

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)



D. Rahadian¹, A. Krisnawatie², W. Rachbini³, Hadifian⁴

^{1,2}Lecturer at School of Economic and Business, (Distance Learning) Master in Management, Faculty of Economic and Business, Telkom University, West Java, Indonesia

³Lecturer at Graduate School, Faculty of Economics and Business, Pancasila University, Jakarta, Indonesia

⁴Postgraduate Student at School of Economic and Business, (Distance Learning) Master in Management, Faculty of Economic and Business, Telkom University, West Java, Indonesia

ABSTRACT: This research examines the relationship and impact of value creation models from the collaboration between Micro, Small, and Medium Enterprises (MSMEs) and Financial Technology (Fintech) companies on innovation and revenue growth within MSMEs. Fintech revolutionizes the financial sector with digital solutions for various business processes, benefiting MSMEs by addressing financing, electronic payments, cash management challenges and other business matters. This study focus on value creations through MSME-fintech collaboration and their effects on innovation and revenue growth in MSME, while previous studies highlight fintech's advantages. The research questions include: (1) What value creations arise from the collaboration? (2) How do these value creations impact innovation and revenue growth in MSMEs? A structural equation model (SEM) using partial least square (PLS) methodology analyses the relationships and impacts of the value creation models. Data were collected from 178 culinary sector MSMEs in Jakarta, Surabaya, and Medan, Indonesia. Three of the five identified value creation models—new customer base, new value chain efficiency, and new customer value—significantly influence incremental innovation from MSME-fintech collaboration. Incremental innovation significantly boosts MSME revenue growth. Multi-group analysis shows micro enterprises have the highest revenue growth impact at 54.8%, compared to 47.0% for small enterprises, 51.5% for medium enterprises, and 50.5% for the overall MSME group. Specific value creation models foster incremental innovation, enhancing MSME revenue growth. This study provides insights into optimizing fintech collaborations for MSME financial outcomes and contributes to understanding the fintech-MSME dynamic, offering a foundation for future research.

KEYWORDS: MSME; Financial Technology; Value Creation Models; Innovation; Collaboration.

I. INTRODUCTION

Financial Technology companies, hereinafter we will call fintech, are companies with a new business model that changes the way people pay, send money, borrow, lend, invest and even donate or collect funds (crowd funding) carried out through technology (Menat, 2016). The World Bank (2017) in its report stated that fintech with technology-based solutions offers collaboration with MSMEs through various platforms to increase efficiency, reduce costs and access new markets. In this way, fintech increases access to financial services to MSMEs as well as increases their financial inclusion.

Micro, small and medium enterprises (and hereinafter abbreviated as MSMEs) have long been served by traditional financial operators, now have options along with the many offerings from various fintech companies and fintech business models that continue to grow, especially in Indonesia (Hatammimi & Krisnawati, 2018). For example, fintech-based lending is one of the largest in fintech applications (Firli & Fanesa, 2022).

Data from the Indonesian Financial Services Authority (OJK) noted that as of August 2022, fintech peer lending provided loans to 3.7 million individual MSME units and 89,126 business entity MSME units with a value of IDR 10.9 trillion and IDR 5.3 trillion. According to data from the Ministry of Cooperatives and MSMEs (2022), as of May 2022, approximately 19.5 million MSME units have entered the digital ecosystem with a turnover of IDR 600 trillion. The Indonesian Fintech Association (AFTECH, 2022) reported that 62% of fintech operators have served MSMEs with 42% of fintech transactions with MSMEs valued above IDR 80 billion.

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

MSMEs in Indonesia in 2022 reached more than 65 million (Ministry of Cooperatives and MSMEs, 2022) with the contribution to Indonesia's Gross Domestic Product (GDP) in 2021 reaching 61.07% or worth Rp 8,600 trillion and absorbing 97% of the total workforce (Coordinating Ministry for Economic Affairs of the Republic of Indonesia, 2022). This causes the position of MSMEs to be very important because the number of units and their economic contribution dominate in Indonesia's economic structure.

Traditional financial institutions such as banks have a reputation for supporting the growth of businesses that meet the requirements for banking services (or called bank-able). But fintech that has application tools, data, technology and algorithms can serve MSMEs where traditional financial institutions fail and cannot serve or because they are inflexible. Fintech, with or without collaboration with traditional banking, has been proven to support the growth of the MSME sector through micro-level data such as data on the number of customers, the number of returning customers, the percentage of digital transactions, periodic growth data, consolidated reports of all digital transactions, and analysis of business and financial reports (Bokadia, 2022).

Studies concluded that financial inclusion was significantly positively correlated with good MSME performance (Efan et al., 2021; Fajri et al., 2021), and also has implications for revenue growth (Chauvet & Jacolin, 2017). More specific research reports the growth of income in the MSME sector after collaborating with fintech (Ajuna, Luqmanu H. et al., 2023; Husna et al., 2021)

Collaboration between MSMEs and fintech in the perspective of innovation 4.0 evolution through the creation of 5 values forms a co-innovation platform (Lee et al., 2012) where the main benefit of co-innovation is to create new value for organizations and other stakeholders (Gupta & Govindarajan, 2003). Collaboration between stakeholders also produces incremental innovation and radical innovation which are also positively correlated with improving organizational performance (Yunus, 2018).

The number of MSMEs engaged in the food and beverage (culinary) sector in Indonesia is the highest, reaching 39.7% of the total number of MSMEs recorded (BPS, 2020) and also according to a report by the Boston Consulting Group (BCG) that MSMEs in the culinary sector are the ones who have adopted digital technology the most (KataData, 2022). The food and beverage sector in question is a food and beverage provider that includes restaurant businesses, restaurants, catering services, food sales centers, cafes, and includes the food processing industry that is sold at retail. The selection of the study in 3 cities, namely DKI Jakarta, Surabaya and Medan, is because these three cities are the cities with the largest GDP (gross domestic product) in Indonesia (BPS, 2021).

II. LITERATURE REVIEW

MSME and FINTECH

Micro small and medium enterprises (MSMEs) play an important role in the economy in the world, especially in developing countries. The number of MSMEs represents 90% of the number of businesses by employing more than 50% of the workforce worldwide. Formal MSMEs in developing countries account for around 40% of gross domestic product (GDP) and even absorb 7 out of 10 workers (World Bank, 2022b). The grouping of MSMEs is generally carried out based on 3 categories, namely: the number of employees, annual sales turnover, and total assets (European Union Commission, 2003; IFC & Alla Khodakivska, 2012). As for Indonesia, the criteria for MSMEs are regulated in Government Regulation No. 7 of 2021 concerning the Facilitation, Protection, and Empowerment of Cooperatives and Micro, Small and Medium Enterprises (PP MSMEs) articles 35 to 36, namely for new businesses based on the amount of capital and businesses that are already running based on the amount of annual turnover.

Table 1. MSME Categories in Indonesia

Indicators/ Company Size	Micro Enterprise	Small Enterprise	Medium Enterprise
Newly Formed MSMEs			
Total Capital (exclude lands and buildings)	< Rp 1 billion	Rp 1 billion – Rp 5 billions	Rp 5 billions – Rp 10 billions
Existing MSMEs			
Annual Turnover	< Rp 2 billions	Rp 2 billions – Rp 15 billions	Rp 15 billions – Rp 50 billions

Source: Government Regulation (PP) No.7/2021 concerning Facilitation, Protection and Empowerment of Cooperatives and Micro, Small and Medium Enterprises (PP MSME)

MSMEs in Indonesia with the number of businesses reaching 99% of all businesses, accounting for more than 61% of gross domestic product and 97% of labor absorption are critical engines for the Indonesian economy (Coordinating Ministry for the Economy, 2022). The World Bank (World Bank, 2022b) in its latest report recommends the digitization of MSMEs to increase competitiveness.

Fintech as a digital technology for financial services creates various opportunities to build more inclusive and efficient financial services and support economic growth (World Bank, 2022a), as well as taking over traditional financial services such as: payments,

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

savings and loans, investment management, insurance, capital raising, and market data analysis services (World Economic Forum & Deloitte, 2015) by 25% in 2020 (Arjunwadkar, 2018).

In Indonesia, according to a survey conducted by UNDP and LPEM-UI (2020), it was found that 44% of MSMEs have joined online marketplaces such as Tokopedia, Shopee, Bukalapak and so on. Fintech, one of which is in the business of providing digital payment services (Rama & Rahadian, 2022) and digital lending/credit in this case is like finding one of the places to collaborate and grow up, namely in the e-commerce online marketplace (Agrawal, 2021).

Co-innovation Platform and Value Creation Models

An important element in innovation 4.0 is the process of creating new value (value creation), where the core of co-innovation is involvement, experience and co-creation of values that are difficult for competitors to imitate (Lee et al., 2012). Entities involved in co-innovation collaborate to create new value for each party (Kopola, 2022). The process of value creation does not only depend on the mastery of knowledge owned by the company or the product/service created, but can be found in an ecosystem consisting of various actors that are not in one hierarchy (Madsen & Cruickshank, 2022).

The co-innovation platform is a platform where the organization create new values and there are 5 values that can be created from this co-innovation (Lee et al., 2012) such as :

a. New model business

The first platform of co-innovation is the creation of new business models. Academics and practitioners generally define a business model as how a company conducts its business (Gilbert et al., 2003; Johnson et al., 2008; Kim & Mauborgne, 2005). The development of information technology, especially the internet, has increased the speed and ease of transactions through the internet, increased information traffic and provided new solutions to solve problems faced by consumers. The new solution can be implemented as a new business model that allows organizations to produce and deliver products and services in a more efficient and effective way (Lee et al., 2012). Therefore, our hypothesis are :

H1 : The collaboration of MSMEs and fintech that create new business models has a significant effect on radical innovation.

H2 : The collaboration of MSMEs and fintech that create new business models has a significant effect on incremental innovation.

b. New products, new services, or new ventures

New products and services can not only come from the discovery or application of new technology, but can also come from the convergence and co-creation of ideas or application devices. New efforts can be generated from collaboration between actors. Organizations can get creativity for new products by co-creating with their consumer base (Ramaswamy, 2008). Therefore, our hypothesis are :

H3 : The collaboration of MSMEs and fintech that create new products/services/ventures has a significant effect on radical innovation.

H4 : The collaboration of MSMEs and fintech that create new products/services/ventures has a significant effect on incremental innovation.

c. New value chain

The third value creation is the creation of a new value chain that makes the organizational architecture more efficient, improves the quality of products and services, and accelerates processes. New approaches to convergence that improve purchasing procedures, transform processes, or increase the effectiveness of distribution channels are examples of the creation of new value chains. In addition, according to Ramaswamy and Gouillart (2010), the formulation of strategies involving co-creation can also create a new value chain that benefits all parties involved in the ecosystem. Therefore, our hypothesis are :

H5 : The collaboration of MSMEs and fintech that create new value chain efficiencies has a significant effect on radical innovation.

H6 : The collaboration of MSMEs and fintech that create new value chain efficiencies has a significant effect on incremental innovation.

d. New customer base

One of the most important things that can be obtained from co-innovation is the creation of a new consumer base both through collaboration (Santoso et al., 2022; Saragih et al., 2021), convergence (Trimi et al., 2010), and co-creation (Kuo et al., 2009). Gaining a new consumer base in a segmented market can create conditions without competitors (Buchness, 2015). The situation without competition has implications for satisfactory revenue and profit growth (Priilaid, 2019). Therefore, our hypothesis for new customer base value are :

H7 : The collaboration of MSMEs and fintech that create new consumer base has a significant effect on radical innovation.

H8 : The collaboration of MSMEs and fintech that create new consumer base has a significant effect on incremental innovation.

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

e. New customer value

Traditional consumers are concerned with price value, quality, quick response, and variety of products/services. But today, customers demand more than just customer experience, emotional fulfillment, public good and the opportunity to learn new things. New consumer value can be generated from co-creation between organizations and consumers. Vesterberg (2014) concluded that convergence produces a series of ideas that offer a new value chain where these ideas are difficult to imitate and ultimately become a competitive advantage for organizations. Therefore, our hypothesis for this value are :

- H9 : The collaboration of MSMEs and fintech that create new consumer value has a significant effect on radical innovation.
- H10 : The collaboration of MSMEs and fintech that create new consumer value has a significant effect on incremental innovation.

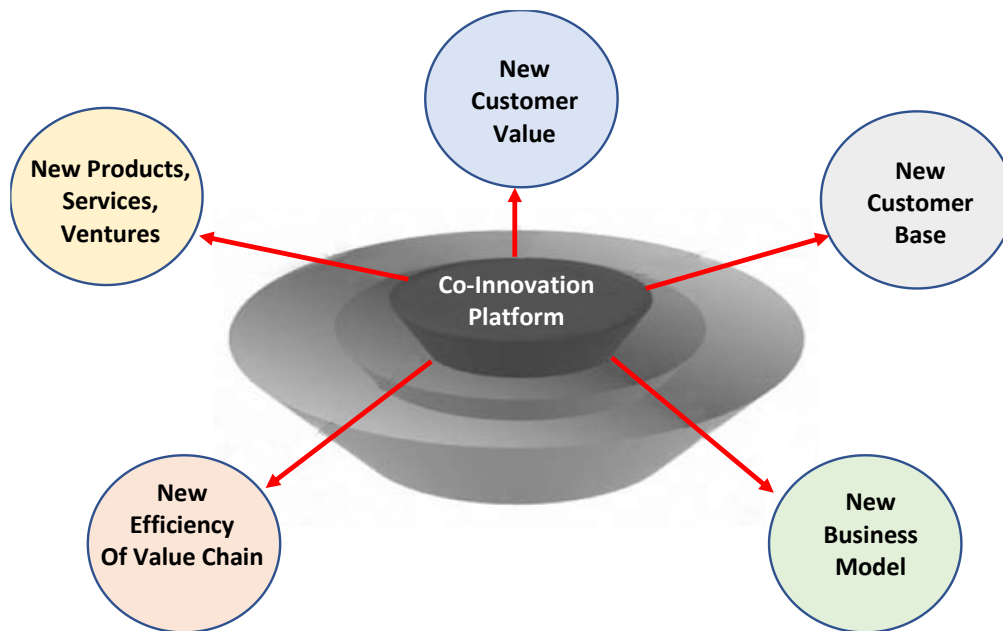


Figure 1. Conceptual framework of co-innovation platform with 5 new value creation (Lee et al., 2012)

Innovation, Incremental Innovation and Radical Innovation

Innovation has evolved over the years, starting from as a legal/legal text to renew contracts in the 13th century (E. Green, 2013), as a science, the invention/creation of machines or new products during the industrial revolution (Krippendorff, 2017), then distinguished by Schumpeter (1934) with inventions with 5 specific aspects related to innovation, namely; new products, new production methods, new market exploration, discovery of new sources for supply, and new ways of organizing business.

Innovation is also seen not only as a result of individual performance but rather as a process, namely as a problem-solving process (Dosi, 1982), as an interactive process that involves companies with various actors (Kline & Rosenberg, 1986), as a learning process: learning by using – learning by doing – learning by sharing internal and external sources of knowledge (Cohen & Levinthal, 1990), Innovation is also a process that involves the exchange of codified knowledge and intuitive practical knowledge (Patel & Pavitt, 1994). Meanwhile, Edquist (1997) explained that innovation is an interactive process of learning and exchange where there is an interdependence between actors who create innovative systems or innovation clusters.

Pedersen and Dalum (2004) argue that innovation in addition to innovative processes is also related to innovative products and services as well. Technological developments in network systems have made a more holistic view of innovation (Oslo, 2005). More systematically, Lee et.al (2012) divides innovation in business into several stages, namely: innovation 1.0: closed innovation, innovation 2.0: collaborative innovation, innovation 3.0: open innovation, and innovation 4.0: co-innovation.

Innovation classification can be done according to the innovation object, according to the innovation trigger and according to the degree of innovation intensity (Norman & Verganti, 2014). According to Souto (2015), innovation in products, processes and organizations according to the degree of innovation can be categorized into incremental innovation and radical innovation.

Schumpeter (1942) defined radical innovation as a creative process that destroys growth, a revolutionary change, a breakthrough in products, processes and organizations. Radical innovation also changes the previous structure, procedures and activities (Damanpour et al., 1989), and old products in the company (Martinez-Ros & Orfila-Sintes, 2009) and replaces them with new innovations. Radical innovation because it has a high degree of renewal has the consequence of the presence of various challenges and at the same time various opportunities (Teece, 2010).

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

Radical innovation can also result from collaboration between units and functions (W. Green & Cluley, 2014). Radical innovation requires drivers such as knowledge and funding (Keupp & Gassmann, 2013), a systematic framework (Van Lancker et al., 2016), a specific business model (Philipson, 2016), and a distinctive leadership style (Domínguez Escrig et al., 2016). In addition, research by Bakovic et.al (2013) shows that corporate culture such as autonomy, proactivity, and risk-taking are also factors that determine the occurrence of radical innovation.

Incremental innovation, on the other hand, is characterized by a smaller degree of renewal, and is also directly proportional to the risks and costs associated with radical innovation (Tushman & Andersen, 1986). Therefore, incremental innovation does not completely dismantle the entire product, process and method in the organization (Martinez-Ros & Orfila-Sintes, 2009). However, incremental innovation that occurs continuously can also produce radical innovation (Souto, 2015).

Incremental innovation can also be triggered by limited resources, especially in MSMEs (Woschke et al., 2017), and can also be influenced by company culture (Choi & Liker, 1995). But according to Henderson and Clark (Henderson & Clark, 1990) companies can also take advantage of the company's available capabilities to initiate and implement incremental innovation.

Both incremental and radical innovation can significantly improve a firm's competitive advantage and economic performance (Al-Khatib & Al-ghanem, 2022). Therefore, our hypothesis are :

H11 : Radical innovations from the collaboration of MSMEs and fintech have a significant effect on MSME revenue growth.

H12 : Incremental innovation from the collaboration of MSMEs and fintech has a significant effect on MSME revenue growth.

Hypothesis Model

This study uses the MSMEs business size as the moderating variable, and the theoretical framework of this study is as shown in Fig 2.

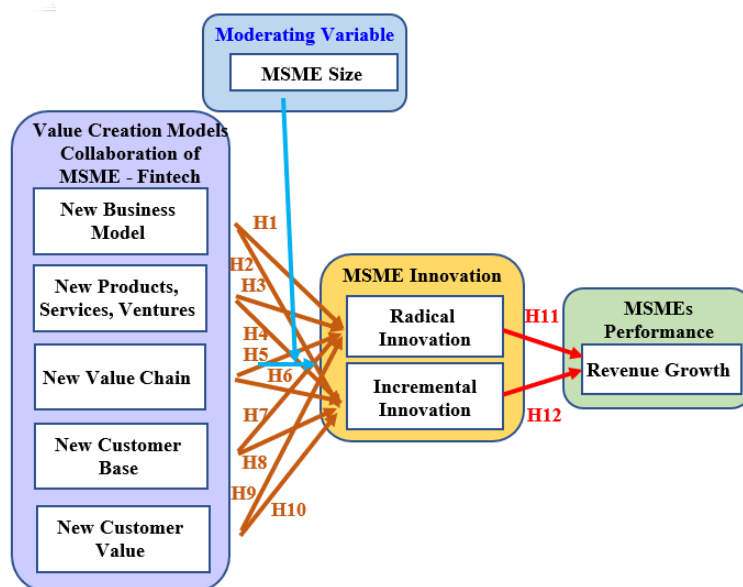


Figure 2. Hypothesis Model (Researcher Model)

Multi Group Analysis Hypothesis

MSME can be grouped into 3 groups as micro, small and medium enterprises and the Multi Group Analysis (MGA) can examine the group-specific parameter estimations for pre-defined data groups (Sarstedt et al., 2011). The grouping of MSMEs is used as a moderation basis to see if there are differences between these business groups in relation to collaboration between MSMEs and fintech. Therefore the MGA Hypothesis can be seen at Table 2 :

Table 2. Multi Group Analysis Hypothesis

Description	Hypothesis		
	Micro	Small	Medium
The collaboration of enterprise and fintech that create new business models has a significant effect on radical innovation.	H13	H25	H37
The collaboration of enterprise and fintech that create new business models has a significant effect on incremental innovation.	H14	H26	H38

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

The collaboration of enterprise and fintech that create new products/services/ventures has a significant effect on radical innovation.	H15	H27	H39
The collaboration of enterprise and fintech that create new products/services/ventures has a significant effect on incremental innovation.	H16	H28	H40
The collaboration of enterprise and fintech that create new value chain efficiencies has a significant effect on radical innovation.	H17	H29	H41
The collaboration of enterprise and fintech that create new value chain efficiencies has a significant effect on incremental innovation.	H18	H30	H42
The collaboration of enterprise and fintech that create new consumer base has a significant effect on radical innovation.	H19	H31	H43
The collaboration of enterprise and fintech that create new consumer base has a significant effect on incremental innovation.	H20	H32	H44
The collaboration of enterprise and fintech that create new consumer value has a significant effect on radical innovation.	H21	H33	H45
The collaboration of enterprise and fintech that create new consumer value has a significant effect on incremental innovation.	H22	H34	H46
Radical innovations from the collaboration of enterprise and fintech have a significant effect on enterprises revenue growth.	H23	H35	H47
Incremental innovation from the collaboration of enterprise and fintech has a significant effect on enterprises revenue growth.	H24	H36	H48

Source: Researcher

III. RESEARCH METHODOLOGY

Culinary MSMEs in the three largest cities in Indonesia (BPS, 2021) such as Jakarta, Surabaya and Medan were selected as population clusters with a total of 178 samples of proportional stratified MSMEs and a confidence level of 92.5% (Table 2). Data collection uses a combined strategy, such as self-filling out questionnaire or being interviewed to fill out the questionnaire.

One open question in questionnaire is about with what fintech the MSME collaborates and for other questions using closed questions with answers that have been prepared by the researcher. The ordinal scale is used for business size questions as a moderating variable and the likert scale (1-4) is used for other questions as a latent variable (Appendix 1).

Table 3. Sample distribution by city based on proportional stratified.

Description	%	Jakarta	Surabaya	Medan	Total
MSMEs					
%		~ 50%	~ 25%	~ 25%	
Micro	~ 59 %	56	25	24	105
Small	~ 24 %	21	11	11	43
Medium	~ 17 %	13	9	8	30
		90	45	43	178

Source: Researcher

The SMARTPLS 4.0 application which run the PLS-SEM (partial least square - structural equation model) method as a multivariate inferential statistical model is used to show the relationship and impact between variables of the value creation model with gradual innovation and radical innovation as well as income growth. SMARTPLS 4.0 presents path modeling estimation calculations not only in the form of modeling graphics but also in text-based reports.

Pre-test (preliminary testing)

Pre-test (preliminary testing) was carried out on 30 MSME respondents from the city of Medan. The Average Variance Extracted (AVE) value > 0.6 to measure indicator validity (Hair et al., 2014) and the AVE value > 0.5 is used to measure variable validity (Sarstedt et al., 2017).

Cronbach's Alpha value > 0.6 is used to measure construct reliability, and Rho_A (Composite Reliability) > 0.6 is used to measure internal consistency reliability (Hair et al., 2016). Indicators and variables that do not meet validity and reliability requirements are excluded from larger data processing.

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

Relationship of the Value Creation Model of MSMEs Collaboration with Fintech Companies on Innovation and Revenue Growth

The bootstrap sampling procedure with SMARTPLS 4.0 is used to obtain the standard error and t-statistical values of the path coefficients. For a 95% confidence level, accept Hypothesis if the t-statistic value > 1.96 . Or with p-value, if the p-value < 0.05 , it means that the probability of coincidence is below 5%, then the hypothesis is accepted, meaning that the relationship between constructs is significantly correlated.

Impact of the Value Creation Model of MSMEs Collaboration with Fintech Companies on Innovation and Revenue Growth

In PLS-SEM, measuring the impact of relationships between constructs involves measuring the strength and relevance of those relationships (Hair et al., 2016). SMARTPLS 4.0 can measure the strength between constructs through measurements:

1. Path Coefficients

Path coefficients describe how strongly one variable influences other variables. The numbers on the connecting arrows indicate the weight of the path coefficients and thus determine their relative statistical importance (Hair et al., 2016).

2. Coefficient of Determination (Squared Correlation Coefficient / R^2)

The R^2 value ranges between 0 and 1, where an R^2 value close to 0 (zero) indicates that the independent construct does not provide much explanation for the variance in the dependent construct. Meanwhile, if the R^2 value is high and close to 1 (one), it indicates that most of the variance in the dependent construct can be explained by the independent construct. It is considered that independent constructs in the model have good predictive power for dependent constructs (Hair et al., 2016).

3. Effect Size (F^2 / F-Square)

Effect size (F-Square) is used to measure the relative influence of an independent variable on a dependent variable. F-square evaluates the change in R-Square when a particular independent variable is added to the model, giving an idea of how important that independent variable is in explaining dependent variables. The F-Square value ranges from 0 to a higher value. Values of 0.02, 0.15, and 0.35 are usually considered small, medium, and large effects, respectively. Thus, a higher F-Square value indicates a more significant influence of the independent variable on the dependent variable. If R-Square is used to assess the overall fit of the model, then F-Square is used to evaluate the relative importance of each predictor in the model (Hair et al., 2016).

Research Validity and Reliability

Research validity includes measures of convergent validity and convergent validity. An AVE value > 0.5 indicates that convergent validity is valid. Meanwhile, measuring discriminant validity uses Heterotrait-Monotrait (HTMT) measurement and Fornell-Larcker Criterion. The validity of HTMT is considered valid if the HTMT value < 0.9 . For validity of Fornell-Larcker Criterion is considered valid if the square root of the AVE value of a latent variable $>$ the square of the correlation between the variables (Fornell & Larcker, 1981).

Research reliability both measures construct reliability (Cronbach's alpha) and internal consistency reliability (ρ_a) with Cronbach's alpha values > 0.6 and $\rho_a > 0.6$ (Hair et al., 2016).

Multi Group Analysis (MGA) - Comparison between Micro, Small and Medium Enterprises and all MSMEs

SMARTPLS 4.0 can conduct Multi Group Analysis (MGA) directly on different groups within the respondents. In this case, for MSME respondents, the basis of the grouping used is the size of the business, namely micro enterprises, small enterprises and medium enterprises.

IV. RESULT AND DISCUSSION

Pre-Test Validity

The results of pre-test data processing with a sample of 30 respondents using the SmartPLS 4.0 for indicator validity (outer loadings) can be seen in Table 4. There were 8 indicators whose AVE value was < 0.6 (smaller than 0.6) and were considered INVALID so that these 8 indicators could be excluded from research.

The validity test of the construct variables in this pre-test with a threshold value of AVE = 0.5 shows that all construct variables are valid at Table 5.

Table 5. AVE Value of Pre-Test's Construct Variables (All MSME's data)

Construct Variables	Construct Validity	
	(AVE)	> 0.5
New Business Model	0.620	VALID
New Products/Services/Ventures	0.578	VALID
New Customer Base	0.558	VALID

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

New Customer Value	0.505	VALID
New Value Chain	0.606	VALID
Incremental Innovation	0.715	VALID
Radical Innovation	0.783	VALID
Revenue Growth	0.652	VALID

Source: Researcher

Table 4. AVE Values of Pre-Test's Indicator Validity (All MSMEs Data)

Indicators	Questions of Indicators	AVE	VALIDITY
A01 <- New Business Model	You plan to change your old business model	0.743	VALID
A02 <- New Business Model	You get the idea to change your old business model	0.742	VALID
A03 <- New Business Model	You change your old business model	0.746	VALID
A04 <- New Business Model	You plan to add a New Business Model	0.804	VALID
A05 <- New Business Model	You get the idea of adding a New Business Model	0.875	VALID
A06 <- New Business Model	You can easily change your old business model	0.756	VALID
A07 <- New Business Model	You can easily add new business models	0.834	VALID
B01 <- New Products/Services/Ventures	You plan to change your product/service/venture	0.458	INVALID
B02 <- New Products/Services/Ventures	You get an idea to change your product/service/venture	0.734	VALID
B03 <- New Products/Services/Ventures	You change your old product/service/venture	0.535	INVALID
B04 <- New Products/Services/Ventures	You plan to add new products/services/ventures	0.888	VALID
B05 <- New Products/Services/Ventures	You get an idea for a new product/service/venture	0.909	VALID
B06 <- New Products/Services/Ventures	You can easily make changes to old products/services/ventures	0.777	VALID
B07 <- New Products/Services/Ventures	You can easily add new products/services/ventures	0.890	VALID
C01 <- New Customer Base	You get new customers	0.936	VALID
C02 <- New Customer Base	You get a New Customer Base	0.873	VALID
C03 <- New Customer Base	You get new consumers outside your domicile	0.360	INVALID
C04 <- New Customer Base	You get new consumers online	0.835	VALID
C05 <- New Customer Base	You can retain your old customers	0.582	INVALID
C06 <- New Customer Base	You can easily get new customers	0.740	VALID
D01 <- New Customer Value	Transactions become easier	0.550	INVALID
D02 <- New Customer Value	Transactions become faster	0.674	VALID
D03 <- New Customer Value	The price of products/services to consumers becomes cheaper	0.354	INVALID
D04 <- New Customer Value	The quality of products/services becomes better	0.798	VALID
D05 <- New Customer Value	Products/services are more varied	0.836	VALID
D06 <- New Customer Value	The risk of transactions decreases	0.201	INVALID
D07 <- New Customer Value	Better access to products/services	0.679	VALID
D08 <- New Customer Value	Product/service transactions are more enjoyable	0.825	VALID
D09 <- New Customer Value	Products / services become more attractive	0.876	VALID
D10 <- New Customer Value	Consumers are more motivated to buy	0.846	VALID
D11 <- New Customer Value	Consumers are more proud to use products/services	0.816	VALID
E01 <- New Value Chain	Consumers are more proud to use products/services	0.738	VALID
E02 <- New Value Chain	Your workers are more productive	0.845	VALID
E03 <- New Value Chain	Your workers become more motivated	0.781	VALID
E04 <- New Value Chain	Your business is starting to use technology	0.655	VALID
E05 <- New Value Chain	You get raw materials more easily	0.799	VALID
E06 <- New Value Chain	Raw material purchasing procedures become easier	0.798	VALID
E07 <- New Value Chain	The availability of raw materials for your business is more guaranteed	0.756	VALID
E08 <- New Value Chain	Faster distribution of your business raw materials	0.723	VALID
E09 <- New Value Chain	It is easier for you to promote your products/services	0.763	VALID
E10 <- New Value Chain	It is easier for you to sell your products/services	0.872	VALID
E11 <- New Value Chain	Payment for your products/services is faster and easier	0.795	VALID
E12 <- New Value Chain	The market segment for your product/service becomes larger	0.815	VALID
E13 <- New Value Chain	It is easier for you to serve consumers	0.854	VALID
E14 <- New Value Chain	You respond more quickly to after-sales service	0.675	VALID
I01 <- Incremental Innovation	You can develop the New Business Model gradually	0.926	VALID
I02 <- Incremental Innovation	You can develop new products/services and ventures gradually	0.717	VALID
I03 <- Incremental Innovation	You get new customers gradually	0.874	VALID
I04 <- Incremental Innovation	Your business efficiency gets better gradually	0.817	VALID
I05 <- Incremental Innovation	Consumers evaluate your business more positively gradually	0.879	VALID
J01 <- Radical Innovation	You experience radically developing a New Business Model	0.900	VALID
J02 <- Radical Innovation	You develop radically new products/services and ventures	0.854	VALID
J03 <- Radical Innovation	You get radically new consumers	0.884	VALID
J04 <- Radical Innovation	Your business efficiency becomes radically better	0.862	VALID
J05 <- Radical Innovation	Consumers evaluate your business radically more positively	0.921	VALID
P01 <- Revenue Growth	Your New Business Model will increase your income	0.549	INVALID
P02 <- Revenue Growth	New products/services or ventures increase your income	0.882	VALID
P03 <- Revenue Growth	Your new customers increase, making your income increase	0.922	VALID
P04 <- Revenue Growth	Your new business efficiency will increase your income	0.897	VALID
P05 <- Revenue Growth	New value chain efficiencies increase revenues	0.803	VALID
P06 <- Revenue Growth	Incremental Innovation increases revenue	0.861	VALID
P07 <- Revenue Growth	Radical Innovation increases revenue	0.667	VALID

Source: Researcher

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

Pre-Test Reliability

The results of the reliability test of construct variables using smartpls 4.0 can be seen in the following table 6. The threshold values of Cronbach's alpha and rho_a used are = 0.6 (Hair et al., 2014; Henseler et al., 2015), so that the reliability test of the construct variables is reliable for all 7 (seven) construct variables.

Table 6. Construct Reliability and Internal Consistency Reliability of Pre-Test (All MSME’s data)

Construct Variables	Construct Reliability		Internal Consistency Reliability	
	Cronbach's alpha	> 0.6	rho_a	> 0.6
New Business Model	0.916	Reliable	1.049	Reliable
New Products/Services/Ventures	0.897	Reliable	0.970	Reliable
New Customer Base	0.839	Reliable	0.903	Reliable
New Customer Value	0.891	Reliable	0.929	Reliable
New Value Chain	0.950	Reliable	0.958	Reliable
Incremental Innovation	0.898	Reliable	0.908	Reliable
Radical Innovation	0.931	Reliable	0.936	Reliable
Revenue Growth	0.907	Reliable	0.935	Reliable

Source: Researcher

Relationship of the Value Creation Model of MSMEs Collaboration with Fintech Companies on Innovation and Revenue Growth

Hypothesis testing is carried out by testing its statistical significance. The bootstrap sampling procedure with the smartpls 4.0 to obtain the standard error and t-statistical values of the path coefficients. For a 95% confidence level, accept Hypothesis if the t-statistic value > 1.96.

In addition, with the value of t, a p-value can be determined, to determine whether the probability that the observed relationship is due to chance or not. If the p-value < 0.05, it means that the probability of coincidence is below 5%, then the hypothesis is accepted, meaning that the relationship between constructs is significantly correlated (read: not coincidental). If the p-value > 0.05, then the hypothesis is rejected. The t-statistic value and p-value can be seen in the table 7.

Table 7. T-Statistic and P-Values of Bootstrapping PLS-SEM (All MSMEs Data)

Hypothesis	Path	Standard Deviation	Value		Hypothesis Significance
			T	P	
H1	New Business Model -> Radical Innovation	0.122	1.833	0.067	Reject
H2	New Business Model -> Incremental Innovation	0.079	1.362	0.173	Reject
H3	New Products/Services/Ventures -> Radical Innovation	0.131	1.183	0.237	Reject
H4	New Products/ Services/Ventures -> Incremental Innovation	0.088	0.127	0.899	Reject
H5	New Value Chain -> Radical Innovation	0.131	1.028	0.304	Reject
H6	New Value Chain -> Incremental Innovation	0.086	2.775	0.006	ACCEPT
H7	New Customer Base -> Radical Innovation	0.116	1.196	0.232	Reject
H8	New Customer Base -> Incremental Innovation	0.074	4.421	0.000	ACCEPT
H9	New Customer Value -> Radical Innovation	0.146	0.206	0.837	Reject
H10	New Customer Value -> Incremental Innovation	0.089	3.199	0.001	ACCEPT
H11	Radical Innovation -> Revenue Growth	0.082	0.220	0.826	Reject
H12	Incremental Innovation -> Revenue Growth	0.044	16.026	0.000	ACCEPT

Source: Researcher

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

Smart PLS 4 present's path modeling estimation calculations in graphical form (p value) as can be seen in Fig 3.

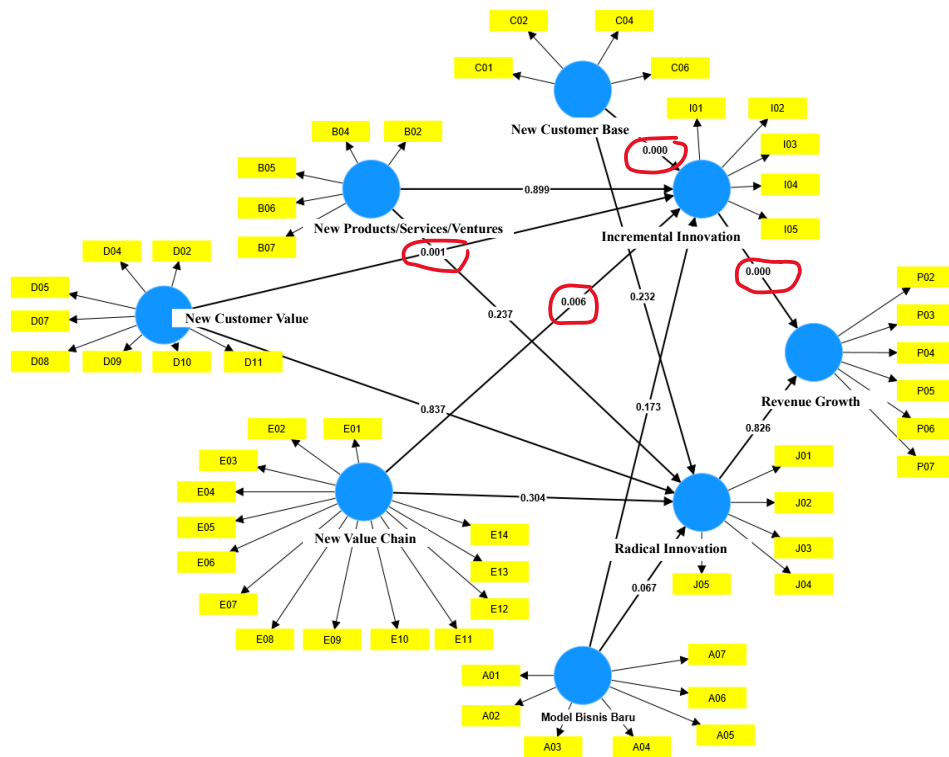


Figure 3. Path modeling (all MSMEs data) estimation calculations in graphical form (p value)

Impact of the Value Creation Model of MSMEs Collaboration with Fintech Companies on Innovation and Revenue Growth

There are 3 results from processing PLS-SEM data using SmartPLS 4.0 as follows:

1. Path Coefficient

Table 8 summarizes the values of the path coefficients that match the interpretation of the hypothesis significance analysis. It can be seen that the accepted hypothesis has a higher path coefficient value compared to the rejected hypothesis. The range of strength of the relationship between the constructs to be accepted or rejected can be seen significantly from the value of the path coefficient between the H6 hypothesis (accepted with a path coefficient value of 0.238) and the H1 hypothesis (rejected with a path coefficient value of 0.223).

Table 8. Path Coefficients with Hypothesis Significance (All MSME's data)

Hypothesis	Path	Hypothesis Significance	Path Coefficient
H1	New Business Model -> Radical Innovation	Reject	0.223
H2	New Business Model -> Incremental Innovation	Reject	0.108
H3	New Products/Services/Ventures -> Radical Innovation	Reject	0.155
H4	New Products/ Services/Ventures -> Incremental Innovation	Reject	-0.011
H5	New Value Chain -> Radical Innovation	Reject	0.135
H6	New Value Chain -> Incremental Innovation	ACCEPT	0.238
H7	New Customer Base -> Radical Innovation	Reject	-0.139
H8	New Customer Base -> Incremental Innovation	ACCEPT	0.327
H9	New Customer Value -> Radical Innovation	Reject	-0.030
H10	New Customer Value -> Incremental Innovation	ACCEPT	0.285
H11	Radical Innovation -> Revenue Growth	Reject	0.018
H12	Incremental Innovation -> Revenue Growth	ACCEPT	0.709

Source: Researcher

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

As for the strength of the relationship between constructs, the highest is the H12 hypothesis where the value of the path coefficient reaches 0.709. There are 3 hypotheses that have an impact on the strength of the relationship between inverted constructs, namely H4 (-0.011), H7 (-0.139) and H9 (-0.03).

Positive values in path coefficients indicate a positive relationship, while negative values indicate the opposite relationship. A value closer to 0 indicates a weaker relationship (Hair et al., 2016).

2. Coefficient of Determination / Squared Correlation Coefficient (R²)

Figure 4 shows the value of the Coefficient of Determination (R²) on the PLS-SEM (all MSMEs data) model graph.

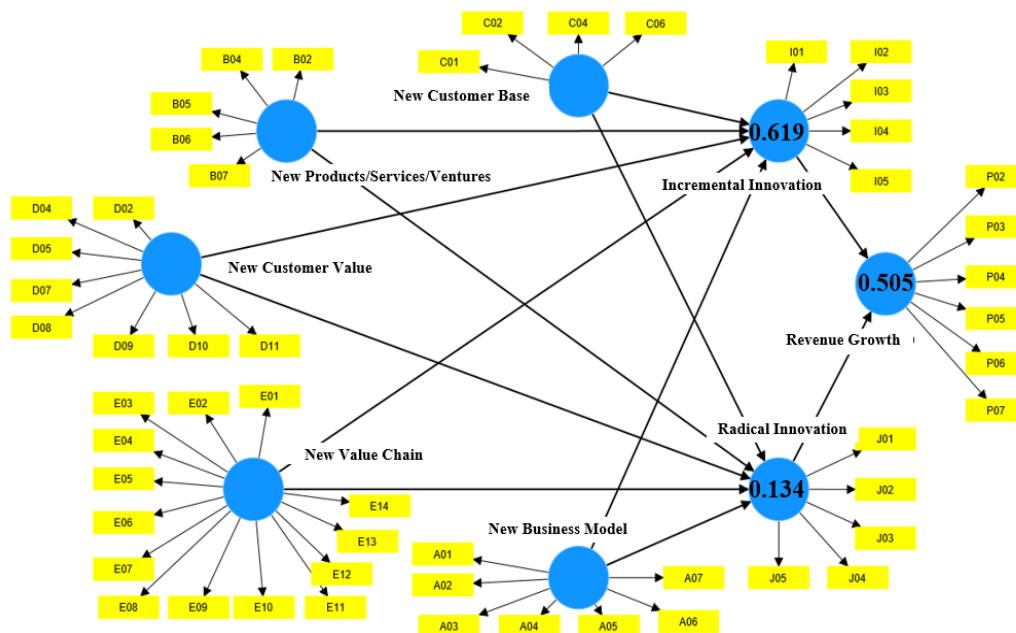


Figure 4. PLS-SEM Path modeling with Coefficient of Determination

- Incremental Innovation

The value of $R^2 = 0.619$ in the incremental innovation construct indicates that about 61.9% of the variability in incremental innovation can be explained by the independent variables connected to this construct in the model. In the context of business, this means that the 5 variables of the value creation model of collaboration between MSMEs and fintech companies are strong predictors of incremental innovation.

- Radical Innovation

The value of $R^2 = 0.134$ in the radical innovation construct indicates that only 13.4% of the variability in radical innovation can be explained by independent variables in the model. This is a low value, indicating that the 5 variables of the value creation model resulting from the collaboration between MSMEs and fintech companies do not adequately describe the factors that affect radical innovation.

- Revenue Growth

The value of $R^2 = 0.505$ for the revenue growth construct indicates that about 50.5% of the variability in revenue growth is explained by the independent variables associated with this construct. This value shows that the (overall) model is quite effective in explaining revenue growth.

3. Effect Size (F² /F-Square)

Table 9 shows that only incremental innovation variable has a high effect on the income growth variable, and the new consumer base variable has a moderate effect on the gradual innovation variable. Meanwhile, the F-Square value for the relationship between other variables is small, so it is concluded that the independent variable only has a small effect on the dependent variable.

Table 9. F-Square Value (All MSMEs data)

Hypothesis	Path	F-Square Value	Effect Interpretation
H1	New Business Model -> Radical Innovation	0,030	Low
H2	New Business Model -> Incremental Innovation	0,016	Low
H3	New Products/Services/Ventures -> Radical Innovation	0,013	Low
H4	New Products/ Services/Ventures -> Incremental Innovation	0,000	Low

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

H5	New Value Chain -> Radical Innovation	0,008	Low
H6	New Value Chain -> Incremental Innovation	0,058	Low
H7	New Customer Base -> Radical Innovation	0,011	Low
H8	New Customer Base -> Incremental Innovation	0,141	Moderate
H9	New Customer Value -> Radical Innovation	0,000	Low
H10	New Customer Value -> Incremental Innovation	0,069	Low
H11	Radical Innovation -> Revenue Growth	0,001	Low
H12	Incremental Innovation -> Revenue Growth	1,004	High

Source: Researcher

Validity and Reliability of Research

Convergent Validity of Research

The convergence validity of the research (complete MSME data) shows that all construct variables are valid with all AVE values above 0.5. The full convergence validity can be seen in table 10.

Table 10. AVE Value for Convergent Validity of Research (All MSMEs Data)

Construct Variables	Construct Validity	
	(AVE)	> 0.5
New Business Model	0.697	VALID
New Products/Services/Ventures	0.704	VALID
New Customer Base	0.639	VALID
New Customer Value	0.568	VALID
New Value Chain	0.733	VALID
Incremental Innovation	0.649	VALID
Radical Innovation	0.780	VALID
Revenue Growth	0.575	VALID

Source: Researcher

Discriminant Validity of Research

From table 11, it can be seen that all HTMT values < 0.9 so that the validity of HTMT between all variables is considered valid.

Table 11. Heterotrait-Monotrait / HTMT Value (All MSME data)

Construct Variable	A	B	C	D	E	F	G	H
New Customer Base (A)								
New Value Chain (B)	0.636							
Incremental Innovation (C)	0.770	0.744						
Radical Innovation (D)	0.146	0.234	0.161					
New Business Model (E)	0.250	0.360	0.398	0.339				
New Customer Value (F)	0.758	0.828	0.802	0.160	0.373			
Revenue Growth (G)	0.675	0.699	0.801	0.300	0.264	0.754		
New Product / Service / Ventures (H)	0.497	0.466	0.500	0.305	0.734	0.486	0.364	

Source: Researcher

Table 12 show the value of Fornell-Larcker Criterion. For example, the square root value of AVE for the latent variable New Consumer Base (A) = 0.835 is greater than all the square of the correlation between variables (respectively 0.574; 0.673; 0.035; 0.220; 0.671; 0.586; 0.434) then discriminant validity based on the Fornell-Larcker Criterion is VALID. And so on, the validity of the Fornell-Larcker Criterion is determined in this way.

Table 12. Fornell-Larcker Criterion Value (All MSME data)

Construct Variable	A	B	C	D	E	F	G	H
New Customer Base (A)	0.835							
New Value Chain (B)	0.574	0.754						
Incremental Innovation (C)	0.673	0.677	0.805					

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

Radical Innovation (D)	0.035	0.176	0.106	0.883				
New Business Model (E)	0.220	0.344	0.353	0.333	0.856			
New Customer Value (F)	0.671	0.772	0.720	0.127	0.346	0.800		
Revenue Growth (G)	0.586	0.610	0.711	0.093	0.204	0.661	0.759	
New Product / Service / Ventures (H)	0.434	0.433	0.432	0.290	0.670	0.442	0.308	0.839

Source: Researcher

Reliability of Research

The results of the reliability test in table 13 show valid results for the reliability of all constructs, both construct reliability (Cronbach's alpha) and internal consistency reliability (rho_a). This means that the indicators on each of the construct variables are consistently correlated with each other both in homogeneity (Cronbach's alpha) and in heterogeneity (rho_a).

Table 13. Construct Reliability and Internal Consistency Reliability (All MSME's data)

Construct Variables	Construct Reliability		Internal Consistency Reliability	
	Cronbach's alpha	> 0.6	rho_a	> 0.6
New Business Model	0.940	Reliable	0.950	Reliable
New Products/Services/Ventures	0.940	Reliable	0.943	Reliable
New Customer Base	0.854	Reliable	0.858	Reliable
New Customer Value	0.864	Reliable	0.871	Reliable
New Value Chain	0.929	Reliable	0.940	Reliable
Incremental Innovation	0.919	Reliable	0.922	Reliable
Radical Innovation	0.817	Reliable	0.888	Reliable
Revenue Growth	0.894	Reliable	0.902	Reliable

Source: Researcher

Multi Group Analysis (MGA) - Comparison between Micro, Small and Medium Enterprises and all MSMEs

SMART PLS 4.0 can perform Multi Group Analysis (MGA) on different groups within the respondents. In this study, for MSME respondents, the basis of the grouping used is the size of the business, namely micro enterprises, small businesses and medium enterprises.

Table 14 shows the T-statistical value of the path hypothesis in the analysis of MSME respondents as a whole and each group, namely micro enterprises, small enterprises and medium enterprises.

The results of the Multi Group Analysis on the relationship between MSMEs and fintech companies indicate that micro business groups benefit more significantly from collaboration with fintech companies, characterized by more hypotheses (significantly correlated) accepted compared to other business groups or even with the total respondents.

Table 14. T-statistical Value on Multi Group Analysis

Hypothesis	Path	MSME		Micro Enterprises		Small Enterprises		Medium Enterprises	
		T-Value	Hypothesis Significance	T-Value	Hypothesis Significance	T-Value	Hypothesis Significance	T-Value	Hypothesis Significance
H1	New Business Model -> Radical Innovation	1.833	REJECT	2.668	ACCEPT	0.899	REJECT	1.105	REJECT
H2	New Business Model -> Incremental Innovation	1.362	REJECT	2.249	ACCEPT	0.797	REJECT	0.962	REJECT
H3	New Products/Services/Ventures -> Radical Innovation	1.183	REJECT	0.151	REJECT	0.811	REJECT	0.884	REJECT
H4	New Products/Services/Ventures -> Incremental Innovation	0.127	REJECT	1.678	REJECT	1.387	REJECT	1.244	REJECT
H5	New Value Chain -> Radical Innovation	1.028	REJECT	1.460	REJECT	1.305	REJECT	0.738	REJECT
H6	New Value Chain -> Incremental Innovation	2.775	ACCEPT	0.974	REJECT	2.120	ACCEPT	1.895	REJECT
H7	New Customer Base -> Radical Innovation	1.196	REJECT	1.237	REJECT	0.714	REJECT	0.858	REJECT
H8	New Customer Base -> Incremental Innovation	4.421	ACCEPT	3.887	ACCEPT	1.647	REJECT	1.340	REJECT
H9	New Customer Value -> Radical Innovation	0.206	REJECT	0.858	REJECT	0.866	REJECT	0.498	REJECT
H10	New Customer Value -> Incremental Innovation	3.199	ACCEPT	3.229	ACCEPT	0.143	REJECT	2.308	ACCEPT
H11	Radical Innovation -> Revenue Growth	0.220	REJECT	0.142	REJECT	0.356	REJECT	0.317	REJECT
H12	Incremental Innovation -> Revenue Growth	16.026	ACCEPT	14.062	ACCEPT	3.923	ACCEPT	5.504	ACCEPT

Source: Researcher

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

Meanwhile, the Multi Group Analysis analysis on the impact of collaboration between MSMEs and fintech companies can be seen in the results of the R-Square value of each group as shown in table 15.

Table 15. R-Square Value on Multi Group Analysis

Construct Variables	MSME Total	Enterprises		
		Micro	Small	Medium
Incremental Innovation	0.619	0.597	0.646	0.826
Radical Innovation	0.134	0.237	0.190	0.238
Revenue Growth	0.505	0.548	0.470	0.515

Source: Researcher

For the impact of revenue growth in relation to collaboration with fintech, the micro business group perceived the largest impact (0.548 or 54.8%) compared to the small business group (47.0%) and medium business group (51.5%) and even compared to the total MSMEs (50.5%). But for the perception of gradual innovation, the one that has the biggest impact is on the medium business group (82.6%). As for the perception of radical innovation, it is relatively the same between micro and medium enterprises.

V. CONCLUSION

With valid and reliable data, this research concludes that there is a significant relationship from the collaboration between MSMEs and fintech in incremental innovation through 3 value creation models (new consumer base, new consumer value and new chain value) and in the end also significantly related to the revenue growth in MSMEs.

The impact of the value creation model from collaboration between MSMEs and fintech companies that can be measured in this research is 61.9% of the value creation model influences incremental innovation and ultimately there is a 50.5% impact on MSME revenue growth.

Multi Group Analysis (MGA) show that the micro enterprises group receives more significant benefits compared to the small business group and the medium business group. MGA also confirm that micro business groups get the biggest impact within groups even larger compared with the entire MSMEs

AUTHOR CONTRIBUTION

Dadan Rahadian : Conceptualization, Research Design, Supervision and Finalization **Astrie Krisnawati** : Methodology, Supervision, and Finalization **Widarto Rachbini** : Statistic Analysis Supervision and Finalization **Hadifian** : Writing Entire Paper, Editing, Layout, Data Collection and Analysis. All Authors have read the final version of the paper.

DECLARATION OF INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

REFERENCES

- 1) AFTECH. Newsletter Juni (2022).
- 2) Agrawal, A. (2021, August 15). *E-commerce vs Fintech: Collaborators or Competitors?*
- 3) Ajuna, Luqmanu H., Papatungan, A., Ichksanul, M., Mokoagow, A., Lestari, M. S., & Labatjo, R. (2023). Utilization of Financial Technology in Increasing the Income of MSMEs in Indonesia. *International Journal of Economics, Business and Accounting Research*, 7(1).
- 4) Al-Khatib, A. W., & Al-ghanem, E. M. (2022). Radical innovation, incremental innovation, and competitive advantage, the moderating role of technological intensity: evidence from the manufacturing sector in 9FJordan. *European Business Review*, 34(3), 344–369. <https://doi.org/10.1108/EBR-02-2021-0041>
- 5) Arjunwadkar, P. Y. (2018). *Fintech - The Technology Driving Disruption in the Financial Services Industry*. Taylor & Francis.
- 6) Baković, T., Lazibat, T., & Sutić, I. (2013). Radical innovation culture in Croatian manufacturing industry. *Journal of Enterprising Communities: People and Places in the Global Economy*, 7(1), 74–80. <https://doi.org/10.1108/17506201311315626>
- 7) Bokadia, P. (2022, September 27). *How Banks & FinTech collaboration has supported MSME business growth*.
- 8) BPS. (2020, March 30). Mayoritas Industri Mikro-Kecil Bergerak di Sektor Makanan. *KataData*.
- 9) BPS. (2021). *Produk Domestik Regional Bruto Kabupaten/Kota di Indonesia*.
- 10) Buchness, J. A. (2015). *A Blue Ocean Strategy for the American Symphony Orchestra*. University of Pennsylvania.

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

- 11) Chauvet, L., & Jacolin, L. (2017). Financial Inclusion, Bank Concentration, and Firm Performance. *World Development*, 97, 1–13. <https://doi.org/10.1016/j.worlddev.2017.03.018>
- 12) Choi, T. Y., & Liker, J. K. (1995). Bringing Japanese Continuous Improvement Approaches to U.S. Manufacturing: The Roles of Process Orientation and Communications. *Decision Sciences*, 26(5), 589–620. <https://doi.org/10.1111/j.1540-5915.1995.tb01442.x>
- 13) Cohen, W. M., & Levinthal, D. A. (1990). Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Science Quarterly*, 35(1), 128. <https://doi.org/10.2307/2393553>
- 14) Damanpour, F., Szabat, K. A., & Evan, W. M. (1989). The Relationship Between Types Of Innovation And Organizational Performance. *Journal of Management Studies*, 26(6), 587–602. <https://doi.org/10.1111/j.1467-6486.1989.tb00746.x>
- 15) Domínguez Escrib, E., Mallén Broch, F. F., Chiva Gómez, R., & Lapiedra Alcamí, R. (2016). How does altruistic leader behavior foster radical innovation? The mediating effect of organizational learning capability. *Leadership & Organization Development Journal*, 37(8), 1056–1082. <https://doi.org/10.1108/LODJ-03-2015-0050>
- 16) Dosi, G. (1982). Technological paradigms and technological trajectories. *Research Policy*, 11(3), 147–162. [https://doi.org/10.1016/0048-7333\(82\)90016-6](https://doi.org/10.1016/0048-7333(82)90016-6)
- 17) Edquist, C. (1997). *Systems of Innovation - Technologies, Institutions and Organizations*.
- 18) Efan, K., Basana, S. R., & Ottemoesoe, R. S. D. (2021). The effect of financial inclusion on micro, small, and medium enterprise performance using fintech as a moderating variable. In *Contemporary Research on Business and Management* (pp. 153–156). CRC Press. <https://doi.org/10.1201/9781003196013-38>
- 19) European Union Commission. (2003). *Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (Text with EEA relevance) (notified under document number C(2003) 1422)*.
- 20) Fajri, A., Indriasih, D., & Indriyati, N. (2021). Pengaruh Inklusi Keuangan dan Literasi Keuangan terhadap Kinerja UMKM Batik di Kabupaten Tegal. *Permana: Jurnal Perpajakan, Manajemen, Dan Akuntansi*, 13(1), 108–123. <https://doi.org/10.24905/permana.v13i1.167>
- 21) Firli, A., & Fanesa, A. (2022). The Influence of Financial Literacy and Income on Generation Z's Interest in Using Fintech Lending: A Study in a Major City of Indonesia. *Review of Integrative Business and Economics Research*, 11, 129–143.
- 22) Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, 18(3), 382. <https://doi.org/10.2307/3150980>
- 23) Gilbert, J., Henske, P., & Singh, A. (2003). Rebuilding Big Pharma's Business Model. *In Vivo - The Business & Medicine Report*, 21, 73–80.
- 24) Green, E. (2013). *Innovation: The History of a Buzzword*.
- 25) Green, W., & Cluley, R. (2014). The field of radical innovation: Making sense of organizational cultures and radical innovation. *Industrial Marketing Management*, 43(8), 1343–1350. <https://doi.org/10.1016/j.indmarman.2014.08.008>
- 26) Gupta, A. K., & Govindarajan, V. (2003). *Global Strategy and the Organization* (1st ed.).
- 27) Hair, J. F., Black, W. C., & Babin, B. J. (2014). *Multivariate Data Analysis* (7th ed.). Pearson Education .
- 28) Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–152. <https://doi.org/10.2753/MTP1069-6679190202>
- 29) Hair, Joseph. F., Hult, T. G., Ringle, C. M., & Sarstedt, M. (2016). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (2nd ed.).
- 30) Hatammimi, J., & Krisnawati, A. (2018). Financial Literacy for Entrepreneur in the Industry 4.0 era. *Proceedings of the 2018 10th International Conference on Information Management and Engineering*, 183–187. <https://doi.org/10.1145/3285957.3285985>
- 31) Henderson, R. M., & Clark, K. B. (1990). Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms. *Administrative Science Quarterly*, 35(1), 9. <https://doi.org/10.2307/2393549>
- 32) Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- 33) Husna, N., Novita, D., Kharisma, O., Ayuning, N. W., & Mundarsih. (2021). Income and Net Profit of Culinary MSMEs in Bandar Lampung Before and After Using Fintech Payments. *Jurnal Manajemen Dan Bisnis*, 18.
- 34) IFC, & Alla Khodakivska. (2012). *Measuring jobs from micro, small, and medium-size enterprises financed by IFC client financial institutions*.
- 35) Johnson, M. W., Christensen, C. M., & Kagermann, H. (2008). Reinventing Your Business Model. *Harvard Business Review*, 50–57.
- 36) KataData. (2022, November). Ini Sektor UMKM yang Banyak Manfaatkan Teknologi Digital. *Katadata*.

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

- 37) Kemenko Perekonomian. (2022). *Perkembangan UMKM sebagai Critical Engine Perekonomian Nasional Terus Mendapatkan Dukungan Pemerintah*.
- 38) Kementerian Koordinator Bidang Perekonomian RI. (2022). *Kontribusi UMKM ke PDB capai Rp8.574 triliun*.
- 39) Kementerian Koperasi dan UMKM. (2022, March 31). Kementerian Koperasi dan UKM Targetkan 65 Juta Pelaku UMKM Terdata. *Kontan*.
- 40) Keupp, M. M., & Gassmann, O. (2013). Resource constraints as triggers of radical innovation: Longitudinal evidence from the manufacturing sector. *Research Policy*, 42(8), 1457–1468. <https://doi.org/10.1016/j.respol.2013.04.006>
- 41) Kim, C. W., & Mauborgne, R. (2005). *Blue Ocean Strategy : How to create uncontested market place and make the competition irrelevant* (1st ed.). Harvard Business School Press.
- 42) Kline, S. J., & Rosenberg, N. (1986). *An Overview of Innovation*.
- 43) Kopola, N. (2022). *Co-Innovation : Innovations Generating New International Business*. Business Finland.
- 44) Krippendorff, K. (2017). *A Brief History of Innovation ... and Its Next Evolution*.
- 45) Kuo, D., Fu, R. L., Chih, H., & Yang, B. (2009). Determining Appropriate Modes for Service Trade from Value Chain and Value Co-Creation Perspectives. *2009 42nd Hawaii International Conference on System Sciences*, 1–10. <https://doi.org/10.1109/HICSS.2009.154>
- 46) Lee, S. M., Olson, D. L., & Trimi, S. (2012). Co-innovation: convergenomics, collaboration, and co-creation for organizational values. *Management Decision*, 50(5), 817–831. <https://doi.org/10.1108/00251741211227528>
- 47) Madsen, T. L., & Cruickshank, D. (2022). *Co-Innovation Platforms : A Playbook for Enabling Innovation and Ecosystem Growth*. Springer International Publishing. https://doi.org/10.1007/978-3-030-75977-3_1
- 48) Martinez-Ros, E., & Orfila-Sintes, F. (2009). Innovation activity in the hotel industry. *Technovation*, 29(9), 632–641. <https://doi.org/10.1016/j.technovation.2009.02.004>
- 49) Menat, R. (2016). Why We're so Excited About FinTech. In *The FinTech Book* (pp. 10–12). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781119218906.ch2>
- 50) Norman, D. A., & Verganti, R. (2014). Incremental and Radical Innovation: Design Research vs. Technology and Meaning Change. *Design Issues*, 30(1), 78–96. https://doi.org/10.1162/DESI_a_00250
- 51) Oslo, M. (2005). *PROPOSED GUIDELINES FOR COLLECTING AND INTERPRETING TECHNOLOGICAL INNOVATION DATA*.
- 52) Patel, P., & Pavitt, K. (1994). National Innovation Systems: Why They Are Important, And How They Might Be Measured And Compared. *Economics of Innovation and New Technology*, 3(1), 77–95. <https://doi.org/10.1080/10438599400000004>
- 53) Pedersen, C. O. R., & Dalum, B. (2004). *Incremental versus radical change - The case of the Digital North Denmark program*.
- 54) Priilaid, D. (2019). Exploring Blue Ocean Innovation in the Wine Industry. In *Management and Marketing of Wine Tourism Business* (pp. 241–259). Springer International Publishing. https://doi.org/10.1007/978-3-319-75462-8_12
- 55) Rama, A. M., & Rahadian, D. (2022). Analysis of Acceptance Factors and Market Potential of Digital Wallets of College Students. *Bisnis Dan Manajemen*, 15(1), 1–19.
- 56) Ramaswamy, V. (2008). Co-creating value through customers' experiences: the Nike case. *Strategy & Leadership*, 36(5), 9–14. <https://doi.org/10.1108/10878570810902068>
- 57) Ramaswamy, V., & Gouillart, F. (2010). Building the Co- Creative Enterprise. *Harvard Business Review*.
- 58) Santoso, W., Tambunan, T., Busneti, I., & Batunanggar, S. (2022). Financial Technology and Small Business Access to Funding in Indonesia: An Exploration Study. *Universitas Trisakti*.
- 59) Saragih, L. R., Dachyar, M., & Zagloel, T. Y. M. (2021). Implementation of telecommunications cross-industry collaboration through agile project management. *Heliyon*, 7(5), e07013. <https://doi.org/10.1016/j.heliyon.2021.e07013>
- 60) Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Partial Least Squares Structural Equation Modeling. In *Handbook of Market Research* (pp. 1–40). Springer International Publishing. https://doi.org/10.1007/978-3-319-05542-8_15-1
- 61) Schumpeter, J. (1942). *Capitalism, socialism and democracy*.
- 62) Schumpeter, J. A. (1934). *The Theory of Economic Development*.
- 63) Souto, J. E. (2015). Business model innovation and business concept innovation as the context of incremental innovation and radical innovation. *Tourism Management*, 51, 142–155. <https://doi.org/10.1016/j.tourman.2015.05.017>
- 64) Teece, D. J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning*, 43(2–3), 172–194. <https://doi.org/10.1016/j.lrp.2009.07.003>
- 65) Trimi, S., Olson, D. L., & Lee, S. M. (2010). The Impact of Convergence on Organizational Innovation. *Organizational Dynamics*, 39(3), 218–225. <https://doi.org/10.1016/j.orgdyn.2010.03.004>
- 66) Tushman, M. L., & Andersen, P. (1986). Technological Discontinuities and Organizational Environments. *Administrative Science Quarterly*, 31(3), 439–465.

Value Creation Models of the Collaboration between MSMEs and Financial Technology Companies towards Innovation and Revenue Growth (A Study on Culinary MSMEs in Jakarta, Surabaya, and Medan - Indonesia)

- 67) UNDP, & LPEM UI. (2020). *UMKM Indonesia di masa pandemi COVID-19*.
- 68) van Lancker, J., Mondelaers, K., Wauters, E., & van Huylenbroeck, G. (2016). The Organizational Innovation System: A systemic framework for radical innovation at the organizational level. *Technovation*, 52–53, 40–50. <https://doi.org/10.1016/j.technovation.2015.11.008>
- 69) Vesterberg, A. (2014). *Creating New Customer Value Using a Co-innovation Perspective - A case study of ABB*. University of Gothenburg.
- 70) World Bank. (2017). *Revolutionizing Microfinance: Insights From The 2017 Global Symposium On Micro Finance*.
- 71) World Bank. (2022a). *Digitalizing SMEs to Boost Competitiveness*.
- 72) World Bank. (2022b). *Fintech and the Future of Finance*.
- 73) World Economic Forum, & Deloitte. (2015). *The Future of Financial Services - How disruptive innovations are reshaping the way financial services are structured, provisioned and consumed*.
- 74) Woschke, T., Haase, H., & Kratzer, J. (2017). Resource scarcity in SMEs: effects on incremental and radical innovations. *Management Research Review*, 40(2), 195–217. <https://doi.org/10.1108/MRR-10-2015-0239>
- 75) Yunus, E. N. (2018). Leveraging supply chain collaboration in pursuing radical innovation. *International Journal of Innovation Science*, 10(3), 350–370. <https://doi.org/10.1108/IJIS-05-2017-0039>



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.