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# STUDY OF THE RELATIONSHIP AMONG MOBILE PAYMENT (FINTECH), CREATING SHARED VALUE, AND CORPORATE REPUTATION: EVIDENCE IN KOREA, US, AND CHINA

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## ***Abstract***

Mobile Payment (Fintech), the combination of finance and technology, is creating a global boom in information technology (IT)-based financial services. In this study, two new factors including creating shared value (CSV), and corporate reputation was investigated. A large-scale survey was conducted in South Korea, the United States, and China for three months with those who have used mobile payment services, which represent the largest proportion of global fintech services. Our research findings show that “security and assurance” had an affirmative effect on user satisfaction. Fintech users’ satisfaction was found to affect positively the “economic value” and “social value” attributes of fintech CSV. The result clearly explains the importance of securing product/service competitiveness — the original mission of companies.

## ***Keywords***

Fintech, Financial Technology, Mobile Payment, Cloud, Networking, Computing, Communication, CSR, CSV (Creating Shared Value), PR (Public Relations), Reputation

## **1. Introduction**

Bill Gates, founder of Microsoft, mentioned at the 2014 Sibos Conference that innovation in finance had entered a new domain and warned that the market would be lost to new competitors already established in the market if existing financial players could not properly establish their roles. Fintech, the combination of finance and technology, is clearly different from existing electronic finance. According to Yoon et al. (2015), if electronic finance technically supported the existing financial system, fintech has the attribute of destructive innovation that can change the landscape of the financial industry. A survey by Venture Scanner (2015) showed 1,141 fintech companies were conducting new businesses that destroyed existing territories in all areas of the financial industry, including individual and corporate financing, payment, asset management, remittance, and insurance, in 53 countries as of June 2015.

We examined previous fintech-related studies and established, through review of various literature, the theoretical concepts of subjects of interest, such as the service quality of fintech, technology acceptance, satisfaction, intention to reuse, creating shared value (CSV), and corporate reputation. Based on this, an empirical analysis was conducted through the research model and through hypotheses to verify the effects of the service quality attributes of fintech and the technology acceptance attributes from a user perspective on the user satisfaction with fintech services, intention to reuse, and relationship between the economic and social value factors from a CSV perspective, as well as on the reputation of fintech companies.

## 2. Literature review

### 2.1 Fintech

Fintech represents new IT-based financial services (UKTI, 2014), and various opinions exist for its interpretation. McAuley (2015) describes fintech as a kind of industry composed of companies that use technology to make the financial system more efficient. The Financial Services Commission (2015), a government department that oversees the financial affairs of South Korea, provided the relatively detailed definition of fintech as “the combination of finance and technology, that is IT-based financial services or innovative non-financial companies directly providing financial services using new technologies”. UKTI (2014) classified fintech into traditional fintech and emergent fintech according to the natures and types of fintech services.

Traditional fintech	IT-related solutions, financial software, and IT services that support the tasks of financial companies
Emergent fintech	Financial services in new domains, such as specialized internet banks, crowdfunding, and remittance services, which replace the existing services

Table 1 Fintech classification of UKTI

CBinsights (2013) classified 100 fintech startup companies into six types: lending, money transfer, payment/billing tech, digital currency, personal finance, and institutional tool for established financial institutions. Global consulting firm Ernst & Young (2014) largely divided the fintech industry into payment, software, data and analytics, and platforms based on sales, market size, and growth potential. Venture Scanner (2015) classified the 1,141 fintech companies in 53 countries as of June 2015 into six areas: payment, personal finance, corporate finance, asset management, overseas remittance, and insurance. According to IDC (2014), the United States, the United Kingdom, Japan, and China are focusing investment on the fintech industry as a national project, and the invested areas of payment (28%), financial data analysis (29%), financial software (29%), and platform (14%) exhibited balanced advancement. In addition, various mobile-banking-related applications have significantly increased recently (Accenture 2015; Gronroos, 1984). Startups and venture companies with innovative financial technologies are changing the existing financial market dramatically by swiftly implementing their business ideas (Parasuraman et al., 1985)

### 2.2 Satisfaction

Hunt (1977) defined satisfaction as "what is assessed as better than expected after experience", and Oliver (1980) mentioned "the state in which the results of the product or service purchase

in response to a user's expectations and desires agree with the user's expectations and desires". Szymanski and Hise (2000) defined it as "a comprehensive concept of emotional reactions such as good feelings due to satisfaction and bad feelings caused by dissatisfaction in response to the subjective satisfaction and cognitive reactions experienced by the consumer after purchasing a certain product or service". Because the satisfaction and dissatisfaction, as well as the intention to reuse of the user, affect attitude formation toward the product or service and future purchase activities, they are regarded as the factors with important influence in this study.

### **2.3 CSV**

CSV was introduced in "Strategy and Society: The Link between Competitive Advantage and Corporate Social Responsibility (CSR)" of Porter and Kramer. It was expanded in "How to Fix the Capitalism?" (Soonho, 2014). Porter and Kramer (2011) described that, unlike CSR, CSV creates social value with its own activities while pursuing economic benefits, and it is a management activity that improves economic and social conditions while strengthening the key competitiveness of corporate profit creation. Since CSV addresses social problems while devising ways to create profits, it is fundamentally different from CSR in terms of the focus of value and the value creation method. Leyshon and Thrift (1995) called the state in which one cannot normally access or use the financial services or products of the established financial institutions in his or her society "financial exclusion," which represents a situation in which the poor and unfortunate social classes have difficulty accessing the established financial system. Burkett and Sheehan (2009) defined financial exclusion as the state in which economic agents cannot access necessary financial services or products with appropriate and fair opportunities.

According to Kim et al (2009), existing financial institutions tried to address financial exclusion problems from a CSR perspective. For example, they developed and provided customized financial products/services to financial exclusion classes, partnered with nonprofit organizations or the government to lower financial access cost, and provided diverse financial education to improve financial literacy. According to Soonho Lee (2014), however, fintech companies have recently provided new financial services for low-income classes in underdeveloped regions like South America, Africa, and Asia and the proliferation itself of fintech services has been attracting attention as an alternative to financial exclusion. M-PESA of Kenya and Tanzania and Easy Paise of Pakistan are replacing established financial services using the fast growth of mobile banking with smartphones even though they have poor bank networks. Based on these cases and according to Yoon et al. (2015), fintech should play an important role in addressing financial exclusion because the introduction and proliferation of fintech in underdeveloped and poor countries with insufficient financial infrastructure may facilitate financial services including banking and payment.

### **2.4 Corporate reputation**

According to Fombrun et al. (2003), corporate reputation generally means collective attraction or positive evaluation that various corporate stakeholders come to possess for a certain company over a long period of time. Corporate reputation is an intangible asset and sometimes called the collective evaluation of the company by the related public (Anderson & Gerbing, 1988). Gotsi and Wilson (2001) asserted corporate reputation is the collective attraction of a company to its customers, journalists, employees, investors, and other public, and described that it is slightly different from identity or image, although correlated. Corporate reputation may affect corporate image, and corporate image may also influence corporate reputation (Dapp, 2014). Domestic and overseas studies on corporate reputation include products or services, management vision and performance, and communication as the factors of corporate reputation. Here, common and essential components in the previous studies on corporate reputation were selected as measurement targets.

### 3. The Conceptual model and hypotheses

First, this study investigated the effects of fintech service quality and technology acceptance attributes on the satisfaction, intention to reuse, and CSV of fintech users, as well as on the corporate reputation of fintech companies. The research model and hypotheses were set up by selecting the fintech service quality attributes of reliability, mobility, and security and assurance, as well as the technology acceptance attributes of performance expectation, effort expectation, social influence, facilitating conditions, customer innovation, and intent to use as independent variables. The satisfaction and intention to reuse of the surveyed fintech users, CSV attributes classified as the economic and social value of fintech services and companies, and the corporate reputation factors of fintech companies were dependent variables. Second, related variables were derived.

H1: Satisfaction with fintech services will have a positive (+) effect on intention to reuse.

H2-1: Satisfaction with fintech services will have a positive (+) effect on "economic value creation" among the CSV attributes.

H2-2: Satisfaction with fintech services will have a positive (+) effect on "social value creation" among the CSV attributes.

H3: The "economic value" attribute of fintech CSV will have a positive (+) effect on "social value".

H4: Intention to reuse fintech will have a positive (+) effect on corporate reputation.

H5-1: The "economic value" attribute of fintech CSV will have a positive (+) effect on corporate reputation.

H5-2: The "social value" attribute of fintech CSV will have a positive (+) effect on corporate reputation.

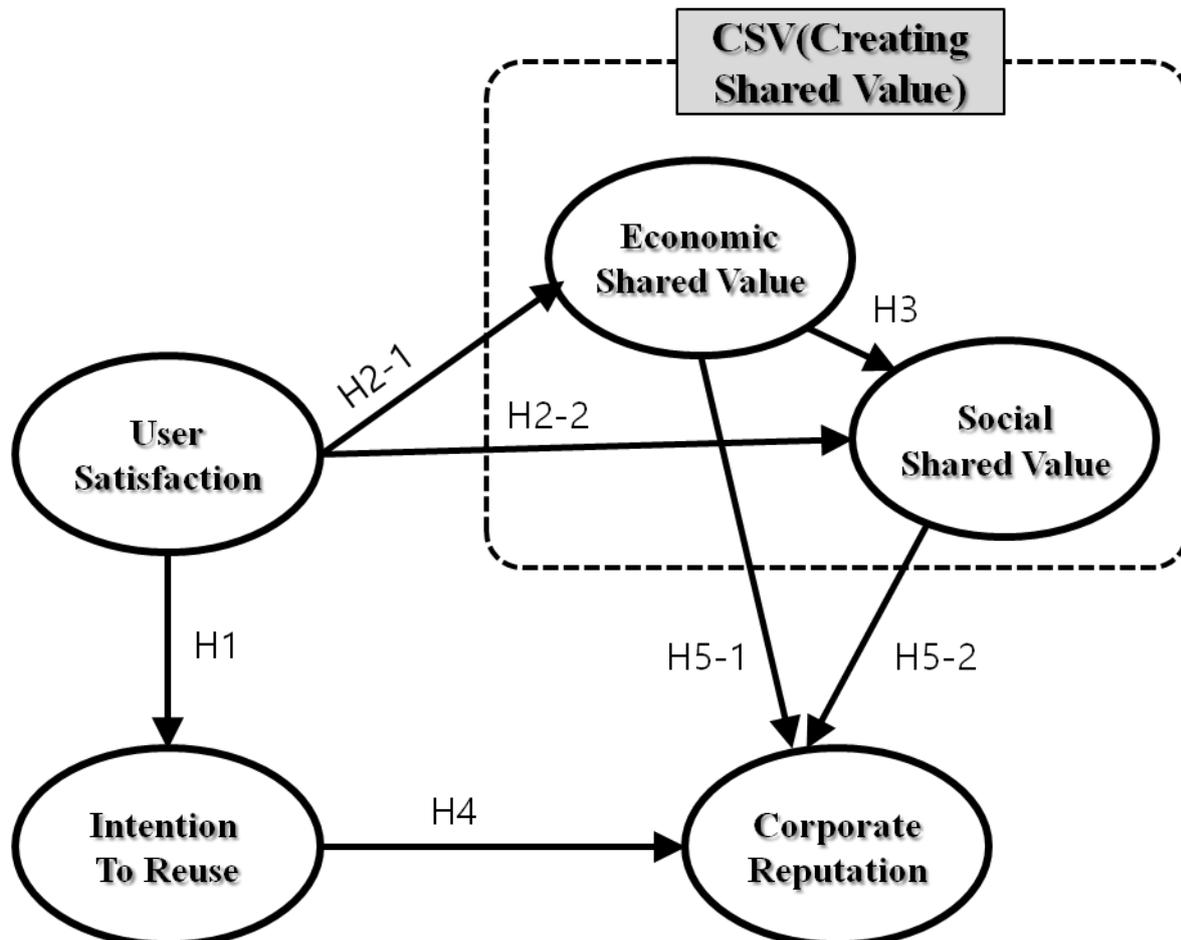


Fig 1: Research model

#### 4. Data collection

This investigation is part of a policy research project run by the Small and Medium Business Administration of Korea. As for questionnaire data in this study, a survey, targeting users who have experience in directly using fintech services (mobile payment) on smartphones, was conducted for about three months from October 2015 to December 2015 in Korea, the United States, and China. A total of 784 people (314 for Korea, 212 for the US, and 231 for China) were surveyed. The survey was conducted offline and online, targeting male and female adults over the age of 19.

#### 5. Results

In this study, the conceptual validity and reliability of the concepts used in the questionnaire were verified using SPSS 19.0, a statistical package software program, prior to hypothesis testing to conduct an empirical analysis using the questionnaires collected through the survey. Exploratory factor analysis was conducted to confirm whether the measurement variables are classified as the same factors for the same concepts. The factor loading of 0.4 or higher and the reliability of 0.6 based on Cronbach's alpha were set as the lowest allowable limit.

##### 5.1 Exploratory factor analysis and primary reliability analysis

Variables	Exploratory Factor Analysis		Reliability Analysis	
	comp1	comp2	Alpha if Item Deleted	Cronbach's $\alpha$
Social5	<b>.764</b>	<b>.038</b>	.690	.745
Social4	<b>.699</b>	<b>.067</b>	.705	
Social3	<b>.664</b>	<b>.220</b>	.695	
Social6	<b>.639</b>	<b>.126</b>	.716	
Social2	<b>.545</b>	<b>.360</b>	.714	
Social1	<b>.506</b>	<b>.229</b>	.730	
Economic2	<b>.068</b>	<b>.773</b>	.478	.601
Economic1	<b>.184</b>	<b>.707</b>	.505	
Economic3	<b>.189</b>	<b>.680</b>	.520	
Eigenvalue	2.549	1.812		
V.E. (%)	28.321	20.134		

Table 2 Results of exploratory factor analysis and reliability analysis on CSV

Variables	Exploratory Factor Analysis			Reliability Analysis	
	comp1	comp2	comp3	Alpha if Item Deleted	Cronbach's $\alpha$
Reputation 5	<b>.870</b>	<b>.031</b>	<b>-.043</b>	.878	.897
Reputation 6	<b>.848</b>	<b>-.001</b>	<b>.031</b>	.877	

Reputation 2	<b>.843</b>	<b>-.016</b>	<b>.014</b>	.878		
Reputation 8	<b>.834</b>	<b>-.033</b>	<b>.018</b>	.879		
Reputation 7	<b>.832</b>	<b>.037</b>	<b>.055</b>	.880		
Reputation 9	<b>.800</b>	<b>.000</b>	<b>-.019</b>	.881		
Reputation 1	<b>.698</b>	<b>-.027</b>	<b>-.016</b>	.890		
Reputation 10	<b>.564</b>	<b>.098</b>	<b>.031</b>	.899		
Reputation 3	<b>.468</b>	<b>-.137</b>	<b>.026</b>	.904		
Reputation 4	<b>.442</b>	<b>.101</b>	<b>-.119</b>	.902		
Satisfaction 2	<b>.052</b>	<b>.777</b>	<b>.136</b>	.786		.825
Satisfaction 1	<b>.001</b>	<b>.772</b>	<b>.184</b>	.782		
Satisfaction 4	<b>.020</b>	<b>.748</b>	<b>.197</b>	.786		
Satisfaction 5	<b>-.042</b>	<b>.640</b>	<b>.229</b>	.805		
Satisfaction 3	<b>.011</b>	<b>.637</b>	<b>.224</b>	.812		
Satisfaction 6	<b>.015</b>	<b>.616</b>	<b>.235</b>	.808		
Reuse2	<b>-.013</b>	<b>.423</b>	<b>.825</b>	.772	.857	
Reuse1	<b>-.020</b>	<b>.437</b>	<b>.785</b>	.796		
Reuse3	<b>-.006</b>	<b>.478</b>	<b>.755</b>	.802		
Reuse4	<b>.007</b>	<b>.231</b>	<b>.740</b>	.926		
Eigenvalue	5.440	3.648	2.688			
V.E. (%)	27.200	18.240	13.438			

Table 3 Results of exploratory factor analysis and reliability analysis on user satisfaction intention to reuse and corporate reputation

## 5.2 Confirmatory factor analysis

Structural equation model analysis was conducted based on the above reliability analysis and factor analysis results to test the suitability of the research model and set hypotheses. Discrimination criteria for the research model on a level that can be sufficiently accepted by general domestic and overseas academic societies (Song, 2012; Jais, 2007) were selected and applied (Christopher & Gwen, 2014; Young-Man et al. 2016). Also, overall suitability was determined only if six or more discrimination criteria out of 10 and three or more absolute suitability index criteria out of five were met. In testing, all 14 latent variables used in this

study were found to be suitable. They were also assessed suitable in measurement model analysis.

Category	CMI N	df	p	CMIN/d f	RMR	GF I	AG FI	CFI	NFI	IFI	TL I	RMSE A
Value	4002. 653	20 53	.000	1.950	.038	.866	.851	.926	.860	.926	.920	.035

Table 4 Initial measurement model assessment

### 5.3 Validity analysis

Convergent validity was analyzed for the latent variables refined through the measurement model analysis to examine the consistency of observation variables that measure the latent variables. The standard regression weights of all variables except "Society 1=0.466" were higher than 0.5, securing convergent validity (Anderson and Gerbing, 1988).

Discriminant validity is secured when the correlation among the variables is low. Therefore, whether the hypothesis that the variables are identical (i.e., correlation coefficient=1) is rejected must be examined (Song, 2012). For the discriminant validity assessment, the 95% standard error interval estimates (two standard error interval estimates) of the correlation coefficient showing the correlation between the constituent concepts, i.e., whether one is included in correlation coefficient  $\pm(2 \times \text{Standard Error})$  was examined (Anderson & Gerbing, 1988). As a result, the correlation coefficients between the variables did not include one, securing discriminant validity among the constituent concepts.

### 5.4 Hypothesis testing

To verify the hypotheses, research model analysis was conducted on the final latent variables using AMOS. Table 5 shows the results of testing the hypotheses. The proposed model exhibited the values of CMIN=3967.719, DF=2027, P=.000, CMIN/DF=1.957, RMR=.042, GFI=.865, AGFI=.852, NFI=.859, IFI=.926, TLI=.921, CFI=.926, and RMSEA=.035. Among the 10 discrimination indices, CMIN/DF, RMR, AGFI, IFI, TLI, CFI, and RMSEA were found to be suitable. The GFI and NFI indices were also extremely close to the discrimination criteria (0.9), indicating the significantly high suitability of the research model. Table 5 shows the results of hypothesis testing.

## 6. Conclusion

Correlations among service quality, technology acceptance, satisfaction, and intention to reuse and their various attributes were investigated to describe the new concepts of fintech, corporate reputation, and CSV. Nine of 16 hypotheses were adopted; seven were rejected. The results of this study showed it was the security and assurance attribute that was found to have a positive (+) effect on user satisfaction among the reliability, mobility, and security and assurance attributes of fintech service quality. The major measurement items of the security and assurance attribute are related to the level of security and assurance in the mobile use environment — the main interest of the users and essential for transactions, due to the nature of mobile financial transactions performed mainly using smartphones. Therefore, it is highly reasonable that the satisfaction of fintech users increased with the high assessment of security and assurance. Dapp (2014) and Christopher and Gwen (2014) have stressed the importance of security and assurance as a major prerequisite for the proliferation and development of fintech. It was found that performance expectation, customer innovation, and usability among the six fintech technology acceptance attributes have a positive effect on user satisfaction. The effort

expectation attribute was rejected, meaning there are some barriers to the notion that fintech is easier to use than general payment methods. The positive effect of satisfaction on intention to reuse was anticipated through previous studies, and their strong correlation was confirmed by high related values in this study.

Hypothesis	Hypothetical Path		Coefficient	C.R.	p	Result	Remark	
H1	User Satisfaction	⇒	Intention to Reuse	1.057	14.687	***	Adopt	
H2-1	User Satisfaction	⇒	Economic Shared Value	.546	10.724	***	Adopt	
H2-2	User Satisfaction	⇒	Social Shared Value	.194	3.476	***	Adopt	
H3	Economic Shared Value	⇒	Social Shared Value	.461	5.474	***	Adopt	
H4	Intention to Reuse	⇒	Corporate Reputation	-.040	-1.511	.131	Reject	p>0.05, C.R.<±1.96
H5-1	Economic Shared Value	⇒	Corporate Reputation	.151	2.130	.033	Adopt	
H5-2	Social Shared Value	⇒	Corporate Reputation	-.029	-.461	.644	Reject	p>0.05, C.R.<±1.96
<b>CMIN=3967.719, DF=2027, P=.000, CMIN/DF=1.957, RMR=.042, GFI=.865, AGFI=.852, NFI=.859, IFI=.926, TLI=.921, CFI=.926, RMSEA=.035</b>								

\*\*\*p<.001

Table 5 Results of hypothesis testing

This study confirmed the positive effect of satisfaction with fintech services on the economic value and social value attributes of fintech CSV. Although various studies have been conducted to investigate the relationship between the CSR of a company and the users (consumers), it is encouraging to find that the economic value and social value attributes are highly correlated with user satisfaction in terms of CSV. It was confirmed that satisfaction with fintech services directly led to the economic value of the fintech company. Also, the high correlation of the social value attribute indicated that the value of fintech is not limited to simply producing and selling products — it provides value to social development and may help address social problems. The result that the economic value attribute of fintech CSV affects the social value attribute also means that fintech services can create social value only if they have fundamental corporate value — economic value in terms of business. The result shows that corporate competitiveness in products and services leads to social value creation.

The limitations of this study lie in the regional restriction on datasets. The survey was conducted only with those who have used fintech services themselves, while the United States with advanced fintech technology, China with the largest number of users, and South Korea were compared. Therefore, the responses of the respondents could not represent their countries, and thus limitations may exist in

generalization, although the number of samples (784) is not considered small. These shortcomings can be overcome through more comprehensive and macroscopic analysis by extending the research targets and countries.

## References

- Anderson, J. C. & Gerbing, D. W. (1988). Structural Equation Modeling in Practice: a review and recommend two-step approach. *Psychological Bulletin*, 103, 411-423.
- Accenture. (2015). The Future of Fintech and Banking. *Accenture Web Site*.
- Bill Gates. (2014.10.3) Banking is changing. Impatient Optimists. *Bill & Melinda Gates Foundation Web site*.
- Burkett, I. & Sheehan, G. (2009). From the Margin to the Mainstream: the challenges for Micro-finance in Australia, Brotherhood of St. Laurence and Foresters Community Finance. Fitzroy, Vic.
- Christopher A. & Gwen F. (2014). Cyber Security: The Human Factor, *Fintech Law Report*, 17(6). 11-13.
- CBinsights. (2013.7.10.). Accenture & Partnership Fund Analysis. *CBinsights Web site*.
- Cronin, J. J. & Taylor, S. A. (1992). Measuring service quality: A re-examination and extension. *Journal of Marketing*, 56(3), 55-68.
- Davis, F. D. (1986). A technology acceptance model for empirically testing new end-user information system: Theory and results. Doctoral Dissertation. *Sloan School of Management, Massachusetts: Massachusetts Institute of Technology*.
- Dapp, T. F. (2014). Fintech? The digital (r)evolution in the financial sector: Algorithm-based banking with the human touch. Deutsche Bank Research. Deutsche Bank web site.
- Ernst & Young. (2014). Landscaping UK Fintech. EY Web site.
- Financial Services Commission, Republic of Korea (2015.1.27). Support plan for fintech industry, [www.fsc.go.kr](http://www.fsc.go.kr).
- Fombrun, C. J. & Van Riel, C. (2003). *Fame & fortune: how successful companies build winning reputation*. Upper Saddle, NJ: Prentice Hall.
- Gronroos, C. (1984). A Service Quality Model and Its Marketing Implication, *European Journal of Marketing*, 4, 36-43.
- Gotsi, M. & Wilson, A. M. (2001). Corporate reputation: Seeking a definition. *Corporate Communication: An International Journal*, 6(1), 24-30.
- Hall, R. (1992). The strategic analysis of intangible resources, *Strategic Management Journal*, 13(2), 135-144.
- Hunt, K. (1977). In *Conceptualization and Measurement of Consumer Satisfaction and Dissatisfaction. CS/D: Overview and Future Research Directions*. pp.455. Cambridge, MA: Marketing Science Institute.
- IDC. (2014). 2014 Fintech Rankings Top 100. IDC Web site.
- Jais, S. D. (2007). The successful use of information in multinational companies: An exploratory study of individual outcomes and the influence of national culture. *Structural Equation Modeling*. pp.131-132. DUV: Springer.
- Jin-Hyuk Jung, Ju Young Kim, Hyeong-Chan Lee, Jeong Hyun Yi (2013), *Wireless Pers Commun* 73(4), pp. 1421–1437.
- Kim, T., Lee T., Kim, M., & Jeon, J. (2009). A Study on the Policy Strategy for Financial Inclusion for Low-income Families. The Korea Institute for Health and Social Affairs, 15, 47-51
- Kim, C., Mirusmonov, M., & Lee, I. (2010). An empirical examination of factors influencing the intention to use mobile payment, *Computers in Human Behavior*, 26(3), 310-322.

- Leyshon, A. & Thrift, N. (1995). Geographies of financial exclusion: financial abandonment in Britain and the United States. *Transactions of the Institute of British Geographers*, 20, 312-341.
- McAuley. (2015.10.23). "What is Fintech". Wharton Fintech Club Web site.
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing*. 17(4), 460-469.
- Porter, M. E., & Kramer, M. R. (2006). Strategic y Sociedad. *Harvard Business Review*, 84(12), 42-56.
- Porter, M. E., & Kramer, M. R. (2011). How to Fix Capitalism. *Harvard Business Review*, January-February, 63-77.
- Parasuraman A., Zeithaml V. A. & Berry L. L. (1985). A Conceptual Model of Service Quality and Its Implication for Future Research, *Journal of Marketing*, 49.
- Szymanski, D. M. & Hise, R. T. (2000). e-Satisfaction: An Initial Examination, *Journal of Retailing*, 76(3), 309-322.
- Soonho L (2014), "The Movement to Expand 'Financial Inclusion' Through the Use of Fintech and Its Implications", *Financial Focus, Weekly Financial Brief, Korea Institute of Finance*, 23(47), pp. 14
- Song, J., 2014, "SPSS/AMOS statistical analysis", *Structural Equation Modeling*, 21st Century Publishing, pp. 216-218.
- Sarfraz Alam, Mohammad M. R. Chowdhury, Josef Noll (2016), Interoperability of Security-Enabled Internet of Things, *Wireless Personal Communications*, 61(3), pp. 567–586.
- UKTI (UK Trade & Investment). (2014). "2014 Landscaping UK Fintech". UKTI Web site.
- Venture Scanner. (2015.6.9.). Where are fintech innovations happening?. Venture Scanner Web site.
- Venkatesh, V. & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478.
- Xinyi Chen, Kyung Choi, Kijoon Chae (2017), A Secure and Efficient Key Authentication using Bilinear Pairing for NFC Mobile Payment Service, *Wireless Pers Commun*, 97(1), pp. 1–17.
- Yoon, B. H., Kim, J. R., Na, K. S., You, Y. Y. & Kim, S. B. (2015). Research on fintech's technology acceptance model: Intention to use and recommend. *International Journal of Applied Engineering Research*, 10(90), 783-787
- Yoon, B. H., You, Y. Y. & Na, K. S. (2015). Analytical Study of Fintech's Influence on Financial Inclusion. The 5th International Conference on Convergence Technology, Hokkaido, Japan.
- Young-Man Je, Yen-Yoo You, Kwan-Sik Na (2016), Information Security Evaluation Using Multi-Attribute Threat Index, *Wireless Personal Communications*, 89(3), pp. 913–925.
- Zeithaml, V. A., Parasuraman, A. & Malhotra, A. (2000). A Conceptual Framework for Understanding e-Service Quality: Implications for Future Research and Managerial Practice. MSI Working Paper Series, pp.1-46. Cambridge: MSI (Marketing Science Institute).