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THE IMPORTANT ROLE OF FINANCIAL ARCHITECTURE REGULATION TOWARD FINTECH P2P LENDING ECOSYSTEM

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Abstract: The purpose of this research is to analyze the significant impact role of financial architecture regulation in the fintech peer-to-peer (P2P) lending ecosystem, using a quantitative approach and the SEM-Amos analysis tools. The research period was carried out around 2022, using research instruments in the form of distributing questionnaires, and the respondents were users of the P2P lending fintech mobile application spread, both as borrowers - lenders and interviews with stakeholders in the P2P lending fintech industry. The results indicated a significant impact of financial architecture regulation on the fintech P2P lending ecosystem, with an estimated value of 0.922. This finding demonstrates that financial architecture regulation plays a crucial role in establishing a strong and stable fintech P2P lending ecosystem. The provision of regulations, is one of the core functions of regulatory bodies and serves to guide and direct the future development of this industry. It is essential that regulations address key aspects such as big data analytics, automation and robotics, which serves as the basis for the development of information technology (IT),) to strengthen the fintech P2P lending ecosystem.

Keywords: financial architecture regulation, Fintech P2P Lending Ecosystem, fintech industry, SEM

Abstrak: *Tujuan dari penelitian ini adalah untuk menganalisis peran signifikan regulasi arsitektur keuangan dalam ekosistem fintech peer-to-peer (P2P) lending, menggunakan pendekatan kuantitatif dan alat analisis SEM-Amos. Periode penelitian dilakukan sekitar tahun 2022, dengan menggunakan instrumen penelitian berupa penyebaran kuesioner, dan respondennya adalah pengguna aplikasi mobile fintech P2P lending baik sebagai peminjam maupun pendana dan wawancara dengan pemangku kepentingan di industri fintech P2P lending. Hasilnya menunjukkan adanya pengaruh signifikansi dari regulasi arsitektur keuangan terhadap ekosistem fintech P2P lending, dengan nilai estimasi sebesar 0,922. Hasil penelitian ini menunjukkan bahwa regulasi arsitektur keuangan memainkan peran penting dalam membangun dan mendukung ekosistem fintech P2P lending yang kuat dan stabil. Penyediaan regulasi, merupakan salah satu fungsi inti dari lembaga pengawas dan berfungsi untuk memberikan pedoman dan mengarahkan pengembangan masa depan industri ini. Regulasi arsitektur keuangan pada industri ini sekurang-kurangnya harus memuat aspek-aspek yang penting seperti antara lain: analitik data besar, otomasi, dan robotika, yang berfungsi sebagai dasar untuk pengembangan teknologi informasi (TI),) untuk memperkuat ekosistem fintech P2P lending.*

Kata kunci: *regulasi arsitektur keuangan, ekosistem fintech P2P Lending, industri fintech, SEM*

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INTRODUCTION

The digital industry (Kearney, 2017) can be categorized into 3 (three) business segments: e-commerce, fintech, and on-demand services, also known as podcasts (playing on demand and broadcast). These 3 (three) business segments represent disruptive innovations. E-commerce disrupts the conventional and traditional trading markets, fintech disrupts the incumbent players in the financial and banking industry, and on-demand services or podcasts disrupt the radio industry. This research focuses on the fintech segment, specifically on lending fintech, also known as fintech peer-to-peer (P2P) lending (Hsueh & Kuo, 2017). The growth of fintech P2P lending over the past 3 (three) years has been significantly driven by the increasing number of internet and smartphone users. Fintech P2P lending is marketed through digital applications in the form of internet-based mobile applications (Kranz, 2019; Ben-Daya et al., 2017; De Vass et al., 2018; Dlamini, 2017; Effimia, 2017), predominantly accessed via smartphones (Elhai et al., 2017; Holgate, 2017). There are two primary factors contributing to the significant development of fintech P2P lending in Indonesia: (i) the growth of internet and smartphone users and (ii) the relatively low level of banking service penetration. The growth of internet has led to a high number of smartphone (Elhai et al., 2017; Holgate, 2017) and social media users (Kotler & Keller, 2016). The user base of these digital media platforms continues to increase each year, indicating a prospective future growth.

The current factual problems in the fintech P2P lending industry need more optimal role of financial regulations, The fintech P2P lending was regulated by only financial regulation, it should be more than it, namely financial architecture regulation, similar to the banking industry's Indonesian Banking Architecture (IBA), which need to be strengthened to provide guidance and direction for the industry's future development. The regulations governing fintech in Indonesia include POJK No. 77/ POJK01/2016 on Information Technology-Based Lending and Borrowing Services, which was replaced by POJK No. 10/POJK.05/2022 on Information Technology-Based Joint Funding Services, and SEOJK No. 18/SEOJK.02/2017 on Information Technology-Based Lending and Borrowing Services. These two factual problems have led to the emergence of research phenomena, and thus, stakeholders in this industry must carefully prepare the necessary regulations to strengthen the fintech P2P lending ecosystem and ensure its future growth and development.

Several previous studies related to the relationship and influence between financial regulatory variables and the fintech ecosystem. Takeda & Ito (2021) states that risk and regulation are 2 (two) important variables in the development of fintech, because these two variables affect one another and are external factors that can affect the fintech ecosystem. Fernández & Lomaquiz (2019). Argentina: FinTech Ecosystem Regulations and Muganyi, Yan, Yin, Sun, Gong & Hesary (2022). Fintech, Regtech, and Financial Development: Evidence from China. This study shows that regulatory variables on the fintech ecosystem have a relationship and influence, which have been specifically studied in Argentina and China. The research gap, the researchers have not studied yet, to analyze the relationship and effect of the financial (architecture) regulation towards fintech P2P lending fintech ecosystem.

The momentum of fintech P2P lending growth needs to be directed, thus requiring financial architecture regulations. A comparison between the regulations of Indonesia's banking architecture and the concept of Financial Architecture Regulations is shown in Table 1.

Table 1. comparison of IBA regulations vs financial architecture regulations concept

Regulation of Banking Architecture in Indonesia	Concept of Financial Architecture Regulation (Fintech))
A Healthy Banking Structure	Regulation (regulatory)
Effective regulatory system	Supervision (supervisory)
Independent and Effective Supervision	Big Data Analytics, Automation, and Robotics
A strong banking industry	Consumer protection in Fintech
Sufficient supporting infrastructure	
Consumer protection	

Source: Data reprocessed by the researcher based on Bank Indonesia (2004) and Imerman & Fabozzi (2020); Giudici (2018); Jagtiani & Kose (2018), Arkanuddin et al. (2021). Arkanuddin (2021).

Based on Table 1, it can be explained that the concept of Indonesia's Banking Architecture Regulations consists of six pillars, namely: (i) sound banking structure; (ii) effective regulatory system; (iii) independent and effective supervisory system; (iv) strong banking industry; (v) sufficient supporting infrastructure; and (vi) consumer protection. On the other hand, the concept of Financial Architecture Regulations, based on Imerman & Fabozzi (2020); Giudici (2018), and Jagtiani & Kose (2018), includes: (i) regulation; (ii) supervision; (iii) big data analytics, automation, and robotics; and (iv) consumer protection. The elements of the fintech ecosystem (fintech P2P lending ecosystem) can be seen in Table 2.

Based on Table 2, the elements of the fintech ecosystem is explained. According to Blyablina (2019), there are six elements in the fintech P2P lending ecosystem, namely: government support, access to capital, a progressive regulator, access to the right talent, a startup supporting community and literate consumers. Meanwhile, Vovchenko et al. (2019) identified five elements in the fintech ecosystem (fintech P2P lending ecosystem): demand, technology, human capital, adjustment, and access to finance. Additionally, Lee & Yong (2018) stated that there are five elements in the fintech ecosystem (fintech P2P lending ecosystem): fintech start-up, technology developers, traditional financial institutions, and financial customers. Lastly, Diemers et al. (2015) confirmed that there are three elements in the fintech ecosystem (fintech P2P lending ecosystem): government, financial institutions, and entrepreneurs. The researcher selected the fintech ecosystem based on Lee & Yong (2018) as it provides easily understandable elements that align with the Indonesian financial system. It is also familiar to stakeholders in the fintech P2P lending industry and supported by existing empirical studies. Based on several fintech ecosystem theories (Lee & Yong, 2018) adopted in this research as the fintech P2P lending ecosystem, the researcher needs to add two new elements (Arkanuddin, Saragih & Nugroho, 2021) to the ecosystem.

The definition of an ecosystem (Environmental Protection and Management Act, 2009) states that it is a comprehensive and interconnected arrangement of environmental elements that shape the balance, stability, and productivity of the environment. According to Lee & Yong (2018), the fintech ecosystem is defined as a concept for understanding the competitive and collaborative dynamics in fintech innovation. Therefore, it is necessary to analyze the ecosystem as a starting point. The stability of the fintech ecosystem is an instrument for fostering the growth of this industry.

The researcher views the fintech P2P lending ecosystem as a unified structure that facilitates collaboration among its elements. Each element cannot stand or operate independently but interacts and influences one another to sustain the fintech P2P lending business in a dynamic manner, adapting to external environmental changes. The existing elements also engage in coordination, cooperation, and collaboration efforts (Ansell & Gash, 2017) to create business stability and future development. The Indonesian Banking Architecture (IBA), known as (Arsitektur Perbankan Indonesia), represents the business landscape of the banking industry in Indonesia. serves as a framework. Several definitions related to financial regulation and financial architecture regulation by various experts are as follows: Architecture of financial (Barlow, 2016) states that financial architecture is a landscape of financial services that provide high-quality personalized services in the form of digital services, facilitating faster, safer, and more transparent borrowing processes, thus making the market more efficient.

Tabel 2. Comparison of elements in the fintech P2P lending ecosystem

Blyablina (2019)	Vovchenko et.al. (2019)	Lee & Yong (2018)	Diemers et.al. (2015)
Government support	Demand	Fintech Start-up	Government
Access to capital	Technology	Government	Financial Institution
A progressive regulator	Human capital	Technology Development	Entrepreneur
Access to the right talent	Adjustment	Traditional Financial Institution	
A startup supporting community	Access to finance	Financial Customer	
Literate consumers			

Source: Data processed by the researcher from various sources, including Blyablina (2019), Vovchenko et al. (2019), Lee & Yong (2018), and Diemers et al. (2015).

Financial architecture, according to Nambisan (2018), is defined as the architectural perspective that plays a crucial role in understanding the rules of digital resources and connections in value creation. It enriches the understanding of complex and dynamic government regulations regarding digital innovation. The architectural perspective specifically encompasses digital resources (digital components) conceptualized into three layers of digital architecture: (a) Artificial artifacts in design and utility; (b) Utilization of the significant potential of agency in terms of motivation, capability, relationships, and interactions among actors; (c) The evolution of digital infrastructure and platforms as factors shaping new innovation. Financial regulation, as described by Imerman & Fabozzi (2020), is one of the factors shaping the fintech ecosystem. They state that financial innovation affects regulation in two ways: (i) How companies should be regulated, including the largest companies; (ii) Development of regulatory IT (Reg-Tech) and Supervisory Technology (Sup-Tech). On the other hand, financial architecture regulation is defined as a superstructure provision aimed at achieving a stable and sustainable financial ecosystem while protecting consumers from financial practices conducted by financial institutions. This research places financial architecture regulation with the goal of achieving a stable fintech P2P lending ecosystem and protecting consumers from financial practices conducted by the fintech P2P lending industry. Financial architecture regulation is a financial landscape designed to govern the relationships and interactions among industry players, supported by financial regulation, supporting infrastructure, and platforms (Blanchard, 2015), providing digital-based financial technology services (Prensky, 2001). Fintech P2P Lending (Milne & Parboteeah, 2016; Hsueh & Kuo, 2017; Ge, Feng, Gu & Zhang, 2017) refers to an internet-based lending business model that caters to borrowers' financial needs through intermediary loan application providers. This platform is targeted at SMEs, as they find traditional bank loan requirements to be excessively high. P2P. Lending (Milne & Parboteeah, 2016; Hsueh & Kuo, 2017; Ge, Feng, Gu & Zhang, 2017) is a business process of facilitating monetary borrowing between two unrelated peers or individuals through an online platform, typically in the form of a mobile application, without the involvement of intermediaries or traditional banking institutions. Additionally, big data analytics, automation, and robotics are considered parts of emerging technologies mentioned as areas that shape the horizontal fintech ecosystem. Financial regulation, according to Imerman & Fabozzi (2020), refers to the innovation landscape in finance that establishes regulatory and supervisory measures for industry players and their supporters. In this research, financial regulation is referred to as financial architecture regulation. Based on the existing literature, the researcher attempts to define financial regulation as the rules that must be followed and complied with in the management processes of financial organizations in the financial sector and financial administration.

Based on existing financial regulatory issues, as well as the results of previous research which stated that the fintech ecosystem consists of 2 (two) important factors, namely risk and regulation and efforts to develop financial regulations into regulatory financial architecture in this industry, as is the banking industry which has Indonesian banking architecture, then the approach to solving the problem that needs to be done is to carry out an analysis related to the presence or absence of a significant effect of financial architecture regulations on the fintech ecosystem, if it is suspected that there is a significant influence, efforts to develop financial architecture regulations are an important thing to do because they have a very important role.

The objective of this study is to analyze the impact of financial architecture regulations on the fintech P2P lending ecosystem by addressing the research question. Stakeholders in the fintech P2P lending industry need to engage in digital collaborative governance, particularly within the industry, to ensure that its needs are met and to provide clarity on the industry's future development. Therefore, it is crucial to develop adequate financial architecture regulations that align with the industry's requirements

METHODS

The research period was carried out around 2022, using research instruments in the form of distributing questionnaires, and the respondents were users of the P2P lending fintech mobile application spread throughout Indonesia, both as borrowers and lenders. This research employs non-probability sampling technique. According to Malhotra (2007), the sample size can be determined by having 5-10 samples per indicator. In this study, there are two constructs with a total of eleven indicators. Based on the above criteria,

the minimum required sample size for this research is 5 x 11 indicators = 55 respondents. However, considering the use of SEM-Amos as the analysis tool and based on the guidelines (Ferdinand, 2006) requiring a minimum of 100 respondents, a sample size of 150 respondents was chosen, thus meeting the research requirements. The number of respondents is 150, with the gender distribution being 84 male respondents (56%) and 66 female respondents (44%). In terms of age categories, there are 7 respondents (4.67%) over 54 years old, 105 respondents (70.00%) between 35 and 54 years old, 38 respondents (25.33%) between 19 and 34 years old, and 0 respondents (0%) below 19 years old. The occupational categories consist of 107 employees (71.33%), 33 SME entrepreneurs (22%), 7 others (4.67%), and 3 professionals (2%). Regarding positions, there are 34 directors/officials/owners (23%), 21 GMs/ Division Heads (14%), 54 managers (36%), and 41 non-managerial positions (27%). The educational background categories include 2 respondents (1%) with a doctoral degree (S-3), 17 respondents (11%) with a postgraduate degree (S-2), 118 respondents (79%) with a bachelor's degree (S-1), and 13 respondents (9%) with education below a bachelor's degree (S-1). In terms of respondents' domicile, 140 respondents (93%) reside in Java, while 10 respondents (7%) reside outside of Java. The research instrument consists of a questionnaire distributed to end-users (borrowers and lenders/investors) of fintech P2P lending platforms. Additionally, interviews were conducted with stakeholders in the Indonesian fintech P2P lending industry, including regulatory bodies, fintech associations, industry players, and professionals from commercial banks (book IV, III, and II). The research focuses on two constructs: the exogenous construct of financial architecture regulation and the endogenous construct of the fintech P2P lending ecosystem. The conceptual definition of financial architecture regulation is a comprehensive set of guidelines that outline the direction, form, and structure of the industry for the future (Imerman & Fabozzi, 2020; Giudici, 2018; Barlow, 2016).

The fintech ecosystem is a cohesive and interdependent arrangement formed by multiple elements that can compete and collaborate. Each element cannot stand or operate independently but must interact and influence one another, fostering dynamic sustainability in the future business landscape, adapting to the evolving external environment that can impact the fintech P2P lending industry (Lee & Yong, 2018). The exogenous construct of financial architecture regulation consists of four dimensions or elements, which can be explained as follows: (i) regulation, (ii) supervision, (iii) big data analytics, automation, and robotics, and (iv) consumer protection. These dimensions reflect the comprehensive nature of financial architecture regulation and are supported by four indicators.

The endogenous construct of the fintech P2P lending ecosystem comprises seven dimensions or elements. It can be described that the ecosystem consists of seven dimensions or elements, namely: (i) startup fintech companies, (ii) government, (iii) technology developers, (iv) fintech customers (P2P lending users), (v) traditional financial institutions, (vi) credit insurance institutions, and (vii) fintech consumer protection agencies. Additionally, two additional elements are credit insurance institutions and fintech consumer protection agencies, as indicated by empirical studies and practices. Research hypotheses are formulated to facilitate addressing the research problems at hand. Hypotheses are also created to structure the steps of answering the research questions, and the results of the hypotheses and hypothesis analysis obtained from data processing using the SEM-Amos analysis tool can provide conclusive answers.

Based on Figure 2, the research hypothesis is deduced as follows: the research hypothesis is built on the significant influence of the exogenous construct of financial architecture regulation on the endogenous construct of the fintech P2P lending ecosystem. The hypotheses are as follows:

H0 = Financial architecture regulation (X) does not have a significant influence on the fintech P2P lending ecosystem (Y).

H1 = Financial architecture regulation (X) has a significant influence on the fintech P2P lending ecosystem (Y).

This indicates that there is a influence between financial architecture regulation variables and the fintech P2P lending ecosystem, as specifically studied in Argentina and China. Another study by Arkanuddin, Saragih & Nugroho (2021) examined the influence of risk and financial regulation on the fintech P2P lending ecosystem. Empirical research on the fintech P2P lending ecosystem has been conducted by other researchers with different variables according to their research needs, using various approaches and conducted in different countries. In SEM testing

(Byrne, 2010), there are two stages: (i) Confirmatory Factor Analysis (CFA) test to determine the fit of variables or constructs, through the testing of 1st Order CFA: 1 confirmatory factor; 2 non-correlated confirmatory factors; 2 correlated confirmatory factors; and 2nd Order CFA test, with the testing of a two-level confirmatory factor analysis model. (ii) Goodness of Fit (GOF) test to determine the fit or significance of the structural model. The prerequisites for SEM testing include sample size test, data normality test, outliers test, multicollinearity test, and singularity test. Data quality test includes validity and reliability tests, followed by CFA or confirmatory factor analysis, measurement model, and Goodness of Fit Test (GOF Test) which includes Df, Chi-Square, Probability, CMIN/df., RMR, RMSEA, GFI, AGFI, NFI, RFI, IFI, TLI, and CFI. The full structural equation model (SEM) can be developed if the CFA results for latent variables are fit. The testing process is crucial for SEM analysis, and researchers should explain the measurement model and Goodness of Fit Test (GOF Test) results.

RESULTS

Multivariate outlier analysis is performed using [method/technique]. Looking at the Mahalanobis Distance values, the Mahalanobis Distance for each observation indicates the distance of a data observation from its mean centroid. Data observations that are far from their centroids are considered outliers and need to be dropped from the analysis. The output of the Mahalanobis Distance calculation by the Amos program shows that there is only 1 outlier data point, which will be dropped, and the remaining observation data have Mahalanobis D-squared values below the predetermined threshold, indicating that the research data used meets the requirement of having no multivariate outliers. Multicollinearity and singularity can be determined by the extremely small determinant value of the sample covariance matrix, approaching zero. Based on the Amos output, the determinant of the sample covariance matrix is calculated as Determinant of sample covariance matrix = .000, which is close to zero. Therefore, it can be concluded that there is no multicollinearity and singularity in the research data. The results of the validity test can be seen in Table 3.

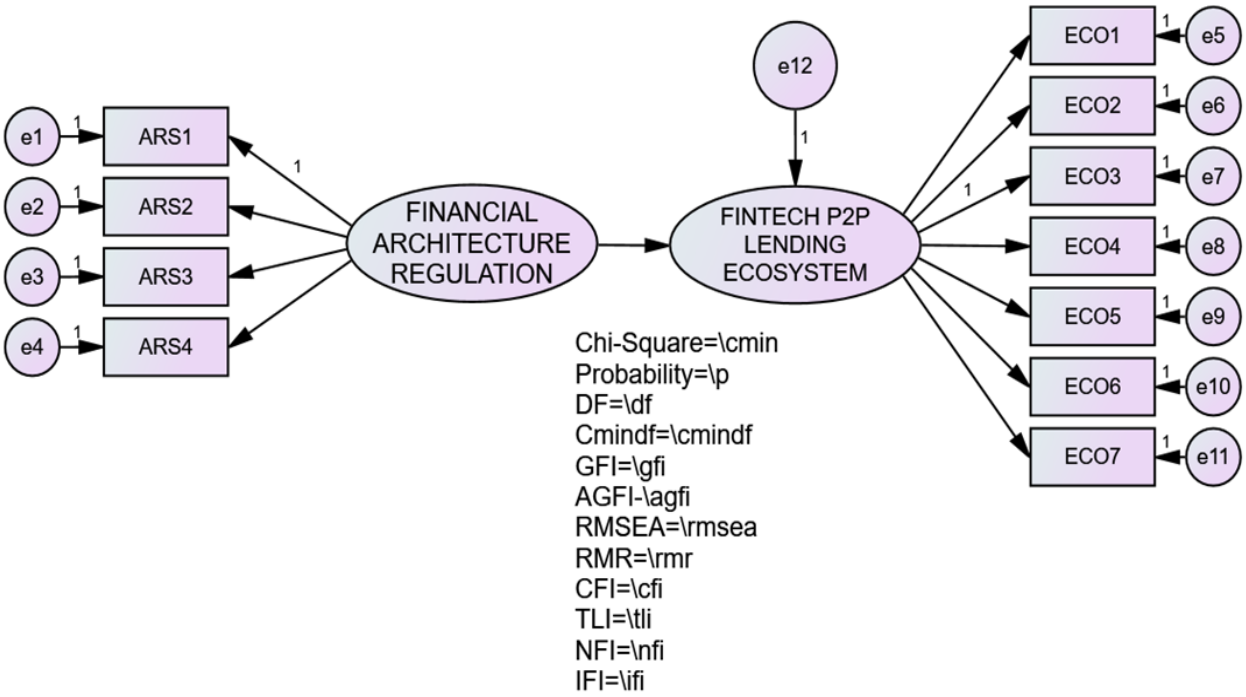

Figure 2. Research hypothesis model (Imerman & Fabozzi, 2020)

Table 3. Results of validity test

	Estimate
ARS4	0.849
ARS3	0.800
ARS2	0.881
ARS1	0.858
ECO1	0.790
ECO2	0.813
ECO3	0.853
ECO4	0.819
ECO5	0.890
ECO6	0.770
ECO7	0.757

Based on Table 3, it could be observed that all indicators are valid because they have a standard loading factor > 0.5. The loading factor represents the estimated value of the indicator on its construct, and there are no loading factor estimates below the cut-off value of < 0.5. All indicators for all constructs are significant because they have a Critical Ratio (C.R.) ≥ 1.96 or a probability (P) ≤ 0.05, indicating that no indicators are eliminated. Reliability testing is conducted through the calculation of construct reliability, with a parameter > 0.7, and the calculation of variance extracted, with a parameter > 0.5. The results of the validity test can be explained as follows: based on the Amos calculations of standardized regression weights, it is known that all dimensions and indicators are valid because they have a standard loading factor ≥ 0.5 (Igbaria et al. in Wijanto, 2008:65 and Ghozali, 2008). The Amos calculations for variance show that the cut-off value for construct reliability and variance extracted is a minimum of 0.70 (Ghozali, 2008), and the variance extracted is a minimum of 0.5 (Ghozali, 2008). The results of the calculations are as follows: for Financial Architecture Regulation, the estimated construct reliability is 0.9494, and the estimated variance extracted is 0.8244. For Fintech P2P Lending Ecosystem, the estimated construct reliability is 0.9612, and the estimated variance extracted is 0.7801. The discriminant validity is obtained from the square root of variance extracted (VE) values in this study, namely: (i) Financial Architecture Regulation, square root of 0.8244 = 0.9080; (ii) Fintech P2P Lending Ecosystem, square root of 0.7801 = 0.8832. The next analysis is the structural equation modeling (SEM) analysis for the full model, analyzing the processed data by conducting adequacy tests and statistical tests. The testing refers to the model fit criteria presented in the Goodness of Fit Index table. The results of the data processing for the full model analysis, after performing modification indices (M.I), indicate that the Amos output shows a full model that fits the model according to the GOFI parameter, so no modification indices are needed. The Amos calculations for regression weights reveal that all dimensions and indicators of the full model that fits the model are significant (because the C.R. values are ≥ 1.96 or the P values are ≤ 0.05, and there are *** signs). Overall, all indicators are valid because they have a standard loading factor > 0.5, indicating that there are no dimensions or indicators to be dropped. The results of the Amos calculations for squared multiple correlations can be seen in Table 4.

Table 4. Squared multiple correlations

	Estimate
Fintech P2P lending ecosystem	.850
ECO7	.633
ECO6	.543
ECO5	.813
ECO4	.644
ECO3	.692
ECO1	.565
ARS1	.761
ARS2	.740
ARS3	.616

Based on Table 4, it could be analyzed that the Amos output for squared multiple correlations above reveals that the squared multiple correlation of the fintech P2P lending ecosystem construct is estimated to be 0.850. The results of the Amos calculations for standardized regression weights can be seen in Table 5.

Based on Table 5, it can be ascertained that the Amos output for the standardized regression of the financial architecture regulation construct on the fintech P2P lending ecosystem construct is estimated to be 0.922. The final model's goodness-of-fit test indicates a well-fitting model when considering the path diagram of the final model. The values of DF, CMIN/DF, RMR, RMSEA, GFI, TLI, NFI, RFI, IFI, and CFI meet the recommended criteria. Specifically, the results of the goodness-of-fit test for the final model indicate the following values: DF (>0, result 19), X2-Chi-Square (< 214.447, result 25.432), Probability (> 0.05, result 0.147), CMIN/DF (<2, result 1.339), RMR (< 0.05, result 0.017), RMSEA (< 0.08, result 0.048), GFI (> 0.90, result 0.965), AGFI (> 0.90, result 0.917), TLI or NNFI (> 0.90, result 0.988), NFI (> 0.90, result 0.977),

RFI (> 0.90, result 0.956), IFI (> 0.90, result 0.994), and CFI (> 0.90, result 0.994). The cutoff values for the Goodness of Fit Index are as follows: DF (> 0), X2-Chi-Square (< 214.477), Probability (> 0.05), CMIN/DF (< 2), RMR (< 0.05), RMSEA (< 0.08), GFI (> 0.90), AGFI (> 0.90), TLI or NNFI (> 0.90), NFI (> 0.90), RFI (> 0.90), IFI (> 0.90), and CFI (> 0.90). The results of the Amos calculations for Yield Value Goodness of Fit Index can be seen in Table 6.

Based on Table 6, it can be concluded that the overall model is a good fit, and therefore, it can be accepted. According to Ghozali (2012), Widarjono (2010), Wijaya (2009), and Wijanto (2008), the Goodness of Fit (GOF) parameters can be evaluated based on a minimum of 5 criteria, and it is not necessary for all criteria to meet the Goodness of Fit criteria. However, it can be adjusted based on the researcher's judgment or decision. Latan (2012), citing Hair et al. (2010), also stated that the use of 4-5 Goodness of Fit criteria is considered sufficient to assess a full model that is a good fit. Nevertheless, the criteria of Goodness of Fit that need to be met include absolute fit indices, incremental fit indices, and parsimony fit indices. The full model that is a good fit can produce a structural equation represented by the output of Amos in standardized regression weights. The structural equation is as follows: Fintech P2P lending = 0.922 * Financial Architecture Regulation + 0.150, where the error or residual of the structural equation is 0.150, obtained from 1 - 0.850 taken from the squared multiple correlations table. The path coefficients obtained from the structural equation can be visualized in Figure 3.

Tabel 5. Standardized regression weight

			Estimate
Fintech P2P lending ecosystem	←	Financial Architecture Regulation	0.922
ARS3	←	Financial Architecture Regulation	0.785
ARS2	←	Financial Architecture Regulation	0.860
ARS1	←	Financial Architecture Regulation	0.872
ECO1	←	Fintech P2P Lending ecosystem	0.751
ECO3	←	Fintech P2P Lending ecosystem	0.832
ECO4	←	Fintech P2P Lending ecosystem	0.802
ECO5	←	Fintech P2P Lending ecosystem	0.902
ECO6	←	Fintech P2P Lending ecosystem	0.737
ECO7	←	Fintech P2P Lending ecosystem	0.795

Tabel 6. Yield Value Goodness of Fit Index

Goodness Fit Index	Cut -Off Values	Results	Criteria
DF	> 0	19	Over Identified
X2 -Chi-Square	< 214.477	25.432	Good Fit
Probability	> 0.05	0.147	Good Fit
CMIN/DF	< 2	1.339	Good Fit
RMR	< 0.05	0.017	Good Fit
RMSEA	< 0.08	0.048	Good Fit
GFI	> 0.90	0.965	Good Fit
AGFI	> 0.90	0.917	Good Fit
TLI or NNFI	> 0.90	0.988	Good Fit
NFI	> 0.90	0.977	Good Fit
RFI	> 0.90	0.956	Good Fit
IFI	> 0.90	0.994	Good Fit
CFI	> 0.90	0.994	Good Fit

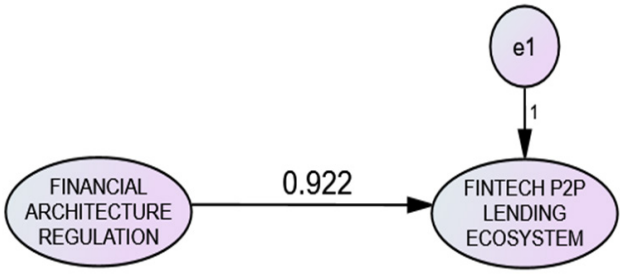

Figure 3. Path Coefficients

Based on the data in Figure 3, it could be ascertained that the path coefficient is equal to the regression coefficient, estimated at 0.922. The hypothesis testing was conducted using path analysis, focusing on the exogenous constructs' influence on the endogenous construct. The results of Amos calculations for the research hypothesis indicate that the exogenous construct of financial architecture regulation has a significant influence and correlation, estimated at 0.922, on the endogenous construct of fintech P2P lending ecosystem. Therefore, the null hypothesis (H0) is rejected, and the alternative hypothesis (H1) is accepted. It can be concluded that financial architecture regulation has a significant impact on the fintech P2P lending ecosystem. Thus, any issuance of regulation will have an impact on the fintech P2P lending ecosystem. Therefore, it is expected that the issued financial architecture regulations can strengthen the existing fintech P2P lending ecosystem and regulate them according to the industry's needs, allowing the industry to develop well and rapidly under the supervision and control of authorities.The results of Amos calculations for the implied correlations (for all variables) show that the correlation between the dimensions of financial architecture regulation and the fintech P2P lending ecosystem indicates that all dimensions of financial architecture regulation have correlations with the fintech startup element. This demonstrates that all pillars of financial architecture regulation issued will provide stimuli for fintech startups and supporting institutions such as traditional financial institutions and banking. The dimension of regulation related to big data analytics, automation, and robotics has correlations with fintech startups and traditional financial institutions, while the dimension of customer protection regulation also correlates with fintech startups and traditional financial institutions.

Managerial Implications

Financial architecture regulation has a significant influence, estimated at 0.922, on the fintech P2P lending ecosystem. This indicates that each issuance of financial architecture regulation has a significant impact on the fintech P2P lending ecosystem, both in terms of business as usual and macro-policy by financial authorities regarding the development of the fintech P2P lending industry. Regulatory agencies need to issue adequate and industry-relevant regulations. The regulatory pillar has correlations with fintech startups and traditional financial institutions, indicating that every regulatory policy has an impact on both industries. Regulations related to the fintech industry, as mentioned above, are crucial. Each issuance of regulatory measures (POJK or SEOJK) will affect the development of the fintech P2P lending industry, where the existing regulations will be flexible yet prudent, while regulations pertaining to the financial and banking industry will tend to be stricter or more rigid and also prudent. The supervisory pillar also has correlations with fintech startups and traditional financial institutions. This proves that effective supervision can influence the growth of businesses in both industries. The stricter the supervision, the more impact it will have on business growth. The regulation pillar of big data analytics, automation, and robotics has correlations with fintech startups and traditional financial institutions. The pillar of regulation concerning customer protection has correlations with fintech startups and traditional financial institutions, indicating that both industries need to focus on handling customer complaints as one of the implementations of customer protection. Considering that customers contribute to the business of both industries, this correlation emphasizes the importance of addressing customer complaints. The pillar of customer protection regulation also correlates with the customer protection element in the fintech P2P lending ecosystem, signaling that any policy related to customer protection will encourage fintech startups and traditional financial institutions to improve their customer complaint handling processes. With adequate IT infrastructure support, the complaint handling process can be responsive, fast, accurate, and precise. The pillar of financial architecture regulation correlates with the elements of the fintech P2P lending ecosystem, with the most important elements in this research being fintech startups and traditional financial institutions. As business entities and implementers of the issued regulations, these two industries are central to the study.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The results of this study complement previous research and previous research, where the contribution of this research to the development of future knowledge is that financial architecture regulations have a significant influence on the fintech P2P lending ecosystem, so that the P2P lending fintech industry is still not powerful if it is only regulated by financial regulations (POJK and SEOJK) and must be regulated in the form of financial architecture regulations, similar to Indonesian banking architecture regulations. The development of the fintech P2P lending industry requires clear guidelines and directions, making financial architecture regulation crucial in creating stability within the Indonesian fintech P2P lending ecosystem. This means that the issuance of regulations can provide stimulus and encourage a more stable fintech P2P lending ecosystem. Regulations will also drive key elements of the fintech P2P lending ecosystem to focus on their tasks and responsibilities, as well as foster cooperation, coordination, and collaboration among these elements. The elements of the Indonesian fintech P2P lending ecosystem, such as fintech startups, the government, IT developers, fintech customers, traditional financial institutions, credit insurance agencies, and customer protection institutions, can work together, coordinate, and collaborate to create stability and depth within the fintech P2P lending ecosystem. This collaboration will promote the healthy and sustainable growth of the fintech P2P lending industry in the future. This research can motivate authorities to prepare, formulate, and develop new regulations or revise existing ones, ensuring that the regulations are more adequate and serve as a foundation for driving the future business development of the fintech P2P lending industry, anticipating future changes. Conducting research on the fintech P2P lending industry aims to contribute to the practical world of the fintech P2P lending industry, considering its current and future prospects as a promising business.

Recommendations

Financial authorities need to improve regulation optimization from simply issuing financial regulations to developing financial architecture regulations such as the banking industry which has Indonesian banking architecture, by developing these financial architecture regulations it will become a guideline and direction for the development of the P2P lending fintech industry in the future and one of the important rules that must exist in this industry financial architecture regulation is regulations related to big data analytics and robotics, because this industry is based on the use of IT and one of the IT development priority scales is big data analytics and robotics in this industry.

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