



RELATIONSHIP BETWEEN USE AND SATISFACTION ON E-BANKING SERVICES OFFERED BY LANDBANK BUGUIAS BRANCH

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ABSTRACT

This study examined the extent of use and level of client satisfaction with e-banking services offered by the Land Bank of the Philippines-Buguias Branch, as well as the relationship between e-banking usage and client satisfaction. It also investigated differences in e-banking usage and satisfaction when clients were grouped according to age and type of client. Employing a descriptive-correlational research design, data were collected from bank clients using a structured survey questionnaire and analyzed using appropriate statistical techniques. Findings revealed that clients frequently utilized e-banking services, with significant differences in usage observed across age groups and client types. Overall, clients reported a high level of satisfaction with e-banking services, and no significant differences in satisfaction were found when respondents were grouped by age or type of client. Furthermore, results indicated a moderate positive relationship between e-banking usage and client satisfaction, suggesting that increased use of e-banking services is generally associated with higher satisfaction levels. Despite the regular use and favorable satisfaction ratings, challenges such as intermittent internet connectivity, limited digital literacy, and security concerns were identified as factors affecting e-banking usage. The study recommends continuous enhancement of e-banking services, strengthened security measures, and improved client support to sustain and further improve client satisfaction.

KEYWORDS: *E-banking services; Client satisfaction; Usage behavior; Digital banking; Descriptive-correlational study; Land Bank of the Philippines*

1. INTRODUCTION

The rapid advancement of information and communication technology has significantly transformed the global banking industry through the introduction of electronic banking (e-banking) services. E-banking enables customers to perform financial transactions using digital platforms such as online banking portals, mobile banking applications, and automated teller machines, thereby reducing the need for physical bank visits. This transformation has improved efficiency, accessibility, and convenience in financial service delivery, particularly in developing economies where financial inclusion remains a priority (World Bank, 2021).

The increasing adoption of e-banking services has been driven by the widespread use of mobile devices, improved internet connectivity, and innovations in digital payment systems. These developments have expanded access to formal financial services and enhanced participation in the digital economy (World Bank, 2020). However, despite these advancements, the adoption and effective utilization of e-banking services continue to face challenges such as inadequate infrastructure, limited digital literacy, cybersecurity risks, and regulatory constraints, especially in rural and underserved areas (IMF, 2021).

In the Philippines, government-led financial inclusion initiatives and increasing digital payment adoption have accelerated the growth of e-banking services. Data from the Bangko Sentral ng Pilipinas indicate a steady rise in digital financial transactions, reflecting a transition toward a more inclusive and cashless economy (BSP, 2022). Nonetheless, rural municipalities such as Buguias, Benguet continue to experience constraints related to internet access, technological readiness, and consumer trust, which may limit the effective adoption of e-banking services.

Buguias is a predominantly agricultural and rural municipality where access to physical banking institutions is limited. In this context, e-banking services have the potential to address long-standing barriers to financial access by reducing transaction costs and improving service reach. However, the success of e-banking in such settings depends on user adoption, satisfaction, and perceived service quality. Guided by the SERVQUAL model developed by Parasuraman, Zeithaml, and Berry (1988), which emphasizes the relationship between service quality and customer satisfaction, this study examines the extent of e-banking usage and the level of client satisfaction with e-banking services offered by the Land Bank of the Philippines (LANDBANK) Buguias Branch.

By focusing on a rural Philippine setting, this study contributes empirical evidence to the limited body of research on e-banking adoption and satisfaction in rural communities and provides insights relevant to policymakers, financial institutions, and development practitioners aiming to strengthen digital financial inclusion.

2. OBJECTIVES

The primary objective of this study is to assess the extent of use and level of client satisfaction with e-banking services offered by the LANDBANK Buguias Branch.



Specifically, the study aims to:

- a. Determine the extent of e-banking service utilization among clients of the LANDBANK Buguias Branch.
- b. Assess the level of client satisfaction with the e-banking services provided.
- c. Examine differences in e-banking service utilization when clients are grouped according to age and type of client.
- d. Identify differences in client satisfaction with e-banking services when grouped according to age and type of client.
- e. Analyze the relationship between e-banking service utilization and client satisfaction.
- f. Identify challenges affecting the use of e-banking services in a rural setting.

3. METHODOLOGY

This study employed a quantitative descriptive-correlational research design to determine the extent of use and level of satisfaction with e-banking services offered by the Land Bank of the Philippines (LANDBANK) Buguias Branch and to examine the relationship between these variables. The descriptive component focused on profiling respondents and describing their patterns of e-banking usage and satisfaction, while the correlational component examined the statistical association between e-banking usage and client satisfaction without manipulating any variables.

Descriptive-correlational research is appropriate for studies that aim to describe existing conditions and analyze relationships among variables as they naturally occur (Creswell & Creswell, 2023). This design was deemed suitable as e-banking usage reflects behavioral patterns, while satisfaction represents users' evaluative responses to service delivery.

4. SAMPLING DESIGN

The study involved 150 clients of the LANDBANK Buguias Branch who were active users of e-banking services. A purposive sampling technique was used to ensure that only respondents with actual experience in using e-banking services were included in the study. Clients who were not enrolled in any e-banking service or had inactive or unregistered accounts were excluded.

Respondents were categorized according to age group (30 years old and below; 31–40 years old; 41 years old and above) and type of client (individual or business/government). Each age group consisted of 50 respondents, while client type was equally distributed between individual and business/government clients.

5. STATISTICAL DESIGN

Data were collected using a structured survey questionnaire consisting of three parts: respondent profile, extent of e-banking usage, and level of satisfaction with e-banking services. The instrument underwent pilot testing and reliability analysis, yielding a Cronbach's alpha of 0.927, indicating high reliability.

The collected data were analyzed using appropriate statistical tools to address the objectives of the study. Frequency counts and percentages were utilized to describe the demographic characteristics of the respondents. The weighted mean was employed to determine the extent of e-banking usage and the level of client satisfaction with e-banking services. To examine differences in e-banking usage and satisfaction across age groups, Analysis of Variance (ANOVA) was applied. An independent samples t-test was used to identify significant differences in usage and satisfaction based on client type. Finally, Pearson's correlation coefficient (r) was used to determine the relationship between the extent of e-banking usage and the level of client satisfaction.

All statistical tests were conducted at an appropriate level of significance to ensure validity and reliability of results.

6. GEOGRAPHICAL AREA

The study was conducted in Buguias, Benguet, a predominantly rural and agricultural municipality located in the Cordillera Administrative Region (CAR), Philippines. Data were gathered specifically from clients of the LANDBANK Buguias Branch, which serves individual, business, and government clients in the area. Buguias was selected as the study site due to its rural setting, limited access to physical banking facilities, and growing reliance on digital banking services, making it a relevant location for examining e-banking adoption and satisfaction in rural communities.

7. RESULTS AND DISCUSSION

Table 1. Extent of use of e-banking services offered by Landbank Buguias branch

Indicators	WM	Description	Rank
1. Checking account balances	3.58	Always	1
2. Transferring funds between accounts	3.40	Always	3
3. Paying bills (e.g., utilities, credit cards, remittances to government agencies)	3.19	Often	6
4. Purchasing mobile phone load or other prepaid services	2.78	Often	10
5. Monitoring transaction history	3.42	Always	2



6. Transacting business such as checkbook re-order, payroll uploading, opening/updating of account, etc	3.03	Often	7
7. Personal savings or investments	3.20	Often	5
8. Contacting customer support via the e-banking platform	2.88	Often	8
9. Availing services outside regular banking hours	3.34	Always	4
10. Accessing loan information or applying for loans	2.79	Often	9
Average	3.16	Often	

Results indicate that clients of the LANDBANK Buguias Branch often use e-banking services, as reflected by an overall weighted mean of 3.16. The most frequently used services were checking account balances, monitoring transaction history, and transferring funds between accounts. These services represent low-risk and essential banking functions that provide convenience, transparency, and real-time access to financial information.

Lower usage was observed in purchasing prepaid mobile load, accessing loan information or applying for loans, and contacting customer support via the e-banking platform. These findings suggest that clients remain cautious when engaging in services perceived as complex or high-risk and prefer face-to-face transactions for sensitive financial matters. Infrastructure limitations, intermittent internet connectivity, digital literacy gaps, and security concerns further influence usage patterns, particularly in rural settings.

Table 1.1. Difference in the extent of use of e-banking services offered by Landbank Buguias branch when respondents are grouped according to age

Indicators	30 years old and below	31 years old to 40 years old	41 years old & above
1. Checking account balances	3.58	3.52	3.67
2. Transferring funds between accounts	3.29	3.34	3.58
3. Paying bills (e.g., utilities, credit cards, remittances to government agencies)	3.06	3.10	3.44
4. Purchasing mobile phone load or other prepaid services	2.48	2.76	3.02
5. Monitoring transaction history	3.19	3.39	3.65
6. Transacting business such as checkbook re-order, payroll uploading, opening/updating of account, etc	2.84	3.02	3.16
7. Personal savings or investments	3.03	3.05	3.60
8. Contacting customer support via the e-banking platform	2.55	2.82	3.23
9. Availing services outside regular banking hours	3.19	3.21	3.70
10. Accessing loan information or applying for loans	2.39	2.83	3.00
Average	2.96	3.10	3.41

p-value= 0.01

α= 0.05

Significant

Statistical analysis revealed significant differences in e-banking usage when respondents were grouped by age (p = 0.01). Older clients (41 years and above) demonstrated higher overall usage compared to younger groups, particularly for fundamental banking services. This may be attributed to greater financial responsibility and familiarity with banking systems rather than technological confidence alone.



Table 1.2. Difference in the extent of use of e-banking services offered by Landbank Buguias branch when respondents are grouped according to type

Indicators	Individual	Business/Government
1. Checking account balances	3.49	3.67
2. Transferring funds between accounts	3.25	3.55
3. Paying bills (e.g., utilities, credit cards, remittances to government agencies)	2.89	3.50
4. Purchasing mobile phone load or other prepaid services	2.60	2.96
5. Monitoring transaction history	3.25	3.61
6. Transacting business such as checkbook re-order, payroll uploading, opening/updating of account, etc	2.68	3.39
7. Personal savings or investments	3.14	3.26
8. Contacting customer support via the e-banking platform	2.56	3.21
9. Availing services outside regular banking hours	3.18	3.51
10. Accessing loan information or applying for loans	2.43	3.17
Average	2.95	3.38

p-value= 0.002

$\alpha= 0.05$

Significant

A significant difference was also found when respondents were grouped according to client type ($p = 0.002$). Business and government clients exhibited higher levels of e-banking usage than individual clients, reflecting their need for frequent, high-volume transactions and efficient financial management.

Table 2. Level of satisfaction on the use of e-banking services offered by Landbank in Buguias branch

Indicators	WM	Description	Rank
1. Checking account balances	3.61	Highly Satisfied	1
2. Transferring funds between accounts	3.46	Highly Satisfied	3
3. Paying bills (e.g., utilities, credit cards, remittances to government agencies)	3.26	Highly Satisfied	6
4. Purchasing mobile phone load or other prepaid services	3.00	Moderately Satisfied	10
5. Monitoring transaction history	3.47	Highly Satisfied	2
6. Transacting business such as checkbook re-order, payroll uploading, opening/updating of account, etc	3.20	Moderately Satisfied	7
7. Personal savings or investments	3.28	Highly Satisfied	5
8. Contacting customer support via the e-banking platform	3.09	Moderately Satisfied	9
9. Availing services outside regular banking hours	3.38	Highly Satisfied	4
10. Accessing loan information or applying for loans	3.12	Moderately Satisfied	8
Average	3.29	Highly Satisfied	

Clients reported a high level of satisfaction with e-banking services, with an overall weighted mean of 3.29. The highest satisfaction ratings were observed for checking account balances, monitoring transaction history, and fund transfers. These services are perceived as reliable, efficient, and convenient.

Moderate satisfaction was noted for loan-related services, prepaid load purchases, and customer support features, indicating areas where service accessibility, usability, and trust may be improved.



Table 2.1. Difference in the Level of Satisfaction on the use of e-banking services offered by Landbank Buguias branch when grouped according to age

Indicators	30 years old and below	31 years old to 40 years old	41 years old & above
1. Checking account balances	3.71	3.62	3.51
2. Transferring funds between accounts	3.45	3.49	3.42
3. Paying bills (e.g., utilities, credit cards, remittances to government agencies)	3.32	3.29	3.16
4. Purchasing mobile phone load or other prepaid services	3.06	3.04	2.88
5. Monitoring transaction history	3.42	3.51	3.44
6. Transacting business such as checkbook re-order, payroll uploading, opening/updating of account, etc	3.13	3.28	3.09
7. Personal savings or investments	3.32	3.29	3.21
8. Contacting customer support via the e-banking platform	3.13	3.06	3.12
9. Availing services outside regular banking hours	3.23	3.38	3.49
10. Accessing loan information or applying for loans	3.10	3.13	3.09
Average	3.29	3.31	3.24
	p-value= 0.74	$\alpha= 0.05$	Not Significant

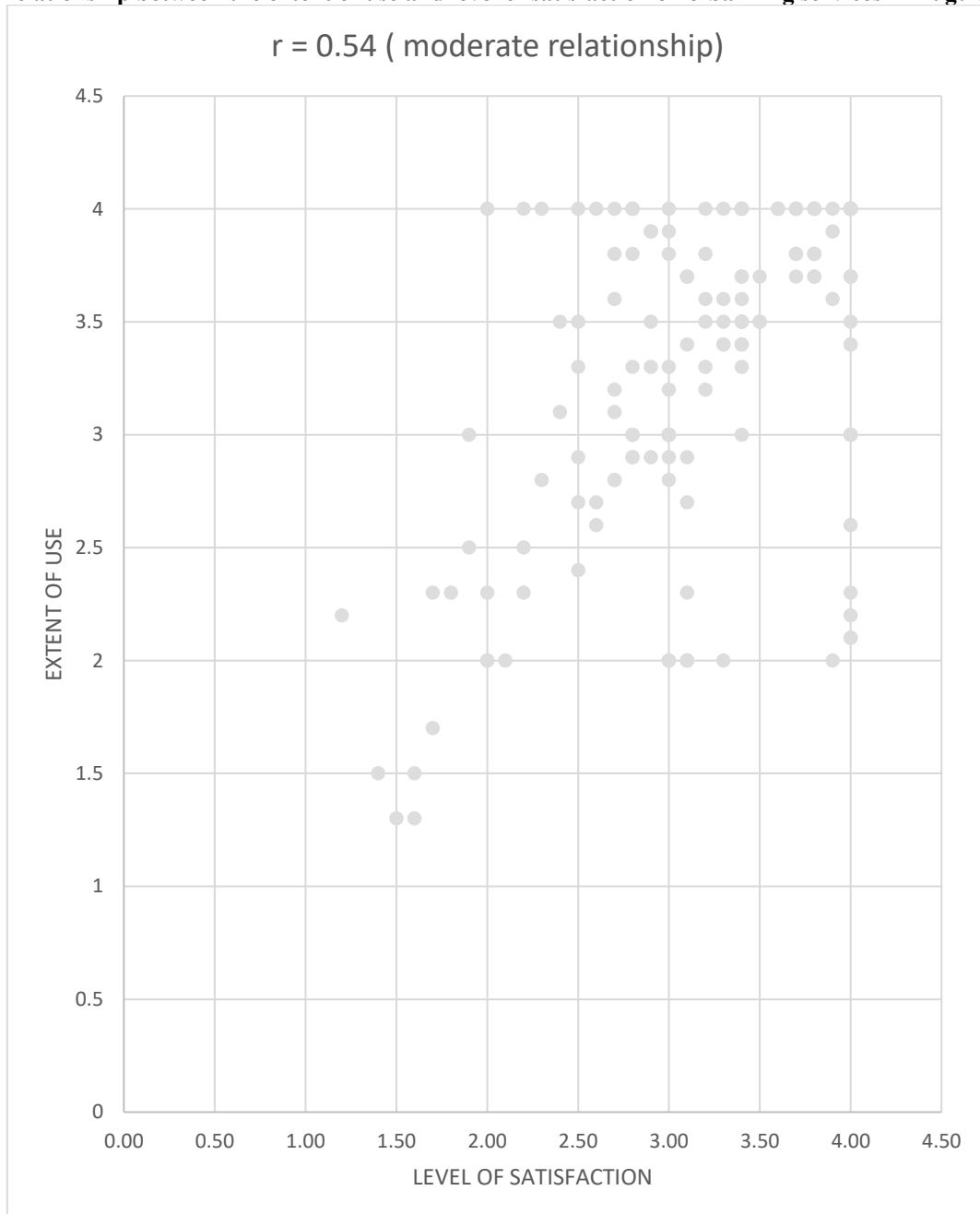
Table 2.2. Difference in the Level of Satisfaction on the use of e-banking services offered by Landbank Buguias branch when grouped according to type

Indicators	Individual	Corporation
1. Checking account balances	3.69	3.53
2. Transferring funds between accounts	3.53	3.39
3. Paying bills (e.g., utilities, credit cards, remittances to government agencies)	3.31	3.21
4. Purchasing mobile phone load or other prepaid services	3.06	2.93
5. Monitoring transaction history	3.49	3.46
6. Transacting business such as checkbook re-order, payroll uploading, opening/updating of account, etc	3.11	3.29
7. Personal savings or investments	3.35	3.20
8. Contacting customer support via the e-banking platform	3.04	3.14
9. Availing services outside regular banking hours	3.35	3.41
10. Accessing loan information or applying for loans	3.01	3.22
Average	3.29	3.28
	p-value= 0.99	$\alpha= 0.05$
		Not Significant

No significant differences in satisfaction were found when respondents were grouped by age ($p = 0.74$) or client type ($p = 0.99$). This suggests that satisfaction with e-banking services is largely influenced by service quality attributes such as reliability, security, and ease of use, rather than demographic characteristics.



Figure 1. Relationship between the extent of use and level of satisfaction on e-banking services in Buguias, Benguet



Pearson’s correlation analysis revealed a moderate positive relationship ($r = 0.54$) between the extent of e-banking use and client satisfaction. This indicates that increased use of e-banking services is generally associated with higher satisfaction; however, other factors such as service quality, user support, and infrastructure also play important roles.

8. SUMMARY OF FINDINGS

1. E-banking services are often used by LANDBANK Buguias clients, with significant differences in usage by age and client type.
2. Clients exhibit a high level of satisfaction with e-banking services, with no significant differences by age or client type.
3. A moderate positive relationship exists between e-banking usage and client satisfaction.

9. CONCLUSIONS

1. Clients of LANDBANK Buguias Branch regularly utilize e-banking services, particularly for basic and low-risk transactions, despite challenges related to internet connectivity, digital literacy, and security concerns.



2. Client satisfaction with e-banking services is generally high and consistent across demographic groups, indicating effective service delivery and system reliability.
3. The moderate relationship between e-banking usage and satisfaction suggests that increased usage contributes to satisfaction, but additional service-related and contextual factors also influence the overall client experience.

10. RECOMMENDATIONS

1. The bank should implement targeted digital literacy and orientation programs tailored to different age groups and client types.
2. Continuous client education campaigns should be conducted to enhance trust and confidence in using advanced e-banking features.
3. The bank should maintain high service quality by ensuring system reliability, fast transaction processing, and robust security measures.
4. Regular client feedback mechanisms should be established to guide service improvements and platform updates.
5. Enhancements in customer support accessibility, such as live chat or dedicated helplines, should be introduced.
6. The bank should actively promote underutilized e-banking features to increase platform engagement.

11. REFERENCES

1. Abil Das, S. V., & Ravi, N. (2021). A study on the impact of e-banking service quality on customer satisfaction. *Asian Journal of Economics, Finance and Management*, 3(1), 450–458. <https://journaleconomics.org/index.php/AJEFM/article/view/69>
2. Aduda, J., & Kingoo, N. (2012). The relationship between electronic banking and financial performance among commercial banks in Kenya. *Journal of Finance and Investment Analysis*, 1(3), 99–118.
3. Ahmad, N., Rahman, S., & Hussain, T. (2023). Impact of e-banking service quality on customer satisfaction and loyalty: Evidence from emerging markets. *Journal of Banking and Financial Technology*, 7(2), 145–162. <https://doi.org/10.1007/s42786-023-00123-4>
4. Akter, S., Kabir, M. H., & Reza, M. (2021). Factors influencing internet banking adoption in developing countries. *Journal of Financial Services Research*, 10(3), 112–130.
5. Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2016). Digital banking adoption: A review and future research directions. *International Journal of Information Management*, 36(3), 508–520. <https://doi.org/10.1016/j.ijinfomgt.2016.04.003>
6. Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management*, 37(3), 99–110. <https://doi.org/10.1016/j.ijinfomgt.2017.01.002>
7. Alam, S. S., Musa, R., & Hassan, F. (2006). Corporate customers' adoption of internet banking: Case of Klang Valley business firms in Malaysia. *International Journal of Business and Management*, 4(4), 13–21.
8. Apaua, T., & Lallie, H. S. (2022). Barriers to digital banking adoption in emerging economies: A review. *International Journal of Bank Marketing*, 40(5), 987–1004.
9. Apaua, R., & Lallie, H. S. (2022). Measuring user perceived security of mobile banking applications. *arXiv preprint*. <https://arxiv.org>
10. Ariffin, S. K., Razak, R. A., & Ismail, N. (2022). Determinants of e-banking adoption among business clients. *Frontiers in Psychology*, 13, 919198.
11. Ayinaddis, S. G., Taye, B. A., & Yirsaw, B. G. (2023). Examining the effect of electronic banking service quality on customer satisfaction and loyalty: An implication for technological innovation. *Journal of Innovation and Entrepreneurship*, 12, Article 22. <https://doi.org/10.1186/s13731-023-00287-y>
12. Azhar, M., Sherwaani, H., Ali, R. A., & Mariam, S. (2024). The impact of e-banking service quality (reliability) on customer purchase intention with the mediating effect of customer satisfaction. *Journal of Excellence in Management Sciences*, 3(1), 174–184. <https://doi.org/10.69565/jems.v3i1.218>
13. Bank for International Settlements. (2020). *Central bank digital currencies: Foundational principles and core features* (BIS Paper No. 117).
14. Bangko Sentral ng Pilipinas. (2021). *Digital payments transformation roadmap 2020–2023*. BSP Publications.
15. Bangko Sentral ng Pilipinas. (2022). *Digital banking and financial inclusion in the Philippines*. BSP.
16. Barooah, I. (2025). *Descriptive correlational research design: Best practices and examples*. <https://merren.io/descriptive-correlational-research/>
17. Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.
18. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/10.2307/249008>
19. International Monetary Fund. (2021). *Cybersecurity in financial services: A global overview*. IMF.
20. Khan, R. (2022). Barriers to digital banking adoption among older adults: A global perspective. *International Journal of Bank Marketing*, 40(5), 987–1004.
21. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.
22. Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahnila, S. (2004). Consumer acceptance of online banking: An extension of the technology acceptance model. *Internet Research*, 14(3), 224–235. <https://doi.org/10.1108/10662240410542652>
23. Resnik, D. B. (2020). *Ethics of research with human subjects: Protecting people, advancing science, promoting trust*. Springer.



24. World Bank. (2021). *The Global Findex Database 2021: Financial inclusion, digital payments, and resilience in the age of COVID-19*. World Bank Group.
25. Yusuf, A., & Bala, S. (2021). *E-banking adoption and satisfaction among rural users in the Philippines*. *Asian Journal of Economics and Banking*, 7(1), 45-60.