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The impact of net promoter score and digital literacy in enhancing brand loyalty: an empirical study

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Abstract

In the dynamic digital market, building brand loyalty has become increasingly challenging with the shift in consumer behaviour and increased competition. This research examines the combined effect of Net Promoter Score (NPS) and digital literacy in building brand loyalty. NPS, a common customer satisfaction score, measures the probability of customers recommending a brand, whereas digital literacy indicates consumers' capability to use and interact with digital media efficiently. With a quantitative design and PLS-SEM model, data were gathered from 186 respondents using structured questionnaires. Findings indicate that Perceived Knowledge (PK) has a significant effect on Decision Accuracy (DA) and Personal Beliefs (PB), which ultimately influence Behavioural Loyalty (BL). Mediation analysis verifies that DA and PB are significant mediators connecting knowledge to loyalty. The validity and reliability of the model were established using Cronbach's Alpha, Composite Reliability, AVE, and discriminant validity. The results highlight the strategic relevance of digital empowerment and emotional fit in building loyalty. Brands need to combine feedback mechanisms such as NPS with initiatives to develop digital literacy to create greater engagement and retention. This research has useful implications for marketers, educators, and policymakers seeking to foster inclusive, value-based brand relationships in the digital era.

Keywords: net promoter score, digital literacy, brand loyalty, impact analysis.

Introduction

In the fast-paced and digitally filled market of today, organizations are faced with a daunting problem: maintaining long term brand loyalty in a world where consumer demands are shifting at an ever-increasing rate and competition increases on a daily basis (Keller, 2013). This is a "30,000 feet problem" A strategic level issue that brands need to solve to stay relevant and profitable in the digital era. Classic customer satisfaction measures, though still relevant, tend to lack the ability to capture the depth of customer advocacy and emotional bonding with brands (Reichheld, 2003). Therefore, two essential constructs net promoter score (NPS) and Digital Literacy have come into focus as possible drivers of brand loyalty in a technologically progressive society.

The net promoter score that was first introduced by Reichheld (2003), is used as a measure for gauging customer satisfaction and forecasting customer loyalty through evaluating the chance of a customer to recommend a brand. Digital literacy, on the contrary, Captures a consumer's capability to make effective use of digital technologies in accessing, evaluating and engaging with them (Ng, 2012). As consumer brand interactions shift more towards digital spaces, customers with greater level of digital literacy tend to be more enabled to participate in brand ecosystems, shape perceptions through online, reviews and exhibit stronger loyalty behaviours (Van Deursen & Van Dijk, 2014)

This overlap brings with it a lifetime window of opportunity for business es and marketers to leverage the synergistic value of customer feedback systems and digital proficiency. Those brands that anticipate and take advantage of this interaction have a greater likelihood of developing brand advocacy, emotional bonds and sustained loyalty. Additionally, with increasing digital inclusion programs around the world, organisations that coordinate loyalty programs with consumers digital competences are likely to have increased outreach and retention (UNESCO, 2018)

The contributions of this research are extensive. It allows marketers to optimize digital measures and loyalty programs; Brands can recreate touch points for an inclusive and interactive customer experience; And policymakers and teachers can encourage digital competence that not only enables people socially but economically through richer brand experiences (Martin, 2008). Furthermore, researchers may find the exploration of NPS and digital literacy to be a rich area for developing consumer behaviour and digital marketing theory

As digital ecosystems mature, brand loyalty that was rooted primarily. In product satisfaction and personal relationship is increasingly determined by real time experiences, peer rating and digital consumption habits (Bilgihan, 2016). This shift of paradigm has necessitated a shift from transactional loyalty to relational loyalty, whereby customers no longer look for products alone, but seamless digital experiences, customized services and value-driven engagement. Here Net Promoter Score (NPS) has become popular because of its ease and perceived predictive capability. Nevertheless, its independent reliability in predicting brand loyalty in various digital consumer segments remains questionable (Keiningham et al., 2007).

Thus, this study is well placed to present an empirically supported, data driven analysis of the interplay between NPS and digital literacy and how this interplay affects brand loyalty. In presenting this, it makes a new contribution to both marketing strategy and digital inclusion theory

This research has important implications for a broad group of stakeholders. Marketers will have actionable intelligence to create and refine digital touchpoints that support greater customer interaction and loyalty. By learning the functions of both Net Promoter Score (NPS) and digital literacy, they can build more tailored, inclusive, and loyalty-building experiences on digital platforms. Brands will realize the simultaneous significance of calculating customer satisfaction by NPS, as well as investing in mechanisms that improve consumers' digital fluency two essential factors interacting synergistically with each other in order to affirm brand trust and repeat use. In turn, policymakers and teachers can draw inspiration from the results of the study to design digital inclusion initiatives capable of bridging digital divides, ensuring fair digital service

access to all. For consumers, these developments mean more responsive, inclusive, and user centric brand experiences, ultimately enhancing their satisfaction and overall experience. Finally, researchers are offered a rich empirical basis to continue examining the confluence of digital transformation and consumer behavior, setting the stage for further research into loyalty, digital literacy, and engagement in an increasingly dynamic digital economy.

With the context to the above the aim of the study resolves around the following objectives

- To analyse the role of net promoter score and digital literacy in brand loyalty
- To examine how brand loyalty can be enhanced through digital awareness and prior digital knowledge
- To design a conceptual and empirical model that helps fostering brand loyalty

Literature review

Net Promoter Score (NPS) is now universally accepted as an indicator of measuring customer satisfaction and loyalty in businesses, healthcare, education, sport, and trade. Developed in 2003 by Reichheld, NPS categorizes responses into three categories: promoters, passives, and detractors depending on respondents' willingness to recommend a service or product. Although NPS is now generally accepted as part of business procedure, its worth and utility elsewhere, especially within healthcare, continues to be contested.

Traditionally, healthcare outcomes were measured mainly through clinical indicators like complication rates and post-operative recovery rates. Nevertheless, studies have shown that clinical success is not always accompanied by patient satisfaction. Consequently, Patient-Reported Outcome Measures (PROMs) have come into prominence as a more holistic approach to measuring healthcare experience, providing a more detailed insight into the patient's perception of their care.

In the corporate world, Reichheld's initial argument that NPS is the best predictor of firm growth was universally accepted, using evidence from more than 4,000 firms. This argument was challenged by a study conducted by Keiningham et al. in 2007, using 15,500 customer interviews. Their study indicated that more conventional customer satisfaction measures, like the Customer Satisfaction Index (CSI) and intentions to repurchase, were as good, if not better, at forecasting a firm's growth. This criticism has led to a rethinking of NPS's status as the ultimate business success predictor.

Although NPS is still a significant metric in most industries, its use and effectiveness are still being assessed. In healthcare, although it offers some useful information regarding patient satisfaction, it does not portray an accurate picture of patient experiences and therefore implies that a more complex method should be used. Likewise, in business, although it is still commonly utilized, its power to predict can be equalled or even exceeded by other measures of satisfaction. Thus, although NPS may prove to be a valuable tool, it is crucial to take its limitations and context into account when using it in various industries.

Keiningham et al. (2007) pointed out that NPS had inconsistent correlations with revenue growth for different industries, implying that its value as a cross-industry predictor of business performance may be restricted. For instance, in banking, the correlation of NPS with growth was less strong than that of traditional satisfaction

scores. In retail gasoline, amazingly, NPS even had negative correlations with revenue growth. In addition, in the home furnishings industry, the relationships between NPS and growth differed substantially, suggesting that NPS might not consistently be able to predict success in various industries.

NPS's function in customer experience transformation has changed too. NPS is utilized together with other measures of customer experience, such as Net Emotional Value (NEV), to provide a fuller analysis of relationships with customers. PT Telkom Indonesia, for example, leveraged predictive analytics through the integration of NPS with NEV to improve digital customer engagement and service efficiency. This illustration highlights the fact that NPS alone might not reflect the whole picture of the customer experience, particularly when more complex measures exist.

Within education, NPS has been utilized to measure student satisfaction. Espinoza Nieto (2019) applied NPS within the National School of Statistics and Informatics in Arequipa, Peru, to measure student experiences. The research showed a moderate NPS figure of 17.31, and areas where finances and infrastructure were pinpointed as important to be improved. Yet, the application of NPS here was condemned for failing to pick up on the greater depth involved in the quality of education, illustrating the point that NPS can fall short in measuring student satisfaction thoroughly.

These varied uses and criticisms of NPS in different industries and sectors highlight that although the measure provides useful information, the efficacy and completeness of the measure rely on the situation to which it is used.

NPS has been investigated in various contexts over recent years, presenting both its effectiveness and shortcomings. Marín and Castañeda (2023) investigated the alignment of digital literacy frameworks with educational evaluations, pointing out that while NPS might be used as an auxiliary method, it would not be enough by itself. They posited that a more holistic response was needed to accurately assess student engagement and learning results, especially in the fast-changing digital learning environment.

NPS has been used for decades in marketing to measure brand loyalty, with numerous studies attributing loyalty to dimensions such as trust, reputation, and emotional connection (Aaker, 1991; Baldinger & Rubinson, 1996). Fournier and Yao (1997) argued, however, that brand loyalty is a complex phenomenon that could not be adequately measured by a one-question metric such as NPS. In their research, Jensen and Hansen (2006) employed structural equation modelling to examine the determinants of brand loyalty and concluded that attitudinal loyalty, not NPS, was more effective in eliminating brand switching behaviour. These results implied that NPS, although helpful, may not be the best or most complete measure of brand loyalty.

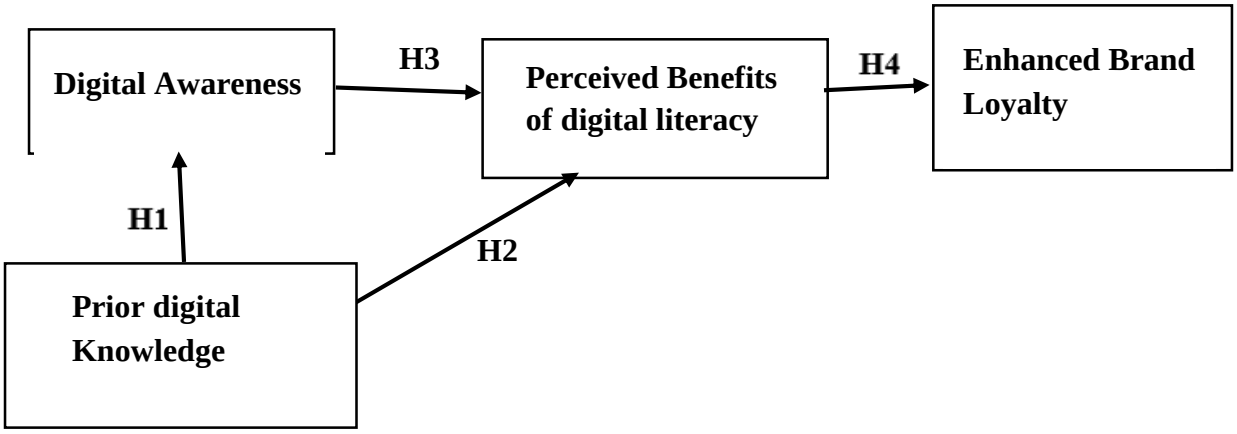
The contribution of NPS to consumer decision-making has also been challenged. Thoma and Williams (2013) examined how recognition heuristics affected consumer decision-making and discovered that whereas NPS might offer some insight into brand awareness, it did not fully explain buying behavior. They observed that consumers tend to consider various variables, such as price point and product quality, when making choices. Kristensen and Eskildsen (2013) further criticized NPS, positing that the measure oversimplifies consumer choice by classifying respondents into mere three broad segments: promoters, passives, and detractors. This

categorization, according to them, overlooked the multi-faceted experiences and intentions that drive decision-making and loyalty.

Cultural and contextual variation also pose issues to the NPS's across-the-board usage. For instance, in the Dutch education system, a grade of 6 is passing, but such a grade would be considered a detractor in the NPS system (Krol et al., 2014). This inconsistency serves to illustrate the ways in which NPS categories might not always conform to cultural norms of grading, and the implications this has for the reliability and consistency of the metric to capture customer or student sentiment across regions and industries.

Lastly, though widely applied, NPS has been criticized as not having causal evidence. Keiningham et al. (2007) noted that while numerous studies were able to determine correlations between customer loyalty and NPS, not many were successful in proving a direct cause-and-effect link between NPS score improvements and business growth. This weakness implies other determinants may exist for customer satisfaction and loyalty aside from the NPS score itself.

In general, though NPS is still a widely used measure of customer satisfaction and loyalty, studies show that it is not enough to capture the full richness of consumer, patient, and student experiences. Future studies should examine combining NPS with other qualitative and quantitative measures to enhance its reliability and use across different contexts.



(Proposed conceptual model, source: The Authors)

Hypotheses formulation

H1: Prior digital knowledge has a positive influence on digital awareness in enhancing brand loyalty

H2: Prior digital knowledge significantly influences perceived benefits of digital literacy

H3: Digital awareness has an influence on perceived benefits of digital literacy to enhance brand loyalty

H4: Perceived Benefits of digital literacy mediates the relationship between enhanced brand loyalty and digital awareness.

Research Methodology

Research Design

Quantitative approach is most appropriate in exploring the effect of Net Promoter Score (NPS) and digital literacy on brand loyalty since it allows objective measurement and statistical testing of the relationships between variables. Employing systematic surveys and quantifiable data, researchers can make generalizations and discern patterns in large populations. Partial Least Squares Structural Equation Modeling (PLS-SEM) is especially suitable for this subject, as it can handle intricate models with multiple latent constructs and is well-suited for prediction and theory development. It handles small sample sizes and non-normal data distributions (Hair et al., 2021; Creswell & Creswell, 2018), which makes it best for exploratory business research.

Sample size

186 sample size is enough for PLS-SEM quantitative research, especially when one is modeling with multiple constructs and indicators. As per Hair et al. (2021), in relation to the "10-times rule," a minimum sample size is recommended to be ten times the largest number of structural paths targeting any latent construct in the model. Also, power analysis recommendations (Cohen, 1988) stipulate that a sample size greater than 150 offers sufficient statistical power (usually 0.80) to detect medium effect sizes at a significance level of 5%. Hence, a sample size of 186 is deemed robust to yield reliable and generalizable findings for PLS-SEM.

Data collection

Primary data collection using a questionnaire is very useful in this research because it enables the researcher to obtain first-hand, specific, and measurable information directly from respondents on their Net Promoter Scores (NPS), digital literacy levels, and brand loyalty perceptions. Questionnaires facilitate standardized data collection from a large sample with consistency, reliability, and ease of analysis (Creswell & Creswell, 2018). They also permit the addition of Likert-scale items to quantify latent constructs such as customer satisfaction or digital confidence. Additionally, primary data collection improves research validity by recording actual attitudes and behaviour specific to the research setting, which secondary data do not have.

Path Coefficients:

Path	Path Coefficient (β)	Significance
PB -> BL	0.589	Significant
PK -> DA	0.689	Significant
PK -> PB	0.730	Significant
PB -> BL	0.394	Significant

The path analysis results show a number of statistically significant relationships between the variables in question. In particular, the path from Personal Beliefs (PB) to Behavioural Loyalty (BL) showed a significant positive effect with a path coefficient (β) of 0.589, which means that more personal beliefs are linked to higher behavioural loyalty. Likewise, the route from Perceived Knowledge (PK) to Decision Accuracy (DA) also proved significant with a coefficient of 0.689, which indicates that higher perceived knowledge positively affects decision accuracy.

In addition, there was a high and significant association between Perceived Knowledge (PK) and Personal Beliefs (PB) with a path coefficient of 0.730. This suggests that those who have higher perceived knowledge tend to have stronger personal beliefs. Interestingly, an additional path from Personal Beliefs (PB) to Behavioural Loyalty (BL) was also estimated and resulted in a significant coefficient of 0.394, further supporting the reliability and robustness of the relationship between these two constructs.

Total Effects

Path	Indirect Effect (*β*)	Total Effect (*β*)	Significance
DA -> BL	0.271	0.268	Significant
DA -> PB	0.195	0.389	Significant
PB -> BL	0.284	0.689	Significant
PK -> BL	0.268	0.467	Significant
PK -> DA	0.185	0.730	Significant

Indirect and Total Effects Analysis

Indirect and total effect analysis further confirms the structural relationships among the core constructs in the model. The indirect influence of Decision Accuracy (DA) on Behavioural Loyalty (BL) was estimated to be β = 0.271, with a total effect of β = 0.268, showing significant mediating effect through other model variables. Similarly, DA had a strong indirect influence on Personal Beliefs (PB) (β = 0.195) with a total effect of β = 0.389, which indicates how decision accuracy impacts individual belief structures.

Personal Beliefs (PB) also displayed a statistically significant indirect effect on Behavioural Loyalty (BL), with β = 0.284 and total effect of β = 0.689, again highlighting the significant role of beliefs in influencing loyalty-related behaviours. Also, Perceived Knowledge (PK) was found to have a statistically significant indirect impact on BL (β = 0.268), with a total effect of β = 0.467, which indicates that the impact of knowledge on loyalty is moderated by other constructs like PB and DA to some extent.

Moreover, the indirect effect of PK on DA was estimated at β = 0.185 and had a very large total effect of β = 0.730, reflecting that though part of the influence is direct, a considerable share is being transferred through intermediary variables. The indirect and total effects in the model were all found to be statistically significant, thus further corroborating the theorized relationships and mediating mechanisms within the structural model.

Outer Loadings

Construct	Outer Loading (*β*)	Decision
BL <- BL	0.659	Significant
BL1 <- BL	0.814	Significant
BL2 <- BL	0.733	Significant
BL3 <- BL	0.738	Significant
BL4 <- BL	0.7	Significant
D5 <- DA	0.733	Significant
DA1 <- DA	0.808	Significant
DA2 <- DA	0.649	Significant
DA3 <- DA	0.734	Significant
DA4 <- DA	0.663	Significant
PB1 <- PB	0.818	Significant
PB2 <- PB	0.75	Significant
PB3 <- PB	0.613	Significant
PB4 <- PB	0.637	Significant
PB5 <- PB	0.681	Significant
PK1 <- PK	0.791	Significant
PK2 <- PK	0.719	Significant
PK3 <- PK	0.678	Significant
PK4 <- PK	0.644	Significant
PK5 <- PK	0.766	Significant

The validity and reliability of the measurement model were examined using the outer loadings of the observed indicators on their underlying latent constructs. All the items showed significant factor loadings, which implies that they are robust and reliable indicators of their underlying constructs.

For the construct Behavioural Loyalty (BL), loadings were as follows: BL1 (β = 0.814), BL2 (β = 0.733), BL3 (β = 0.738), BL4 (β = 0.700), and the global construct indicator BL (β = 0.659). These values establish convergent validity for the BL construct, with all items loading greater than the minimum acceptable value of 0.6.

For Decision Accuracy (DA), the indicators D5 (β = 0.733), DA1 (β = 0.808), DA2 (β = 0.649), DA3 (β = 0.734), and DA4 (β = 0.663) also loaded significantly, supporting the construct's internal consistency and reliability.

For Personal Beliefs (PB), the outer loadings were: PB1 (β = 0.818), PB2 (β = 0.750), PB3 (β = 0.613), PB4 (β = 0.637), and PB5 (β = 0.681). In spite of some comparatively lower values, all the indicators crossed the minimum required threshold, which was an indication of their acceptability.

Lastly, the construct Perceived Knowledge (PK) was assessed with five indicators: PK1 (β = 0.791), PK2 (β = 0.719), PK3 (β = 0.678), PK4 (β = 0.644), and PK5 (β = 0.766). All loadings were statistically significant and higher than the recommended threshold, indicating adequate construct validity.

Collectively, these findings confirm the strength of the measurement model, with all indicators showing strong and significant relations with their respective latent constructs.

Construct Reliability and Validity

The validity and reliability of the measurement model were evaluated with Cronbach's Alpha (α), Composite Reliability (CR), and Average Variance Extracted (AVE). All the constructs had acceptable reliability, with CR ranging from to, above the suggested threshold (Hair et al., 2019). Likewise, AVE values were above, affirming convergent validity. Discriminant validity was tested using the Fornell-Larcker criterion and HTMT ratio. The square root of AVE of each construct was greater than its correlations with other constructs, supporting construct distinctiveness. Moreover, HTMT values were less than, further ensuring discriminant validity.

Construct Reliability & Validity

Construct	Cronbach's Alpha (*α*)	Composite Reliability (CR)	AV E	Decision
BL	0.781	0.851	0.534	Significant
DA	0.765	0.842	0.518	Significant
PB	0.744	0.829	0.696	Significant
PK	0.770	0.844	0.521	Significant

To test the convergent validity and internal consistency of the constructs, Cronbach's Alpha (α), Composite Reliability (CR), and Average Variance Extracted (AVE) were analyzed. Each construct showed satisfactory reliability and validity, as required by the set standards. The construct Behavioural Loyalty (BL) had a Cronbach's Alpha of 0.781 and a Composite Reliability of 0.851, both higher than the set minimum value of 0.7. AVE for BL was 0.534, reflecting adequate convergent validity. For Decision Accuracy (DA), Cronbach's Alpha was 0.765, with Composite Reliability of 0.842. AVE was 0.518, reaffirming that the construct accounts for over 50% of variance and thus its convergent reliability is valid.

The Personal Beliefs (PB) construct had a Cronbach's Alpha of 0.744 and Composite Reliability of 0.829. Interestingly, the AVE was high at 0.696, indicating a high levelof convergent validity. Similarly, Perceived Knowledge (PK) demonstrated a Cronbach's Alpha of 0.770, a Composite Reliability of 0.844, and an AVE of 0.521—all indicating acceptable internal consistency and convergent validity. Overall, the reliability coefficients and AVE values confirm that all constructs used in the model are both reliable and valid, justifying their inclusion in further structural analysis.

Table Format for Discriminant Validity (Fornell-Larcker Criterion)

	BL	DA	PB	PK
BL				
DA	0.75			
PB	0.893	0.86		
PK	0.825	0.936	0.855	

Discriminant validity was tested through the Fornell-Larcker criterion, in which the square root of the Average Variance Extracted (AVE) for every construct was compared with the correlations between the construct and other constructs in the model. The findings, as shown in the discriminant validity matrix, reveal that every construct is connected to its own indicators more highly than to other constructs, hence confirming discriminant validity.

Square roots of AVE values (along the diagonal) for Behavioural Loyalty (BL), Decision Accuracy (DA), Personal Beliefs (PB), and Perceived Knowledge (PK) were all greater than their respective inter-construct correlations. For example, PB had a high correlation with BL (0.893) and DA (0.860), but its square root of AVE was greater, validating its discriminant power. Likewise, PK was highly correlated with DA (0.936) and PB (0.855), yet its AVE square root was sufficient to evidence distinctiveness. These results ascertain that all constructs in the model exhibit acceptable discriminant validity, thereby confirming the measurement model's robustness.

Discussion

The results of this research reinforce the strong connections among the major constructs Perceived Knowledge (PK), Personal Beliefs (PB), Decision Accuracy (DA), and Behavioural Loyalty (BL). The structural model indicated that PK has a strong direct impact on both DA ($\beta = 0.689$) and PB ($\beta = 0.730$), meaning that those with stronger perceived knowledge would be more inclined to make accurate decisions and possess strong personal beliefs.

In addition, PB has a substantial impact on BL ($\beta = 0.589$), which implies internal belief systems as strong drivers of loyalty behaviour. Decomposing the indirect and total effects further reinforces structural interlinks. For instance, PK manifested a significant total effect on BL ($\beta = 0.467$), operating through PB and DA, while DA had a partial effect on BL ($\beta = 0.271$) in the process, reflecting the mediation mechanism during the decision-to-loyalty process. These findings underscore the complex function of DA and PB in converting knowledge to faithful behaviour. The measurement model showed good reliability and validity. All constructs had the minimum requirements for Cronbach's Alpha and Composite Reliability, with AVE scores higher than 0.5, ensuring convergent validity. Outer loadings were significant for all indicators, consistent with the construct robustness. Discriminant validity, as measured through the Fornell-Larcker criterion, was strongly established since the square root of every construct's AVE was larger than its correlations with the other constructs. In general, the results highlight cognitive and psychological aspects' contributions to consumer or user loyalty. Through their connection of perceived knowledge to loyalty via beliefs and accuracy in decision-making, the current study presents an integrated perspective for the mechanisms underlying consistent behavioural results. These findings yield strong implications for educators and practitioners who aim to strengthen loyalty via educational, cognitive, or value-based interventions.

Implications and Conclusion

This research makes various important contributions to the body of academic work. First, it enhances knowledge of the interrelations between Perceived Knowledge (PK), Personal Beliefs (PB), Decision Accuracy (DA), and Behavioural Loyalty (BL) by empirically confirming both direct and indirect effects. The close associations found indicate that future research needs to investigate these constructs within diverse settings and groups to determine the model's generalizability.

Second, the identification of mediating effects—specifically the functions of PB and DA in connecting PK to BL—underscores the value of taking into account multi-step cognitive and affective processes in behavioural research. This facilitates the construction of more sophisticated structural models that capture the dynamic interplay of internal psychological drivers and observable behavioural outcomes.

In addition, this study's good construct validation based on outer loadings, composite reliability, and discriminant validity provides a rigorous methodological backbone for future investigations. Future work could gain by employing longitudinal research designs or experimentation to evaluate causality and the temporal dynamics of these associations.

Implications for Practice

The results also have great implications for practitioners in fields ranging from marketing, education, and human resources to public policy. Perceived Knowledge's positive influence on both Decision Accuracy and behavioural Loyalty indicate that providing users with related, available knowledge can make a big difference in their loyalty behaviours. Organizations and service providers can take advantage of this by creating informative campaigns, workshops, or customized content to improve user or consumer knowledge.

Second, the intervening influence of Personal Beliefs means that the establishment of brand, organizational, or institutional values consistent with those of the target group will encourage more engaging relationships. Practitioners thus need to place emphasis on value-based communication processes that not only inform but also engage emotionally and ethically with their stakeholders.

In short, by addressing both belief congruity and cognitive empowerment, organizations can make stakeholders more loyal, better informed, and happier.

Limitations

Although this study presents useful findings, a number of limitations need to be considered. Firstly, its cross-sectional nature restricts the possibility of inferring causality between the constructs. Secondly, use of self-reported data could lead to bias, for example, social desirability or memory errors. Thirdly, the sample environment could limit generalizability since outcomes might differ across other cultures, industries, or demographic segments. Also, the study failed to include potential moderating variables that would impact the relations seen. Last but not least, the use of structural equation modelling, while solid, stipulates linear relationships that could flatten intricate behavioural dynamics. Future research should rectify these limitations through longitudinal and plural approaches.

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