Available online at: http://journal.uinsgd.ac.id/index.php/ks
Khazanah Sosial, Vol. 7 No. 3: 705-720
DOI: 10.15575/ks.v7i3.45477

What Drives Customers to Choose Branchless Banking? An Empirical Study Using the Analytic Hierarchy Process

Eti Kusmiati[1*], Nizar Alam Hamdani[2], Hanifah Fauziah[2], Dinar Mariam Kurniati[2], Melly C. Resmi[3]

[1*]Department of Digital Business, Faculty of Economics, Universitas Garut, Indonesia
[2]Department of Management, Faculty of Economics, Universitas Garut, Indonesia
[3]Mark Oliphant College, Adelaide, Australia.
*Corresponding E-mail: etikusmiati@uniga.ac.id

Abstract

This study aims to analyze customer preferences in choosing Branchless Banking services by examining various perceptions that influence their decision-making. The research focuses on four key factors: Perceived Ease of Use, Perceived Trust, Perceived Usefulness, and Perceived Risk. The Branchless Banking services evaluated in this study include BRILink, Agen46, and Mandiri Agen, platforms developed by major banks in Indonesia to expand financial services through agent-based networks. A mixed-methods approach was employed, combining quantitative analysis using the Analytic Hierarchy Process (AHP) and the Expert Choice software with qualitative insights to enrich the interpretation of results. Data were collected from 100 respondents with experience using all three services, ensuring a relevant and comprehensive evaluation. The findings reveal that Perceived Ease of Use is the most dominant factor influencing customer choice, with a weight of 39.40%, followed by Perceived Usefulness at 23.90%. Trust ranked third at 22.30%, while Risk had the lowest weight at 14.30%. Further analysis indicates that BRILink is the most preferred branchless banking service, scoring the highest (45.5%) across all criteria: Perceived Ease of Use, Perceived Usefulness, Trust, and Risk. These results suggest that BRILink aligns best with customer expectations across the evaluated dimensions. The study offers strategic insights for financial institutions to enhance agent banking services through a customer-centric approach.

Keywords: Analytic Hierarchy Process, Perception of Ease, Perception of Risk, Perception of Trust, Perception of Usefulness

Abstrak

Penelitian ini bertujuan untuk menganalisis preferensi nasabah dalam memilih layanan Branchless Banking dengan meneliti berbagai persepsi yang memengaruhi keputusan mereka. Studi ini berfokus pada empat faktor utama: Perceived Ease of Use, Perceived Trust, Perceived Usefulness, dan Perceived Risk. Layanan Branchless Banking yang dievaluasi dalam studi ini adalah BRILink, Agen46, dan Mandiri Agen—platform yang dikembangkan oleh bank-bank besar di Indonesia untuk memperluas layanan keuangan melalui jaringan berbasis agen. Pendekatan metode campuran digunakan, menggabungkan analisis kuantitatif menggunakan Analytic Hierarchy Process (AHP) dan perangkat lunak Expert Choice dengan wawasan kualitatif untuk memperkaya interpretasi hasil. Data dikumpulkan dari 100 responden yang memiliki pengalaman menggunakan ketiga layanan tersebut, memastikan evaluasi yang relevan dan berwawasan luas. Temuan mengungkapkan bahwa Perceived Ease of Use merupakan faktor yang paling dominan memengaruhi pilihan nasabah, dengan bobot 39,40%, diikuti oleh Perceived Usefulness sebesar 23,90%. Kepercayaan berada di peringkat ketiga dengan 22,30%, dan Risiko memiliki bobot terendah yaitu 14,30%. Temuan lanjutan menunjukkan bahwa BRILink merupakan lakupandai yang paling disukai berdasarkan penilaian terhadap kriteria: Perceived Ease of Use, Perceived Usefulness, Kepercayaan dan Risiko dengan skor 45,5%. Hal ini menunjukkan bahwa BRILink paling sesuai dengan harapan pelanggan di seluruh kriteria yang dipertimbangkan. Studi ini menawarkan wawasan strategis bagi lembaga keuangan untuk meningkatkan layanan perbankan agen melalui pendekatan yang berfokus pada pelanggan.

Kata Kunci: Persepsi Kepercayaan, Persepsi Kegunaan, Persepsi Kemudahan, Persepsi Risiko, Proses Hirarki Analitik

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Received: May 7, 2025; Revised: July 20, 2025; Accepted: August 10, 2025

INTRODUCTION

Accessing formal banking services remains a significant hurdle in numerous regions, particularly in remote or underserved communities. A major contributing factor is the considerable distance between where customers live and the nearest bank branch, which often discourages interaction with formal financial institutions (Rachmawati et al., 2019). However, this challenge is not limited to physical distance; it also encompasses broader socioeconomic issues. In areas lacking reliable or affordable transportation, even short distances can become substantial obstacles. Moreover, the separation from financial institutions is often accompanied by low financial literacy, compounding the exclusion of these populations from regulated financial systems. Beyond the physical barriers, the costs associated with banking access—such as travel, transaction fees, and administrative charges—further marginalize low-income groups. These financial burdens make formal banking seem less beneficial, as the costs can outweigh the perceived advantages (Yuliaty et al., 2018). Ironically, those most in need of secure financial services are frequently the ones most excluded from them.

To address these persistent barriers, banks have increasingly turned to innovative, technology-based solutions (Precious Nambeye & Lubinda Haabazoka, 2025). One such innovation is branchless banking, which allows banks to deliver services without relying on physical branches. This model uses digital platforms and community-based agents to reach populations in areas where traditional banking infrastructure is not feasible (Ashraf, 2023) (Palaon, Wiryono, & Faturohman, 2020). By leveraging mobile technology and agent networks, banks can provide core services—such as deposits, withdrawals, and transfers—in a more accessible and cost-effective manner (Prior & Mora, 2019). This system significantly reduces dependency on brick-and-mortar branches, which are often expensive to establish and maintain, especially in low-density or economically limited regions (Mohamed & Elgammal, 2023).

Recognizing the importance of inclusive finance, Indonesia's Financial Services Authority (OJK) issued a 2014 regulation allowing banks to operate without physical branches. This regulatory move officially introduced branchless banking, or *Layanan Keuangan Tanpa Kantor dalam Rangka Keuangan Inklusif (Laku Pandai)*, which was formally launched in March 2015. Initially implemented by seven banks as part of their 2015 business plans, the program was positively received. By 2024, it had expanded rapidly, with 1.36 million agents operating under 34 banks and reaching 512 out of 514 districts and municipalities in Indonesia (Otoritas Jasa Keuangan, 2024). This expansion had a measurable impact: 27.8 million Basic Saving Accounts (BSAs) were opened, collecting IDR 1.4 trillion in savings. Furthermore, more than 320,000 credit distributors used the agent networks to channel loans exceeding IDR 2 trillion. West Java led all provinces with 272,671 agents, representing 18.79% of the national total. Bank Rakyat Indonesia (BRI) emerged as the top contributor in agent deployment, demonstrating strong engagement in community-level financial access (Otoritas Jasa Keuangan, 2021). These achievements highlight the potential of branchless banking to reduce infrastructural and geographic limitations and foster financial inclusion through technology-driven approaches.

Branchless banking has become increasingly popular, reflecting the rising acceptance of digital financial services (Palaon et al., 2020) (Hana & Mustaqim, 2023). These services provide key advantages, notably in accessibility and operational efficiency. However, certain challenges hinder their broader adoption and inclusivity. Technological barriers are significant, especially in rural or underdeveloped areas with limited internet access, making service use difficult (Wahyuni et al.,

2023). Technical disruptions in mobile platforms also affect user experience (Adiandari, 2023). Security remains a major concern, as digital services are vulnerable to cyber threats like fraud and identity theft (Suseno & Aulawi, 2024), necessitating robust safeguards (Lee & Kim, 2020). Compared to conventional banks, branchless banking offers a narrower range of financial products, limiting user options (Saputra & Supangkat, 2018). Additionally, the absence of human interaction can reduce trust and customer satisfaction (Qazi & Khushk, 2019); (Zaffar, Kumar, & Zhao, 2019). Lastly, low financial literacy hampers adoption, as some users lack understanding of how to use the services effectively or assess related risks (Marhaeni et al., 2023); (Sholihah, Nurhapsari, & Rohmania, 2023). Branchless banking is broadly defined as delivering financial services via digital channels and agents without requiring physical branch visits (Yuliaty et al., 2018); (Kochar, 2018); (Kurila, Lazuras, & Ketikidis, 2016).

Numerous studies have examined technology adoption, utilizing various theoretical models to explain the underlying factors influencing individuals' willingness to embrace new technologies. Among the most prominent frameworks are the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), both of which offer insights into the drivers and obstacles of technology adoption (Singh et al., 2020). TAM, introduced by Davis (1989), posits that two core perceptions shape technology adoption: perceived usefulness and perceived ease of use (Balakrishnan et al., 2021). Perceived usefulness refers to the belief that a technology enhances task performance, while perceived ease of use denotes the degree to which the technology is free from complexity or effort (Huang, 2021). Technologies seen as both useful and easy to operate are more likely to be accepted by users. Expanding on TAM, UTAUT incorporates additional dimensions such as social influence, which captures the effect of social norms and the behavior of peers, family, or colleagues in shaping one's technology usage decisions (Tajul Urus, Othman, Syed Mustapha Nazri, & Kurniasari, 2022) (Zheng & Li, 2020). Beyond TAM and UTAUT, several other constructs contribute to understanding adoption behavior. Perceived risk, involving concerns over privacy, security, or technical failure, can deter users from adopting a technology (Hamzah, Razak, Yahaya, Shamsuddin, & Zahrin, 2022) (Abdul-Rahim, Bohari, Aman, & Awang, 2022); (Xie, Ye, Huang, & Ye, 2021). Attitude also plays a crucial role; individuals with favorable attitudes toward a technology are more inclined to adopt it, often based on prior experience or perceived benefits (Rouidi et al., 2022). Lastly, trust is pivotal—users are more likely to adopt technologies they perceive as reliable and secure, particularly when backed by a reputable provider and transparent processes (Mahmud, Joarder, & Muheymin-Us-Sakib, 2022); (Al Rubaiai & Pria, 2022) (Hassan et al., 2022).

The purpose of this study is to thoroughly examine the factors that drive the adoption of branchless banking. This study aims to understand the factors that influence customers' decisions to adopt this service and to explore the key aspects that lead to the successful adoption of branchless banking technology. The study utilizes the Analytical Hierarchy Process (AHP) method to analyze and assess these factors. Through AHP, the study not only aims to identify the main factors that drive adoption but also to understand how these factors interact with each other and influence customer decisions.

RESEARCH METHOD

This study adopts a mixed-methods approach to examine consumer preferences in selecting branchless banking services in Indonesia. This approach integrates the strengths of quantitative analysis with the contextual depth of qualitative insights. Specifically, the Analytical Hierarchy Process (AHP) is used to systematically assess various decision-making criteria, while in-depth interviews with three key informants provide richer, more nuanced perspectives on user experiences with BRILink, Mandiri Agen, and Agen46.

The AHP method is particularly appropriate for this study because it captures subjective user preferences related to intangible service attributes—such as perceived convenience, usefulness, trust, and risk—which are critical in digital financial service settings. Originally developed by Saaty (1990), AHP has been widely applied in multi-criteria decision-making contexts. It enables complex decisions to be broken down into a hierarchical structure consisting of the main objective, evaluation criteria, and alternatives (Saaty, 1990). The method involves pairwise comparisons and assigns preference weights to each element. Consistency in judgments is measured using the Consistency Ratio (CR), where values ≤0.1 are deemed acceptable. If the CR exceeds this threshold, respondents' inputs are re-evaluated to improve consistency ((Balubaid & Alamoudi, 2015).

Quantitative data were collected from 100 respondents selected through purposive sampling, based on their direct experience with all three branchless banking services. This sampling method ensures that participants are capable of providing informed comparative evaluations. While the sample size is modest, it is considered appropriate for AHP-based studies, which prioritize the relevance and expertise of respondents over sheer quantity ((Hair, 2017).

This study employs the Analytic Hierarchy Process (AHP) to assess customer preferences in choosing branchless banking services. The AHP framework is organized into three hierarchical levels: the top level represents the overall objective—identifying the most preferred branchless banking provider; the middle level comprises four evaluation criteria—Perceived Ease of Use, Perceived Usefulness, Perceived Trust, and Perceived Risk; and the bottom level includes the three service alternatives: BRILink, Mandiri Agen, and Agen46.

The evaluation criteria and their respective sub-criteria are based on constructs from the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), as introduced by Davis (1989). The *Perceived Ease of Use* criterion includes: (1) proximity of the service location to the customer's residence, (2) ability to conduct transactions at any time, and (3) transaction convenience. *Perceived Usefulness* is measured by: (1) time-saving in transactions and (2) availability of diverse banking products. *Perceived Trust* is assessed through: (1) service convenience, (2) transaction security, and (3) the bank's reputation. Finally, *Perceived Risk* encompasses: (1) relatively high transaction fees and (2) the possibility of delays in fund transfers due to network issues (Marhaeni et al., 2023) (Mayandi, Rachman, Alexander Tardini, & Asrol, 2023) (Shahabi, Azar, Faezy Razi, & Fallah Shams, 2021) (Setiyono, Shihab, & Azzahro, 2019) (Slazus & Bick, 2022a) (Zaffar et al., 2019) (Islatince, 2024).

To gather the required data, a structured questionnaire was designed using a pairwise comparison format. Respondents were asked to assess the relative importance of two elements at a time using Saaty's 1–9 scale. These comparisons were applied to both the criteria and the service alternatives. Clear instructions and illustrative examples were included to ensure respondent comprehension, and a pre-test was conducted to validate the clarity and reliability of the instrument. Participants in the study were experienced users of the three services being evaluated.

The collected data were analyzed using Expert Choice software, which generated priority weights for each criterion and alternative. Additionally, a *Consistency Ratio* (CR) was calculated to verify the reliability of the respondents' judgments before interpreting the final rankings.

To complement the structured insights provided by AHP, semi-structured interviews were conducted with three carefully selected informants: a branchless banking agent, a frequent user of digital banking services, and a local village leader who actively promotes digital financial inclusion in rural areas. The interviews explored key themes such as service accessibility, trust-building between agents and customers, infrastructure reliability, and perceived risks in non-branch environments.

The integration of AHP and in-depth interviews enables a triangulated understanding of consumer decision-making. While AHP offers a methodologically rigorous structure to quantify preferences, interviews contribute cultural, emotional, and situational context often absent from numerical models. This dual approach balances the limitations of each method: the structured logic of AHP is enriched by the narrative depth of qualitative data, while subjective interpretations from interviews are grounded in the analytical robustness of AHP (Creswell John and Creswell David, 2023).

RESULTS AND DISCUSSIONS

Respondent Characteristics

This study identifies respondent characteristics based on two criteria: gender and type of occupation. In Garut Regency, 67.5% of branchless banking users are women, indicating a higher level of engagement by female users in utilizing these services. While this reflects a demographic reality, it also points to deeper gendered patterns of financial behavior. In many Indonesian households—especially in rural areas—women traditionally assume responsibility for managing daily financial needs such as budgeting, paying bills, and purchasing essentials. These cultural roles, deeply embedded in social norms, shape the way women interact with financial services. Branchless banking aligns well with these responsibilities by offering convenience, flexibility, and proximity, which are particularly beneficial for women who often juggle multiple domestic tasks and have limited mobility or time to access formal banking channels. The ability to perform financial transactions without needing to visit a bank or ATM reduces time and logistical barriers, reinforcing women's roles as financial managers within their households. This reflects not only practical adaptation but also a subtle form of financial empowerment, enabling women to engage with the financial system in a way that respects cultural expectations while enhancing their autonomy.

In Garut Regency, around 35% of branchless banking users are from the informal sector, including housewives, laborers, and farmers. This demographic also reflects the intersection of economic marginalization and cultural constraints. Informal workers, particularly women in this group, often face irregular work hours, lack of legal employment protections, and limited proximity to financial infrastructure. Culturally, many of them may perceive banks as institutions primarily serving the formally employed or urban populations, leading to a sense of exclusion. Branchless banking serves as a culturally resonant and economically viable alternative for these groups. Its local accessibility and flexible operation match the livelihood patterns of informal workers who

cannot afford to take time off for traditional banking. This democratization of access through agent-based services in local communities empowers marginalized populations, particularly women, to engage with the financial system on their own terms. It also reinforces the importance of designing financial services that are not only economically inclusive but also culturally sensitive and gender-responsive.

AHP Results

This study yielded an Inconsistency Ratio of 0.01, well below Saaty's (1990) acceptable threshold of 0.1, indicating a high level of consistency in the pairwise comparisons. Such a low ratio suggests minimal inconsistency, reinforcing the reliability and validity of the AHP results. Therefore, the findings are considered dependable, with consistent respondent assessments. Table 1 presents the ranking of branchless banking selection criteria based on these evaluations.

Table 1. The Order of Selection Criteria for Branchless Banking.

Rank	Criteria	Priority Value (%)
1	Perceived Ease of Use	0.390
2	Perceived Usefulness	0.240
3	Trust	0.226
4	Perceived of Risk	0.143
Total		1

Source: data processing, 2024

Table 1 indicates that in assessing the criteria for selecting branchless banking services, respondents place the highest priority on perceived ease of use, which accounts for 39.00% of the total score. This highlights *ease of use* as the most influential factor in customer preferences, surpassing other considerations such as perceived usefulness (24.00%), perceived trust (22.60%), and perceived risk (14.30%). The emphasis on perceived ease of use reflects the practical value of branchless banking in enhancing accessibility, particularly for users in rural or underserved areas. The presence of local agents allows users to conduct transactions without needing to travel to formal bank branches or ATMs. This convenience reduces the time and costs associated with accessing financial services, making it a critical driver for adoption. The ability to perform financial transactions in familiar, community-based settings also alleviates technological or procedural barriers that many low-income or first-time users might face.

However, despite the dominance of perceived ease of use, it is important to recognize that trust and risk remain fundamental in the context of financial transactions. Financial services inherently involve sensitive information and the movement of personal funds, which necessitates a high degree of user confidence in the security and integrity of the system. The weight assigned to perceived trust (22.60%) illustrates that users still evaluate the credibility, reliability, and accountability of branchless banking providers. Trust is often built through repeated positive experiences, institutional reputation, and the professionalism of the agents. It also connects closely to the perceived support and redress mechanisms available in case of errors or fraud. Similarly, perceived risk (14.30%), although rated lower, plays a significant role in shaping user decisions. Users weigh potential risks such as transaction errors, loss of funds, data breaches, or fraud when choosing a branchless banking service. In areas where formal financial literacy may be limited, risk perception can significantly influence whether users feel comfortable using such services regularly.

Branchless banking models must therefore not only offer user-friendly interfaces but also demonstrate risk mitigation strategies, such as transparent transaction records, agent training, and secure technology infrastructure.

The findings of this study align with previous research, showing that the ease of conducting transactions through branchless banking plays a key role in increasing customer interest in using the service. The smoother and more seamless the transaction process, the more inclined customers are to engage with branchless banking (Rachmawati et al., 2019); (Marhaeni et al., 2023) (Nuhu, 2024) (Mayandi et al., 2023). This suggests that perceived ease of use affects not only user comfort but also their decision to continue utilizing such services. Insights from respondent interviews further support this notion, as many participants noted the significant role of accessible agents who are always ready to assist, along with the convenience of having branchless banking locations situated closer to their homes than traditional bank offices or ATMs. These factors demonstrate that perceived ease of use is a critical consideration, with improved accessibility and agent support enhancing and streamlining the overall transaction experience.

When evaluating branchless banking services, customers primarily consider perceived ease of use, yet other factors—such as perceived usefulness, trust, and risk—also significantly influence their decisions. Perceived usefulness, which reflects the benefits and added value that users gain from these services, received a score of 24.00%. Customers are more inclined to continue using a service when they believe it provides meaningful advantages. Perceived trust, scoring 22.60%, is another critical aspect. It reflects the confidence customers have in the security and reliability of branchless banking. Trust is fundamental in financial services, where customers must feel that their personal information and funds are protected. Thus, service providers must implement robust security measures and cultivate a strong reputation to retain customer trust (Reaves et al., 2017); (Saputra & Supangkat, 2018); (Saif, Hussin, Husin, Alwadain, & Chakraborty, 2022) (Ashraf, 2023). Although perceived risk received the lowest score at 14.30%, it remains an important consideration (Muthinja & Chipeta, 2017) (Islatince, 2024) (Slazus & Bick, 2022b). Risks may include concerns about fraud, transaction errors, or technical malfunctions. Even though risk is rated lower than other factors, providers must proactively address and manage these concerns to ensure a secure and satisfactory user experience (Prior & Mora, 2019)(Mohamed & Elgammal, 2023).

Based on the results of the sub-criteria calculations using the Analytical Hierarchy Process (AHP) method, the description of the respondents' responses can be explained in Table 2:

Table 2. The Order of Sub-Criteria for Selecting Branchless Banking.

Rank	Sub Criteria	Priority Value (%)	Inf.
Sub Criteria Ease of Use			
1	The proximity of the location to the place of residence	0.213	R1
2	Transactions anytime	0.105	R2
3	Transactions are more practical	0.072	R3
	Total Sub-Criteria of Ease of Use	0.390	
Sub Criteria Usefulness			
1	Save transaction time	0.168	R1
2	Varied Products	0.072	R2
	Total Sub-Criteria of Usefulness	0.240	
Sub Criteria Trust			

Rank	Sub Criteria	Priority Value (%)	Inf.
1	Convenience of services provided	0.112	R1
2	Transaction security	0.069	R2
3	Bank's Reputation	0.045	R3
	Total Sub-Criteria of Trust	0.226	
Sub Criteria Risk			
1	Transaction fees are quite high	0.097	R1
2	Funds pending due to network disruption	0.046	R2
	Total Sub-Criteria of Risk	0.143	

Source: data processing, 2024

The evaluation criteria used by customers in selecting branchless banking services, as presented in Table 2, emphasize perceived ease of use and usefulness. The data show that perceived ease of use holds the highest priority value at 39.00%, primarily driven by the sub-criterion of proximity to the customer's residence, which accounts for 21.30%. This suggests that customers place greater importance on how close the service is to where they live, compared to other aspects such as the ease of performing transactions or the flexibility to carry out transactions at any time.

The proximity factor indicates that customers tend to favor branchless banking services that are easily accessible from their homes (Rachmawati et al., 2019) (Slazus & Bick, 2022b). The availability of agents near residential areas significantly impacts customers' decisions to utilize the service. Having agents nearby minimizes the time and effort required to perform transactions and reduces the inconvenience of traveling long distances to bank branches or ATMs. Therefore, a strategically located service is a key factor in selecting branchless banking, as it offers substantial ease of access. Compared to proximity, other aspects of perceived ease of use—such as the simplicity of transaction processes and flexibility in transaction timing—are assigned lower priority values (Kochar, 2018) (Precious Nambeye & Lubinda Haabazoka, 2025). While these aspects are still relevant, customers place greater importance on the physical closeness of services. This suggests that direct and immediate access outweighs general practicality or flexible timing in the eyes of customers.

Within the usefulness perception criteria, the priority score of 24.00% indicates that customers place greater importance on saving time during transactions than on having access to a wide range of financial products. The sub-criterion for saving transaction time received a score of 16.80%, while the availability of varied products scored only 7.20%. This shows that, although various products and services are offered, most customers primarily utilize essential services such as bill payments, transfers, deposits, and cash withdrawals, with efficiency and speed being the main priorities (Prior & Mora, 2019) (Saif et al., 2022). Branchless banking is particularly effective in meeting this need for speed, as it eliminates the need to queue at a physical bank and allows for faster transaction processing (Marhaeni et al., 2023). The ability to conduct transactions easily, at any time, and without being constrained by conventional bank operating hours further enhances its appeal. These characteristics position branchless banking as a highly practical and efficient service model. The importance of transaction speed as a dimension of perceived usefulness is also supported by research findings showing that it significantly influences customer interest in using branchless banking services (Ghani, Ali, Musa, & Omonov, 2022)(Nuhu, 2024) (Setiyono et al., 2019). This underscores that customers are more likely to adopt such services when they experience tangible benefits like faster and more convenient transactions.

In the realm of branchless banking, perceived trust is a pivotal factor influencing customer adoption decisions. Research shows that this criterion carries a priority value of 22.60%, with service convenience emerging as the most influential sub-factor at 10.20%, surpassing both transaction security (7.90%) and bank reputation (4.70%) (Slazus & Bick, 2022b). Service convenience refers to elements such as the agent's professionalism, responsiveness, and ease of conducting transactions. Agents who are knowledgeable, courteous, and able to build rapport with customers help foster a sense of reliability and satisfaction in the service experience (Marhaeni et al., 2023). A friendly and attentive service environment significantly enhances customer comfort, reinforcing their trust in the branchless banking system (BEYBUR, 2022)(Slazus & Bick, 2022a)(Kochar, 2018). The interview findings support this, revealing that customers place the highest value on responsive and respectful treatment from agents, which encourages continued use of the service. This perception of convenience extends beyond interpersonal aspects to include seamless access and operational efficiency (Nuhu, 2024) (Mohamed & Elgammal, 2023). While concerns such as fraud and identity theft remain relevant, customers tend to prioritize the quality of their service experience over potential security risks. Thus, positive and consistent service interactions are more influential in shaping trust than concerns about transaction safety (Kesa, Somantri, & Huruta, 2025) (Reaves et al., 2017). Moreover, bank reputation, although still relevant, ranks third in importance. Trust is more strongly built through direct service encounters than through institutional reputation alone. Therefore, empathetic and customer-centered service delivery by agents plays a more decisive role in building lasting customer trust (Setiyono, Shihab, & Azzahro, 2019).

In branchless banking services, customers perceive transaction costs as a more critical risk factor, with a weight of 9.70%, compared to the risk of fund delays due to network disruptions, which holds a lower priority at 4.60%. This indicates that customers are more sensitive to the financial burden of fees than to potential technical disruptions. The concern over high transaction costs reflects a strong preference for financial transparency and control (Saif et al., 2022). Even though these fees may be considered costly, customers find reassurance in knowing the exact amount they will be charged, allowing them to plan accordingly (Islatince, 2024) (Prior & Mora, 2019). In contrast, network-related risks—such as delayed or failed fund transfers—are viewed as more unpredictable and potentially disruptive to their financial activities. Respondents in this study confirmed that they would rather incur higher administrative fees than deal with the uncertainty and stress caused by delayed transactions. This preference suggests that customers prioritize reliability and consistency in the transaction process over the minimization of service fees (Pervin & Sarker, 2021) (Mohamed & Elgammal, 2024) (Arshad, Rizvi, Mahfooz, & Ahmad, 2024). By choosing predictable costs over operational uncertainty, customers demonstrate that perceived control and stability are essential aspects of their trust in the branchless banking system.

In this study, there are three types of alternative Branchless Banking, namely: BRILink, Agen46, and Mandiri Agen. Based on the criteria or factors for selecting Branchless Banking, according to 100 respondents based on the AHP method, the results are described in Table 3:

Table 3. Branchless Banking Agent Alternative Order

Rank	Alternative	Priority Value
1	BRILink	0.455

Rank	Alternative	Priority Value
2	Mandiri Agen	0.315
3	Agen 46	0.230
	Total	1

Source: data processing, 2024

In Table 3, the results of respondents' preferences for alternative branchless banking services are displayed. BRILink is the most popular choice, with a score of 45.50%. Following closely is Mandiri Agen, with a score of 31.50%, and in third place is Agen 46, with a score of 23.00%. This data suggests that respondents are more inclined to choose BRILink over Mandiri Agen and Agen 46 based on various criteria.

BRILink is a branchless banking service offered by Bank Rakyat Indonesia (BRI) that provides significant usefulness to customers. Interviews with respondents have confirmed that many consider BRILink to be the top choice due to its easy access, usefulness, and high level of trust. The wide agent network of BRILink allows customers to easily locate agents in their vicinity, making it especially convenient for those in remote areas or with limited access to traditional banks. With its extensive network, BRILink enables customers to carry out various banking transactions like bill payments, money transfers, and balance top-ups. Additionally, BRILink offers technology that facilitates transactions and provides a better user experience, including a fast and efficient system and technical support for agents.

Customer trust in BRILink is crucial in their decision to choose this service. BRILink has built a high level of trust through its quality service, agent integrity, and solid reputation as part of Bank Rakyat Indonesia. Customers feel safe and comfortable transacting through BRILink because they believe it is reliable and provides adequate protection for their information and funds. By the end of 2020, Bank BRI had over five hundred thousand BRILink agents, indicating the rapid growth and widespread acceptance of this service in the market (Frisca widya lestari et al., 2023). This data shows that BRILink is not only a popular choice, but also widely accepted and used by many customers throughout the country. Figure 1 presents a hierarchical form of the processed merger of each level of criteria and sub-criteria.

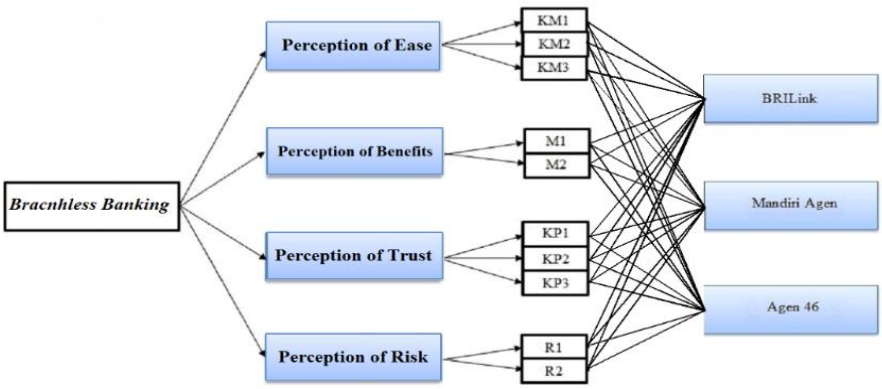

Figure 1. Hierarchical Structure
Source: data processing (2024)

 ISSN 2715-8071 (online)

Figure 2 depicts a sensitivity graph that presents the analysis results of branchless banking selection based on specific criteria including ease of use, trustworthiness, usefulness, and perceived risk. The graph compares three alternative branchless banking services: BRILink, Mandiri Agen, and Agen46.

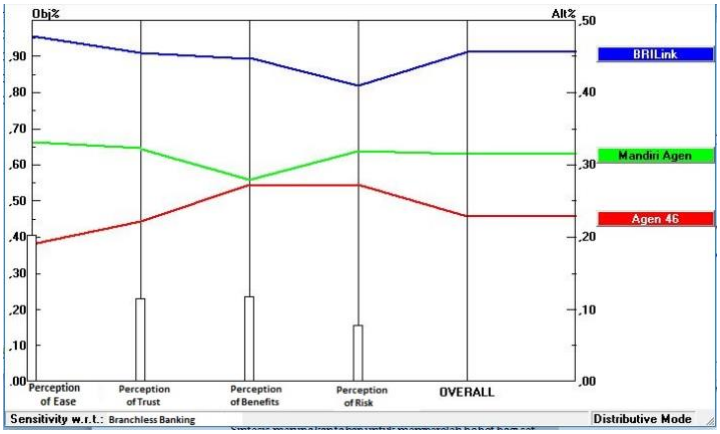

Figure 2. Hierarchical Process Performance Curve
Source: Ec 11 model (2024)

Figure 1 presents the AHP hierarchy employed to evaluate branchless banking services, placing user perceptions—such as ease of use, usefulness, trust, and risk—as the core criteria for assessing service quality. In this context, the sensitivity analysis shown in Figure 2 offers more than a numerical ranking; it reveals deeper dynamics related to service delivery models, infrastructure coverage, and institutional trust—elements that are essential for advancing branchless banking as a means of financial inclusion in Indonesia.

The analysis highlights BRILink as the most preferred branchless banking service across all evaluation criteria. This preference is not solely due to its high performance in perceived convenience and low risk, but also stems from its strong alignment with the everyday realities of users, particularly in rural areas. BRILink ranks highest in perceived ease of access and safety, reflecting the confidence users have in both the reliability and security of the service. These perceptions are crucial in building sustained user engagement and satisfaction. BRILink's leading position can be attributed to the expansive and deeply rooted agent network of Bank Rakyat Indonesia (BRI), which has historically served low-income and rural communities. Unlike its competitors, BRILink integrates digital innovation with a strong physical presence, allowing users to perform financial transactions within their own communities with minimal barriers. This proximity not only reduces transaction costs but also creates a sense of trust and familiarity that is essential in a context where formal banking services are often seen as distant or intimidating.

Mandiri Agen, operated by Bank Mandiri, ranks second. While its service quality is generally acceptable, it lacks the localized presence and contextual sensitivity demonstrated by BRILink. Its lower ranking suggests that users may perceive it as less tailored to their specific needs, particularly in underserved areas. The absence of a deeply embedded community-level network appears to limit its effectiveness as a truly inclusive financial service. Agen46, operated by Bank BNI, receives the

lowest ranking among the three options. This result likely reflects several interrelated challenges, including limited agent outreach, weaker customer engagement, and a perceived lack of reliability. The service is seen as less user-friendly and less trusted, which undermines its role in promoting financial inclusion. Users may not feel confident in relying on Agen46 due to either insufficient access points or inadequate support at the local level.

In sum, BRILink's dominance is not merely a reflection of superior service attributes, but rather of its capacity to bridge institutional capabilities with community-based needs. Its success underscores the critical importance of accessibility, localized trust, and cultural familiarity in the implementation of branchless banking systems. These findings suggest that future efforts to scale branchless banking must move beyond digital infrastructure alone and instead adopt a more holistic, user-centered approach that recognizes the socio-spatial dimensions of financial inclusion in Indonesia.

CONCLUSION

This study applied the Analytical Hierarchy Process (AHP) to develop a hierarchical structure for evaluating branchless banking services based on customer preferences. The analysis revealed that perceived convenience is the most influential factor in service adoption, followed by usefulness, trust, and finally perceived risk. Among the available alternatives, BRILink was ranked highest due to its superior accessibility and service convenience. Mandiri Agen ranked second, offering relatively comparable convenience, while Agen46 received the lowest preference, indicating its lower performance in meeting customer expectations across key criteria.

Despite these valuable insights, the study has several limitations. The sample size was limited, the selected branchless services varied among respondents, and important socio-cultural factors were not fully considered. Additionally, the short data collection period may have constrained the depth of the analysis. Theoretical implications of this research highlight the need to strengthen user-centered technology adoption models, particularly in digital financial services aimed at underserved regions. This study also contributes to the literature by demonstrating the utility of AHP in understanding user priorities in financial technology adoption. Practical implications suggest that service providers should prioritize enhancing convenience, improving agent availability in strategic locations, and reducing transaction time. BRILink can maintain its lead by aligning services with local user needs, while competitors like Mandiri Agen and Agen46 should address existing service gaps. A deeper understanding of customer preferences can help shape more inclusive digital finance strategies, product development, and market outreach initiatives.

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