

Does Firm Innovativeness Matter? EFFECTS Of User Attitude To Intention To Adopt Novel Pan-African Digital Payment: User Perspectives

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ABSTRACT:

Digital payments are thriving among SMEs following the COVID-19 pandemic that made businesses re-adjust to reality. Businesses seek to maintain the status quo while new payment technologies are evolving. However, challenges are associated with accepting new payment technologies, which concerns low adoption. The study focused on the levels of firms' innovativeness to the effects of user attitudes on intention to adopt novel pan-African digital payment. The structural equation model analyzed the 369 data pooled through judgmental sampling. A Structured questionnaire adapted from literature and measured on 7-point Likert was used. The findings revealed significant differences in user attitudes to intention to adopt digital pan-African payment technology depending on the level of firms' innovativeness. SMEs with low innovativeness tend to have lower direct effects on firms' attitudes towards intention to adopt new pan-African payment technology, while SMEs with low firms' innovativeness tend to have higher indirect effect of perceived compatibility and perceived trust to the firms' attitude on their intention to adopt novel pan-African payment technology. The implication calls for strategic initiatives such as strategic marketing communication and campaigns directed to SMEs to enable a better understanding of the operations of the novel pan-African payment technology. This will deepen awareness and improve the favourableness and likeness of the SMEs towards the novel pan-African payment technology.

KEYWORDS: *Attitude, Adoption, digitalization, SMEs, Digital payments*

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INTRODUCTION

The African payment system is fragmented and undeveloped compared to the nature of the payment ecosystem in developed countries. Businesses consider receipts and payments a fundamental aspect of business operations because of the role of money in business activities. Before the millennial era, cash was central to settling business financial transactions. This led to several problems associated with cash for

businesses, such as the risk of theft, while the cost of cash handling and management gravely impacted the banking system. Pan-African trade suffers following the delays in payments often caused by conversion to a third currency. This is further hindered by Africa's over 40 different types of currencies. Unlike the Euro, which facilitates trade among businesses across European countries, the African continent requires the Euro or the Dollar to facilitate payment.

However, technological advancements have led to tremendous transformation of the payment ecosystem. The benefits of technology in the convenience of payments and speed of transactions are attractions to businesses. The patronage of digital payments facilitates e-commerce development in several regions. It is increasingly becoming relevant in cross-border transactions (Gaya, 2022). There has been significant growth in the value of cross-border payments following the increasing digitalization of the global economy (Visa Economic Empowerment Institute, 2022). This is a significant development for small and medium enterprises (SMEs) following the hindrances they encounter in cross-border trade financing as of 2016. According to the World Trade Organisation (2016), the period preceding the moment was challenging for SMEs because of the inadequacy of skills and expertise in the products useful in cross-border finance and the lack of awareness of their existence. The importance is buttressed by SMEs' rising demand for cross-border trade finance instruments, with about 37% demand rate (Kim *et al.*, 2019). Significantly, letters of credit and other traditional trade instruments were mainly used by SMEs in West Africa before the emergence of borderless payments (World Trade Organisation, 2022), which was made prominent with the Covid-19 pandemic that led to significant ditching of traditional methods (Borderless Payments Report, 2022).

Regarding borderless payments, it was a useful avenue for SMEs during COVID-19 as the pandemic led to enforced adjustments to strategies, leading to many SMEs selling beyond the country's borders. According to the Borderless Payments Report (2022), SMEs are unwilling to back down on the opportunity, having experienced new benefits of cross-border customers and the provisions of digital payments that accelerated the cross-border payments that were light years ahead to present reality overnight. Though there are concerns about online payment fraud, the experience has opened more opportunities to innovate cross-border digital payment systems. The alignment to e-commerce and cross-border trade has yielded results, unlike the outcomes before the pandemic. Significant results from India, China, and South Africa suggested that the pivot to online sales strongly indicated cross-border payments as the major facilitator in the switch to online sales, having a presence internationally, and onboarding new services and suppliers from across the world (Borderless Payments Report, 2022).

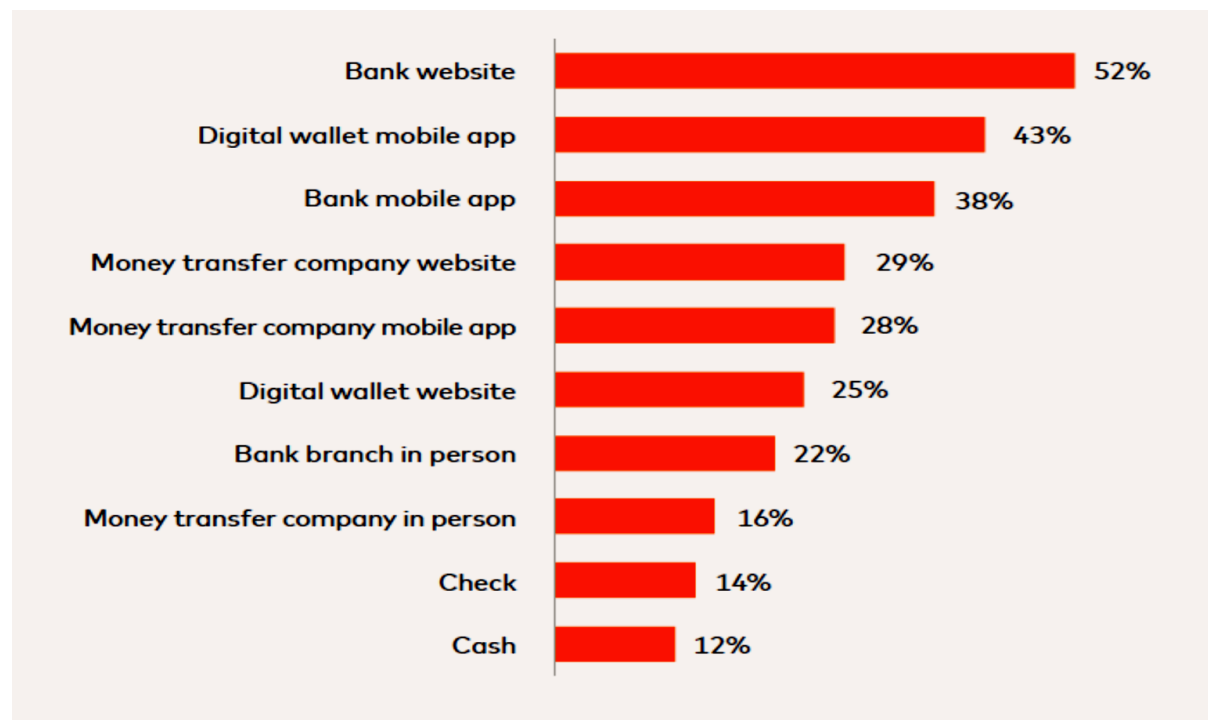


Figure 1: Methods of making cross-border payments for SMEs
Source: Borderless Payments Report (2022).

However, there are challenges with cross-border payments not having optimal interoperability to the extent that it hinders payments from cross-border customers due to the differences in payment platforms. In this regard, nations and associations are pursuing avenues that will facilitate easier, safer, and instant payments. Thus, facilitating the digital borderless payment system will demand interoperability in the regulatory dimension, network perspective, and technical or uniformity aspects (Visa Economic Empowerment Institute, 2022). The demand of SMEs for digitalized cross-border payment options is rising, with web-based bank platforms, fintech banking solutions, and mobile options having about 72% usage patronage from SMEs (Borderless Payments Report, 2022).

The business owners are finding it more attractive, though Abayomi (2023) emphasized that the adoption level by SMEs is very low. However, the differences in their level of adoption lay in their innovativeness. The influence on technology adoption within a firm is often traced to the owners' and managers' innovativeness (Shahadat *et al.*, 2023). It is a function of skills like information technology (IT) and the ability to perceive innovation as significant to the business. However, according to the Borderless Payments Report (2022), there are concerns with government restrictions on digitalized cross-border payment platforms. Evidence from the literature suggests that SME owners and customers are comfortable with safe, secure, fast, transparent, and less costly options. However, cost is not a significant factor.

With the evolutions in Cross border payment, African countries are integrating into the payment ecosystem. M-money solutions such as Kenya's M-Pesa and Airtel money, Uganda and Zambia's MTN mobile money, and Tanzania's Tigo Pesa are options for cross-border payments. However, they have limitations on transaction limits (AfricaNenda, 2022). Regional markets are becoming the attention of most African economies on how to simplify payments across the borders in their regions. The East African Community (EAC) and Common Market for Eastern and Southern Africa (COMESA) spurred their regional trade settlements with Real Time Gross Settlement (RTGS). At the same time, the East African Payment System (EAPS) and the Regional Payment Settlement System (RPSS), that is operational in four and nine African countries, respectively, have impacted the volume and value of transactions with significant involvements of SMEs (AfricaNenda, 2022). Within the West African Monetary Zone (WAMZ) that involves Nigeria and six other African countries, such as Ghana, the new payment technology – Pan-African Payment and Settlement System (PAPSS), is pushing to achieve similar success with the other payment solutions for SMEs.

PAPSS is a novel pan-African digital payment designed to eliminate the pain points in the WAMZ region. Evidence from the literature suggests that SMEs' sales are projected to increase when inadequate digital interoperability that leads to their lost sales is mitigated (Visa Economic Empowerment Institute, 2022). The goal of PAPSS is to significantly reduce the excessive reliance on third currency, facilitate instant receipts and payment in local currencies, significantly reduce transaction costs, and enable accessibility to African SMEs (Abayomi, 2023). The contributions of commercial banks, such as Access Bank Group and UBA Group, in adopting the payment system for SMEs' settlement of transactions are helping to revolutionize WAMZ cross-border trade transactions (Moses-Ashike, 2023). Therefore, PAPSS, a novel pan-African digital payment system, enables the buyer to instruct the local bank to debit personal accounts and pay foreign sellers a stipulated amount (Brookings, 2022).

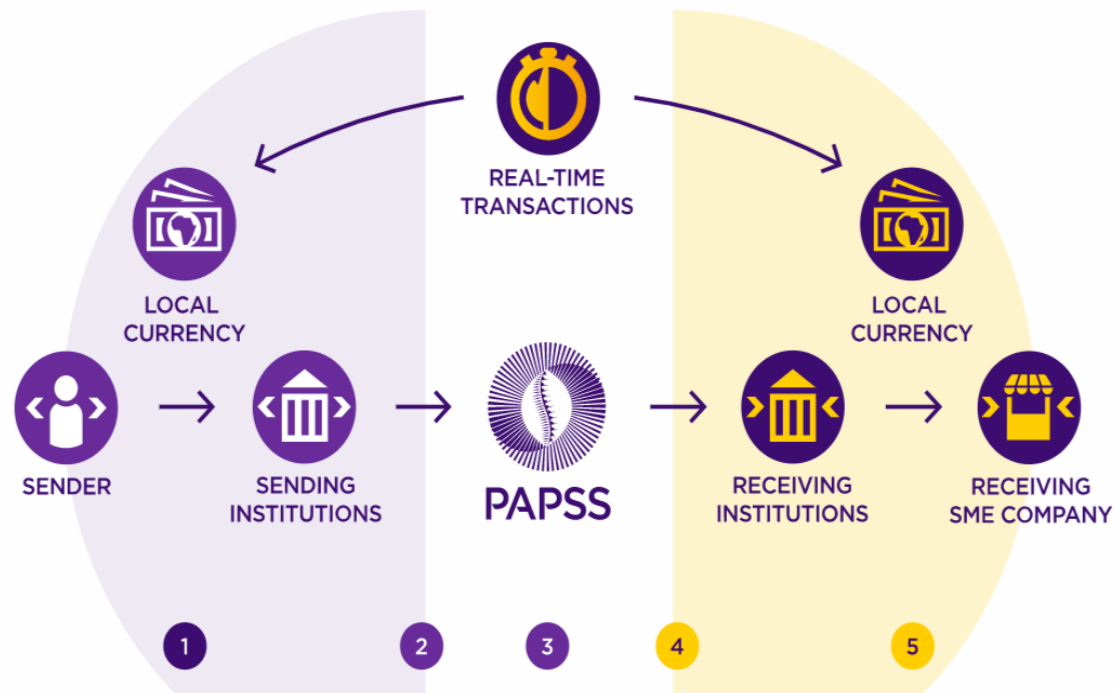


Figure 2 How PAPSS works

Source: PAPSS (n.d.)

However, how humans perceive an object can impact their attitude and intentions. Consequently, such perceptions can predict actions (Lee, 2020), mainly as intentions, but not as a proxy for the actual behavior (Jeyaraj *et al.*, 2023). Therefore, intentions can be perceived as a person's self-instruction to try something new. It is considered a degree to which an individual has made deliberate arrangements to engage in future conduct or refrain from future conduct (Warshaw & Davis, 1985). It suggests that the target individual has deliberated on an action and would be prepared to expend an effort toward the object (Webb & Sheeran, 2006). In this guise, intentions are well-established as the proximate cause of actual behavior (Ventatesh *et al.*, 2006). It is often used as a dependent variable in studying user intentions. It has been interchanged in literature with intention to use, intention to adopt, intention to readopt, intention to upgrade, intention to continue, intention to discontinue, and intention to switch (Jeyaraj *et al.*, 2023). Extant literature indicates the existence of recognizing the gap between intention and actual behavior but also suggests that the relationship between the two has not always been empirically supported (Jeyaraj, 2021). This is because of the role of habit, bendable interventions that change them, the automaticity of human behavior, and biased information processing on behavior engagement through strong intentions are indicative of a reduction in the intention-behavior gap because they are more stable over time (Conner & Norman, 2022). However, effects on medium to significant intentions often reflect changes in behavior that are small to medium in size (Sheeran *et al.*, 2016). However, innovativeness is a significant consideration in the adoption process. According to Shahadat *et al.* (2023), the influence of adopting technology within a firm is often traced to the owners' and managers' innovativeness. Agarwal and Prasad (1998) address the concept of innovativeness, in which the authors assert that the concept focuses on implementing innovation. Therefore, firm innovativeness is emphasized on the owners' IT skills, receptiveness to technological change and implementations, and the employment of ICT-savvy workers. The projection is that the user behavior towards intention to adopt PAPPSS would differ significantly among firms with different levels of innovativeness. The skill, knowledge, and ability are buttressed to be a significant attribute of innovativeness. According to Shahadat *et al.* (2023), it plays a significant role in the perception of what innovation can offer the firm. Studies reveal a significant relationship between firm innovativeness and innovation adoption (Shahadat *et al.*, 2023; Setiowati *et al.*, 2015). Subramanian and Nilakanta (1996) argue the dimension of firm innovativeness as the meantime of adopting innovation, the number of adopted innovations, and the consistency. The level of innovativeness (High, moderate, low) adopted in the study is consistent with Walsh *et al.* (2017) as the dimensions of innovativeness. Innovativeness at the firm's level emphasizes a proactive approach at the firm's level in doing business in new ways (Menguc & Auh, 2006).

However, studies of this sort have adopted different theories to explain SMEs' adoption of new technologies. Shahadat *et al.* (2023) and Marei *et al.* (2023) adopted a technological organization environment (TOE) in examining digital technology adoption by SMEs. The study is anchored on an integrative model focusing on the technological acceptance model (T.A.M.) constructs and its extensions and diffusion of innovation (DOI).

Perceived Relative Advantage (PRA)

"This is the degree to which an innovation is perceived to be better than the idea it supersedes" (Rogers, 1983). It is often related to Davis (1989) perceived usefulness. It can be measured from the economic aspect, convenience, and satisfaction. The key focus is on the advantage it has over any other innovation. It explains how an individual can recognize that the new technology has better benefits than existing technology (Oloveze *et al.*, 2023). Therefore, it presents the idea of comparing the present ideas against the old ideas. Adopting critical features of the old and the new technology conditions is the implication. Essentially, where the perceptions from the comparison are high on the new technology being more beneficial, adoption increases (Badi *et al.*, 2021). This attribute has been variedly studied to explain diffusion. It is argued to be impacted by technologies' novelty, complexity, and ease of integration (Kaine & Wright, 2022). Results on the effect of perceived relative advantage have been discordant in the literature. Extant literature revealed that perceived relative advantage does not significantly impact adoption among businesses in China (Pan *et al.*, 2022), while other studies indicate that it significantly impacts the adoption of technological innovations (Ali Abbasi *et al.*, 2022; Mohammad *et al.*, 2023) and entrepreneurial intention to adopt e-payment system (Oloveze *et al.*, 2023).

H1: The effect of PRA on firms' attitudes would significantly differ based on the level of firms' innovativeness

Perceived Ease of Use (PEoU)

This is about using a technological innovation (Davis, 1989). It is about users' perception in considering an innovation's use to be effortless (Venkatesh *et al.*, 2003). The concentration of this attribute to technological adoption is on the effort-free nature of it, as several studies view it from this dimension (Davis, 1989; Nguyen, 2020; Sunny, 2018). It has a significant impact on the adoption of technology. Further, it has a dual effect on adoption through attitude and usefulness (Davis, 1989). It has been proven in extant studies (Liébana-Cabanillas & Lara-Rubio, 2017). According to Sugandini *et al.* (2018a), it has high reliability following its applicability in various technology contexts. Studies show contrasting results of its effect on attitude. Ramos-de-Luna *et al.* (2016) found a non significant effect on attitude. Other results reported a significant result in adopting solar energy technology (Bandara & Amarasena, 2018), MSME's technology adoption (Sugandini *et al.*, 2018b), and intention to use technology (Oktania & Indarwati, 2022; Putri *et al.*, 2022; Oloveze *et al.*, 2022b). Further studies report that the effect of PEoU is significant on perceived usefulness (Ramos-de-Luna *et al.*, 2019).

H2: The effect of perceived ease of use on firms' attitudes would significantly differ based on the level of firms' innovativeness

Perceived Compatibility (PC)

"This is the degree to which an innovation is perceived to be consistent with existing values, past experiences, and needs of adopters" (Rogers, 1983). Previous knowledge of related technology helps adopt an innovation. In this regard, a novel innovation that suits the needs and values of the adopter with previous experience of related innovation has a better chance of adopting the new technology. In essence, when the innovation is not suited to the existing values and norms in a given environment, adoption suffers except if there is prior adoption of the value system (Rogers, 1983). It impacts new technologies by helping to reduce uncertainties about their use (Su *et al.*, 2017). Further, the adoption of new technology is higher among the users with more experience and better appreciation of the benefits of technology (Mohammad *et al.*, 2023). According to Badi *et al.* (2021), the compatibility between a company's work processes and beliefs and any electronic technology enhances the chances of its adoption. It is a critical factor that influences adoption spread, given that when compatibility is high, the speed of adoption is likely high. It is seen as a predictor of perceived usefulness (Ramos-de-Luna *et al.*, 2017; Ramos-de-Luna *et al.*, 2016; Oliveira *et al.*, 2016; Liébana-Cabanillas *et al.*, 2018a) and ease of use (Liébana-Cabanillas *et al.*, 2018a). The importance of the attribute is buttressed by extant literature. Studies suggest a positive significant effect on the adoption of technologies such as in adoption of AI in manufacturing companies (Chatterjee *et al.*, 2021; Pillai *et al.*, 2021), SME e-commerce adoption (Hoang & Nguyen, 2022), cloud-based payment systems (Mondego & Gide, 2022).

H3: The effect of perceived compatibility on firms' attitudes would significantly differ based on the level of firms' innovativeness

Perceived Trust (PT)

Trust is significant in accepting and rejecting innovation. The Technology Acceptance Model (T.A.M.) is considered an extension of the constructs of TAM. It is an attribute that deals with trustworthiness, reliability, honesty and keeping to promise. According to Kalinic *et al.* (2019a), it focuses on data confidentiality and integrity in service usage. Studies such as She *et al.* (2017) argue that innovation is essential to innovation. This is because of its role in pre- and post-adoption innovations (Talwar *et al.*, 2020). In online settings, it can contribute to the reduction in privacy concerns and data breaches. On the other hand, it is considered from a cognitive and behavioral dimension. The cognitive aspect explains the expectation of one party on another to fulfill an obligation in a relationship. In comparison, the behavioral dimension explains the willingness of one party to be vulnerable to risk. One of its significant usefulness in the study of innovations is because risk involvement can affect trust levels when adopting the innovation early. However, it mitigates with time (Liebana-Cabanillas *et al.*, 2018b). Practically, trust in firms can reduce risk while encouraging continuous adoption. The dangers are sometimes found in exploitations by the firms. In this regard, Liebana-Cabanillas *et al.* (2018b) assert that regulations and stringent customer protections in online transactions are necessary to improve trust at the initial innovation stage. Extant literature reveals that the perception of trust can positively improve perceived usefulness (Liebana-Cabanillas & Alonso-Dos-Santos, 2017) and behavioral intention (Oloveze *et al.*, 2022a; Ali *et al.*, 2022). In essence, it can improve the user's recognition of the superior benefit of an innovation over an existing one, especially where users perceive it to be more reliable, safe, trustworthy, and promising than an existing option.

H4: The effect of perceived trust on firms' attitudes would significantly differ based on the level of firms' innovativeness

Perceived Risk (PR)

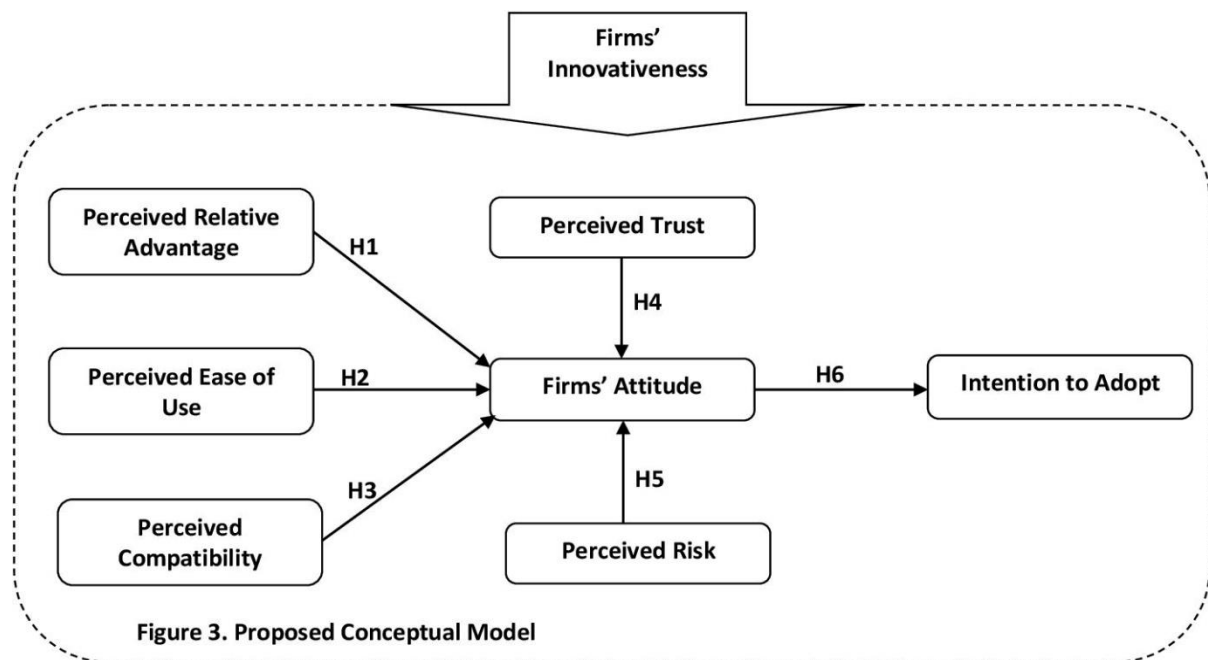
Risk to consumer behavior is critical in consumer decision-making. User behavior has an element of risk. In e-payment, the risk concerns transaction uncertainties and the consequences of adopting behavior (Kalinic *et al.*, 2019a). Such uncertainties include personal information theft (Singh *et al.*, 2020), loss of money (Kalinic *et al.*, 2019a), and security and privacy concerns (Ali *et al.*, 2022). In this respect, adopting innovation is a critical downside for users. Concerns such as exposure to fraud, nonexistent transaction payment history, and other irregularities associated with e-payment deter users (Ozturk *et al.*, 2017; Liébana-Cabanillas *et al.*, 2019). With innovative e-payment systems like PAPSS, user perception of risk can constrain adoption (Alalwan *et al.*, 2018). PAPSS belongs to the e-payment category. As a new e-payment system and the prevailing challenges of internet fraud, users' association of risk with PAPSS might be critical in accepting the innovation. Innovations might fail at the acceptance level because of risk concerns, especially where there is insufficient control over privacy, fraud, and security. Extant studies show that it is negatively related to intention to use (Kalinic *et al.*, 2019a). However, in some other studies, it has no significant effect on intention to use (Singh *et al.*, 2020; Oloveze *et al.*, 2023).

H5: The effect of perceived risk on firms' attitudes would significantly differ based on the level of firms' innovativeness

Firm's Attitude to E-Payment (FA)

This is expressed through likes or dislikes. It is a multi-dimensional construct covering cognitive, emotional, and conative dimensions (Fishbein & Ajzen, 1975). It deals with feelings that could be favorable or not towards something. It is vital in developing behavior and adopting a technology (Rahi *et al.*, 2017). The vital aspect of it is that it can help minimize barriers that inhibit the adoption of technology and work in favor of the intended adoption of the proposed e-payment system (Saghafi *et al.*, 2016). Its importance is highlighted by its adaptation in studies on technology such as electromobility (Higueras-Castillo *et al.*, 2019) and m-banking Applications (Munoz-Leiva *et al.*, 2017). In some studies, it has been evaluated as a mediating variable (Li *et al.*, 2017), while in others, it has been evaluated as a predictor variable (Tarkar, 2023) and moderating variable (Conner *et al.*, 2021). Extant literature reveals that it positively affects innovation adoption (Bothma & Mostert, 2023; Akinwale & Kyari, 2020; Oloveze *et al.*, 2022c).

H6: The effect of firms' attitudes on intention to adopt PAPSS would significantly differ based on the level of firms' innovativeness



Methodology

The study adopted a cross-sectional survey design and structured questionnaire with items adapted from literature on digital payments. The questionnaire was administered to 369 small marketing businesses in South East Nigeria that trade in Agricultural products, medical supplies, Fashion, Shoes and Apparel, and the manufacturing sector. The preliminary check of the suitability of the items was undertaken using face and content reliability and validity. Purposive sampling and mall intercept were adopted in sampling the population. At the same time, the structured questionnaire that was measured on a 7-point Likert scale was used to generate the data from the small marketing businesses. Common method bias (CMB) was used and executed through Herman's single-factor technique. This was done by adjusting all items to a single factor. Notably, CMB helps to check against biases arising from shared variances among measured variables. The reason is its ability to distort findings, leading the researcher to make incorrect conclusions (Baumgartner & Weijters, 2021). The value of 49.103 was derived after adjusting all items to a single factor. This confirms that CMB is not a problem. This is because the minimum threshold is 50% (Podsakoff *et al.*, 2003), and the result is within the minimum reference threshold.

The Kaiser-Meyer-Olkin value is useful in determining sampling adequacy and the sufficiency of the collected data for analysis. KMO value of .906 confirms the sampling adequacy for the analysis. Extant literature suggests minimum value of 0.60 (Crick & Crick, 2019). Bartlett's test of sphericity is useful in determining the rejection or acceptance of the null hypothesis of no difference between the correlation matrix and identity matrix. Thus, the value of 4808.109 for Bartlett's test of sphericity at $p=0.00$ confirms that the constructs' properties were captured and that there is a difference between the correlation matrix and identity matrix. Principal axis factoring through the varimax rotation method with Kaiser normalization was executed to identify the valid component factors. Two-component factors were extracted. The retention of the factors followed the recommendation of 0.6 as a minimum threshold in the literature (Crick, 2020). Thus, PEoU3, FA4, PRA1 and PRA2, PC3, and INT3 were dropped.

All other factor loadings in Table 1 satisfied this requirement. Further, Cronbach Alpha and composite reliability were used to evaluate the reliability of the measurement scale. Extant literature suggests 0.7 as the reference threshold for Cronbach Alpha (Crick, 2023) and 0.7 for composited reliability (Hair *et al.*, 2010). This is satisfied in the study for each construct, as represented in Table 1. The validity was assessed through convergent validity. Convergent validity was confirmed using composite reliability, which should exceed the reference threshold of 0.60, as indicated in Table 1. Further, the average variance extracted exceeded the threshold of 0.5, confirming the convergent validity (See Hamzah *et al.*, 2023; Crick, 2023). Therefore, the reliability and the validity were adequately met for the SEM analysis.

Table 1: Confirmatory Factor Analysis

| Variable | Factor items | Factor loads | Cronbach Alpha | Composite Reliability | Mean | Average Variance Extracted |
|---|--------------|--------------|----------------|-----------------------|------|----------------------------|
| Perceived Ease of Use | PEoU1 | .764 | .880 | .830 | 5.37 | .619 |
| | PEoU2 | .778 | | | 5.51 | |
| | PEoU4 | .818 | | | 5.55 | |
| Firms' Attitude | FA1 | .871 | .937 | .896 | 5.63 | .742 |
| | FA2 | .842 | | | 5.73 | |
| | FA3 | .870 | | | 5.54 | |
| Perceived Trust | PT1 | .771 | .894 | .877 | 5.71 | .641 |
| | PT2 | .836 | | | 5.66 | |
| | PT3 | .856 | | | 5.69 | |
| | PT4 | .733 | | | 5.67 | |
| Perceived Relative Advantage | PRA3 | .793 | .874 | .821 | 5.19 | .696 |
| | PRA4 | .874 | | | 5.34 | |
| Perceived Compatibility | PC1 | .883 | .921 | .893 | 5.35 | .736 |
| | PC2 | .888 | | | 5.35 | |
| | PC4 | .799 | | | 5.52 | |
| Perceived Risk | PR1 | .651 | .885 | .882 | 5.16 | .654 |
| | PR2 | .855 | | | 5.08 | |
| | PR3 | .887 | | | 4.94 | |
| | PR4 | .822 | | | 4.91 | |
| Intention to Adopt | INT1 | .865 | .957 | .859 | 5.50 | .740 |
| | INT2 | .856 | | | 5.50 | |
| | INT4 | .859 | | | 5.60 | |
| Kaiser-Meyer-Olkin measure of sampling adequacy | | | | | | .926 |
| Bartlett's test of sphericity | | | | | | 8269.516 |
| Significance | | | | | | .000 |

Source: Field survey output (2024)

The fit of the structural model was evaluated through a set of indices, as indicated in Table 2. The model's values were within the recommended values in literature except RMSEA, which is marginally higher than the threshold. The R-square value ($R^2 = 0.792$) further revealed that the explanatory variables accounted for a 79.2% variance in intention to adopt PAPSS. Generally, the model suggests a good fit.

Table 2: Result of Fit Indices

| Fit indices | Recommended value | Value in the model | Reference |
|-------------|-------------------|--------------------|----------------------------|
| CMIN/DF | <5 | 3.908 | Bentler and Paul (1996) |
| NFI | ≥ 0.90 | 0.913 | Bentler and Paul (1996) |
| RFI | ≥ 0.90 | 0.896 | Schumaker and Lomax (2016) |
| IFI | ≥ 0.90 | 0.934 | Pituch and Stevens (2016) |
| CFI | ≥ 0.90 | 0.934 | Bentler and Paul (1996) |
| TLI | <0.90 | 0.920 | Schumaker and Lomax (2016) |
| RMSEA | <0.08 | 0.089 | Hu and Bentler (1999) |
| SRMR | <0.08 | 0.049 | Pituch and Stevens (2016) |
| R-Square | | .792 | |

Notes: Normed fit index (NFI). Relative fix index (RFI). Incremental fit index (IFI). Comparative fit index (CFI). Tucker-Lewis index (TLI). Root mean square error of approximation (RMSEA). Standardized root mean squared residual (SRMR)

The approach adopted involves the maximum likelihood method and statistical significance of the paths. The firm innovativeness was measured based on High, Average and low levels. The results are in Table 3

and Figure 4. Firstly, the hypothesis 1 could not be dismissed. At the moderate level of firms' innovativeness, the effect of perceived relative advantage on firms' attitude significantly differs towards intention to adopt novel pan-African digital payment and not at high and low levels (High: $\beta = 0.074$, $p = 0.629$; Moderate: $\beta = 0.460$, $p > 0.001$; Low: $\beta = 0.367$, $p = 0.595$). The result demonstrates that SMEs with moderate firm innovativeness perceive a relative advantage of novel pan-African digital payment over existing options such that it impacts the attitude of the SMEs on their intention to adopt novel pan-African digital payment. This follows the assertion of Vandecasteele and Geuens (2008) on the transformative role of innovativeness in actualizing innovative behavior.

Hypothesis 2 could not be totally dismissed. At the high level and moderate level of firms' innovativeness, the effect of perceived ease of use on firms' attitudes significantly differs towards the intention to adopt novel pan-African digital payment and not at the low level (High: $\beta = 0.378$, $p > 0.001$; Moderate: $\beta = 0.325$, $p > 0.001$; Low: $\beta = 1.714$, $p = 0.187$). This demonstrates that SMEs with a high level of firm innovativeness and a moderate level of firm innovativeness have different perceptions of the ease of use of novel pan-African digital payment and how it affects firm attitude towards intention to adopt novel pan-African digital payment. At both high and moderate levels of firm innovativeness, the effect marginally differs following the effect size at the different levels while being rejected at low levels of firm innovativeness. The result further demonstrates the non-importance of the effect of perceived ease of use on firm attitude at low levels. However, it suggests the small importance of the effect at high and moderate levels, given the effect sizes following Cohen's (1988) statistical power analysis. The importance of the result is less than what was suggested in the literature (Lorenzo *et al.*, 2011). However, it corroborates Ramos de Luna *et al.*, (2019) on mobile payment systems.

Hypothesis 3 could not be dismissed entirely for results at high and low levels of firms' innovativeness. At the high level and low levels of firms' innovativeness, the effect of perceived compatibility by the SMEs on firms' attitudes significantly differ but not at a moderate level (High: $\beta = 0.629$, $p > 0.001$; Moderate: $\beta = 0.129$, $p = 0.146$; Low: $\beta = 1.603$, $p > 0.001$). The result demonstrates differences in the perception of compatibility with novel pan-African digital payments, particularly for SMEs with high levels of innovativeness and low innovativeness. There is a significant difference effect for SMEs with low perceived compatibility, demonstrating that SMEs' attitude towards adopting novel pan-African digital payment is essential for SMEs with low innovativeness. This implies that with low innovativeness, a change in perceived innovativeness would significantly impact attitude towards intention to adopt novel pan-African digital payment, but at high innovativeness, the effect of a change in perceived compatibility would produce a significant effect. The result is consistent with the literature (Su *et al.*, 2017) for firms with high and low levels of innovativeness following the contribution in reducing uncertainty around the novel pan-African digital payment.

Hypothesis 4 could only be confirmed for SMEs with high level and low levels of innovativeness but not for firms with moderate levels of innovativeness (High: $\beta = 0.083$, $p > 0.077$; Moderate: $\beta = 0.070$, $p = 0.166$; Low: $\beta = 1.662$, $p > 0.05$). The result demonstrates the difference in how the SMEs perceive trust in novel pan-African digital payment. There is a trivial effect for SMEs with high innovativeness on their attitude towards intention to adopt novel pan-African digital payment but a significant difference effect for the SMEs with a low level of innovativeness. The result is consistent in the literature on trust determining attitude (Uzir *et al.*, 2021; Bustaman *et al.*, 2023), but the dimension of the study demonstrates the differences in the size of the effect when the innovativeness of the SMEs is considered. In essence, the perception of trust that impacts the firm attitude of the SMEs on novel pan-African digital payments depends on firms' innovativeness.

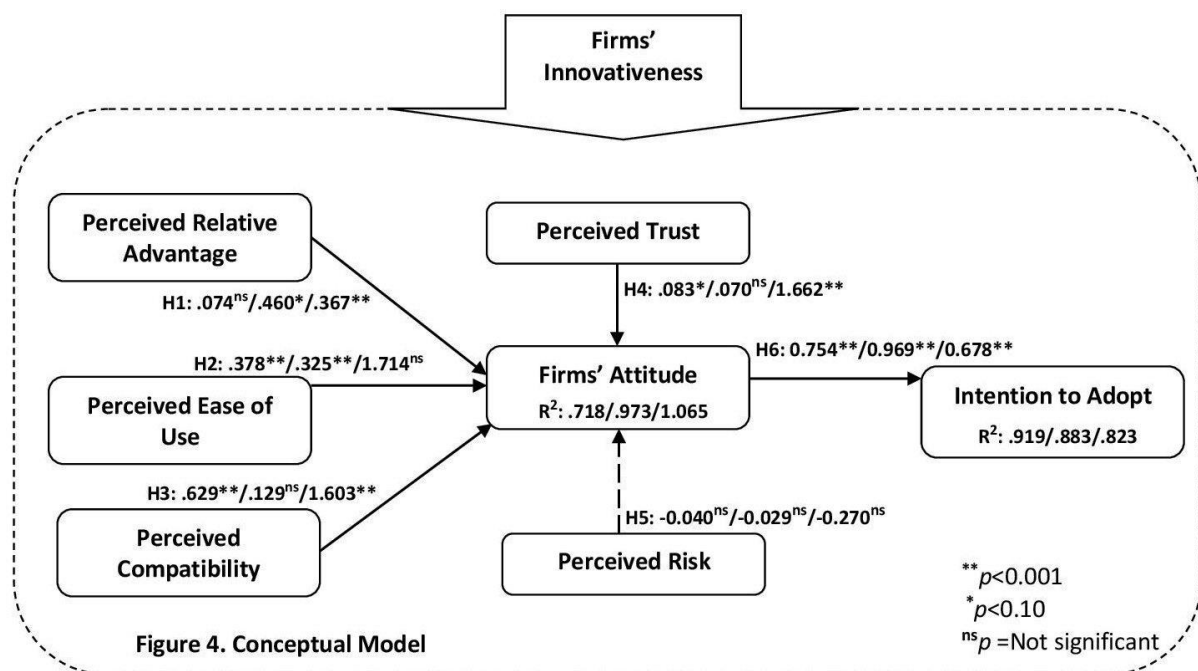
Hypothesis 5 is not confirmed at any of the levels of firms' innovativeness following the non-significance of the p values (High: $\beta = -0.040$, $p = 0.424$; Moderate: $\beta = -0.029$, $p = 0.508$; Low: $\beta = -.270$, $p = 0.126$). This demonstrates the rejection of the hypothesis.

Hypothesis 6 was confirmed for SMEs with high, moderate, and low levels of innovativeness. (High: $\beta = 0.754$, $p > 0.001$; Moderate: $\beta = 0.969$, $p = 0.001$; Low: $\beta = .678$, $p > 0.001$). This demonstrates that at different levels of firm innovativeness, there is a significant difference in the effect of firm attitude on intention to adopt novel pan-African digital payment. Further, the result revealed that the outcome of the effect of firm attitude on intention to adopt is highest for the SMEs with moderate innovativeness, while those with the least outcome are from SMEs with low firm innovativeness. Generally, there is a large difference effect for SMEs and a strong significant effect at any level. This demonstrates the importance of a firm attitude toward adopting new pan-African digital payment.

Table 3: Un-standardized Coefficients of the Model

| Hypotheses | High Firms' Innovativeness | | | Moderate Firms' Innovativeness | | | Low Firms' Innovativeness | | |
|----------------------|----------------------------|------|------|--------------------------------|------|------|---------------------------|-------|------|
| | β | S.E. | Sig. | β | S.E. | Sig. | β | S.E. | Sig. |
| H1: PRA→FA | .074 | .153 | .629 | .460 | .145 | .001 | .367 | .091 | .595 |
| H2: PEOU→FA | .378 | .047 | .000 | .325 | .094 | .000 | 1.714 | .198 | .187 |
| H3: PC→FA | .629 | .049 | .000 | .129 | .088 | .146 | 1.603 | .056 | .000 |
| H4: PT→FA | .083 | .047 | .077 | .070 | .050 | .166 | 1.662 | .058 | .009 |
| H5: PR→FA | -.040 | .050 | .424 | -.029 | .044 | .508 | -.270 | .076 | .126 |
| H6: FA→INT | .754 | .047 | .000 | .969 | .055 | .000 | .678 | .089 | .000 |
| R ² (FA.) | | .718 | | | .973 | | | 1.065 | |
| R ² (INT) | | .919 | | | .883 | | | .823 | |

Source: Field survey output (2024)



CONCLUSION, IMPLICATION, AND RECOMMENDATION

Generally, new payment technologies like PAPSS are helpful for regional payments following their interoperability and alignment with similar regional payment systems like the Real Time Gross Settlement (RTGS), East African Payment System (EAPS), and the Regional Payment Settlement System (RPSS). The result demonstrates that firm attitude is the most important predictor variable among the antecedents, with a significant difference effect for SMEs with any level of firm innovativeness. Other predictor variables were demonstrated to be significant but not for all the SMEs based on their difference in firms' innovativeness. While some SMEs with high firm innovativeness are demonstrated to be significant predictors with large difference effects on attitude, some others with moderate firm innovativeness were revealed to have trivial effects that are not significant.

The implication of the result is demonstrated by the importance of firm innovativeness among SMEs in the present time, where the drive for regional payments necessitated by the COVID-19 pandemic has opened a new landscape for SMEs. This drives an understanding of the critical role of firm attitude while revealing the rising important role of digital payments in driving regional trade. The practical implication is that further improvements of PAPSS as a novel pan-African payment system should integrate the critical factors that the potential users project to be most important in adopting the novel pan-African digital payment. This calls for attention to the trustworthiness of digital payment, enabling it to be easier to use and considering the existing payment values and norms of the payment ecosystem in African regional payments. In other words, consideration should be directed towards ease of use, compatibility, and trust perceptions of the users with high and low levels of firms' innovativeness. Thus, the high firm innovativeness projects need to focus on SME owners who are technology enthusiasts. They are the first to adopt innovations and possess the capacity to cause further mass adoption. Further, the implication of the findings calls for strategic initiatives

such as strategic marketing communication and campaigns directed to SMEs to enable a better understanding of the operations of the novel pan-African payment technology. This will deepen awareness and improve the favourableness and likeness of the SMEs towards the novel pan-African payment technology. Novel pan-African payment such as PAPSS can thrive successfully through partnerships with fintech companies that offer more avenues to access PAPSS indirectly than just the commercial banks. Therefore, the involvement of fintech companies and the development of mobile solutions would make a meaningful contribution to improving the adoption of the innovation.

REFERENCE

- Abayomi, O. (2023). Breaking free from dollar dependency: Adopting PAPSS for intra-African trade. *The Cable*, July 27 Available online: <https://www.thecable.ng/breaking-free-from-dollar-dependency-adopting-papss-for-intra-african-trade>
- AfricaNenda (2022). *Use of cross-border digital payments in the COMESA region: Understanding the training needs of MSMEs*. Available at: https://www.africanenda.org/uploads/files/AfricaNendaMSMEsReport_WEB_July-2022.pdf
- Agarwal, R. & Prasad, J. (1998). A conceptual and operational definition of personal Innovativeness in the domain of information technology. *Information Systems Research*, 9(2), 204-215
- Akinwale, Y.O. & Kyari, A.K. (2020). Factors influencing attitudes and intention to adopt Financial technology services among the end-users in Lagos State, Nigeria. *African Journal of Science, Technology, Innovation and Development*, DOI:10.1080/20421338.2020.1835177
- Alalwan, A.A., Dwivedi, Y.K., Rana, N.P. & Algharabat, R. (2018). Examining factors Influencing Jordanian customers' intentions and adoption of internet banking: Extending UTAUT2 with risk. *Journal of Retailing and Consumer Services*, 40, 125–138.
- Ali Abbasi, G., Abdul Rahim, N.F., Wu, H., Iranmanesh, M. & Keong, B.N.C. (2022) Determinants of SME's social media marketing adoption: competitive industry as a moderator. *Sage Open*, 12(1), 1-21.
- Ali, M., Syed, A.R., Faiza, H., Chin-Hong, P. & Chawly, L.Y. (2022). An integrated framework for mobile payment in Pakistan: drivers, barriers, and facilitators of usage behavior. *Journal of Financial Services Marketing*, <https://doi.org/10.1057/s41264-022-00199-0>
- Badi, S., Ochieng, E., Nasaj, M. & Papadaki, M. (2021). Technological, organisational and environmental determinants of smart contracts adoption: UK construction sector viewpoint. *Construction Management and Economics*, 39(1), 36–54
- Bandara, U.C. & Amarasena, S.M. (2018). Impact of relative advantage, perceived behavioural control and perceived ease of use on intention to adopt with solar energy Technology in Sri Lanka. *Conference Paper*, DOI:10.23919/ICUE-GESD.2018.8635706.
- Baumgartner, H. & Weijters, B. (2021). Dealing with common method variance in international marketing research. *Journal of International Marketing*, 29(3), 7–22. <https://doi.org/10.1177/1069031X21995871>
- Borderless Payments Report (2022). *Helping people stay connected to their worlds*. Available at: <https://b2b.mastercard.com/media/sgpermp/borderless-payments-report-2022.pdf>
- Bothma, M. & Mostert, L. (2023). Adopting the technology acceptance model: A Namibian perspective. *South African Journal of Information Management* 25(1), a1624. <https://doi.org/10.4102/sajim.v25i1.1624>
- Brookings (2022). *The Brookings Institution Africa Growth Initiative Foresight Africa podcast: New tools for easing cross-border trade in Africa*. Available online: <https://www.brookings.edu/wp-content/uploads/2022/04/Foresight-Africa-Mike-Ogbalu-20220427.pdf>
- Bustaman, M.K., Aprianingsih, A., Hidayat, M. & Dasuki, R.E. (2023). The impact of trust, perceived usefulness, perceived ease of use and customer intentions on customer attitude toward the use of technology, *Almana Jurnal Manajemen dan Bisnis*, 7(2), 230-241. DOI: 10.36555/almana.v7i2.2133
- Chatterjee, S., Rana, N.P., Dwivedi, YK & Baabdullah, A.M. (2021). Understanding AI. adoption in manufacturing and production firms using an integrated TAM-TOE model. *Technological Forecasting and Social Change*, 170, 120880.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New Jersey: Lawrence Erlbaum.
- Conner, M. & Norman, P. (2022). Understanding the intention-behavior gap: The role of intention strength. *Frontiers in Psychology* 13, 923464. doi: 10.3389/fpsyg.2022.923464
- Conner, M.T., van Harreveld, F. & Norman, P. (2021). Attitude stability as moderator of the relationships between cognitive and affective attitudes and behavior. *British Journal of Social Psychology*, 61(4), 1-22. DOI:10.1111/bjso.12473
- Crick, J.M. (2023). Analyzing survey data in marketing research: A guide for academics and postgraduate students, *Journal of Strategic Marketing*, DOI: 10.1080/0965254X.2023.2176533

- Crick, J.M. (2020). The dark side of competition: When collaborating with competitors is harmful to company performance. *Journal of Business & Industrial Marketing*, 35(2), 318–337. <https://doi.org/10.1108/JBIM-01-2019-0057>
- Crick, J.M. & Crick, D. (2019). Developing and validating a multi-dimensional measure of coopetition. *Journal of Business & Industrial Marketing*, 34(4), 665–689. <https://doi.org/10.1108/JBIM-07-2018-0217>
- Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–339
- Fishbein, M. & Ajzen, I. (1975). *Belief, Attitude, Intention and Behaviour: An Introduction to Theory and Research*. Massachusetts: Addison-Wesley
- Gaya, R. (2022). The payment landscape of B2C e-consumer marketplaces in Latin America and the Caribbean. Series: *Production Development* 230. Available at <https://repositorio.cepal.org/server/api/core/bitstreams/e353f3a0-24a9-407e-93b2-e2a3924a713d/content>
- Hair, J.F., Black, W.C., Babin, B.J. & Anderson, R.E. (2010). *Multivariate data analysis* (7th ed.). Englewood Cliffs, NJ: Prentice Hall.
- Hamzah, M.I., Crick, J.M., Crick, D., Ali, S.A.M. & Yunus, N.M. (2023). The nature of the relationship between an entrepreneurial marketing orientation and small business growth: Evidence from Malaysia. *International Journal of Entrepreneurship and Small Business*
- Higueras-Castillo, E., Liebana-Cabanillas, F.J., Munoz-Leiva, F. & Garcia-Maroto, I. (2019). Evaluating consumer attitudes toward electromobility and the moderating effect of perceived consumer effectiveness. *Journal of Retailing and Consumer Services*, 51, 387–398. doi:10.1016/j.jretconser.2019.07.006.
- Hoang, T.D.L. & Nguyen, H.K. (2022). Towards an economic recovery after the COVID-19 pandemic: empirical study on electronic commerce adoption by small and medium-sized enterprises in Vietnam. *Management & Marketing Challenges for the Knowledge Society*, 17(2), 98–119
- Jeyaraj, A. (2021). Rethinking the intention to behavior link in information technology use: Critical review and research directions. *International Journal of Information Management*, 59, 102345. <https://doi.org/10.1016/j.ijinfomgt.2021.102345>
- Jeyaraj, A., Dwivedi, YK & Venkatesh, V. (2023). Intention in information systems adoption and use: Current state and research directions. *International Journal of Information Management*. 73, 102680, <https://doi.org/10.1016/j.ijinfomgt.2023.102680>
- Kaine, G. & Wright, V. (2022). Relative advantage and complexity: Predicting the rate of adoption of agricultural innovations. *Frontiers in Agronomy*, 4, 967605. DOI:10.3389/fagro.2022.967605
- Kalinic, Z., Liébana-Cabanillas, F.J., Muñoz-Leiva, F. & Marinković, V. (2019a). The moderating impact of gender on the acceptance of peer-to-peer mobile payment systems. *International Journal of Bank Marketing*, 38(1), 138–158. DOI 10.1108/IJBM-01-2019-001
- Kim, K. et al. (2019). *2019 Trade Finance Gaps, Growth, and Jobs Survey*, Asian Development Bank. <http://dx.doi.org/10.22617/BRF190389-2>
- Lara-Rubio, J., Villarejo-Ramos, A.F. & Liébana-Cabanillas, F. (2020). Explanatory and predictive model of the adoption of P2P payment systems. *Behaviour & Information Technology*. <https://doi.org/10.1080/0144929X.2019.1706637>
- Lee, C. (2020). Intention to use versus actual adoption of technology by university English language learners: what perceptions and factors matter? *Computer Assisted Language Learning*, 35(3), 1–29. DOI: 10.1080/09588221.2020.1857410
- Li, W., Long, R., Chen, H. & Geng, J. (2017). A review of factors influencing consumer intentions to adopt battery electric vehicles. *Renewable and Sustainable Energy Review* 78, 318–328. doi:10.1016/j.rser.2017.04.076.
- Liebana-Cabanillas, F. & Alonso-Dos-Santos, M. (2017). Factors that determine the adoption of facebook commerce: The moderating effect of age. *Journal of Engineering and Technology Management*, 44, 1–18. <http://dx.doi.org/10.1016/j.jengtecman.2017.03.001>
- Liébana-Cabanillas, F., Marinkovic, V., Ramos-de-Luna, I. & Kalinic, Z. (2018a). Predicting the determinants of mobile payment acceptance: A hybrid SEM-neural network approach. *Technological Forecasting and Social Change* 129, 117–130. <https://doi.org/10.1016/j.techfore.2017.12.015>
- Liébana-Cabanillas, F., Molinillo, S. & Ruiz-Montañez, M. (2019). To use or not to use, that is the question: Analysis of the determining factors for using NFC mobile payment systems in public transportation. *Technological Forecasting and Social Change*, 139, 266–276
- Liebana-Cabanillas, F., Higueras-Castillo, E., Molinillo, S. & Ruiz Montañez, M. (2018b). Assessing the role of risk and trust in consumers' adoption of online payment systems. *International Journal of Information Systems and Software Engineering for Big Companies (IJISEBC)*, 5(2), 99–113

- Marei, A., Mustafa, J.A., Othman, M., Daoud, L., Lutfi, A. & Al-Amarneh, A. (2023). The moderation of organizational readiness on the relationship between TOE factors and fintech adoption and financial performance. *Journal of Law and Sustainable Development*, 11(3), 1-36
- Menguc, B. & Auh, S. (2006). Creating a firm-level dynamic capability through capitalizing on market orientation and innovativeness. *Journal of the Academy of Marketing Science*, 34(1), 1552-7824.
- Mohammad, N., Hirzallah, Y. & Alshurideh, M.T.R. (2023). The effects of the internal and the external factors affecting artificial intelligence (AI) adoption in e-innovation technology projects in the UAE? Applying both innovation and technology acceptance theories. *International Journal of Data and Network Science*, 7, 1321–1332
- Mondego, D. & Gide, E. (2022). The Use of the Technology Acceptance Model to analyse the Cloud-Based Payment Systems: A Comprehensive Review of the Literature. *JISTEM-Journal of Information Systems and Technology Management*, 19
- Moses-Ashike, H. (2023). 5 African banking groups adopt PAPSS for cross-border transactions. *Businessday*, June 29 Available online: <https://businessday.ng/news/article/5-african-banking-groups-adopt-papss-for-cross-border-transactions/>
- Muñoz-Leiva, F. Climent-Climent, S. & Liébana-Cabanillas, F. (2017). Determinants of intention to use the mobile banking apps: An extension of the classic TAM model, *Spanish Journal of Marketing – ESIC*, 21, 25-38
- Nguyen, O.T. (2020). Factors affecting the intention to use digital banking In Vietnam. *Journal of Asian Finance, Economics and Business*, 7(3), 303–310. <https://doi.org/10.13106/jafeb.2020.vol7.no3.303>
- Oliveira, T., Thomas, M., Baptista, G. & Campos, F. (2016). Mobile payment: Understanding the determinants of customer adoption and intention to recommend the technology, *Computers in Human Behavior*, 61, 404–414.
- Oktania, D.E. & Indarwati, T. A. (2022). Pengaruh perceived usefulness, perceived ease of use, dan compatibility with lifestyle terhadap Niat Beli Di social commerce. *Jurnal Ilmu Manajemen*, 10(1), 255–267
- Oloveze, A.O., Okonkwo, R.V.O., Oteh, O.U. Nwachukwu, C.P. & Chukwuoyims, K. (2022a). Cardless cash adoption and consumer psychology in a cashless market: Structural equation model (S.E.M.) approach. *Journal of Psychology and Allied Discipline (J.P.A.D.)*, 1(1), 20-34
- Oloveze, A.O., Oteh, O.U., Nwosu, H.E. & Obasi, R.O. (2022b). How user behaviour is moderated by affective commitment on point of sale terminal. *Rajagiri Management Journal*, 16(1), 2-20. DOI10.1108/RAMJ-05-2020-0019
- Oloveze, A.O., Ogbonna, C., Ahaiwe, E.O. & Ugwu, P.A. (2022c). From offline shopping to online shopping in Nigeria: Evidence from African emerging economy. *IIM Ranchi journal of management studies*, 1(1), 56-68. DOI 10.1108/IRJMS-08-2021-0110
- Oloveze, A.O., Okonkwo, R.V.O., Oteh, O.U., Ollawa, C.O. & Onya, O.V. (2023). Innovating e-payment to boost marketing of entrepreneurial products: Case of pan-African payment and settlement system (PAPSS). *Eurasian Journal of Management and Social Sciences*, 4(2), 61-87. doi:10.23918/ejms.V4i2p61
- Ozturk, A.B., Bilgihan, A., Salehi-Esfahani, S. & Hua, N. (2017). Understanding the mobile payment technology acceptance based on valence theory. *International Journal of Contemporary Hospitality Management*
- Pan, Y., Froese, F., Liu, N., Hu, Y. & Ye, M. (2022). The adoption of artificial intelligence in employee recruitment: The influence of contextual factors. *The International Journal of Human Resource Management*, 33(6), 1125–1147.
- Payne, E.M., Peltier, J.W. & Barger, V.A. (2018). Mobile banking and AI-enabled mobilebanking: The differential effects of technological and non-technological factors on digital natives' perceptions and behavior. *Journal of Research in Interactive Marketing*, 12(3), 328-346
- Pillai, R., Sivathanu, B., Mariani, M., Rana, N. P., Yang, B. & Dwivedi, Y. K. (2022). Adoption of AI-empowered industrial robots in auto component manufacturing companies. *Production Planning & Control*, 33(16), 1517-1533
- Podsakoff, P., MacKenzie, S.B., Lee, J-Y.Y. & Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903. DOI: 10.1037/0021-9101.88.5.879
- Putri, D.E., Sinaga, O.S., Sudirman, A., Augustinah, F. & Dharma, E. (2022). Analysis of the effect of perceived ease of use, perceived usefulness, trust, and cashback promotion on intention to use e-wallet. *International Journal of Economics, Business and Management Research*, 6(11), 63-75
- Rahi, S., Yasin, N. & Alnaser, F. (2017). Measuring the role of website design, assurance, customer service and brand image towards customer loyalty and intention to adopt internet banking. *The Journal of Internet Banking and Commerce*, 8(24). <https://bit.ly/2VO1oKi>

- Ramos-de-Luna, I., Montoro-Ríos, F. & Liébana-Cabanillas, F. (2016). Determinants of the intention to use NFC technology as a payment system: an acceptance model approach. *Information Systems and E-Business Management*, 14, 293-314. DOI 10.1007/s10257-015-0284-5
- Ramos-de-Luna, I., Montoro-Ríos, F., Liébana-Cabanillas, F. & Gil de Luna, J. (2017). NFC technology acceptance for mobile payments: A Brazilian perspective. *Review of Business Management*, 19(63), 82-103. DOI: 10.7819/rbgn.v0i0.2315
- Ramos-de-Luna, I., Liébana-Cabanillas, F., Sánchez-Fernández, J. & Muñoz-Leiva, F. (2019). Mobile payment is not all the Same: The adoption of mobile payment systems depending on the technology applied, *Technological Forecasting and Social Change*, 146, 931–944
- Rogers, E.M. (1983). *Diffusion of innovations* (3rd ed.). New York: The Free Press
- Saghafi, F., Moghaddam, E.N. & Aslani, A. (2016). Examining effective factors in initial acceptance of high-tech localized technologies: Xamin Iranian localized operating system. *Technological Forecasting and Social Change*, 122, 275-288 <http://dx.doi.org/10.1016/j.techfore.2016.04.010>
- Setiowati, R., Hartoyo, Daryanto, H.K. & Arifin, B. (2015). Understanding I.C.T. adoption determinants among Indonesian SMEs in fashion subsector. *International Research Journal of Business Studies*, 8(1), 47-57
- Shahadat, H.M.M., Nekomahmud, Md., Ebrahimi, P. & Fekete-Farkas, M. (2023). Digital technology adoption in SMEs: What Technological, Environmental and Organizational factors Influence in Emerging Countries? *Global Business Review* 1–27. DOI:10.1177/09721509221137199
- She, ZY, Sun, Qing, Ma, JJ & Xie, B.C. (2017). What are the barriers to widespread adoption of battery electric vehicles? A survey of public perception in Tianjin, China. *Transport Policy*, 56, 29–40. <https://doi.org/10.1016/j.tranpol.2017.03.001>
- Sheeran, P., Maki, A., Erika, M., Avishai-Yitshak, A., Bryan, A., Klein, W.M.P., Miles, E. and Rothman, A.J. (2016). The impact of changing attitudes, norms, and self-efficacy on health-related intentions and behavior: A meta-analysis. *Health Psychology*, 35(11), 1178-1188. doi: 10.1037/hea0000387
- Singh, N., Sinha, N. & Liébana-Cabanillas, F. (2020). Determining factors in the adoption and recommendation of mobile wallet services in India: Analysis of the effect of innovativeness, stress to use and social influence. *International Journal of Information Management*, 50, 191–205. <https://doi.org/10.1016/j.ijinfomgt.2019.05.022>
- Su, P., Wang, L. & Yan, J. (2017). How users' internet experience affects the adoption of mobile payment: A mediation model. *Technology Analysis & Strategic Management*, 1–12
- Subramanian, A. & Nilakanta, S. (1996). Organizational Innovativeness: Exploring the relationship between organizational determinants of innovation, types of innovations, and measures of organizational performance. *International Journal of Management Science*, 24(6), 631–647
- Sugandini, D., Pambudi, A.A., Resmi, S., Reniati, Muafi & Kusumawati, R.A. (2018a). The role of uncertainty, perceived ease of use, and perceived usefulness towards the technology adoption, *International Journal of Civil Engineering and Technology*, 9(4), 660–669
- Sugandini, D., Sudiarto., Surjanti, J., Maroah, S. & Muafi. (2018b). Intention to delay: The context of technology adoption based on android. *International Journal of Civil Engineering and Technology*, 9(3), 736-746.
- Sunny, P. (2018). Determinants of behavioral intention to use mobile wallets – a conceptual model. *Journal of Management (JOM)*, 5(5), 52–62.
- Talwar, S., Dhir, A., Khalil, A., Mohan, G. & Islam, AKMN (2020). Point of adoption and beyond. Initial trust and mobile-payment continuation intention. *Journal of Retailing and Consumer Services*, 55, 102086
- Tarkar, P. (2023). Attitude and post-retirement work intentions: a mediator-moderator effect of job satisfaction and education. *Working with Older People*, 27(2), 77-90. <https://doi.org/10.1108/WWOP-04-2021-0021>
- Uzir, M.U.H., Al Halbusi, H., Thurasamy, R., Hock, R.L.T., Aljaberi, M.A., Hasan, N. & Hamid, M. (2021). The effects of service quality, perceived value and trust in home delivery service personnel on customer satisfaction: Evidence from a developing country. *Journal of Retailing and Consumer Services*, 63, 102721.
- Vandecasteele, B. & Geuens, M. (2008). Motivated consumer innovativeness: Concept and measurement. *Working Paper Series*, Universiteit Gent.
- Ventatesh, V., Maruping, L.M. & Brown, S.A. (2006). Role of time in self-prediction of behavior. *Organizational Behavior and Human Decision Processes* 100(2), 160-176. <https://doi.org/10.1016/j.obhdp.2006.02.003>
- Venkatesh, V., Morris, G.M., Davis, B.G. & Davis, D.F. (2003). User acceptance of information technology: toward a unified view, *M.I.S. Quarterly*, 27(3), 425-478

- Visa Economic Empowerment Institute (2022). *Inclusive trade and cross-border payments. Presentation to WTO Informal working group on MSMEs*. Available at https://www.wto.org/english/tratop_e/msmes_e/visa_inclusive_trade_and_cross_border_payments.pdf
- Walsh, M., Lynch, P. & Harrington, D. (2017). Innovativeness: A conceptual framework antecedents, dimensions and outcomes. Available at: https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.rikon.ie%2Fwp-content%2Fuploads%2F2017%2F02%2FINNOVATIVENESS_A_CONCEPTUAL_FRAMEWORK_ANTECEDENTS2C_DIMENSIONS2C_26_OUTCOMES_E.pdf&psig=AOvVaw3xXZh3lqZ_egC9Ju3ocDM&ust=1707150683740000&source=images&cd=vfe&opi=89978449&ved=0CAYQn5wM ah cKEwiQ09frvY-EAxUAAAAAHQAAAAAQBA
- Warshaw, P.R. & Davis, F.D. (1985). Disentangling behavioral intention and behavioral expectation. *Journal of Experimental Social Psychology*, 21, 213–228.
- Webb, T.L. & Sheeran, P. (2006). Does Changing Behavioral Intentions Engender Behavior Change? A Meta-Analysis of the Experimental Evidence. *Psychological Bulletin*, 132, 2, 249–268. DOI: 10.1037/0033-2909.132.2.249
- World Trade Organization (2016). *Trade finance and SMEs Bridging the gaps in provision*, https://www.wto.org/english/res_e/publications_e/tradefinsme_e.htm
- World Trade Organisation (2022). *Trade finance in West Africa. A study of Coted'Ivoire, Ghana, Nigeria and Senegal*. Available at <https://www.ifc.org/content/dam/ifc/doc/2022/report-trade-finance-in-west-africa.pdf>
- Yussaivi, A., Suhartanto, D. & Syarief, M. E. (2020). An Analysis of the Determining Factors of Mobile Banking Adoption in Islamic Banks. *IOP Conference Series: Materials Science and Engineering*, 879(1), 12174