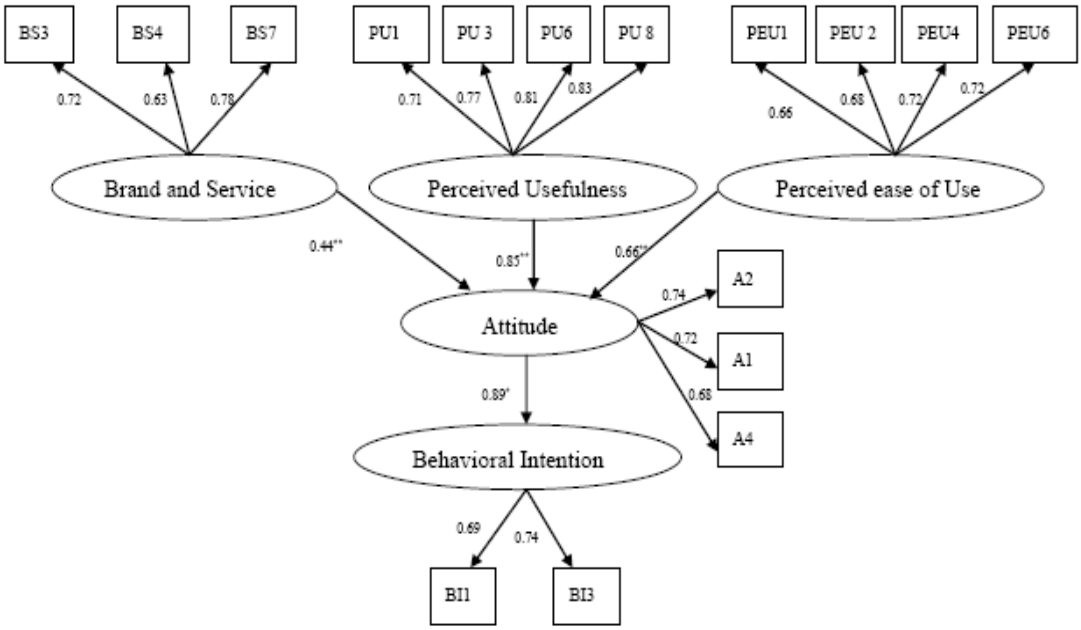


Figure 4 Measurement models tested using Confirmatory Factor Analysis (CFA)

*4.2. Analysis of Overall Model Fit*

Table 3 showed indices test results of the CFA measurement model. All the test indicators of this type met the testing standards, e.g., $\chi^2/df$ was 1.96 and less than 3, and the RMSEA was 0.07 and less than 0.08. In addition, the GFI (goodness-of-fit index) was 0.82, which was close to the testing standard of greater than 0.09. The RMR (root mean squared residual) value was 0.06, which was slightly higher than the testing standard of 0.05. On the other hand, all the test indicators of this type met or were close to the testing standard value of greater than 0.09; for example, the NFI (normed fit index) was 0.84, the CFI (comparative fit index) was 0.91, the IFI (incremental fit index) value was 0.91, and the RFI (relative fit index) value was 0.82. Therefore, the overall model fit tests mostly attained the testing standard, which had an excellent fit.

Table 5 Model fit-indices

| Model | Criteria | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | $\chi^2/df$ | P-value | RMSEA | GFI | RMR | NFI | CFI | IFI | RFI |
| | <3 | >0.05 | < 0.08 | > 0.9 | < 0.05 | > 0.9 | > .9 | > 0.9 | > 0.9 |
| Measurement | 1.96 | 0.000 | 0.07 | 0.82 | 0.06 | 0.84 | 0.91 | 0.91 | 0.82 |

*4.3. Hypothesis Testing of Each Variable Path*

From the empirical analysis and testing results, a path diagram of the relationships among the dimensions of brand and service trust, perceived usefulness, perceived ease of use, attitude toward using, and behavioral intention to use in this study was constructed and is presented in Figure 4. The conclusions of the hypothesis testing performed in this study were showed in Table 6.

Table 6 Hypothesis Relationship Path Test Result

| Hypothesis | Path | Path value | C.R./t | E/N |
|---|---|---|---|---|
| H1 | brand and service trust→ attitude toward using | 0.42 | 3.07** | Supported |
| H2 | perceived usefulness→ attitude toward using | 0.84 | 4.66*** | Supported |
| H3 | perceived ease of use→ attitude toward using | 0.31 | 2.15*** | Supported |
| H4 | attitude toward using→ behavioral intention to use | 0.86 | 9.08*** | Supported |

*: P<0.05、**: P<0.01、***: P<0.001)

Hypothesis 1: Brand and service trust has a significant positive effect on a customer's attitude toward using Fintech Service. The path coefficient of brand and service trust on attitude toward using Fintech Service was 0.42 and the t value was 3.07, which was greater than the standard value of 1.96 and attained the significant level; therefore, Hypothesis 1 is valid. This result means that if consumers have higher brand and service trust toward using Fintech Service, then their attitude toward using Fintech Service will be more positive.

Hypothesis 2: Perceived usefulness has a significant positive effect on a customer's attitude toward using Fintech Service. The path coefficient of perceived usefulness on attitude toward using Fintech Service was 0.84, and the t value was 4.66, which was greater than the standard value of 1.96 and attained the significant level; therefore, Hypothesis 2 is valid. This result means that if the consumer's view regarding how helpful it is to use Fintech Service is more positive, then their general attitude toward using Fintech Service is more positive.

The path coefficient of perceived ease of use on attitude toward using 3D Printing was 0.31, and the t value was 2.15, which was less than the standard value of 1.96 and attained the significant level; therefore, Hypothesis 3 is valid. This result means that the degree of ease of learning and using Fintech Service for consumers will affect consumer's attitude toward using the product.

The path coefficient of attitude toward using on behavioral intention to use Fintech Service was 0.86, and the t value was 9.08, which was greater than the standard value of 1.96 and attained the significant level; therefore, Hypothesis 4 is valid. This result means that if the level of a consumer's positive and negative evaluation of Fintech Service is higher, then the consumer's behavioral intention of using will be higher.

## 5. CONCLUSION

### *5.1. Research Result*

1. If customers are satisfied with the Fintech Service that provided by enterprises (brand/company reputation/trust), such as the transaction processes and results are correct, or the transaction system is safe and secure, then customers will have high levels of brand and service trust in Fintech Service.

2. If the Fintech Service enables customers to efficiently, conveniently, and quickly obtain relevant information on enterprises or perform transactions in real-time and free of time and location restrictions, then the customer's positive attitude toward using Fintech Service will increase.

3. If the Fintech Services are ease-of-using, the processes of operation are friendliness, and ease of downloading application program, this technology will affect customer's attitude toward using Fintech Service.

4. The degree of positive and negative evaluation of customers in using Fintech Service is the most important factor that affects whether customers will use Fintech Service.

### *5.2. Research Implications*

Based on the results of this study, the major findings have significant managerial implication. This finding reveals the importance of understanding the behavioral intention toward using Fintech Service. First of all, the exploratory factor analysis for consumer behavior showed that the acceptance of new technology 5 domains (brand and service trust, perceived usefulness, perceived ease of use, attitude toward using, and behavioral intentions to use) When evaluating people's acceptance of new technology experiences domain, they may think of positive experiential aspects, such as social psychological interaction within their clients or

the enterprises, the cost control of the products for the manufacturing industries, or the process convenience of the new technology, and conflict-related attributes included in this study with the quality of the new technology.

Be being able to identify setting performance, the enterprises managers may be able to alter customers' experiences in order to maximize their attitude toward using Fintech Service and then increase behavioral intention toward using Fintech Service. By understanding the relationships between the technology services provided, and how they affect customers, the enterprises managers should be better equipped all to satisfy and to retain clients.

For the success of marketing new technology, thus, it is suggested that the marketers should focus on building the relationship between customers about the enterprise's brand and service trust. Not only let customers perceive usefulness of the new technology, but also perceive ease of use of the new technology; because they can be fundamental factors increasing satisfaction with setting performance and activity. Expect to affect the customer's attitude toward using, and behavioral intentions to use, so that the new technology can be accepted by customers.

In the competitive market, servicing industries and products services must be linked complementary closely to gain the market share. On the other hand, a key factor to enhance the development of economic is continuing make advances in technology; the continuous technological progress is the main component in increasing added value for servicing industries; and the new technologies can make new investments profitable. Continuous technological progress must depend on continued research and development. Therefore, the upgrading of servicing industrial and developing of economic should focus on research and development to build the brand.

*5.3. Limitation and Future Research*

In order to compare the acceptance of Fintech Service for different industries, it might be possible to induct other industries as the sampling frame. This study is based on the servicing industry; suggest future research can be extended sample objects to other industries, and to learn more about different areas of consumer acceptance of Fintech Service approach.

For improving an understanding of consumer's behavior, further research should focus on the examination of the effects of other factors such as social norms and situational variables moderated the relationship between attitude and behavioral intention, the servicing costs significantly influence the acceptance of Fintech Service, and the product of Fintech Service will influence their attitude. In other words, future studies on quality-satisfaction relationship should consider other variables that may be included as alternative or additional antecedents to behavioral or control these effects.

Finally, there are other issues associated with this study's limitations that should be discussed to offer suggestions for future research. The proposed model was tested in the acceptance of Fintech Service. Generalization of this model must be examined using various settings. In conclusion, longitudinal analysis would clarify our understanding of the mechanisms influencing the link between satisfaction and loyalty in general.

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