

## Innovation of Electronic-Based Multipurpose Credit Services to Improve Customer Satisfaction Through Loan Fee : A Study on Bank Jatim - Malang

Dwi Orbaningsih<sup>1\*</sup>, Mellisa Gitaria<sup>2</sup>, Gendut Budi Wahyono<sup>3</sup>

<sup>1,2,3</sup>Departement Of Accounting, Gajayana University, Malang, Indonesia

\*corresponding author: Dwi Orbaningsih

email : [dwi.orbaningsih@unigamalang.ac.id](mailto:dwi.orbaningsih@unigamalang.ac.id)

### ARTICLE INFO

#### Article history:

Received 26 September 2021

Accepted 15 December 2021

Available online 27 February 2022

#### Keywords:

Multipurpose Credit, Customer Satisfaction, Quality of Service, financial services, Electronic Credit Services

### ABSTRACT

The competition of financial services business is getting higher and encourages banks to optimize their efforts to reach as many prospective customers as possible. One of the efforts made is to update innovative banking credit services through the development of an electronic-based multipurpose credit service system. This research aims to find out whether the quality of service, product quality, and loan fee, affect customer satisfaction. This research uses a quantitative approach, data collection using questionnaires distributed to 150 customers of Jatim bank. Data analysis uses path analysis. This research found that The Quality of Service affects Customer Satisfaction but the Quality of Multipurpose Credit electronic application products does not significantly affect customer satisfaction; Quality of Service and Product Quality of Multipurpose Credit electronic application affects Customer Satisfaction through Loan Fees. This research has the implication that innovation policies on multipurpose credit services and borrowing costs are major factors that can improve customer satisfaction.

© 2022 The Author(s). Published by International Ecsis Association. This is an open access article under the Creative Commons Attribution-ShareAlike 4.0 International License.



## 1. Introduction

The phenomenon of customer satisfaction is important to be researched because satisfied customers tend to provide good references to the product to others. In addition, customer satisfaction will encourage re-transactions. The company formulates various strategies to reach more customers, one of which is to increase customer satisfaction (Chicu et al., 2019). Therefore, customer satisfaction becomes the number one priority in the company (Dou et al., 2021). Banks as companies that provide financial services, also pay attention to the satisfaction of savings customers as a strategy to survive the business competition (Baziki et al., 2022). The more benefits and benefits that the bank offers to customers, the higher the customer's desire to buy a bank's products (Karakaplan, 2021). Customers who feel satisfied with the service of bank products, will tend to be faithful to make transactions to the bank (Chicu et al., 2019; Tseng, 2019).

Customer satisfaction is the difference between the expectations and results that customers feel. Meaning that, customer satisfaction is the outcome of a comparison between expectations and disappointments (Tseng, 2019; Uzir et al., 2020). In determining the level of customer satisfaction there are five dimensions of the main factor attributes that must be considered, namely: 1) Product quality, customers who feel satisfied if the results of evaluation after product use show that the product is quality; 2) Quality of service, customers who feel satisfied if they get the service in accordance with what is expected; 3) Human or emotional factors, the level of satisfaction that tends to be high due to the customer's confidence and pride that others will be amazed if he uses products with a certain brand; 4) Price, relatively cheap pricing for products of the same quality will provide higher value to customers; and 5) Situation or cost factors, customers who do not need to spend additional costs or do not need to waste time to get a product or service will tend to be satisfied with the product or service.

Bank has many product variations (Azad et al., 2020). One of the product is a credit that meet all consumptive needs, which called Multipurpose Credit. Efforts to increase multipurpose credit growth are by utilizing digital technology based on information technology (Lee et al., 2021), So that the multipurpose credit products offered is called as electronic multipurpose credits. Electronic multipurpose credit is an innovation of bank products in reaching a wider potential customer. However, the performance of bank services is subjective to every customer (Bhatia & Gulati, 2021). Customer satisfaction is determined by customer expectations with the reality of the service received. Therefore, banks need to know their ability to meet customer expectations (Kassemeier et al., 2021). It also deals with the quality of electronic multipurpose credit products offered by banks. The existence of electronic multipurpose credit product aims to facilitate customers in the process of applying and utilizing credit (Chen et al., 2021; Zhao et al., 2022). However, the effectiveness of electronic multipurpose credit products in meeting customer satisfaction is important to research. The effectiveness of electronic credit service products is closely related to the quality of banking services (Dang & Huynh, 2022).

Multipurpose credit products are related to loan interest. The existence of multipurpose credit is aimed at addressing customer financial problems. However, it is necessary to know the extent to which the interest on the loan can overcome customer problems. The more competitive the interest on loans offered by banks, the more customer expectations are achieved and the better the quality of services and quality of products. Price is a measurement of a person's satisfaction through the product he buys. The price of a product become higher if consumers assess the satisfaction from a product is higher. The economic value of a product is created by activities that occur in the market mechanism between buyers and sellers. Initially the selling price set by the company becomes a determining factor in the economic value of a product. But over time, the determining factors of the price increasingly vary. Factors other than price play role in purchasing decisions. All the variables contained in the marketing mix are contribute to the market value or price creation.

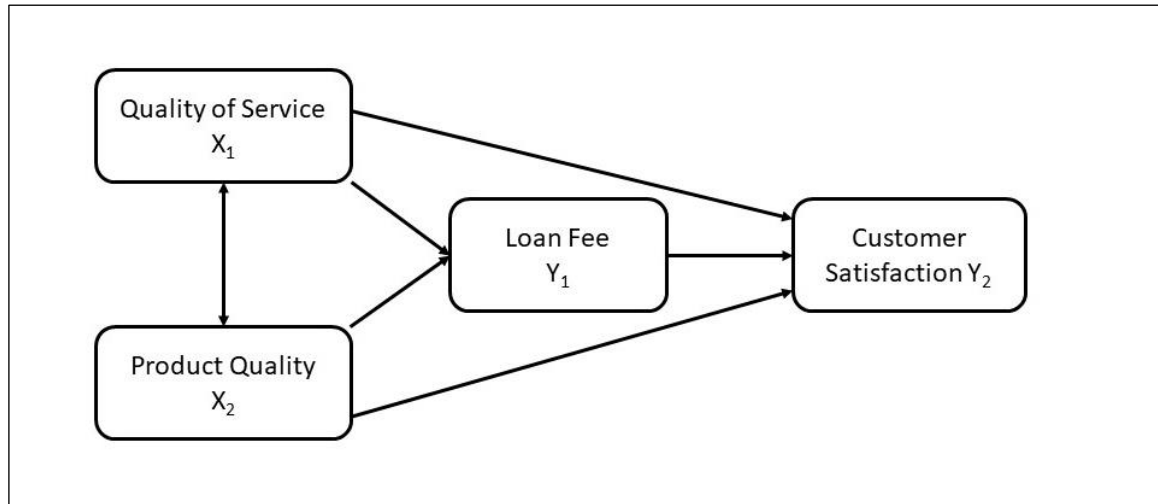
Some aspects that must be done by producers in setting prices, including; (1) Choose a price target, where the company must decide what it wants to achieve with a particular product. In other words, pricing strategies are largely determined by decisions that concern the placement of market positions. (2) Identify the market demand. Each price offered by the company will lead to a different level of demand. Therefore, it will have a different influence on its marketing goals. (3) Estimating prices, Market demand generally limits the highest price of a product. While companies generally set the lowest costs. The Company sets prices that covers the cost of producing, distributing, and selling products, including reasonable income on its business and the risks. (4) Analyze the prices and offers of competitors. The price of a competitor's product helps the company set a reasonable level of selling price. The company must benchmarking on the price and quality of each competitor's offer.

The increasingly competition among financial services encourages banks to optimize their efforts to reach as many prospective customers as possible. One of the efforts made

is to update banking credit services to become more innovative. However, the customer satisfaction factor in utilizing banking credit services is very dynamic and varied. Therefore, it is important to know what factors that can increase customer satisfaction in utilizing electronic multipurpose credit services.

The research framework is shown in figure 1.

Figure 1. Research framework



The research framework tests the following hypotheses:

- H1: There is an effect of Quality of Service on Customer Satisfaction
- H2: There is an effect of electronic application of Multipurpose Credit product quality on Customer Satisfaction
- H3: There is an effect of Quality of Service on Borrowing Costs
- H4: There is an effect of Electronic Application of Multipurpose Credit Product Quality on Loan Costs
- H5: There is an effect of Borrowing Costs on Customer Satisfaction
- H6: There is an effect of electronic application of Service Quality and Product Quality of Multipurpose Credit on Customer Satisfaction
- H7: There is an effect of electronic application of Service Quality and Product Quality of Multipurpose Credit on Customer Satisfaction through Loan Fees

Based on those hypothesis, the purpose of this research is as follow

- What is the effect of Quality of Service on Customer Satisfaction.
- What is the effect of electronic application of Multipurpose Credit product quality on Customer Satisfaction
- What is the effect of Quality of Service on Borrowing Costs
- What is the effect of Electronic Application of Multipurpose Credit Product Quality on Loan Costs
- What is the effect of Borrowing Costs on Customer Satisfaction
- What is the effect of electronic application of Service Quality and Product Quality of Multipurpose Credit on Customer Satisfaction
- What is the effect of electronic application of Service Quality and Product Quality of Multipurpose Credit on Customer Satisfaction through Loan Fees

## **2. Methods**

The research uses a quantitative approach. Quantitative approach can be interpreted as research methods based on the philosophy of positivism. It is used to examine a particular population or sample. Sampling method is randomly take the data by using research instruments. Quantitative approaches aim to test theories, build facts, show relationships between variables, provide statistical descriptions, estimate and forecast results. The population in this study is 150 person. They are customer of Bank Jatim who has used electronic multipurpose credit. The data collection method uses a questionnaire, which terdiri dari a set of written questions to the respondent. The type of question is a closed question that can help the respondent to answer quickly. In addition, closed questions make it easier for researchers to analyze the collected data. Measurements of questionnaire uses the Likert scale. It is from scale 1 "Strongly agree", to scale 5 "Strongly disagree".

The study uses four variables consisting of two Independent variables and two Dependent variables. Independent variables consist of "quality of service" variable with the symbol X1, and "product quality" variable with the symbol X2. Dependent variables consist of "borrowing costs" variable with the symbol Y1, and "job satisfaction" variable with the symbol Y2. The operational definition of each variable is as follows:

### **a. Product quality.**

Product quality is the factors contained a result that causes the goods meet the purpose for what the goods are intended for. Product quality has several dimensions, among others; (1) Performance, is the characteristic of the operation and core product purchased. For example speediness, easiness and comfort in use. (2) Features, are secondary or complementary characteristics; (3) Reability is a small possibility of damage or failure; (4) conformance to specifications that is to what extent the characteristics of design and operation meet the standards that have been set; (5) Durability is related to how long the product can continue to be used. This dimension includes the technical age as well as the economic age of use of the product; (6) Serviceability, including speed, competence, comfort, easy to repair and satisfactory handling of complaints; (7) Aesthetics, is the attractiveness of the product to the five senses, such as the physical form of attractive products, artistic designs, colors and so on; (8) Perceived quality (Yokoyama et al., 2022), the image and reputation of the product. Generally, buyer's knowledge to the attributes of the product, they perceive product quality from the aspect of price, brand name, advertising, company reputation and the country of the maker.

### **b. Customer Satisfaction**

Customer satisfaction is the feeling of pleasure or disappointment of someone who appears after comparing the expected product performance to the expected performance (Chicu et al., 2019). If performance is below expectations, the consumer is not satisfied. If performance meets expectations, consumers are satisfied. If the performance exceeds expectations, the consumer is very satisfied / happy. Customer dissatisfaction is the customer's response to an evaluation of perceived satisfaction between previous expectations or other performance expectations and the actual performance of the product felt after wearing it. Customer satisfaction is the difference between customer expectations and customer perception of what the company provides (Uzir et al., 2020).

### **c. Loan Fee**

Bank is a financial institution that has the main role in providing credit and other services (Azad et al., 2020). Therefore, banks have the lending policy including determining the interest rate of loans (Chiu et al., 2021). Although there are differences between banks and each other. The consequence of a bank loan is the interest on the loan that the borrower must pay to the bank. Interest is the cost that arises borrowed money by the debtor to the creditor (Kim et al., 2021).

d. Electronics multipurpose credit application.

Electronics multipurpose credit is a credit given to meet all consumptive needs. The targets of this type of Bank Jatim credit are civil servants, state-owned enterprises, Indonesian national army, Legislators, Private Company Employees, Retirees, Contract Workers, and Honorees. Advantages of Multipurpose Credit Electronics is (1) Loan limit proportionally adjusted to salary; (2) Interest rates are competitive and attractive; and (3) The period of loan in accordance with the service period or maximum (i.e fifteen years). Electronics multipurpose credit presents convenience in filing or applying for credit for civil servants who are still active or who will retire. Submissions are made through mobile application, customers simply have an account and payroll salary registered with the Bank. The independent variable and dependent variable indicators of this study can be seen in table 1.

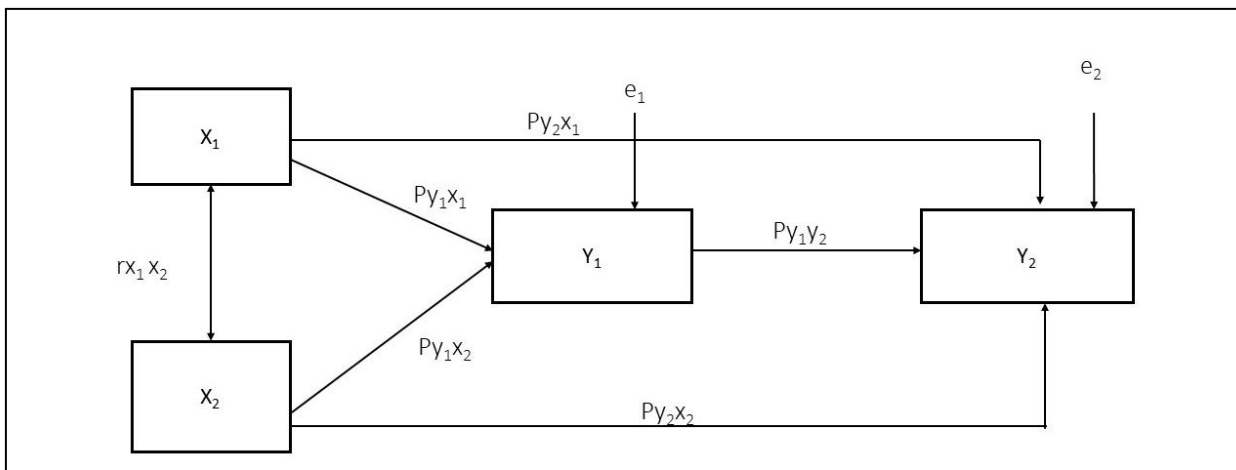
**Table 1. Research Variable Indicator**

No.	Variabel	Dimensi Variabel	Indikator
1.	Quality of Service (X <sub>1</sub> ) A performance that one can offer to others. This performance can be an intangible act and does not result in the ownership of any goods and against anyone.	Physical Evidence	Office equipment in the office is adequate and complete
		Empathy	Caring and paying personal attention to customers.
		Reliability	Carry out the promised services appropriately and reliably.
		Quick response	Provide services quickly and quickly in serving handling transactions and handling customer complaints
		Guarantee	The ability of employee knowledge and decency to engender trust and confidence in customers
2.	Product Quality (X <sub>2</sub> ) The expected level of quality and diversity control in achieving these qualities to meet the needs of consumers.	Performance	The performance of bank employees is as expected by customers
		Features	The products offered have additional functions and privileges for users.
		Reability	Quick in overcoming problems
		Conformance to Specifications	Design and operation meet the standards that have been set
		Durability	technical age or economic age of use of the product.
		Serviceability	speed, competence, comfort, easy to repair and satisfactory handling of complaints.
		Aesthetic	attractive physical form of products, artistic models/ designs, colors and so on.
3.	Customer Satisfaction (Y <sub>2</sub> ) The perception of the customer that his expectations have been met, obtained	Perceived Quality	Buyers perceive their quality from the aspect of price, brand name, advertising, reputation of the company and the country of the maker
		Feeling satisfied	satisfied or dissatisfied from customers when receiving good service and quality products from the company

	optimal results for each customer and banking services by paying attention to the ability of the customer and his family, attention to the needs of the customer so that the best continuity between satisfaction and results.	Always buy products.	Customers will continue to use and continue to use a product if they achieve the expectations they want
		Recommend to others	Recommend others and be able to create new customers for a company.
		Customer expectations are met after purchasing the product	Customer expectations is met when using the product
4	Loan fee (Y1) are interest and other expenses incurred by the entity in connection with the lending of funds.	Need for funds	The amount of money required by the customer
		Loan term	Time for loan. The longer the loan term, the bigger the interest for the loan
		Quality of loans	The higher quality of the loan, the easier customers to access the loan. Electronic application makes the quality of the loan is higher
		Third party guarantee	There is a reliable guarantee from third party

Path analysis is used to test the direct and indirect influence of causal variables on other variables as a result. The path analysis diagram model is as follows:

**Figure 2. Path Diagram Model**



### 3. Results

Based on the results of questionnaires distributed to 150 customers, 60 questionnaires are valid and can be further processed in the research analysis. The results of hypothesis testing are as follows:

**Table 2. Path Analysis Result**

Effect	Path Relation and Path Coefficient
<b>Direct Effect</b>	
1 Quality of service to Loan Fee	$X1 \rightarrow Y1 = 0,319$
2 Product quality to Loan Fee	$X2 \rightarrow Y1 = 0,253$

3	Quality of service to job satisfaction	$X1 \rightarrow Y2 = 0,345$
4	Product quality to job satisfaction	$X2 \rightarrow Y2 = -0,218$
5	Loan fee to job satisfaction	$Y1 \rightarrow Y2 = -0,011$
<b>Indirect Effect</b>		
6	Quality of service on job satisfaction through Loan fee	$X1 \rightarrow Y1 \rightarrow Y2 = (0,319 \times -0,011) = -0,004$
7	Product quality on job satisfaction through Loan fee	$X2 \rightarrow Y1 \rightarrow Y2 = (0,253 \times -0,011) = -0,003$
<b>Total Effect</b>		
8	Quality of service on job satisfaction through Loan fee	$X1 \rightarrow Y1 \rightarrow Y2 = (0,319 - 0,011) = 0,308$
9	Product quality on job satisfaction through Loan fee	$X2 \rightarrow Y1 \rightarrow Y2 = (0,253 - 0,011) = 0,242$

H1: *Quality of Service affects borrowing costs*

H2: *Quality of electronic application of Multipurpose Credit products affects loan fee*

H3: *Quality of Service affects Customer Satisfaction*

H4: *Quality of electronic application of Multipurpose Credit products affects Customer Satisfaction*

H5: *Loan Fee affect Customer Satisfaction*

H6: *Quality of Service and Product Quality of electronic application of Multipurpose Credit affects Customer Satisfaction*

H7: *Quality of Service and Product Quality of electronic application of Multipurpose Credit affects Customer Satisfaction through Loan Fees*

#### 4. Discussion

The results showed that the variable quality of service had a positive effect on Loan Fees. These results show that financing customers at Bank Jatim Malang feel that the cost and quality of service provided is good enough that customers are quite satisfied. This is evidenced by the results of calculations obtained where t research / calculation of 2,646 with a significance level of 0.010. The amount of the effect of service quality and borrowing costs amounted to 0.319 or 31.9%.

The results showed that product quality variables had a positive effect on borrowing costs. These results show that this flexible installment model is tailored to the capabilities and desires of consumers so that financing consumers are satisfied with this installment model. This is evidenced by the results of calculations obtained where t calculates 2,093 with a significance level of 0.041. The magnitude of the effect of product quality on borrowing costs by 0.253 or 25.3%.

The results showed that the quality of service variables had a positive effect on customer satisfaction. If the quality of service is increasing, customer satisfaction will also be higher. This is evidenced by the results of calculations obtained where t research / calculation of 2,594 with a significance level of 0.012. If the service provided is in accordance with customer expectations, then the quality of the service will be perceived either or positively by the customer. The magnitude of the influence of service quality and customer satisfaction amounted to 0.345 or 34.5%.

The results showed that product quality variables negatively affect customer satisfaction. This is evidenced by the results of calculations obtained where t research amounted to  $-1,674 < t$  table 2,003. This indicates that there is still a lack of quality of Bank Jatim Malang products which are not followed by increased customer satisfaction and have distinctive product properties and characteristics so that customers still do not

meet their wants and needs and feel less satisfied with the product. The magnitude of the effect of product quality on customer satisfaction of - 0.218 or -21.8% is considered insignificant.

The results showed that variable borrowing costs negatively affect customer satisfaction. These results show that the cost of borrowing charged to customers is heavy enough to be quite burdensome for customers. This may be because financing customers compare the cost of loans in other banking institutions, so they feel the cost of borrowing is more expensive so that the financing customer is not satisfied with the amount of the loan fee (Chiu et al., 2021). This is evidenced by the results of calculations obtained where  $t$  research amounted to  $-0.081 < t$  table 2,003.

Based on the research obtained that the first results of calculations where  $t$  research amounted to  $2,594 > t$  table 2.003 so that  $H_0$  rejected  $H_1$  accepted. This means that there is a linear relationship between service quality and customer satisfaction. The magnitude of the effect of service quality on customer satisfaction is 0.345 or 34.5%. The second where the results of the calculation are obtained where the study  $t$  amounted to  $-1,674 < t$  table 2.003 so that  $H_0$  received  $H_1$  was rejected. This means that there is no linear relationship between product quality and customer satisfaction. The magnitude of the effect of product quality on customer satisfaction by -0.218 or -21.8%. So that the results of this hypothesis test concluded that the Quality of Service affects Customer Satisfaction but the Quality of Multipurpose Credit electronic application products does not significantly affect Customer Satisfaction.

Based on the results of the analysis in this study, prove that; (1) There is a direct influence of the quality of service on customer satisfaction through loan costs. This means that variable borrowing costs are able to mediate and strengthen the influence of quality of service on customer satisfaction. (2) There is a direct influence of product quality on customer satisfaction through borrowing costs. This means that variable borrowing costs are able to mediate and strengthen the influence of product quality on customer satisfaction. In other words, the results of this hypothesis test concluded that the Quality of Service and Product Quality of Multipurpose Credit electronic applications affect Customer Satisfaction through Loan Fees.

## **5. Conclusion**

Based on the results of research and discussions that have been conducted, it can be concluded that the Quality of Service affects Customer Satisfaction; The quality of multipurpose credit electronic application products does not significantly affect customer satisfaction; Quality of Service affects the cost of loans; The quality of multipurpose credit electronic application products affects the cost of loans; The Cost of The Loan does not significantly affect customer satisfaction; Quality of Service affects Customer Satisfaction but The Quality of Multipurpose Credit electronic application products does not significantly affect the satisfaction of the language; Quality of Service and Product Quality of Multipurpose Credit electronic application affects Customer Satisfaction through Loan Fees.

This research provides the implication that manager needs to pay attention to the amount of borrowing costs charged to customers, the results of this study can be used as a lesson for banking institutions to streamline operational costs so as to reduce borrowing costs that are considered expensive by financing customers. Determination of the amount of fees charged to customers should be determined fairly and not burden the customer in returning the loan obtained. Quality services will affect the satisfaction of financing customers who will convey to other prospective customers

## 6. References

- Azad, A. S. M. S., Azmat, S., & Hayat, A. (2020). What determines the profitability of Islamic banks: Lending or fee? *International Review of Economics and Finance*, *May*.  
<https://doi.org/10.1016/j.iref.2019.05.015>
- Baziki, S. B., Kılıç, Y., & Yılmaz, M. H. (2022). Consumer loan rate dispersion and the role of competition: Evidence from Turkish banking industry. *Central Bank Review*, *xxxx*.  
<https://doi.org/10.1016/j.cbrev.2022.01.001>
- Bhatia, M., & Gulati, R. (2021). Board governance and bank performance: A meta- analysis. *Research in International Business and Finance*, *58*(May), 101425.  
<https://doi.org/10.1016/j.ribaf.2021.101425>
- Chen, W. Da, Chen, Y., & Huang, S. C. (2021). Liquidity risk and bank performance during financial crises. *Journal of Financial Stability*, *56*(December 2020), 100906.  
<https://doi.org/10.1016/j.jfs.2021.100906>
- Chicu, D., Pâmies, M. del M., Ryan, G., & Cross, C. (2019). Exploring the influence of the human factor on customer satisfaction in call centres. *BRQ Business Research Quarterly*, *22*(2), 83–95. <https://doi.org/10.1016/j.brq.2018.08.004>
- Chiu, W. C., King, T. H. D., & Wang, C. W. (2021). Debt maturity dispersion and the cost of bank loans. *Journal of Corporate Finance*, *70*(January), 102049.  
<https://doi.org/10.1016/j.jcorpfin.2021.102049>
- Dang, V. D., & Huynh, J. (2022). Monetary policy and bank performance: The role of business models. *North American Journal of Economics and Finance*, *59*(November 2021), 101602.  
<https://doi.org/10.1016/j.najef.2021.101602>
- Dou, R., Li, W., Nan, G., Wang, X., & Zhou, Y. (2021). How can manufacturers make decisions on product appearance design? A research on optimal design based on customers' emotional satisfaction. *Journal of Management Science and Engineering*, *6*(2), 177–196.  
<https://doi.org/10.1016/j.jmse.2021.02.010>
- Karakaplan, M. U. (2021). This time is really different: The multiplier effect of the Paycheck Protection Program (PPP) on small business bank loans. *Journal of Banking and Finance*, *133*(March 2020), 106223. <https://doi.org/10.1016/j.jbankfin.2021.106223>
- Kassemeier, R., Haumann, T., & Güntürkün, P. (2021). Whether, when, and why functional company characteristics engender customer satisfaction and customer-company identification: The role of self-definitional needs. *International Journal of Research in Marketing*, *xxxx*. <https://doi.org/10.1016/j.ijresmar.2021.08.002>
- Kim, Y. S., Kim, Y., & Yi, H. C. (2021). Vice or virtue? The impact of earnings management on bank loan agreements. *International Review of Economics and Finance*, *73*(March 2018), 303–324.  
<https://doi.org/10.1016/j.iref.2020.12.028>
- Lee, C. C., Li, X., Yu, C. H., & Zhao, J. (2021). Does fintech innovation improve bank efficiency? Evidence from China's banking industry. *International Review of Economics and Finance*, *74*(June 2020), 468–483. <https://doi.org/10.1016/j.iref.2021.03.009>
- Tseng, L. M. (2019). How customer orientation leads to customer satisfaction: Mediating mechanisms of service workers' etiquette and creativity. *International Journal of Bank Marketing*, *37*(1), 210–225. <https://doi.org/10.1108/IJBM-10-2017-0222>
- Uzir, M. U. H., Jerin, I., Al Halbusi, H., Hamid, A. B. A., & Latiff, A. S. A. (2020). Does quality stimulate customer satisfaction where perceived value mediates and the usage of social media moderates? *Heliyon*, *6*(12), e05710. <https://doi.org/10.1016/j.heliyon.2020.e05710>
- Yokoyama, N., Azuma, N., & Kim, W. (2022). Moderating effect of customer's retail format perception on customer satisfaction formation: An empirical study of mini-supermarkets in an urban retail market setting. *Journal of Retailing and Consumer Services*, *xxxx*, 102935.  
<https://doi.org/10.1016/j.jretconser.2022.102935>
- Zhao, J., Li, X., Yu, C. H., Chen, S., & Lee, C. C. (2022). Riding the FinTech innovation wave: FinTech, patents and bank performance. *Journal of International Money and Finance*, *122*, 102552. <https://doi.org/10.1016/j.jimonfin.2021.102552>