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**Global Education, Teaching and Learning
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The Mediating Effect of Job Satisfaction in Creating Employee Performance of The Public Fertilizer Company in Indonesia

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Abstract

Organizations in Recent decades are faced with more challenges that affect all organizations and increased the popularity of creativity and innovation as major contributors to company performance. The previous studies indicate that job satisfaction precedes and significantly influences several aspects of organizational performance and productivity. The overall objective of the investigation is to identify the mechanism and / or process of the mediating effect of job satisfaction that affects the results of individuals and companies at the company level. Data from 131 employees of PT. Pupuk Iskandar Muda was analyzed using partial least squares structural equation modeling (PLS-SEM) with Warp PLS to assess the hypothesized relationships. The empirical analysis shows that self-efficacy, organizational climate, and quality of work-life are positively associated with job satisfaction. Self-efficacy, organizational climate, quality of work-life, and job satisfaction are positively associated with employee performance. Moreover, the findings also indicate that the mediation of job satisfaction is also proven significant in the same relationship. Overall, this study could make important contribution to extant research in human resource management and organizational behavior crucially in the context of bureaucratic reform in Indonesia.

Keywords: employee performance, job satisfaction, organizational climate and QWL

1. INTRODUCTION

Organizations in the 21st century are faced with more challenges that affect all organizations, both in structure and size. The organizational climate in certain organizations is always challenged by the increasing number of changes at this time (Nair, 2006). Recent decades have increased the popularity of creativity and innovation as major contributors to company performance (eg, Zhang & Bartol, 2010; Shalley, Zhou, & Oldham, 2004; Shalley, Gilson, & Blum, 2000).

The facts show that the rules, company's regulations, and policies are not enough to maintain the effectiveness and performance of employees, because the workplace is diverse, unique, and always changing. Successful organizations achieve dynamic changes within them and with their employees and create significant relationships between their employees (Khan, Farooq & Ullar, 2010).

The results of previous studies indicate that job satisfaction precedes and significantly influences several aspects of organizational performance and productivity (Judge, Thoresen, Bono & Patton, 2001; Liu & Norcio, 2008; Yousef, 2002; Podsakoff, MacKenzie, Paine & Bacharach, 2000; Anbuouli, 2012; Vischer, 2007; Dalal, 2005; Newsham et al., 2009). Nevertheless, the researchers also support the existence of potential mediators such as job

satisfaction that can explain the significant relationship between antecedents and employee performance (Politis, 2006; Yousef, 2002; Crede et al., 2010).

Indonesia's economy is mainly dependent on natural resources, oil, the fertilizer industry, and other chemical industries as the main source of income, to collect foreign currencies, assists in the creation of the infrastructures and industries in the country. Although large investments are aimed at the industrial sector, this sector is still very dependent on oil revenues (BPS, 2018; Kilavuz et al., 2012).

The manufacturing industry is the main driver for Indonesia's economic growth. In 2013, the contribution of the manufacturing industry was 21.03 %; increased to 21.08 % in 2014; 20.99 % in 2015; 20.51 % in 2016; and 20.16 % in 2017. Manufacturing growth rate in 2017 increased to 4.27 % compared to 4.26 % in 2016 (BPS, 2018b).

Since 1960, the development of the manufacturing industry has continued to increase with an average of 7.42 %, this is in line with the increase in the contribution of the manufacturing industry to GDP in 1960-2004, with the highest value in 2004, the role of the manufacturing industry reaching 24.23 % (Winardi et al., 2017; World Bank, 2018b; BPS, 2017).

In the Indonesian context, even though the country is rich in natural resources, the production sector shows poor performance due to ineffective use of resources which limits output and income. The Indonesian government controls most of the companies and assets in the country (directly or indirectly) and in its supervision several low-performance industries (Rahman et al., 2018; Winardi et al., 2017; Bakari, 2017).

This study set out to explore the phenomenon of how the mediating effect of job satisfaction in creating employee performance of the public fertilizer company in Indonesia. Therefore, the overall objective of the investigation is to identify the mechanism and / or process of the mediating effect of job satisfaction that affects the results of individuals and companies at the company level. To advance previous research, qualitative and quantitative phases are carried out and analyzed in this study.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Research has long recognized the importance of an individual's self efficacy in his/her ability to sustain performance (Bandura & Locke, 2003; Hannah et al., 2016; Honicke & Broadbent, 2016; Walumbwa & Hartnell, 2011). Self-efficacy refers to an individual's belief in his or her capabilities for accomplishing a particular task (Bandura, 1997), which then encourages effective work behavior such as higher job satisfaction (Wallace, 1995) and job performance (Chebat & Kollias, 2000).

The construct of self-efficacy is one major focus of Bandura's Social Cognitive Theory (Bandura, 1977, 1997, 2000, 2001). Bandura (2006) identifies four sources of information that influence self-efficacy: enactive mastery, vicarious learning, verbal persuasion, and emotional arousal. Self-efficacy is viewed as one of the real determinants of job satisfaction. Some study examined the impact of self-efficacy on job satisfaction and the results demonstrated that every factor strengthening, self-efficacy positively and significantly affect job satisfaction and employee performance (Iis and Yunus, 2016; Torkoglu et al., 2017; Adeeko et al., 2017; Singh & Jain, 2013).

Job satisfaction plays a crucial impact on employees' effectiveness and performance in any organization (Perera et al., 2014). This may be the reason why job satisfaction still stands to be a major field of study for researchers since its inception in 1900s (Noor et al., 2015).

For every company that wants to remain competitive and maintain a competent workforce, the management team must focus on the organizational climate (Altman, 2000). If the climate in an organization provides positive benefits for its employees, job satisfaction will increase (Gibson, 1998; Hashemi & Sadeqi, 2016). Several studies conducted on the relationship between organizational climate and job satisfaction on job performance have found a significant correlation between the two variables (Eskandari & Ghanabari, 2014; Boateng et al., 2014; Balkar, 2015; Efanga et al., 2015; Awan & Asghar, 2014; Javed et al., 2014).

Quality of work-life (QWL) is a construct related to employee welfare (Mathison, 2012). Job satisfaction is the result of QWL where QWL also influences satisfaction in all other aspects of life such as family life and social life (Robbins, 2001; Herzberg, 1966; Robbins & Judge, 2013) especially on employee satisfaction and performance (Swamy, 2013; Chaturvedi & Yadav, 2011; Baleghizadeh & Gordani, 2012; Ashwini, 2014).

In this section, the conceptual framework is developed based on the results of the literature review of various opinions of experts. The path diagram and conceptual framework proposed include the effect of self-efficacy, organizational climate, and quality of work-life on the performance of employees of PT. Pupuk Iskandar Muda North Aceh Regency with job satisfaction as the intervening variable. The conceptual framework appears below:

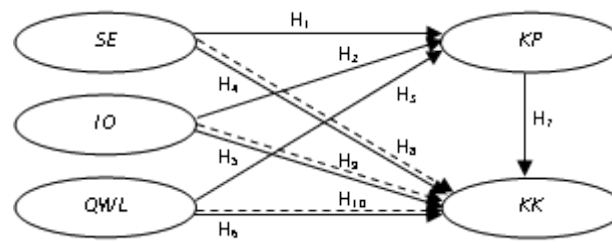


Fig. 1. Conceptual model

Based on the above arguments, the hypotheses can be drawn as follows:

H1: Self-efficacy directly influenced job satisfaction

H2: Organizational climate directly influenced job satisfaction.

H3: Quality of work-life directly influenced job satisfaction.

H4: Self-efficacy directly influenced employee performance.

H5: Organizational climate directly influenced employee performance.

H6: Quality of work-life directly influenced employee performance.

H7: Job satisfaction directly influences employee performance.

H8: Job satisfaction mediates the relationship between self-efficacy and employee performance

H9: Job satisfaction mediates the relationship between organizational climate and employee performance

H10: Job satisfaction mediates the relationship between quality work of life and the employee performance

3. RESEARCH METHODS

This study is conducted at PT. Pupuk Iskandar Muda Aceh, Indonesia, and the object are employees of PT. Pupuk Iskandar Muda. The population in this study are 640 permanent employees of PT. Pupuk Iskandar Muda, while the samples are 139 employees of PT. Pupuk Iskandar Muda North Aceh Regency. This study obtained the data by distributing questionnaires to respondents. Descriptive statistics analysis is a method related to the data collection and presentation. This analysis is used to provide an empirical description of the data collected in the study. In this study, the analytical method used to examine the hypotheses is SEM Partial Least Squares (PLS) analysis with Warp PLS which is an indeterminacy factor of powerful analysis methods because the data do not have to be of a certain scale measurement, both small and large sample sizes.

4. RESULTS AND DISCUSSIONS

4.1. Descriptive Statistics of Characteristics of Respondents

The population of this study is all employees of PT. Pupuk Iskandar Muda, North Aceh Regency. While the samples are 139 respondents. The researcher has distributed questionnaires to all respondents, but only 134 questionnaires have returned, and only 131 questionnaires could be used.

The description of respondents based on their characteristics, such as age, marital status, education, and years of service. The results show that in terms of age 40 (30.5%) of respondents aged over 40 years, 35 (26.7%) aged between 26 to 35 years, 33 (25.2%) aged between 36 and 45 and the remaining 23 (17.6%) under the age of 25 years. In terms of marital status, 107 (81.7%) were married and 24 (18.3%) were single. 88 (67.1%) of them have master, undergraduate and diploma qualifications while the rest have secondary school qualifications. The majority of respondents, 98 (74.8%) had work experience of more than 11 years.

4.2. Measurement Model (Outer Model)

Measurement Model (Outer Model) test results concluded that self-efficacy, organizational climate, quality of work life, job satisfaction, and employee performance meet the evaluation criteria of the outer model (measurement model) because the value of all loading values is above 0.4 and the p-value value <0, 05.

4.3. AVE, CR, and CA Test

For the validity test using AVE, the recommended AVE value is 0.5. Based on Table 1, the AVE value of SE is 0.556, IO 0.618, QWL 0.568, KP 0.588 and while KK is only 0.374. The four variables are known with the AVE values above 0.5 while the KK is only 0.374. It means that it has met the validity requirements based on the AVE size.

The composite reliability value of self-efficacy (SE) is 0.909, organizational climate (IO) 0.906, quality of work-life (QWL) 0.913, job satisfaction (KP) 0.919 and employee performance (KK) 0.807. It shows that all composite reliability values are above 0.7, which means that the variables in this study have met the reliability requirements based on composite reliability measures. the Cronbach alpha value of self-efficacy (SE) is 0.885, organizational climate (OI) 0.874, quality work of life (QWL) 0.891, job satisfaction (KP) 0.898 and employee performance (KK) 0.720. It is known that all Cronbach alpha values are above 0.7, which means that the variables in this study have met the reliability requirements based on Cronbach alpha value.

Table 1. The Values of Average Variance Extracted (AVE) of Each Latent Variables

	SE	IO	QWL	KP	KK
R-Squared				0.356	0.442
Composite reliability	0.909	0.906	0.913	0.919	0.807
Cronbach's Alpha	0.885	0.874	0.891	0.898	0.720
Avg. var. extrac.	0.556	0.618	0.568	0.588	0.374
Full Collin. VIF	1.262	1.174	1.114	1.472	1.358
Q-squared				0.352	0.438

4.4. The Goodness of Fit Tests

The Test Results of Mediation Effect of Self-Efficacy - Job Satisfaction. The output results above explain that the APC has an index of 0.268 with the p-value <0.001, while ARS has an index of 0.399 with the p-value <0.001. Based on the criteria, the APC has met the criteria because of the p-value <0.001. Similarly, the p-value of ARS is p <0.001. AVIF value that must be <5 has been fulfilled because based on the data, AVIF value is 1,118. Thus, the inner model could be accepted.

Table 2. The OutputModel Fit Indices Results

Fit Indices	Index	p-value	Criteria
Average Path Coefficient (APC)	0.268	p < 0.001	p < 0.05
Average R-squared (ARS)	0.399	p < 0.001	p < 0.05
Average Variance Inflation Factor (AVIF)	1.118 Good if <5		AVIF < 5

4.5. Coefficient of Determination

the value of R^2 or the coefficient of determination in the endogenous construct. Job satisfaction (KP) has a value of R^2 was 0,356 which indicates that 35.6% of the variations in job satisfaction can be explained by self-efficacy (SE), organizational climate (IO), and quality of work-fife. While the value of R^2 or coefficient determination of employee performance (KP) R^2 was 0.442, which indicates that 44.2% of the variation in employee performance can be explained by self-efficacy (SE), organizational climate (IO), and quality of work-life and job satisfaction.

Table 3. The R^2 Value of Latent Variables

Latent Variables	R Square
Job Satisfaction	0,356
Employees Performance	0,442

4.6. Structural Model Path Analysis (SEM WarpPLS)

Structural Equation Model (SEM) with WarpPLS was employed to analyse the data gathered in this study. PLS is a technique also known as a “soft modelling” technique. The analysis shows

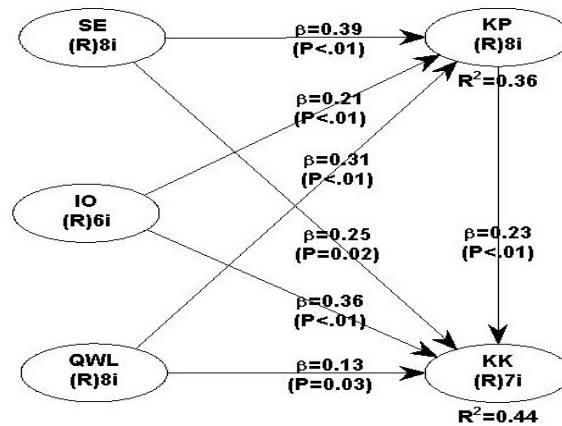


Fig. 2. Structural model path analysis (SEM WarpPLS)

The path coefficient is illustrated on Table 4.

Table 4. Structural parameter estimates: Path analysis model (n=131)

Latent Variables		Coef	P
Self efficacy	Job Satisfaction (KP)	0.394	0.001
Organizational Climate	Job Satisfaction (KP)	0.205	0.006
Quality of Work-life	Job Satisfaction (KP)	0.305	0.001
Self efficacy	Employee Performance (KK)	0.246	0.016
Organizational Climate	Employee Performance (KK)	0.360	0.001
Quality of Work-life	Employee Performance (KK)	0.130	0.027
Job Satisfaction	Employee Performance (KK)	0.234	0.002

Table 4 shows the direct effect results self-efficacy (SE) directly influenced job satisfaction (KP), where the p-value is 0.001 or lower than the significance level of 0.05 (H1 was accepted), Organizational climate (IO) directly influenced job satisfaction (KP) where the p-value is 0.006 or lower than the significance level of 0.05, Quality of work-life (QWL) directly influenced job satisfaction (KP) where the p-value is 0.001 or lower than the significance level of 0.05, Self-efficacy (SE) directly influenced employee performance (KK) where the p-value is 0.016 or lower than the significance level of 0.05 (H1, H2, H3 and H4 was accepted).

Meanwhile, organizational climate (IO) directly influenced employee performance (KK) where the p-value is 0.006 or lower than the significance level of 0.05, Quality of work-life (QWL) directly influenced employee performance (KK) where the p-value is 0.027 or higher than the significance level of 0.05, Job satisfaction (KP) directly influences employee performance (KK) where the p-value is 0.002 or smaller than the significance level of 0.05 (H5, H6, H7 and H8 was accepted).

4.7. The Results of Indirect Effects

Based on Mediation Criteria (Baron & Kenny, 1986), it can be concluded that all direct path coefficients (a, b, and c), are significant though only path c is significant. So, it concludes that there is a partial mediation relationship. In other words, job satisfaction partially mediates the relationship between self-efficacy and employee performance

at PT. Pupuk Iskandar Muda North Aceh Regency with the estimated standardized value of 0.092 and the p-value of $0.009 < 0.05$.

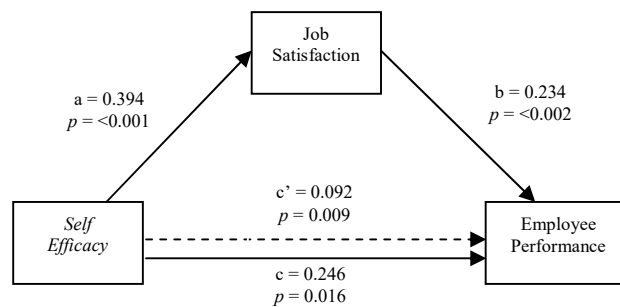


Fig. 3. The Results of Mediation Effect Test of Self-Efficacy - Job Satisfaction – Employee Performance

Based Mediation Criteria (Baron & Kenny, 1986), it shows that all direct path coefficients (a, b, and c) are significant, and path c is also significant. It means that a partial mediation relationship occurs. In other words, job satisfaction partially mediates the relationship between organizational climate and employee performance of PT. Pupuk Iskandar Muda North Aceh Regency where the estimated standardized value is 0.048 and p-value is $0.036 < 0.05$.

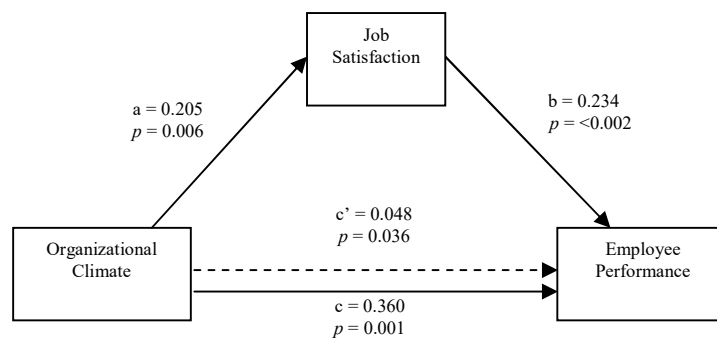


Fig. 4. The Results of Mediation Effect Test of Organizational Climate – Job Satisfaction – Employee Performance

Based on Mediation Criteria (Baron & Kenny, 1986), it concludes that all the direct path coefficients (a, b, and c) are significant and path c is also significant. It means that a partial mediation relationship occurs. In other words, job satisfaction partially mediates the relationship between quality work of life and the performance of the employees of PT. Pupuk Iskandar Muda North Aceh Regency where the estimated standardized value is 0.071 and the p-value is $0.014 < 0.05$.

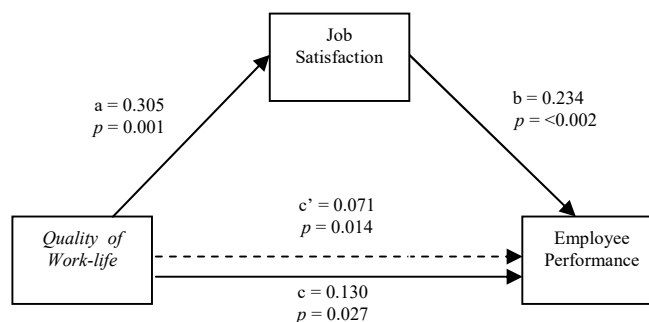


Fig. 5. The Results of Mediation Effect Test of Organizational Climate – Job Satisfaction – Employee Performance

5. CONCLUSION

These findings have empirically found that Self-efficacy has a positive effect on the job satisfaction of employees. This condition reveals that high self-efficacy could provide high job satisfaction in which appears on the ability of employees to provide good work results. Organizational climate has a positive effect on the job satisfaction of employees. This reveals that the perception of the job satisfaction of employees also rises when the organizational climate is conducive. Quality of work-life has a positive effect on the job satisfaction of employees. This condition shows that the perception of job satisfaction of employees rises when management could improve the quality of work-life. Self-Efficacy has a positive effect on the performance of the employees. This condition shows that high self-efficacy could improve employee performance. To achieve optimal employee performance, one of the ways is through self-efficacy. Organizational climate has a positive effect on the performance of employees. This condition shows that the performance of the employees will go up when the organizational climate has been conducive. Quality of work-life has a positive effect on the performance of employees. This condition explains that improving performance through the quality work of life can be done by creating or increasing job satisfaction as a measure of quality work of life on performance. Job satisfaction has a positive effect on the performance of employees. This condition explains that the perception of high job satisfaction can improve employee performance. To achieve employee performance expected by the company, one of which is by providing a perception of job satisfaction for employees.

In addition, the analysis shows that Job satisfaction mediates partially between self-efficacy and the performance of employees. It explains that satisfaction gives a significant and indirect effect on the performance of employees. Partial job satisfaction mediates between the organizational climate and the performance of the employees of. It explains that satisfaction gives a significant and indirect effect on the performance of the employees. Partial job satisfaction mediates between the quality of work-life and employee performance. It explains that satisfaction gives a significant and indirect effect on the performance of the employees.

6. SUGGESTIONS

To increase job satisfaction and employee performance, the researcher suggests several suggestions as follows. Based on the results of the study, self-efficacy has a large role in improving employee performance, both the role is directly or mediated by job satisfaction. The self-efficacy assessment is very subjective because it emphasizes the individual beliefs of employees as a result of his perception of his abilities. Based on the results of the study, self-efficacy has a large role in improving employee performance, both the role is directly or mediated by job satisfaction. The self-efficacy assessment is very subjective because it emphasizes the individual beliefs of employees as a result of his perception of his abilities. These beliefs can determine how employees behave, ways of thinking, and how emotional reactions in certain situations, but the leaders of company must be able to pay attention to employees who have high self-confidence and feel valued in their work because employees who have high self-efficacy will increase employee job satisfaction and will have an impact on more productive performance.

A conducive organizational climate is important because it is an individual's perception of what is given by the organization and is used as a basis for determining the behavior of future members. Climate is determined by how well members are directed, built, and valued by organizations. The leaders of company must reconcile the existing organizational climate, and pay attention to existing aspects such as structure, standard, responsibility, recognition, support, and commitment. It means, the organizational climate plays a very important role in the formation of job satisfaction which makes the performances more optimal.

The leaders of company must be able to improve the quality of work-life to be better because it is very important and is a need for the company to attract and retain its employees to be loyal to the company. One of the important roles of the Quality of Work-life program is to be able to change the work climate so that technical and humane companies can bring a better quality of work-life. Improving the quality of work-life is necessary to create job satisfaction as a trigger of good and optimal employee performance as expected by the company so that the work targets can be easily achieved.

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References

- [1] Nair, R. (2006). *Climate studies and associated best practices to improve climate issues in the workplace*. Paper presented at Women in Engineering Programs and Advocates Network, Pennsylvania.
- [2] Zhang, X., & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal*, 53: 107-128.
- [3] Shalley, C. E., & Gilson, L. L. (2004). What leaders need to know: A review of social and contextual factors that can foster or hinder creativity. *The Leadership Quarterly*, 15: 33-53.
- [4] Shalley, C. E., Gilson, L. L., & Blum, T. C. (2000). Matching creativity requirements and the work environment: Effects on satisfaction and intentions to leave. *Academy of Management Journal*, 43: 215-223.
- [5] Khan, U. K., Farooq, U. S., & Ullar, I. M. (2010). The Relationship between Rewards and Employee Motivation in Commercial Banks of Pakistan. *Research Journal of International Studies*, Vol. 6(4), 37-46.
- [6] Judge, T., Thoresen, C., Bono, J., & Patton, G. (2001). The Job Satisfaction-Job Performance Relationship: A Qualitative and Quantitative Review. *Psychological Bulletin*, Vol. 127(3), 376-407.
- [7] Liu, S., & Norcio, R. (2008). Mediating Effects of Job Characteristics on Job Satisfaction and Organizational Commitment of Taiwanese Expatriates Working in Mainland China. *The Business Review*, Vol. 9, 62-69.
- [8] Yousef, D. A. (2002). Job Satisfaction as A Mediator of the Relationship Between Job Stressors and Affective, Continuance, and Normative Commitment: A Path Analytical Approach. *International Journal of Stress Management*, Vol. 9(2), 99-112.
- [9] Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bacharach, D. G. (2000). Organizational Citizenship Behaviors: A Critical Review of the Theoretical and Empirical Literature and Suggestions for Future Research. *Journal of Management*, Vol. 26, 513-563.
- [10] Anbuoli, P. (2012). A Study of Job Satisfaction Correlates with Work Environment among Employees in Textile Industries. *Research Journal of Social Science & Management*, Vol. 2 (8), 1-7.
- [11] Vischer, J. C. (2007). The Effects of the Physical Environment on Job Performance: Towards A Theoretical Model of Workplace Stress. *Stress and Health*, Vol. 23(3), 175-184.
- [12] Dalal R. S. (2005). A Meta-Analysis of The Relationship between Organizational Citizenship Behavior and Counterproductive Work Behavior. *Journal of Applied Psychology*, Vol. 90, 1241-1255.
- [13] Newsham, G. R., Brand, J., Donnelly, C. L., Veitch, J. A., Aries, M., & Charles, K. E. (2009). Linking Indoor Environment Conditions to Organizational Productivity: A Field Study. *Building Research & Information*, Vol. 37 (2), 129-147.
- [14] Politis, J. D. (2006). Self-Leadership Behavioral-Focused Strategies and Team Performance. A Mediating Influence of Job Satisfaction. *Leadership and Organizational Development Journal*, Vol. 27, 203-216.
- [15] Crede, M., Chernyshenko, Stark, S., Dalal, S. R., & Bashshur, M. (2010). Job Satisfaction as Mediator: An Assessment of Job Satisfaction's Position within the Nomological Network. *Journal of Occupational and Organizational Psychology*, Vol. 80 (3), 515-538.
- [16] BPS-Statistic Indonesia. (2018a). *Monthly Statistical Bulletin Economic Indicators February 2018*. Jakarta: BPS-Statistic Indonesia
- [17] BPS-Statistic Indonesia. (2018b). *National Income of Indonesia 2013-2017*. Jakarta: BPS-Statistic Indonesia.
- [18] Kilavuz, Emine and Altay, Topcu Betül. (2012). Export and Economic Growth in the Case of the Manufacturing Industry: Panel Data Analysis of Developing Countries. *International Journal of Economics and Financial Issues*, vol. 2, no. 2, 2012, pp. 201-215.
- [19] Winardi, Priyarsono, D. S., Siregar, H., & Kustanto, H. (2017). Kinerja Sektor Industri Manufaktur Provinsi Jawa Barat berdasarkan Lokasi di Dalam dan di Luar Kawasan Industri. *Jurnal Manajemen Teknologi*, 16 (3), 2017, pp. 241-257. Available online at <http://journal.sbm.itb.ac.id>
- [20] Rahman, Nida and Nayyer, & Rahman Mohd. (2018). Do Foreign Direct Investment Inflows Impinge Gross Domestic Product? A Venture Out for Asean. *Jurnal Ekonomi dan Studi Pembangunan*, 10 (1), 2018, pp. 64-73.
- [21] Bakari, Sayef. (2017). The Impact of Domestic Investment on Economic Growth: New Evidence from Malaysia. *Journal of Smart Economic Growth*, vol. 2, no. 2, pp. 105-121.
- [22] Bandura, A. & Locke, E.A. (2003) Negative self-efficacy and goal effects revisited. *J. Appl. Psychol.* 2003, 88, 87. [CrossRef] [PubMed]
- [23] Hannah, S.T. Schaubroeck, J.M. & Peng, A.C. (2016). Transforming followers' value internalization and role self-efficacy: Dual processes promoting performance and peer norm-enforcement. *J. Appl. Psychol.* 2016, 101, 252. [CrossRef] [PubMed]
- [24] Honicke, T & Broadbent, J. (2016). The influence of academic self-efficacy on academic performance: A systematic review. *Educ. Res. Rev.* 2016, 17, 63-84. [CrossRef]
- [25] Walumbwa, F.O. & Hartnell, C.A. (2011). Understanding transformational leadership-employee performance links: The role of relational identification and self-efficacy. *J. Occup. Organ. Psychol.* 2011, 84, 153-172. [CrossRef]
- [26] Bandura, A. (1997). *Self-efficacy: The Exercise of Control*; Freeman & Company: New York, NY, USA, 1997.
- [27] Wallace, J.E. (1995). Corporatist control and organizational commitment among professionals: The case of lawyers working in law firms. *Soc. Forces* 1995, 73, 811-840. [CrossRef]
- [28] Chebat, J.C.; Kollias, P. (2000). The impact of empowerment on customer contact employees' roles in service organizations. *J. Serv. Res.* 2000, 3, 66-81. [CrossRef]
- [29] Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.
- [30] Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning [Electronic Version]. *Educational Psychologist*, 28(2), 117-148.
- [31] Bandura, A. (2000). *Cultivate self-efficacy for personal and organizational effectiveness*. In E. A. Locke (Ed.), *Handbook of principles of organizational behavior* (pp. 120-135). Oxford, UK: Blackwell.
- [32] Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1-26.
- [33] Bandura, A., & Bandura, A. (2006). *Self-efficacy beliefs of adolescents: In guide for constructing self-efficacy scales* (pp. 307-337). Retrieved from <https://www.uky.edu/~eushe2/Bandura/BanduraGuide2006.pdf>
- [34] Iis, E. Y., & Yunus, M. (2016). Job satisfaction as an intervening variable of self-efficacy and employee performance. *International Journal of Academic Research in Business and Social Sciences*, 6(7), 284-298. doi:10.6007/IJARBS/v6-i7/2249

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- [35] Turkoglu, M. E., Cansoy, R., & Parlar, H. (2017). Examining relationship between teachers' self-efficacy and job satisfaction. *Universal Journal of Educational Research*, 5(5), 765–772. doi:10.13189/ujer.2017.050509
 - [36] Adeeko, K., Aboyade, W.A., & Oyewole, G.O. (2017). *Job satisfaction and self-efficacy as determinants of job performance of library personnel in selected university libraries in South West Nigeria*. Library Philosophy and Practice and Practice. Retrieved from <http://digitalcommons.unl.edu/libphilprac/1557utm>
 - [37] Singh, J. K. & Jain, M. (2013). A Study of employee's job satisfaction and its impact on their performance. *Journal of Indian Research*, 1(4), 105–111.
 - [38] Perera, G. D. N., Khatibi, A., Navaratna, N. & Chinna, K. (2014). Job satisfaction and job performance among factory employees in apparel sector. *Asian Journal of Management Sciences & Education*, 3(1), 96 – 104.
 - [39] Noor, Z., Khanl, A. U. & Naseem, I. (2015). Impact of job promotion and job advancement on job satisfaction in universities of KPK province of Pakistan. *Science International Journal (Lahore)*, 27 (2), 1499 – 1505.
 - [40] Altman, B. (2000). Understanding organizational climate: Start minimizing your workforce problems. *Water Engineering & Management*, 147 (6), 31.
 - [41] Gibson, I.D. (1998). *Organization: Behavior, structure, process, translation*: Djarkasih, I, II. Salemba Empat, Jakarta.
 - [42] Hashemi, J., & Sadeqi, D. (2016). The relationship between job satisfaction and organizational climate: A case study of government departments in Divandarreh. *World Scientific News*, 274-383.
 - [43] Eskandari, A., & Ghanbari, S. (2014). Organizational climate, job motivation and organizational citizenship behavior. *International Journal of Management Perspective*, 1(3).
 - [44] Boateng, I.A., Kanyandewe, S., & Sassah, M. (2014). Organizational climate a tool for achieving employees jobsatisfaction in Ghanaian manufacturing firms. *International Journal of Academic Research in Business and Social Sciences*, 4(9), 166.
 - [45] Balkar, B. (2015). The relationships between organizational climate, innovative behavior and job performance of teachers. *International Online Journal of Educational Sciences*, 7(2).
 - [46] Efanga, S.I., Aniedi, M.M.O., & Idante, G.O. (2015). Organizational justice and job performance of lecturers in Federal Universities in South-South Zone of Nigeria. *American International Journal of Social Science*, 4(1), 111-117.
 - [47] Javed, M., Balouch, R., & Hassan, F. (2014). Determinants of job satisfaction and its impact on employee performance and turnover intentions. *International Journal of Learning and Development*, 4(2), 120-140.
 - [48] Mathison K. (2012). *Prioritising Identity: A grounded theory of employees' evaluation of the work-life interface in multinational corporations*. Submitted in fulfilment of the requirements for the degree of Doctor of Philosophy University of Tasmania July 2012.
 - [49] Robbins, S. (2001). *Perilaku Organisasi*, Edisi 8. Prentice Hall, Jakarta
 - [50] Robbins, S. & Timothy A. Judge. (2013). *Organizational Of Behavior*. 8th Edition, Mcgraw-Hill, Irwin
 - [51] Swamy, D.R. & Nanjundeswaraswamy, T. S. (2013). Review Of Literature On Quality Of Worklife *International Journal for Quality Research* 7(2) ISSN 1800-6450 18 April 2013 pp. 201–214
 - [52] Chaturvedi, V & Yadav. (2011). A Study on impact of job satisfaction on Quality of Work life among employess in hotel industry . *International Journal Of Research in Computer Application & Management*. Volume no NO: 1 (2011), issue No. 4 June.
 - [53] Baleghizadeh, S., & Gordani, Y. (2012). Motivation and Quality of Work Life among Secondary School EFL Teachers. *Australian Journal of Teacher Education*, 37(7)
 - [54] Ashwini J. (2014). Quality of Work Life Evaluation Among Service Sector Employees *Journal of Business and Management (IOSR-JBM)* e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 16, Issue 9. Ver. I (Sep. 2014), PP 01-12
 - [55] Sari Ni PR, Bendesa I Komang Gde & Antara Made. (2019). The Influence of Quality of Work Life on Employees' Performance with Job Satisfaction and Work Motivation as Intervening Variables in Star-Rated Hotels in Ubud Tourism Area of Bali. *Journal of Tourism and Hospitality Management* June 2019, Vol. 7, No. 1, pp. 74-83

Appendix A. The Results of Validity Test Analysis Based on Loading Values

Indicator	(SE)	(IO)	(QWL)	(KP)	(KK)
SE1	(0.662)	-0.000	-0.082	-0.043	0.143
SE2	(0.748)	0.070	0.034	0.026	0.033
SE3	(0.806)	-0.000	0.020	-0.070	0.186
SE4	(0.715)	-0.018	0.108	0.141	-0.069
SE5	(0.661)	0.025	-0.044	-0.031	0.081
SE6	(0.794)	-0.025	-0.039	-0.005	-0.051
SE7	(0.788)	-0.039	0.044	0.017	-0.205
SE8	(0.777)	-0.007	-0.052	-0.032	-0.094
IO1	-0.097	(0.744)	-0.057	0.058	0.216
IO2	-0.087	(0.874)	0.025	0.085	0.034
IO3	-0.003	(0.843)	-0.028	0.044	-0.055
IO4	-0.033	(0.775)	-0.008	-0.062	0.107
IO5	0.142	(0.805)	0.110	-0.073	-0.189
IO6	0.096	(0.656)	-0.057	-0.072	-0.114
QWL1	0.064	0.037	(0.778)	0.010	-0.102
QWL2	-0.014	-0.031	(0.785)	-0.027	0.010
QWL3	0.207	-0.018	(0.767)	-0.081	-0.011
QWL4	0.060	0.082	(0.770)	-0.168	-0.056
QWL5	-0.176	-0.075	(0.778)	0.025	0.035
QWL6	-0.089	-0.015	(0.780)	0.174	0.098
QWL7	0.082	0.046	(0.707)	-0.008	-0.063
QWL8	-0.147	-0.025	(0.655)	0.084	0.096
KP1	0.010	0.030	-0.034	(0.859)	-0.022
KP2	0.074	0.059	-0.048	(0.790)	0.033
KP3	0.030	-0.007	0.077	(0.818)	0.057
KP4	0.177	0.058	-0.016	(0.782)	-0.131
KP5	0.098	-0.188	0.051	(0.776)	0.079
KP6	-0.201	-0.055	-0.067	(0.763)	-0.046
KP7	-0.264	0.043	-0.033	(0.723)	0.037
KP8	0.065	0.075	0.086	(0.599)	-0.007
KK1	-0.053	-0.030	0.009	-0.046	(0.625)
KK2	-0.027	0.073	-0.022	0.051	(0.625)
KK3	0.141	-0.034	-0.067	0.010	(0.648)
KK4	-0.053	-0.068	0.007	0.081	(0.576)
KK5	-0.035	-0.005	0.087	-0.016	(0.591)
KK6	0.081	0.027	-0.072	-0.128	(0.603)
KK7	-0.064	0.034	0.064	0.052	(0.607)

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Customer Value Co-creation Behaviour in Indonesia Innovation Ecosystems

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Abstract

Mobile payment systems are becoming an integral part of innovation ecosystems with the aim of encouraging people to engage in value co-creation. This study proposes a model for co-creation behaviour in Indonesia innovation ecosystems. A total of 350 respondents were surveyed through a self-administered questionnaire at the hand of a convenience sampling technique. The hypotheses in the study were assessed through structural equation modelling (SEM) through AMOS software. The study results revealed that out of 13 hypotheses developed during the study, 11 of them were very strongly supported, and 2 unsupported. The findings in this study indicate that the model provides a scale for validation of co-creation behaviour based on the identified environmental factor and brand loyalty.

Keywords: value co-creation; brand loyalty; mobile payment and innovation ecosystems

1. INTRODUCTION

Managing high innovation practices and the complexity of technological systems now requires a better understanding of the improved organizational structure and the surrounding environment. Recently, many scholars turned their attention to the phenomenon of developing and commercializing innovations that different labels, such as innovation networks (e.g. Lee et al., 2015) or open innovation (e.g., Chesbrough, 2003). To address the process of complex joint value creation, several scholars proposed and developed the concept of innovation ecosystem (e.g., Adner and Kapoor, 2016; Adner, 2006), which draws upon the former concept business ecosystem (Moore, 1993).

The development of the concept of innovation ecosystems associated with the relevance and flexibility of concept in the entrepreneurship literature, strategy, and business are also increasingly rapid, such as platform-based ecosystem (e.g., Gawer, 2014), hub ecosystems (e.g., Nambisan & Baron, 2013), open innovation ecosystem (e.g., Chesbrough et al., 2014), digital innovation ecosystem (e.g., Rao & Jimenez, 2011).

On the other hand, the literature is very fragmented, diverse theory and does not provide a robust definition about the innovation ecosystem (e.g., Oh et al., 2016; Overholm, 2015; Nambisan & Baron, 2013; Gawer & Cusumano, 2014; Valkokari, 2015) making it difficult to compare and consolidate knowledge.

Currently, there are many online platforms that provide social network-based service delivery systems that are part of the service ecosystem in creating value co-creation that aims to create service value, increase customer knowledge and expertise (Zhang et al., 2015; Xie, Bagozzi, & Troye 2008; Vargo & Lusch 2008; Svensson & Grönroos, 2008; Payne, Storbacka & Frow, 2008; Rowley et al., 2007).

One of the main concepts of S-D logic is that the customers are the active player in the co-creation process (Xie, Bagozzi, & Troye 2008) and the co-creator of value (Payne et al., 2008; Vargo & Lusch, 2008). Customer value co-creation comprises of Customer Participation Behaviour (CPB) (Yi & Gong, 2008) and Customer Citizenship Behaviour (CCB) (Yi et al, 2011; Yi & Gong, 2013). The results of previous studies concluded that the co-creation experiences influence customer's future participation on social media sites (Zhang et al., 2015) and retail (Shamim & Ghazali, 2014; Neghina et al., 2014; Tommasetti et al., 2015).

In the digital age, mobile payments are a real-time exchange of values between consumers and actors in business networks (Szmigin & Foxall, 1998; Milne, 2006; Berger et al., 1996) and digital ecosystems (Moore, 1993, 1996; Feijóo et al., 2009; Corallo et al., 2007; Gaur et al., 2013).

In mobile payment ecosystems (Zhong et al., 2011; Kendall et al., 2011; Contini et al., 2011; Gaur & Ondrus, 2012) numerous innovative payment services (eg, mobile wallets) conduct "exchange of values" (Hughes & Lonie, 2007; Allen et al., 2002), provide innovative payment services directly to consumers and traders (Allen & Santomero, 1997) and providing transaction balances (Llewellyn, 1996; Ertürk & Özgür, 2014; Edwards & Mishkin, 1995; Bond, 2004).

The Indonesian government has focused on financial inclusion in recent years. The level of financial account ownership has increased significantly from 20 percent in 2011, to 36 percent in 2014 and 49 percent in 2017 (Demirguc-Kunt et al., 2018; World Bank, 2018) has also been supported by the penetration of telecommunication and internet devices reached 143,260,000 of internet users in 2017 (APJII, 2017). Around 75 percent of the online buys are made through cellphones (Nuryakin et al., 2019). Digital currency is a digital representation of value. It consists of centralized virtual currency, which has a centralized repository and a central administrator (e.g., PayPal, Alipay, Go-Pay, Telkomsel T Cash, Bank Mandiri e-cash BCA Sakuku, XL Tunai, PayPro, BBM Money, Doku Wallet, OVO, Rekening Ponsel CIMB Niaga, Mandiri E-money, BCA Flazz, BRI Brizzi, BNI TapCash, MegaCash, Bank DKI JakCard, Nobu E-money and BTN Blink), and decentralized virtual currency, namely cryptocurrency (e.g., Bitcoin and Litecoin).

This paper contributes conceptually to the literature and the main concepts in the service ecosystem domain, S_D logic, Uses and Gratification theory (U&G) (Luo, 2002) and Stimulus-Organism-Response (S-O-R) Model (Mehrabian & Russell, 1974).

2. HYPOTHESES AND CONCEPTUAL DEVELOPMENT

2.1. Environmental Factors in Co-creation

The SOSNs (i.e. service ecosystems) itself is defined as the environment supporting the important digital innovations in digital businesses in which economic and social actors are connected by mutual value creation and interactions (Lusch & Nambisan, 2015; Lusch et al., 2010). For generality, we use the term user that encompasses customers that involve co-creation activities beyond service or product consumption toward service exchange and co-creation behaviour, including: platform characteristics, environmental characteristics, and value exchange (Lusch & Nambisan, 2015).

This paper follows the overall view of Lusch and Nambisan (2015), regarding how service innovation (that includes co-creation) happens in the innovation ecosystems. Co-creation behaviour occurs as users have the ability to collaborate and provide co-creation value to stakeholders. Hence, the co-created value extracted from the delivered service is highly influenced by the characteristics of the environment, such as Network Structure (Lusch & Nambisan, 2015; Kane et al., 2014; Edvardsson et al., 2011), Service Platform Capabilities (Barros et al., 2000; Lusch & Nambisan, 2015; Kane et al., 2014), Roles (Edvardsson et al., 2011; Vargo & Lusch, 2008; Hoyer et al., 2010; Romero & Molina, 2011), Social Influence (Anagnostopoulos et al., 2008; Ajzen & Fishbein, 1980; Li, 2011; Tsai & Bagozzi, 2014). Thus:

- H1: The environmental factor network structure contributes to participation behaviour.
 H2: The environmental factor platform capabilities contribute to participation behaviour.
 H3: The environmental factor role of users contributes to participation behaviour.
 H4: The environmental factor social influence contributes to participation behaviour.
 H5: The environmental factor network structure contributes to citizenship behaviour.
 H6: The environmental factor platform capabilities contribute to citizenship behaviour.
 H7: The environmental factor role of users contributes to citizenship behaviour.
 H8: The environmental factor social influence contributes to citizenship behaviour.

2.2. Co-creation and brand loyalty

Loyalty can have multiple objects, such as loyalty to the service firm, loyalty to the store, and loyalty to the brand. In other words, to retailers, it means loyalty to the manufacturer, to the store, it means loyalty to his brand. Brand loyalty more than just one simple dimension, on the contrary, this is a complex multi-dimensional concept (Oliver, 1999).

The initial studies of loyalty were focused on a unidimensional construct (Guest, 1944; Cunningham, 1961). Later, many researchers integrated both attitudinal and behavioral to become composite loyalty (Jacoby, 1971). Due to its complexity, loyalty has been measured and defined in many different ways. Many researchers generally agree that loyalty consists of both attitudinal and behavioral dimensions as the multi-dimensional approach (Oliver, 1999, 1997; Wilkie, 1994; Dick & Basu, 1994) that loyalty evolves in stages called the Four-Stage Loyalty Model (Oliver, 1999).

This study defines customer brand as the customer's positive response to the brand in various levels of attitudinal loyalty that translates into behavioral loyalty based on Oliver's Four-Stage Loyalty Model. Many researchers have empirically tested this multi-dimensional approach (e.g., East et al., 2005; Hennig-Thurau et al., 2004; Caruana, 2002; Zeithaml et al., 1996; Mariyudi & Matriadi, 2017).

Hence, consumers can be both, attitudinally and behaviourally loyal to a brand. In the context of the research, we define co-creation as the active participation and active cooperation of the Indonesian buyers with mobile payment such as in the process of new product design and sharing product designs ideas to a specific virtual environment.

Likewise, the companies have certain benefits from co-creation as well. One of those is an increase in brand loyalty (Mathwick et al., 2007; Franke et al., 2009). This research will focus on exploring to what extent product co-creation activity would influence attitudinal and behavioral loyalty in the Indonesian innovation ecosystems toward a particular product brand. Thus:

- H9: Customer's participation behaviour in co-creation activity contributes to the attitudinal loyalty
 H10: Customer's citizenship behaviour in co-creation activity contributes to the attitudinal loyalty
 H11: Customer's participation behaviour in co-creation activity contributes to the behavioural loyalty
 H12: Customer's citizenship behaviour in co-creation activity contributes to the behavioural loyalty
 H13: Attitudinal loyalty contributes to the behavioural loyalty

The literature review identified three main concepts. Accordingly, we investigate whether environmental factors affecting value co-creation behavior and brand loyalty in the Indonesian innovation ecosystems. The derived conceptual model is represented in figure 1.

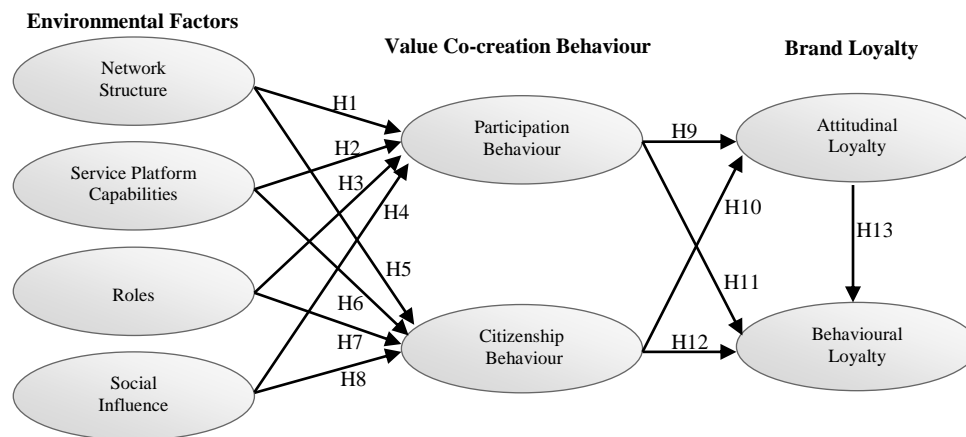


Fig. 1. Conceptual model

3. METHODS

All in all, 500 respondents were personally approached and willing to respond to the questionnaire. Of the 500 questionnaires distributed, 375 (75%) were returned. A further sixteen were not usable, and 350 (70%) questionnaires were subsequently utilized giving an effective final survey response rate (Sekaran, 2005). This research used a self-administered questionnaire (Zikmund & Babin, 2007) thorough literature review and constituted a 5-point Likert scale

The survey instrument adopted in this study is based on a critical review of the past studies, Environmental factors (Bidar et al., 2016), Value Co-creation Behaviour (Durugbo & Pawar, 2014; Lorenzo-Romero et al., 2014; Shamim & Ghazali, 2014), and brand loyalty (Oliver, 1999). The psychometric measurements in the scales that were utilized were reckoned to be fitting as they exceeded the threshold of 0.6 with Cronbach's alpha statistics of between 0.67 and 0.75 values.

The data were analyzed in two ways, namely, descriptive and inferential analyses. Statistical Package for Social Sciences (SPSS) Version 25 and Analysis of Moment Structures (AMOS Version 25.0) were used as analytical software to simultaneously investigate a series of interrelated relationships among the measured variables and several latent constructs (Hair et al., 2014), to examine assumptions for multivariate analysis (Kline, 2005), and to present an overall test of model fit and individual parameter estimate tests simultaneously (Hair et al., 2014).

4. RESULTS

Preliminary analysis results in screening for missing data, outliers, and normality (kurtosis and skewness) showed that no significant inconsistencies in the data were identified. Information on the respondents' demographic attributes was from a total of 350 respondents, 48% were male and 52% were female. There were 70 % single respondents and 29.14% married respondents, while others were 086%. In terms of specifying age, there was the majority or 60.86% of the respondents were between 31 and 40 years old. This was followed by 26.57%, which were between 41 and 50 years old. While 7.14% of the respondents were above 60 years old, which are summarized in Table 1.

Table 1. Demographic characteristics

Characteristics variables	Frequency	Percentage
Gender		
Male	168	48.00%
Female	182	52.00%
Marital status		
Single	245	70.00%

Married	102	29.14%
Others	3	0.86%
Educational level		
Primary	1	0.29%
Secondary	12	3.43%
College (Certificate/Diploma)	147	42.00%
College/University degree	178	50.86%
Post grad degree (Master/PhD)	12	3.43%
Age		
21 – 30	8	2.29%
31 – 40	213	60.86%
41 – 50	93	26.57%
51 – 60	11	3.14%
61 – 70	25	7.14%

To determine the outliers, the Mahalanobis distance (d2) measure was used to assess multivariate outliers (Kline, 2005). There were a total of 10 questionnaires that were eliminated due to the outliers. After eliminating 6 questionnaires that were incomplete and another 10 questionnaires due to the outliers, a total of 350 samples for analysis. All the data fell within the range of normality assumptions and not exhibit any nonlinear patterns.

4.1. Measurement Model

The measurement of the proposed research model, including the variables of environmental factor network structure, environmental factor service platform capabilities, environmental factor role of users, environmental factor social influence, participation behaviour in co-creation activity, citizenship behaviour in co-creation activity, attitudinal loyalty, and behavioural loyalty.

Data were analyzed for convergence through Cronbach's coefficient alpha (α) scores and all the values exceeded the threshold of 0.7 signifying significant convergence. The result shows Cronbach's coefficient values ranging between 0.874 and 0.921 which specify significant reliability. CR values exceeding 0.7 and AVE values were greater than 0.5 areas viewed as satisfactory for internal consistency (Hair et al., 2014; Fornell & Lacker, 1981). The absolute fit indices of the RMSEA (0.027) and GFI (0.978) indicate a good fit. The incremental fit indices of CFI (0.901), TLI (0.923), and AGFI (0.968) also indicate a good fit and meet the recommended values.

4.2. Structural Equation Modelling

In order to examine the hypothesized relationships pertaining to environmental factors affecting value co-creation behavior and brand loyalty in the Indonesian innovation ecosystems, a path analysis approach in structural equation modelling (SEM) was done (Hair et al., 2014). Testing the structural research model was used to test the thirteen causal paths reflecting Hypothesis 1 to Hypothesis 13. Figure 2 presents the result of testing the structural research model.

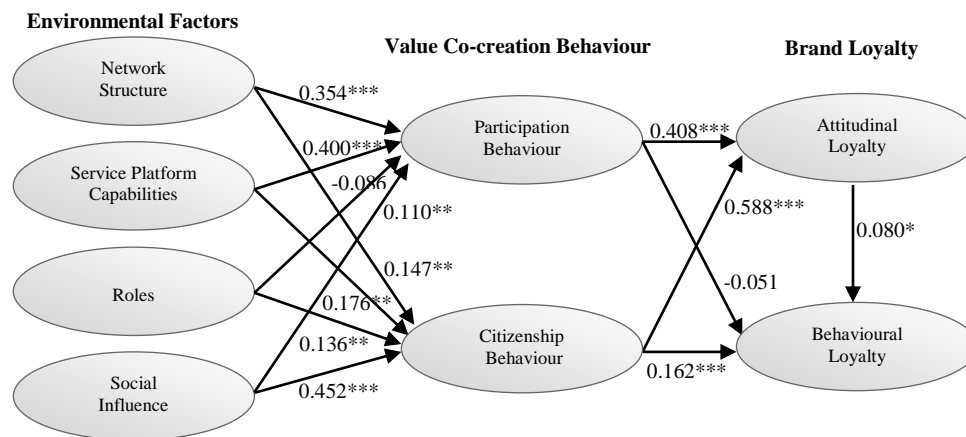


Fig. 2. Structural model

Figure 2 demonstrates that all of the goodness-of-fit indexes was deemed satisfactory (χ^2/df : 2.128, RMSEA: 0.065, GFI: 0.899, CFI: 0.945, NFI: 0.937, PGFI: 0.688). Thus, the result of testing the structural research model was acceptable. Based on this model, the relationships between the constructs as listed in the hypotheses statements are shown in Table 2.

Figure 2 and Table 1 show the results. Out of the 13 hypotheses, 11 were supported except for 2 (H3 and H11). The standardized estimate coefficient (β) of all paths tested in the structural model was significant. However, Hypothesis 3 and 11 were not supported as the standardized estimate (β) was not as expected, negative and not significant. (Hair et al., 2010).

In addition, the structural model also reveals that the explanatory power (R^2) of determinant variables on endogenous variables was relatively high, customer's participation behaviour = 77.1%, customer's citizenship behaviour = 75.1%, attitudinal loyalty = 69.7%, and behavioural loyalty = 67.5%.

Table 2. Results of path coefficients and hypothesis testing

Hypothesis	Relationship	Std. Estimate	Critical Ratio	Supported
H1	Environmental factor network structure --> Participation behaviour	0.354	4.121***	Yes
H2	Environmental factor service platform capabilities --> participation behaviour	0.400	5.734***	Yes
H3	Environmental factor role of users --> Participation behaviour	-0.086	1.051 (ns)	No
H4	Environmental factor social influence --> Participation behaviour	0.110	2.043**	Yes
H5	Environmental factor network structure --> Citizenship behaviour	0.147	2.166**	Yes
H6	Environmental factor service platform capabilities --> Citizenship behaviour	0.176	2.113**	Yes
H7	Environmental factor role of users --> Citizenship behaviour	0.136	1.831**	Yes
H8	Environmental factor social influence --> Citizenship behaviour	0.452	5.036***	Yes
H9	Customer's participation behaviour --> Attitudinal loyalty	0.408	3.648***	Yes
H10	Customer's citizenship behaviour --> Attitudinal loyalty	0.588	16.887***	Yes
H11	Customer's participation behaviour --> Behavioural loyalty	-0.051	0.591 (ns)	No
H12	Customer's citizenship behaviour --> Behavioural loyalty	0.162	4.335***	Yes
H13	Attitudinal loyalty --> Behavioural loyalty	0.080	1.299*	Yes

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$, ns = not supported

5. DISCUSSIONS

This section will analyze the research results and discusses the contribution this research makes to academic theory and managerial practice. As we can see in the final research model, not all latent constructs are consistent

with the literature. Rather, environmental factor role of users and customer's participation behaviour were found to have no direct relationship with behavioural loyalty. Instead, they all influenced attitudinal loyalty through another construct in a direct way.

The results of this study indicate that the environmental factor network structure, environmental factor platform capabilities and environmental factor social influence is a direct path and is a factor that significantly influences participation behaviour in co-creation activity. These findings support H1, H2, and H4, which means the findings are consistent with previous research studies (Lusch & Nambisan, 2015; Kane et al., 2014; Edvardsson et al., 2011; Barros et al., 2000; Lusch & Nambisan, 2015; Kane et al., 2014; Anagnostopoulos et al., 2008; Ajzen & Fishbein, 1980; Li, 2011; Tsai & Bagozzi, 2014).

The structure of a network is the way Indonesian buyers with mobile payment are connected to each other within the network. Indonesian buyers with mobile payment create the structure with others based on shared competences, information resources, and relationships. The type of connectivity (interactions, relations, proximities, flows) and ties characteristics (strength, affect, degree, symmetry) that form the structure, affect network formation, with implications for the platform's design and consequently influence the behaviour and dynamics of network.

Moreover, the result of data analysis shows that environmental factor network, environmental factor platform capabilities, environmental factor role of users, and environmental factor social influence is a direct path and is a factor that significantly influences citizenship behavior in co-creation activity. These findings support H5, H6, H7, and H8, which means the findings are consistent with previous research studies (Lusch & Nambisan, 2015; Kane et al., 2014; Edvardsson et al., 2011; Barros et al., 2000; Lusch & Nambisan, 2015; Kane et al., 2014; Edvardsson et al., 2011; Vargo & Lusch 2008; Hoyer et al., 2010; Romero & Molina, 2011; Anagnostopoulos et al., 2008; Ajzen & Fishbein, 1980; Li, 2011; Tsai & Bagozzi, 2014).

In co-creation users deliver the service and co-create the value. The role of user refers to "socially defined expectations of individuals' behaviours, in particular, social positions". According to S-D logic, all economic and social users adopt the role of resource integrators rather than the individual user. Value is co-created during interactions between providers and beneficiaries through the integration of resources and the application of competencies.

On the other hand, customer's participation behaviour in co-creation activity and customer's citizenship behavior in co-creation activity influence is a direct path and is a factor that significantly influences attitudinal loyalty. Customer's citizenship behavior in co-creation activity and attitudinal loyalty influence is a direct path and is a factor that significantly influences behavioural loyalty. Thus, the hypotheses H9, H10, H12, and H13 were supported, which means the findings are consistent with previous research studies (Franke et al., 2009; Mathwick et al., 2007; East et al., 2005; Hennig-Thurau et al., 2004; Caruana, 2002; Zeithaml et al., 1996; Mariyudi & Matriadi, 2017).

According to the recent marketing strategy literature, value co-creation strategy as active engagement of target customers in the process of value creation to reinforces customers' loyalty. Our results have provided any empirical support that the Indonesian buyer's participation in co-creation activity positively influences customers' loyalty toward mobile payment brands. Therefore, we conclude that co-creation activity in Indonesian buyers with mobile payment automatically influences customers' loyalty.

This study contributes to the literature on the four stages of the Oliver's Model in Indonesia Innovation Ecosystems. The research confirms that customer loyalty consists of both attitudinal and behavioral aspects. Customer loyalty evolves in stages and it is a multidimensional approach, the study supports attitude-behavior relationship theory (Fishbein & Ajzen, 1975).

6. CONCLUSION

The study highlighted that the environmental factor network structure, environmental factor platform capabilities and environmental factor social influence is a direct path and is a factor that significantly influences participation behaviour in co-creation activity.

Moreover, the result of data analysis shows that environmental factor network, environmental factor platform capabilities, environmental factor role of users, and environmental factor social influence is a direct path and is a factor that significantly influences citizenship behavior in co-creation activity. Finally, the customer's participation behaviour in co-creation activity and customer's citizenship behavior in co-creation activity influence is a direct path and is a factor that significantly influences attitudinal loyalty. Customer's citizenship behavior in co-creation

activity and attitudinal loyalty influence is a direct path and is a factor that significantly influences behavioural loyalty.

Involving customers to co-create value and user engagement in co-creation activities is an important new marketing strategy for any company. Managers abandoned the traditional product-centric value by engaging customers, in order to produce products that will fulfill customers' needs, effectiveness, increase productivity, and will lead to brand loyalty.

The complex multi-dimensional concept of brand loyalty plays an important role in the longterm stability of any company. Hence, in order to ensure a continuous stream of revenue, mobile payment companies should understand, how to achieve that customers develop a favorable attitude toward their brand, which they will purchase consistently in the future..

7. LIMITATIONS AND FUTURE RESEARCH

This research represents an important step in understanding Customer Value Co-creation Behaviour the buyers with mobile payment in Indonesia Innovation Ecosystems. There are a few limitations to the study. Firstly, and perhaps the most important, this conceptual research-based focused mainly on the durable goods industry which is not entirely in line with the service sector. The results may have been more encouraging, further research is necessary to base on previous studies carried out in the mobile payment ecosystems.

Secondly, this study fails to fully explain the antecedents of the Indonesian buyer's participation in co-creation activity in the mobile payment ecosystems in full extent, since not all possible contributing factors were examined. Other factors related to customer or to company may also have a significant effect of customers' participation in co-creation activity such as openness, uniqueness of problem, clarity of task, trust and rapport, commitment to common goals, customers' expertise, etc. (Auh et al., 2007; Hakanen & Jaakkola, 2012). However, these factors were beyond the scope of our study.

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References

- [1] Lee, S., Nam, Y., Seonmi, S., & Son, H., (2015). *Determinants of ICT innovations: a cross-country empirical study*. Technol. Forecast. Soc. Chang. (in press).
- [2] Chesbrough, H. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Harvard Business School Press.
- [3] Adner, R. & Kapoor, R. (2010). Value creation in innovation ecosystems: how the structure of technological interdependence affects firm performance in new technology generations. *Strateg. Manag. J.* 31 (3), 306–333.
- [4] Adner, R. (2006). Match your innovation strategy to your innovation ecosystem. *Harv. Bus. Rev.* 84 (4), 98–107.
- [5] Moore, J.F. (1993). Predators and prey: a new ecology of competition. *Harv. Bus. Rev.* 71 (3), 75–86.
- [6] Gawer, A., & Cusumano, M.A., (2014). Industry platforms and ecosystem innovation. *J. Prod. Innov. Manag.* 31 (3), 417–433.
- [7] Nambisan, S., & Baron, R.A., (2013). Entrepreneurship in innovation ecosystems: Entrepreneurs' self-regulatory processes and their implications for new venture success. *Enterp. Theory Pract.* 37 (5), 1071–1097.
- [8] Chesbrough, H., Kim, S., & Agogino, A., (2014). Chez Panisse: building an open innovation ecosystem. *Calif. Manag. Rev.* 56 (4), 144–171.
- [9] Rao, B., & Jimenez, B., (2011). *A Comparative Analysis of Digital Innovation Ecosystems*. Proceedings of PICMET Conference - Technology Management in the Energy Smart World, Portland, Oregon. Oh et al., 2016;
- [10] Overholm, H., (2015). Collectively created opportunities in emerging ecosystems: the case of solar service ventures. *Technovation* 39-40, 14–25.
- [11] Gawer, A., & Cusumano, M.A., (2014). Industry platforms and ecosystem innovation. *J. Prod. Innov. Manag.* 31 (3), 417–433.
- [12] Valkokari, K., (2015). Business, innovation, and knowledge ecosystems: how they differ and how to survive and thrive within them. *Technol. Innov. Manag. Rev.* 8 (5), 17–24.
- [13] Zhang, H., Lu, Y., Wang, B. & Wu, S. (2015). The impacts of technological environments and cocreation experiences on customer participation. *Information & Management*, 52(4), 468-482. doi:10.1016/j.im.2015.01.008.
- [14] Xie, C., Bagozzi, R. P. & Troye, S. V. (2008). Trying to presume: toward a theory of consumers as co-creators of value. *Journal of the Academy of Marketing Science*, 36(1), 109-122.
- [15] Vargo, S. L. & Lusch, R. F. (2008). Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1), 1-10. doi:10.1007/s11747-007-0069-6.
- [16] Svensson, G. & Grönroos, C. (2008). Service logic revisited: Who creates value? And who co-creates? *European Business Review*, 20(4), 298-314.

- [17] Payne, A. F., Storbacka, K. & Frow, P. (2008). Managing the co-creation of value. *Journal of the Academy of Marketing Science*, 36(1), 83-96. doi:10.1007/s11747-007-0070-0.
- [18] Rowley, J., Kupiec-Teahan, B. & Leeming, E. (2007). Customer community and co-creation: a case study. *Marketing Intelligence & Planning*, 25(2), 136-146. doi:10.1108/02634500710737924.
- [19] Yi, Y., Natarajan, R. & Gong, T. (2011). Customer participation and citizenship behavioral influences on employee performance, satisfaction, commitment, and turnover intention. *Journal of Business research*, 64(1), 87-95. doi:10.1016/j.jbusres.2009.12.007.
- [20] Yi, Y. & Gong, T. (2013). Customer value co-creation behavior: Scale development and validation. *Journal of Business research*, 66(9), 1279-1284.
- [21] Shamim, A. & Ghazali, Z. (2014). A Conceptual Model for Developing Customer Value Co-Creation Behaviour in Retailing. *Global Business and Management Research*, 6(3), 185-196.
- [22] Neghina, C., Caniels, M. C., Bloemer, J. M. & van Birgelen, M. J. (2014). Value cocreation in service interactions Dimensions and antecedents. *Marketing theory*, 1470593114552580
- [23] Tommasetti, A., Troisi, O. & Vesci, M. (2015). Customer value co-creation: a conceptual measurement model in a Service Dominant Logic perspective. *Paper presented at the Naples Forum on Service*.
- [24] Szmigin, I. & Foxall, G. (1998). Three forms of innovation resistance: the case of retail payment methods. *Technovation*, 18(6):459-468.
- [25] Milne, A. (2006). What is in it for us? network effects and bank payment innovation. *Journal of Banking & Finance*, 30(6):1613-1630.
- [26] Berger, A. N., Hancock, D., & Marquardt, J. C. (1996). A framework for analyzing efficiency, risks, costs, and innovations in the payments system. *Journal of Money, Credit and Banking*, pages 696-732.
- [27] Moore, J. F. (1996). *The death of competition: leadership and strategy in the age of business ecosystems*. HarperBusiness New York.
- [28] Feijóo, C., Maghiros, I., Abadie, F., & Gómez-Barroso, J.-L. (2009). Exploring a heterogeneous and fragmented digital ecosystem: Mobile content. *Telematics and Informatics*, 26(3):282-292.
- [29] Corallo, A., Passiante, G., & Prencipe, A. (2007). *The digital business ecosystem*. Edward Elgar Publishing.
- [30] Gaur, A., Avison, D., & Ondrus, J. (2013). *Mobile merchandising exploring new business practices in the mobile payment ecosystem*.
- [31] Zhong, J., Nieminen, M., Hämäläinen, M., & Laine, J. (2011). On mobile payment ecosystems in different markets. In *Proceedings of the 10th Wuhan International Conference on E-Business 2011 (WHICEB2011)*, Wuhan, China
- [32] Kendall, J., Maurer, B., Machoka, P., & Veniard, C. (2011). An emerging platform: From money transfer system to mobile money ecosystem. *innovations*, 6(4):49-64.
- [33] Contini, D., Crowe, M., Merritt, C., Oliver, R., & Mott, S. (2011). *Mobile payments in the united states: Mapping out the road ahead*. Federal Reserve Bank of Atlanta and Federal Reserve Bank of Boston White Paper, March.
- [34] Gaur, A. & Ondrus, J. (2012). The role of banks in the mobile payment ecosystem: a strategic asset perspective. In *Proceedings of the 14th Annual International Conference on Electronic Commerce*, pages 171-177. ACM.
- [35] Hughes, N. & Lonie, S. (2007). M-pesa: mobile money for the ‘unbanked’ turning cellphones into 24-hour tellers in kenya. *Innovations*, 2(1-2):63-81.
- [36] Allen, F., McAndrews, J., & Strahan, P. (2002). E-finance: an introduction. *Journal of Financial Services Research*, 22(1-2):5-27.
- [37] Allen, F. & Santomero, A. M. (1997). The theory of financial intermediation. *Journal of Banking & Finance*, 21(11):1461-1485.
- [38] Llewellyn, D. T. (1996). *Banking in the 21st century: the transformation of an industry*. Reserve Bank of Australia, The future of the financial system, pages 141-79.
- [39] Ertürk, K. & Özgür, G. (2014). *14. the decline of traditional banking and endogenous money*. Banking, Monetary Policy and the Political Economy of Financial Regulation: Essays in the Tradition of Jane D'Arista, page 275.
- [40] Edwards, F. R. & Mishkin, F. S. (1995). *The decline of traditional banking: Implications for financial stability and regulatory policy*. Technical report, National Bureau of Economic Research
- [41] Bond, P. (2004). Bank and nonbank financial intermediation. *The Journal of Finance*, 59(6):2489-2529.
- [42] Demircuc-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). *The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution*. The World Bank.
- [43] World Bank. (2018). *Improving access to financial services in Indonesia: Executive summary (English)*. Washington, DC: World Bank. <http://documents.worldbank.org/curated/en/448491468257952510/Executive-summary>
- [44] APJII. (2017). *2017 APJII Survey Report: Penetration and Behavior of Indonesian Internet Users*. Retrieved from APJII website: <https://apjii.or.id/content/read/39/342/Hasil-Survei-Penetrasi-dan-Perilaku-Pengguna-Internet-Indonesia-2017>.
- [45] Nuryakin, C. Aisha, L. & Massie, NWG. (2019). *Financial Technology in Indonesia: A Fragmented Instrument for Financial Inclusion?*. LPEM-FEB UI Working Paper 036, May 2019.
- [46] Luo, X. (2002). Uses and gratifications theory and e-consumer behaviors: a structural equation modeling study. *Journal of Interactive Advertising*, 2(2), 34-41.
- [47] Mehrabian, A. & Russell, J. A. (1974). *An approach to environmental psychology*: the MIT Press
- [48] Lusch, R. F. & Nambisan, S. (2015). Service Innovation: A Service-Dominant Logic Perspective. *MIS Quarterly*, 39(1), 155-175.
- [49] Lusch, R. F., Vargo, S. L. & Tanniru, M. (2010). Service, value networks and learning. *Journal of the Academy of Marketing Science*, 38(1), 19-31.
- [50] Kane, G. C., Alavi, M., Labianca, G. & Borgatti, S. P. (2014). What's Different about Social Media Networks? A Framework and Research Agenda. *MIS Quarterly*, 38(1), 274.
- [51] Edvardsson, B., Tronvoll, B. & Gruber, T. (2011). Expanding understanding of service exchange and value co-creation: a social construction approach. *Journal of the Academy of Marketing Science*, 39(2), 327-339.
- [52] Barros, A., Duddy, K., Lawley, M., Milosevic, Z., Raymond, K. & Wood, A. (2000). Processes, roles, and events: UML concepts for enterprise architecture UML 2000—*The Unified Modeling Language* (pp. 62-77): Springer.
- [53] Hoyer, W. D., Chandy, R., Dorotic, M., Krafft, M. & Singh, S. S. (2010). Consumer cocreation in new product development. *Journal of Service Research*, 13(3), 283-296.

- [54] Romero, D. & Molina, A. (2011). Collaborative networked organisations and customer communities: value co-creation and co-innovation in the networking era. *Production Planning & Control*, 22(5), 447-472. doi:10.1080/09537287.2010.536619
- [55] Anagnostopoulos, A., Kumar, R. & Mahdian, M. (2008). *Influence and correlation in social networks*. Paper presented at the Proceedings of the 14th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining
- [56] Ajzen, I. & Fishbein, M. (1980). Understanding attitudes and predicting social. Behaviour. Englewood Cliffs, NJ: Prentice-Hall
- [57] Li, D. C. (2011). Online social network acceptance: a social perspective. *Internet Research*, 21(5), 562580. doi:10.1108/10662241111176371.
- [58] Tsai, H.-T. & Bagozzi, R. P. (2014). Contribution behavior in virtual communities: Cognitive, emotional and social influences. *MIS Quarterly*, 38(1), 143-163.
- [59] Oliver, R. L. (1999). Whence consumer loyalty? *Journal of Marketing*, 63(4), 33-44
- [60] Guest, L. (1955). Brand loyalty: twelve years later. *Journal of Applied Psychology*, 28(1), 16-27.
- [61] Cunningham, R. M. (1961). Brand Loyalty – What, Where, How Much? *Harvard Business Review* 34(1), 116-128.
- [62] Jacoby, J. (1971). A Model of Multi-Brand Loyalty. *Journal of Advertising Research* 11(3), 25-31.
- [63] Oliver, R. L. (1997). *Satisfaction: A behavior perspective on the consumer*. Singapore: McGraw-Hill.
- [64] Franke, N., Keinz, P., & Steger, C. J. (2009). Testing the Value of Customization: When Do Customers Really Prefer Products Tailored to Their Preferences. *Journal of Marketing*, 73(5), 103-121.
- [65] Dick, A. S., & Basu K. (1994). Customer Loyalty: toward an Intergraded Conceptual Framework. *Journal of the Academy of Marketing Science*, 22(2), 99-113.
- [66] East, R., Gendall, P., & Hammond, K. (2005). Consumer loyalty: Singular, addictive or interactive? *Australasian Marketing Journal*, (13)2, 10-27.
- [67] Hennig-Thurau, T., Gwinner, K. P., & Walsh, G. (2004). Electronic word-of-mouth via consumer-opinion platforms: what motivates consumers to articulate themselves on the internet? *Journal of Interactive Marketing*, 18(1), 38-52.
- [68] Caruana, A. (2002). Service loyalty: The effects of service quality and the mediating role of customer satisfaction. *European Journal of Marketing*, 36(7), 811-955.
- [69] Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60, 31-46.
- [70] Mariyudi & Matriadi, F. (2017). Customer value co-creation behavior and customer loyalty: a case study in the mobile application industry. *Advances in Economics, Business and Management Research (AEBMR)*, volume 46.
- [71] Mathwick, C., Wiertz, C., & Ruyter, K. D. (2008). Social capital production in a virtual P3 community. *Journal of Consumer Research*, 34(6), 832.
- [72] Sekaran, U. (2005). Research methods for business a skill building approach (4th ed.): John Wiley & Sons.
- [73] Zikmund, W. G., & Babin, B. J. (2007). Exploring marketing research (9th ed.): ThomsonSouth Western.
- [74] Hair, J. Hult, T. Ringle, C. & Sarstedt, M. A (2014). *Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*; Sage Publications, Inc.: Thousand Oaks, CA, USA, 2014
- [75] Kline, R. B. (2005). Principles and practice of structural equation modeling (2nd ed.). New York: The Guilford Press
- [76] Bidar, R. Watson, J. & Barros, A. (2016). *Literature review to determine environmental and cognitive factors underlying user value cocreation behavior*. Working paper ARC Discovery.
- [77] Durugbo, C. & Pawar, K. (2014). A unified model of the co-creation process. *Expert Systems with Applications*, 41(9), 4373-4387.
- [78] Lorenzo-Romero, C., Constantinides, E. & Brünink, L. A. (2014). Co-creation: Customer Integration in social media based product and service development. *Procedia-Social and Behavioral Sciences*, 148, 383-396. doi:10.1016/j.sbspro.2014.07.057.
- [79] Shamim, A. & Ghazali, Z. (2014). A Conceptual Model for Developing Customer Value Co-Creation Behaviour in Retailing. *Global Business and Management Research*, 6(3), 185-196.
- [80] Fornell, C.D.; Lacker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* 18, 39-50. [CrossRef]
- [81] Auh, S., Bell, S. J., & McLeod, C. S. (2007). Co-production and customer loyalty in financial services. *Journal of Retailing*, 83(3), 359-370.
- [82] Hakanen, T., & Jaakkola, E. (2012). Co-creating customer-focused solutions within business networks: a service perspective. *Journal of Service Management*, 23(4), 593-611.