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RESEARCH ARTICLE

Evaluating user satisfaction through service innovation in the mobile internet industry of Bangladesh

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Abstract: This paper questions the belief that more service innovation always leads to higher customer satisfaction in Bangladesh's fast-growing mobile internet market. It explores four dimensions of innovation: customer engagement, technology, process, and service design. Using data from 300 mobile internet users in urban and semi-urban Bangladesh, the study applies PLS-SEM to examine how these dimensions affect satisfaction. The findings reveal that customer engagement innovation has a strong negative effect, as frequent and unwanted brand communication is often seen as annoying and tiring. Meanwhile, technology, process, and service design innovations have only small effects, suggesting that users now see them as standard expectations rather than special benefits. The study introduces digital exhaustion as an important explanation and suggests that firms focus on simplicity, affordability, and reliable service delivery.

Keywords: Service innovation, User satisfaction, Mobile internet, Structural equation modelling, Bangladesh, Technological innovation, Customer engagement, Emerging markets

Introduction

Background of the study

The global economy is no longer goods-dominant, but service dominated where value is created in the services, experiences, contact and digital platform more than in goods only (Vargo and Lusch, 2004). Consequently, companies are no longer dealing with competition based on features, but responsiveness of service, its accessibility, the quality of relationships, and experience. In mobile telecommunications the competition has shifted past the coverage and prices to encompass the billing efficiency, the usability of the apps, personalization and the quality of the communication. Therefore, service innovation involves a combination of technological, process, service design, and customer engagement that help in value co-creation (Lusch and Nambisan, 2015; Vargo and Lusch, 2004).

The traditional service literature presupposes the fact that customer satisfaction is increased with the improvement of service performance. This is evident in SERVQUAL model which describes satisfaction in terms of the gap between the expected and perceived performance (Parasuraman et al., 1988). Similarly,

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research on innovation may take the assumption that there is more value and satisfaction when there is more innovation. Nevertheless, all these assumptions were primarily worked out in steady environments and might not be applicable to new and digitally unreliable markets.

Bangladesh is a significant setting, because the mobile internet industry has grown fast, although, it remains in an unstable state of infrastructure, inconsistency of service provision, sensitivity of prices, and digital disparities. Service innovation in this environment might not necessarily bring positive results to the user. This paper considers service innovation as a multidimensional concept which is a combination of Technological Innovation (TI), Process Innovation (PI), Service Design Innovation (SDI) and Customer Engagement Innovation (CEI). These dimensions can affect User Satisfaction (US) in a different manner. Especially, overuse of the engagement practices, including recurring promotions, notifications, and active communication, can result in intrusiveness, cognitive load, and digital fatigue. Thus, this paper will address the issue of the impact of multidimensional service innovation on user satisfaction levels in the mobile internet sector of Bangladesh with a particular focus on whether CEI generates value or dissatisfaction.

Problem statement

Digital service providers largely consider service innovation as a competitive and customer satisfaction tool (Lusch and Nambisan, 2015; Vargo and Lusch, 2004). Nevertheless, the mobile internet sector in Bangladesh has not seen the high levels of user satisfaction due to the high investment done in network upgrades, applications, billing, and the practice of user engagement. This implies that innovation dimensions do not produce positive results in every case.

One of the issues is that current literature tends to view service innovation as one construct with a direct positive impact on satisfaction. This ignores the fact that other dimensions of innovation can have varying results. Specifically, engagement activities with customers that can include promotional messages, reminders, and customized campaigns can create unrealistic expectations that cannot always be met by a provider, thus leading to higher levels of dissatisfaction. Thus, the empirical evidence about the impact of different dimensions of service innovation on the user satisfaction in Bangladesh is limited, as well as whether CEI can increase user satisfaction or mediate the relationship between other innovation dimensions and user satisfaction. In the face of a lack of such understanding, operators are likely to keep investing in unproductive innovation strategies, and policymakers are likely to focus on digital growth without paying enough attention to user welfare and communication overload.

Motivation of the study

There are theoretical and practical issues driving this study. Its theoretical assumption is that one should not simply assume that increased innovation in service will result in increased satisfaction. In practice, the mobile internet market in Bangladesh is a topical case since it is associated with a high pace of development, competition, diversity of infrastructures, and the capabilities of users. The use of digital engagement strategies by service providers is becoming increasingly common, yet when it is felt that the strategy is invasive or out of touch with the real service performance it will have a detrimental impact on satisfaction instead of promoting it. Another reason that motivates the study is that the evidence in the context of an emerging economy should be context specific as much of the literature written has been made in an advanced economy.

Significance of the study

This report is both an academic and a practical study. It has an academic contribution in the sense that it treats service innovation as a multidimensional phenomenon and looks at TI, PI, SDI, and CEI separately relative to the User Satisfaction (US). It also uses the Expectation-Disconfirmation Paradigm (EDP) that provides the explanation of satisfaction in the contrast between the expectations and the actual performance (Oliver, 1980; Oliver, 2014). This is more applicable in the digital services where communication and promotional claims are very influential in influencing the expectations of the user. In practice, the results

can assist telecommunications managers to determine what types of innovation investments enhance satisfaction as well as what ones can result in digital overload. The paper can also be of use to policy makers and regulators that deal with consumer protection, trust and digital governance.

Research objectives

The objectives of the study are:

1. To test the influence of TI, PI, and SDI on CEI in the mobile internet industry of Bangladesh.
2. To determine the direct influences of TI, PI, SDI, and CEI on User Satisfaction (US).
3. To explore the negative or value-destroying nature of the correlation between service innovation dimensions and US by the intervention of CEI.

Research question

1. What are the factors of assessing user satisfaction using service innovation in the Bangladesh mobile internet business?

Reframing structure of the study variables

This paper views service innovation as a multidimensional concept that is composed of TI, PI, SDI and CEI. TI incorporates infrastructural and technical additions. PI is associated with efficiency, simplification of billing, dealing with complaints, and service delivery. SDI encompasses usability, customization, quality of interface and accessibility. CEI incorporates one-on-one communication, offers, initiatives, and online interactions. Dependent variable is User Satisfaction (US) which is an assessment of user on his/her experience with service. TI, PI, and SDI might influence US both directly and indirectly via CEI, but also CEI might lead to expectations and perceived intrusiveness.

Proposed tasks of the study

The research is going to review the pertinent literature, construct a multidimensional model of TI, PI, SDI, and CEI, apply EDP to describe expectation-performance comparisons (Oliver, 1980; Oliver, 2014), employ Service-Dominant Logic (SDL) to describe value creation and potential value co-destruction (Vargo and Lusch, 2004; Vargo and Lusch, 2008), test direct and mediating relations empirically.

Novelty of the study

The research is new since it aims at questioning the belief that a greater amount of innovation will always translate to greater satisfaction, it gives a critical analysis of CEI as a potentially intrusive and cognitive exhausting idea, provides evidence on a relatively new area of study, Bangladesh, as an emerging market, and brings together EDP, SDL and multidimensional service innovation under a single analytical model. Contrary to the predominantly positive perception of engagement in previous research (Payne and Frow, 2005; Payne et al., 2008), both the beneficial and adverse impacts of engagement are considered in this study.

Significance of the study within the Bangladesh set-up

Mobile internet business in Bangladesh is among the rapidly developing sectors of digital services in this country and is at the center of communication, business, education, entertainment and finance. Although a lot of money has been pumped into the fields of innovation and infrastructure, users continue to experience network unpredictability and service failure. Consequently, it is valuable that operators, regulators, and researchers should know how users judge various innovation endeavors.

Overall, this paper states that service innovation does not necessarily enhance customer satisfaction directly and similarly. The results of innovation in Bangladesh mobile internet industry are most probably to be complicated due to the presence of digital expansion and the unstable state of infrastructures and unequal capabilities of users. The analysis of TI, PI, SDI, and CEI concerning User Satisfaction (US) will help the

study to gain a more context-specific insight into service innovation whether engagement-based innovation generates value or brings about digital exhaustion, inflated expectations, and diminished satisfaction.

Literature Review

The literature review will provide a summary of the research presented in the article by Riley and Praed (2010).

The digital services have increased the literature on service innovation and customer satisfaction. Previous researchers tended to believe that higher satisfaction is brought by better service quality and innovation. Recent research, however, indicates that such relationships are more complicated in new digital economies that are characterized by infrastructure unsteadiness, digital disparity, and intensive involvement practices. The current review is based on the top theories and empirical research concerning Technological Innovation (TI), Process Innovation (PI), Service Design Innovation (SDI), Customer Engagement Innovation (CEI), and User Satisfaction (US).

Service-dominant shift and service innovation

Vargo and Lusch (2004) maintained that service, relationships, and interaction produced value as opposed to goods where value is integrated. This applies to the mobile internet services, whereby responsiveness, personalization, and digital interfaces determine user experience. Vargo and Lusch (2008) also stressed the active position of customers in value creation. Nevertheless, the Service-Dominant Logic primarily presupposes the presence of value-generating engagement and is insignificantly concerned with the situations when engagement becomes obstructive or value-destructive. This is a limitation since the current paper assumes that CEI might not necessarily enhance satisfaction.

Satisfaction and quality of service

Parasuraman, Zeithaml and Berry (1988) SERVQUAL model described the idea of satisfaction as the difference between the expected and the perceived service performance. It set a general perception that the higher the quality of service, the higher the satisfaction. Nevertheless, SERVQUAL was constructed in the traditional service context and is not comprehensive enough to reflect the digital challenges of communication overload, intrusive interaction, or digital fatigue. It also fails to draw a line between TI, PI, SDI, and CEI. Thus, it offers a convenient starting point but cannot be used in this research.

User satisfaction and the expectation disconfirmation theory

The primary theoretical basis of the given work is the Expectation Disconfirmation Theory by Oliver (1980) and Oliver (2014). According to this theory, satisfaction is based on reality against the expectations of performance. Positive disconfirmation is more satisfying and negative disconfirmation results in dissatisfaction. This applies very well to the mobile internet services where promotions, technological assertions and service promise must be the factors defining what is expected. In this paper, TI, PI, and SDI are the performance-related factors, whereas CEI is regarded as the expectation-shaping factor. If expectations increase at a pace higher than the performance, there can be dissatisfaction due to the presence of the CEI.

Service innovation as a multidimensional construct

According to Lusch and Nambisan (2015), service innovation was termed as a resource integration and value co-creation process. Their work demonstrates that innovation in service involves improvement of processes, change of service interface, and mechanisms of interaction, in addition to technology. This justifies the application of TI, PI, and SDI as the areas of core innovation and CEI as a mediating process. Nonetheless, the overall approach of their framework is to view engagement as a good thing and fails to properly explain overload or annoyance of extreme engagement.

Customer involvement and open innovation

Chesbrough (2003) opined that companies can obtain competitive advantage through the integration of internal capabilities and external ideas and customer feedback. This is one of the reasons as to why service providers invest in interactive platforms and personalized communication and feedback systems. Open Innovation is a concept that clarifies the strategic foundations of CEI in the current study. Nevertheless, as it does not concern the strategy of satisfaction formation, but innovation, it should be integrated with Oliver (1980, 2014) to discuss the impact of CEI on US.

Customer relationship management and customer engagement innovation

CEI is also supported in the relationship management literature. Payne and Frow (2005) regarded CRM as the strategy process of handling customer relationship and generation of value. Payne, Storbacka, and Frow (2008) focused on value co-creation by means of interactive touchpoints. The studies favor personalizing and being proactive, although they largely presuppose engagement to be advantageous. They fail to state explicitly at which point, the engagement turns invasive or excessive, which causes a significant gap, which the current research fills.

Empirical situation: Mobile internet services in Bangladesh

The context in Bangladesh is significant since the market of mobile internet has grown at a rapid pace yet becomes inconsistent in terms of services, price sensitive and not even digitally literate. According to Rizvi et al. (2021), the market is characterized by quick growth and infrastructural limitations and the ability of various users. Haque et al. (2022) discovered that the level of dissatisfaction still prevails due to fluctuating performance, overcrowding, and unequal service provisions. Their results indicate that visible innovation may not necessarily enhance satisfaction in cases where the delivery of core services is poor. They also suggest that high levels of promotional intensity can raise dissatisfaction in case performance is sporadic.

Connections of literature to the study variables

Technological innovation

Technological Innovation (TI) incorporates infrastructure, speed, reliability and network performance. Bharadwaj et al. (2013) and Yoo et al. (2010) demonstrated that digital infrastructure facilitates interactive service systems, whereas Parasuraman et al. (2005) stressed the influence of digital capability on the electronic services. This promotes a good TI -CEI relationship. Nevertheless, Mick and Fournier (1998) also indicated that speedy technological change could also introduce complexity hence TI does not necessarily enhance US.

Process innovation

Process innovation (PI) incorporates operational efficiency, simplification of billing, access to self-service and quick issue resolution. The researchers Meuter et al. (2000), Homburg et al. (2017), and Tax et al. (1998) determined that self-service technologies promote involvement, efficient processes, and favorable customer experience, respectively, and fair treatment of complaints. This literature facilitates beneficial impacts of PI on CEI and US.

Service design innovation

Service Design Innovation (SDI) incorporates usability, customization, flexibility of services, and package design. Prahalad and Ramaswamy (2004) associated personalization and relevance, Gefen et al. (2003) focused on usability and trust, and Lemon and Verhoef (2016) focused on the consistency of the design in customer experience. This research confirms positive connections between SDI, CEI, and US.

Customer engagement innovation

Customer Engagement Innovation (CEI) incorporates initiatives to talk with customers, customized offers, interactive applications, and digital outreach. Brodie et al. (2011) and Hollebeek et al. (2014) attributed engagement to more positive emotional attachment and customer performance. Nevertheless, Aguirre et al. (2015) believed that over-individualization can cause privacy issues and discomfort. This will argue in favor of the fact that CEI can also minimize satisfaction in cases where engagement is forced.

Literature trends and developments

Three trends are demonstrated in literature. The initial research to highlight was work by Parasuraman et al. (1988), Oliver (1980) and Vargo and Lusch (2004) who highlighted service performance, expectations and interaction. Second, subsequent reports like Lusch and Nambisan (2015), Payne et al. (2008) and Lemon and Verhoff (2016) concentrated on the themes of ecosystems, platforms of engagement, and customer experiences. Third, recent articles like Haque et al. (2022) and Aguirre et al. (2015) indicate that innovation and involvement are not always positive, particularly in volatile and digitally overcrowded worlds.

Research gaps

Several gaps remain. To begin with, the key theories (Parasuraman et al., 1988, Vargo and Lusch, 2004 and Lusch and Nambisan, 2015) were largely constructed in well-established economies and might not be applicable in new markets like Bangladesh. Second, the numerous studies do not distinguish service innovation but instead discuss it as one construct. Third, previous literature largely assumes that engagement by the customers is a good phenomenon, and almost no consideration is made to digital fatigue, intrusiveness, and dissatisfaction. Lastly, there is little literature that explored CEI as a negative mediating variable between service innovation and satisfaction.

Correlations of literature to the current study

The current research fills these gaps by considering TI, PI and SDI as basic innovative dimensions, CEI as mediating variable, and US as the ultimate outcome. It is also largely based on Oliver (1980, 2014), which is reinforced by Vargo and Lusch (2004, 2008) and informed by Lusch and Nambisan (2015), Payne and Frow (2005), and Payne et al. (2008).

All in all, the literature indicates that the relationships among service innovation, engagement and satisfaction are close, yet not uniformly positive. Thus, this research will hypothesize the various dimensions of service innovation to influence user satisfaction in the Bangladesh mobile internet industry differently and whether CEI is a negative mediating variable.

Methodology

The research study used quantitative research design whereby one cross-sectional survey was used to test relationships that were hypothesized between the variables. To examine the measurement model and structural relationships at the same time, the PLS- Structural Equation Modeling (PLS- SEM) was applied in the study. This approach is suitable to develop and test theories in complicated research environments (Hair et al., 2019).

Research environment and background rationalization

The study targeted the mobile internet market in Bangladesh since it is a booming and a highly dynamic market in an emerging economy. This context is significant in that it will enable the study to test the hypothesis whether the theories that were formed in the context of relatively stable and developed markets stand or fall under circumstances of infrastructural instability, tight competition, and varied user qualities. In Bangladesh, the penetration of mobile internet through the program, Digital Bangladesh, has seen the quality of services become a national issue. Meanwhile, inconsistent service duties, price elasticity, unequal

digital proficiency, and mistrust in publicizing communications can likewise have a potent impact on user reaction particularly to CEI.

Sample and data collection

Active mobile internet subscribers between the ages of 18 years and above residing in the major urban and semi-urban regions of the country namely, Dhaka, Chittagong and Khulna were used as the source of data. A convenience sampling method that is not probability was employed. To achieve the coverage and minimize selection bias, hybrid data collection approach was taken: 60 percent of responses were obtained via online questionnaires that were distributed with the help of social media and email, and 40 percent were obtained through face-to-face interview conducted by trained research assistants with the help of tablet in crowded places like university campuses and transport hubs. Overall, 300 responses were received that could be used. The informed consent, voluntary participation, and the confidentiality were adhered to and ethical approval was obtained in the context of the study.

Table 1: Respondent demographics (\$N=300\$)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	175	58.3
	Female	125	41.7
Age	18–24 years	105	35.0
	25–34 years	120	40.0
	35–44 years	55	18.3
	45+ years	20	6.7
	Secondary/Higher Secondary	45	15.0
Education	Bachelor's Degree	180	60.0
	Master's Degree and above	75	25.0
Monthly Income (BDT)	Below 20,000	80	26.7
	20,001 – 40,000	110	36.7
	Above 40,000	110	36.7
Geographical Area	Urban Centers (Dhaka/Chittagong)	195	65.0
	Semi-Urban Areas (Khulna/Others)	105	35.0

Source: Author's own work

Hypotheses

Customer engagement innovation and technological innovation

Technological innovation (TI) involves the application of new technology infrastructure in the improvement of service delivery like, speed of internet, network coverage and reliability of services. Technological infrastructure, as the center of digital engagement systems, will enable firms to interact with customers via touchpoints (Bharadwaj et al., 2013; Yoo et al., 2010), according to the antecedent research. Reliable and quick technological systems endorse the digital service experience and consequently elicit interactive and customized interaction (Parasuraman et al., 2005).

Digital interaction is greatly motivated by the reliability of services and the quality of services performance as it reduces friction and enhances the perceived usefulness (Davis, 1989; Venkatesh et al., 2003). The customers with a sense of security in the connection and the impeccable digital service can interact more with apps, respond to personal offers, and use digital forms of communication (Verhoeff et al., 2010).

In this connection, technological innovation will be anticipated to enhance customer engagement innovation.

H1: Technology innovation has a positive influence on Customer Engagement Innovation.

Customer engagement and innovation process

Process innovation (PI): This refers to improvement of the working processes in an organization, such as simplified billing, self-service, and efficient solutions of issues. The processes are highly efficient, which

simplifies the lives of the customers, and reduces the effort of the service, which adds significantly to the engagement behaviors (Homburg et al., 2017). This is done using self-service technologies that allow customers to learn about service technologies and, as a result, increases their participation and engagement (Meuter et al., 2000).

Information and communications that are streamlined and complaints that are handled efficiently create a feeling of fairness and transparency upon which the interactive engagement platforms are founded (Tax et al., 1998). The efficiency and the responsiveness of the services are also defined by the improvement of the processes, and the firms offer more individualized and timely digital interactions (Ostrom et al., 2015).

Thus, the organization which is innovative in its service processes will be more likely to motivate a customer-level innovation.

H2: Process Innovation has a positive effect on Customer Engagement Innovation.

Service design innovation and customer engagement innovation

Service Design Innovation (SDI) refers to the redesigning of the services that are offered in terms of customizing the services and offering flexible prices and user-friendly interfaces. The service-dominant logic emphasizes the fact that there is co-creation of value during the process of exchange between companies and consumers (Vargo and Lusch, 2004). Individualization and customization increase the perceived relevance that increases the desire to be engaged by the customers (Prahalad and Ramaswamy, 2004).

The user-centered design and layout improve usability by intuition, which has a beneficial effect on the interaction and engagement in the digital environment (Gefen et al., 2003). The service design must conform to the user preferences and cognition since customers react better to tailored information and are more inclined toward digital platforms (Lemon & Verhoef, 2016).

In this manner, customer engagement innovation is bound to be enhanced due to innovative service design.

H3: Service Design Innovation has a positive influence on Customer Engagement Innovation.

Customer engagement innovation and user satisfaction

Customer engagement innovation (CEI) indicates interactive programs, provides that are customized, and electronic communication types that affect customer experience. The engagement programs enhance emotional attachment and experiential value, which are among the largest elements of satisfaction (Brodie et al., 2011; Hollebeek et al., 2014).

However, excessive digital communication or over personalization of information may lead to saturation of information or privacy threat that may also lead to a decrease in satisfaction (Aguirre et al., 2015). In case the engagement strategies are seen as being intrusive or overwhelming, customer ratings will decline.

As a proposal of the conceptual framework, it is hypothesized that CEI influences user satisfaction negatively.

H4: Customer Engagement Innovation has a negative effect on User Satisfaction.

Firsthand implication of innovation to customer satisfaction

Technological innovation has a direct influence on service performance perceptions. The attributes of the performance such as reliability and speed are known to contribute significantly to the satisfaction as has been found in the expectations-confirmation theory (Bhattacharjee, 2001) and service quality theory (Parasuraman et al., 1988). However, there is also a possibility that because of rapid technological changes the cost of complexity and user adaptation will act to reduce satisfaction because of higher costs (Mick and Fournier, 1998).

H5: Technological Innovation has negative impact on User Satisfaction.

Process innovation enhances efficiency in operation and convenience in service which is already predetermined by the drivers of customer satisfaction (Anderson et al., 1994). Fairness has also been

improved based on simplified billing and good complaints redressing mechanisms that influence perceived fairness and quality of services that influence overall levels of satisfaction.

H6: Process Innovation has a direct impact on Customer Satisfaction.

Continuing the same point, service design innovations can benefit customer experience and perceived value (Lemon and Verhoef, 2016). Flexibility and custom packages will promote value-perceptions, which are the essential components of user satisfaction (Zeithaml, 1988).

H7: There is a direct influence of Service Design Innovation on User Satisfaction.

Going in between customer engagement innovation

Customer engagement involves a relational activity which links innovative activities and customer performance (Brodie et al., 2011). The technological, process, and service design innovations of the firms are primarily transformed into satisfaction outcomes in terms of enhanced engagement experiences rather than in terms of actual impacts on performance only (Hollebeek et al., 2014).

The channels of interaction enable the firms to scout the operating and technological proficiency regarding interactive value-creating processes (Vargo & Lusch, 2008). Thus, CEI is likely to mediate the relations between innovation and user satisfaction.

H8: Technological Innovation does not have a significant correlation with User Satisfaction by Customer Engagement Innovation.

H9: Customer Engagement Innovation has an important mediating role in the relationship between Process Innovation and User Satisfaction.

H10: Customer Engagement Innovation is a strong mediating variable between Service Design Innovation and User Satisfaction.

Conceptual framework

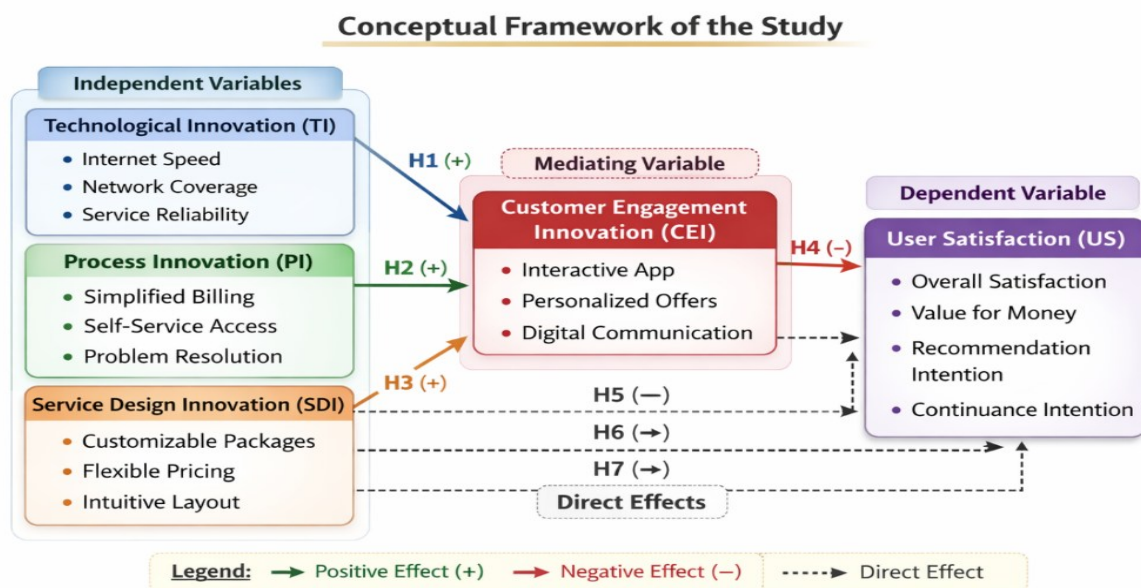


Figure 1: Conceptual framework

Source: Author's own work

Measures

The measures on all the constructs were given in reflective scales that were based on the already existing studies and adjusted to the contextual environment of mobile internet service. The answers were taken on a five-point Likert scale in which 1 = Strongly Disagree and 5 = Strongly Agree.

Table 2: Measurement model and construct operationalization

Construct	Abbreviation	Adapted Source	No. of Items (Original/Final)	Example Item
Technological Innovation	TI	Lee et al. (2015), TSMC	4 / 3	The mobile operator frequently introduces high-speed services (e.g., 4G/5G).
Process Innovation	PI	Chen et al. (2017), IM	4 / 4	The operator has simplified procedures for solving customer problems.
Service Design Innovation	SDI	Lusch and Nambisan (2015), JM	4 / 4	The service interface (app/website) is user-friendly and aesthetically pleasing.
Customer Engagement Innovation	CEI	Payne et al. (2008), JSR	4 / 3	The operator offers unique ways for me to interact with and customize my service.
User Satisfaction	US	Oliver (2014), JCR	3 / 3	I am highly satisfied with the overall mobile internet service provided.

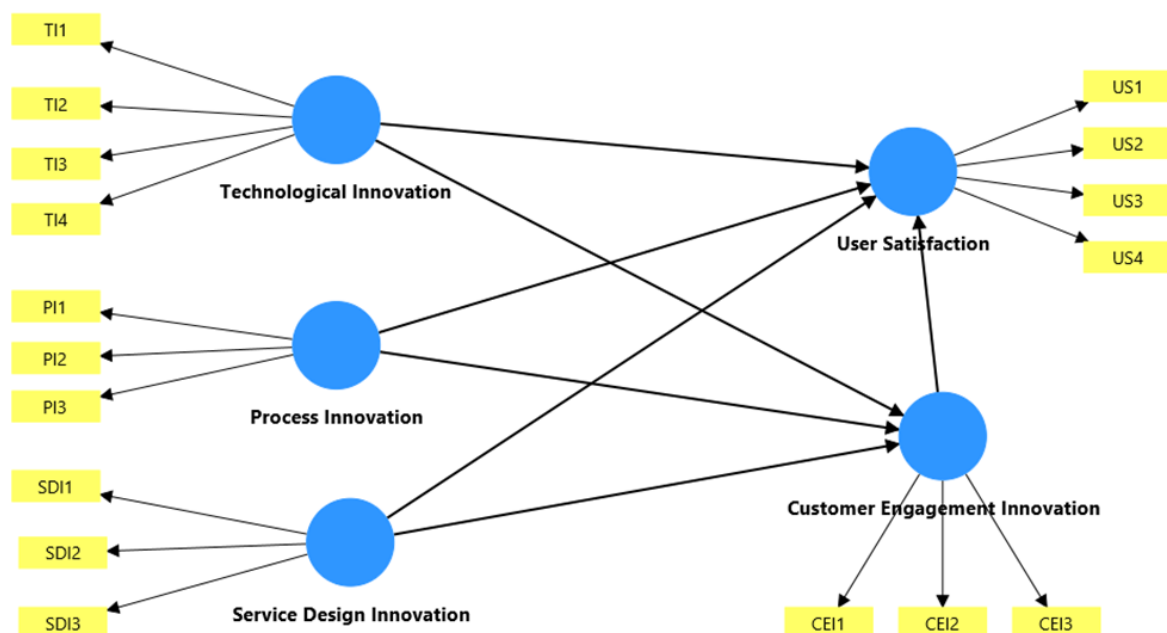
Source: Author's own work

The survey was narrowed down to 17 items and five constructs in the final survey. Complete items are given in Appendix A. To achieve content validity, translation with back translation, expert review and pilot test involving 30 users were used. Some evaluations of the Measurement Model are also done in 3.6.

Evaluation of the measurement model

The model investigates how Technological Innovation (TI), Process Innovation (PI), and Service Design Innovation (SDI) can impact User Satisfaction (US) through Customer Engagement Innovation (CEI), which is a mediator. Measurement of all constructs was done reflectively.

Two of them (CEI2 and TI4) were first eliminated because of weak loadings. The last model demonstrated satisfactory reliability and convergent validity. The Outer loadings were between 0.676 and 0.874, Cronbach 820-0.739, Composite Reliability (CR) 0.836-0.893 and AVE 0.561-0.736. These values comply with suggested thresholds.

**Figure 2: Measurement and structural model diagram**

Source: Author's own work

Table 3: Results of the measurement model assessment

Construct	Items	Loadings (Final)	Cronbach's α	Composite Reliability (CR)	Average Variance Extracted
Customer Engagement Innovation (CEI)	CEI1	0.874	0.745	0.850	0.656
	CEI2	0.688			
	CEI3	0.856			
Process Innovation (PI)	PI1	0.812	0.776	0.870	0.690
	PI2	0.854			
	PI3	0.825			
Service Design Innovation (SDI)	SDI1	0.862	0.820	0.893	0.736
	SDI2	0.840			
	SDI3	0.871			
Technological Innovation (TI)	TI1	0.779	0.773	0.854	0.595
	TI2	0.802			
	TI3	0.709			
	TI4	0.791			
User Satisfaction (US)	US1	0.676	0.739	0.836	0.561
	US2	0.758			
	US3	0.808			
	US4	0.748			

Source: Author's own work

Overall, the measurement model demonstrated satisfactory reliability and convergent validity.

Table 4: Inter-construct correlations and discriminant validity

Construct	PI	SDI	CEI	TI	US
Process Innovation (PI)	0.831	0.479	0.505	0.636	0.874
Service Design Innovation (SDI)	0.479	0.858	0.657	0.523	0.541
Customer Engagement Innovation (CEI)	0.505	0.657	0.810	0.393	0.484
Technological Innovation (TI)	0.636	0.523	0.393	0.771	0.859
User Satisfaction (US)	0.874	0.541	0.484	0.859	0.749

Source: Author's own work

The Fornell Larcker criterion was used to measure discriminant validity. SDI and CEI passed the criterion well. Nonetheless, PI, TI and US had potential of discriminant validity issues due to high inter-construct correlations particularly with US. Thus, in the structural model, these constructs can be taken with some caution.

Common method bias and multicollinearity

Common Method Bias (CMB) was assessed using VIF values. Construct-level VIF values range from When the method is being common, it is sometimes referred to as CMB. Multicollinearity is also a term that is used in the same context. VIF values were used to evaluate the common method, Bias. Construct-level VIFs were between 1.449 and 2.063 and indicator-level VIFs were between 1.322 and 1.977. No significant common method bias was observed since all the values were lower than the conservative value of 3.3. VIF was also used to evaluate the possibility of multicollinearity, and all the values were below the suggested cut-off. It means that the issue of multicollinearity did not occur and the structure estimates are consistent. Evaluation Structural models should enable one to clarify why a particular structure can be observed within a specific environment, especially in relation to its counterparts in that environment where it is typically found.

Structural model evaluation

Structural models must allow one to explain why a certain structure can be found in a certain environment in comparison to its counterparts in the environment in which it is normally found. PLS-SEM was used to

test the structural model. Bootstrapping using 5,000 subsamples and a 95 per cent two-tailed confidence interval was used to test the importance of the hypothesized relationships. The analysis also reports standardized path coefficients (8) of the paths proposed, t-values and p-values to measure the strength and significance of the proposed paths. Moreover, R^2 and q^2 values were also tested to determine explanatory power and predictive relevance of the model

Data Analysis

The results of the PLS-SEM of the 300 respondents that could be used show that the structural model is very highly explanatory. The model has a high predictive power with 91.8% of the variance in the User Satisfaction ($R^2 = 0.918$) suggesting the innovativeness constructs employed alone and in combination can predict the User Satisfaction well. Customer Engagement Innovation ($R^2 = 0.483$) moderated by the antecedent innovation variables is also present.

As far as the postulated courses are concerned:

Concerning direct relations, Process Innovation and Technological Innovation have a very strong, positive and significant effect on User Satisfaction (Process Innovation (0.547, 19.538, $p < 0.001$) and Technological Innovation (0.502, 19.021, $p < 0.001$)). Service Design Innovation (0.017, $t = 0.605$, $p = 0.545$) has a positive but insignificant effect, in its turn, implying that the changes associated with design do not affect satisfaction significantly. Similarly, Customer Engagement Innovation is not a significant direct effect on User Satisfaction ($= -0.001$, $t = 0.040$, $p = 0.968$).

Overall, the findings indicate that Process Innovation and Technological Innovation are the two significant drivers of User Satisfaction and the Service Design Innovation and Customer Engagement Innovation are not so major in this equation. This means that in this respect functional efficiency and technological performance are of greater importance to the users than the engagement initiatives or the service design features singly.

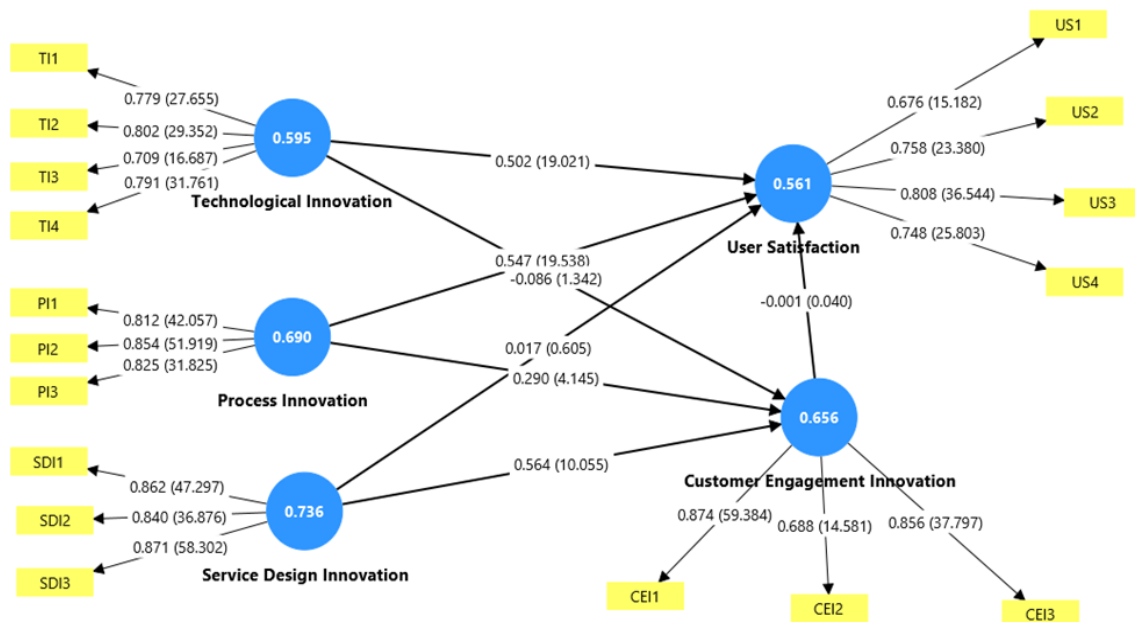


Figure 3: Structural model results

Source: Author's own work

Descriptive statistics

Standardized scores of constructs were computed using descriptive statistics. The data were standardized to PLS-SEM and therefore, all the constructs have a mean of 0.000 with a standard deviation of 1.000. This shows the similarities in distributions among constructs. In general, the respondents demonstrated moderate service innovation and user satisfaction impressions.

Table 5: Descriptive statistics of constructs (N = 300)

Construct	Abbreviation	Mean (μ)	Standard Deviation (σ)	Interpretation of Mean
Customer Engagement Innovation	CEI	0.000	1.000	Moderate perception of engagement innovation
Process Innovation	PI	0.000	1.000	Moderate perception of process improvements
Service Design Innovation	SDI	0.000	1.000	Moderate perception of service design quality
Technological Innovation	TI	0.000	1.000	Moderate perception of technological advancement
User Satisfaction	US	0.000	1.000	Moderate overall user satisfaction

Source: Author's own work

Measurement model assessment

The measurement model was evaluated on the reliability, convergent validity, and discriminant validity. Findings indicate the presence of good reliability and convergent validity. Most loadings were more than 0.70, the Cronbachalpha was between 0.739 and 0.820, the CR was between 0.836 and 0.893 and the AVE was between 0.561 and 0.736.

Table 6: Reliability and convergent validity

Construct	Items	Loadings (Final)	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted
Customer Engagement Innovation (CEI)	CEI1	0.874	0.745	0.850	0.656
	CEI2	0.688			
	CEI3	0.856			
Process Innovation (PI)	PI1	0.812	0.776	0.870	0.690
	PI2	0.854			
	PI3	0.825			
Service Design Innovation (SDI)	SDI1	0.862	0.820	0.893	0.736
	SDI2	0.840			
	SDI3	0.871			
Technological Innovation (TI)	TI1	0.779	0.773	0.854	0.595
	TI2	0.802			
	TI3	0.709			
	TI4	0.791			
User Satisfaction (US)	US1	0.676	0.739	0.836	0.561
	US2	0.758			
	US3	0.808			
	US4	0.748			

Source: Author's own work

Overall, the constructs show satisfactory reliability and convergent validity. Discriminant validity was assessed using HTMT. Most values were acceptable, but the PI–US value exceeded the recommended threshold, indicating a possible discriminant validity issue.

Table 7: Discriminant validity (Heterotrait–monotrait ratio)

Construct	PI	SDI	CEI	US
Process Innovation (PI)	—	0.596	0.639	1.115
Service Design Innovation (SDI)	0.596	—	0.795	0.693
Customer Engagement Innovation (CEI)	0.639	0.795	—	0.604
User Satisfaction (US)	1.115	0.693	0.604	—

Source: Author's own work

Thus, discriminant validity is acceptable for most constructs, but Process Innovation and User Satisfaction should be interpreted with caution.

Structural model and hypothesis testing

Bootstrapping with 5,000 resamples was the method to test the structural model. The model had good explanatory strength in terms of $R^2 = 0.483$ (CEI) and $R^2 = 0.918$ (US). This implies that the model accounts for 48.3 percent of the variance in CEI and 91.8 percent of the variance in US.

Table 8: Results of the structural model (direct path coefficients)

Path	Hypothesis	Coefficient (β)	t-value	p-value	Result
Process Innovation $\rightarrow$ User Satisfaction	H1	0.547	19.538	0.000	Supported
Service Design Innovation $\rightarrow$ User Satisfaction	H2	0.017	0.605	0.545	Not Supported
Technological Innovation $\rightarrow$ User Satisfaction	H3	0.502	19.021	0.000	Supported
Customer Engagement Innovation $\rightarrow$ User Satisfaction	H4	-0.001	0.040	0.968	Not Supported
Process Innovation $\rightarrow$ Customer Engagement Innovation	H5	0.290	4.145	0.000	Supported
Service Design Innovation $\rightarrow$ Customer Engagement Innovation	H6	0.564	10.055	0.000	Supported
Technological Innovation $\rightarrow$ Customer Engagement Innovation	H7	-0.086	1.342	0.180	Not Supported

Source: Author's own work

These findings indicate that Process Innovation and Technological Innovation yield huge boost to User Satisfaction. Customer Engagement Innovation is also highly augmented by Process Innovation and Service Design Innovation. Nonetheless, SDI to US, CEI to US, and TI to CEI were not significant.

Assessment of model fit

Standard indices were used to measure model fit. The value of SRMR (0.121) is higher than the recommended value (0.08), and it does not represent the optimal model fit. The d ULS value of 2.226 is also an indication that there is a certain divergence between empirical and model implied matrices. Thus, the model can be regarded as highly explanatory, but the absolute fit must be viewed with caution.

Table 9: Model fit indices

Fit Index	Saturated Model	Estimated Model
SRMR	0.121	0.121
d_ULS	2.226	2.226
d_G	n/a	n/a
Chi-square	∞	∞
NFI	n/a	n/a

Source: Author's own work

Indirect effects: Mediation analysis

Bootstrapping was performed using 95 percent bias corrected confidence intervals as tests of mediation. All the indirect effects were not statistically significant. Because all confidence intervals contained zero, Customer Engagement Innovation (CEI) is not in the middle of the association between PI, SDI, TI, and US.

Table 10: Results of the mediation analysis (specific indirect effects)

Indirect Path	Hypothesis	Specific Indirect Effect (β Indirect)	t-value	95% C.I. (Lower)	95% C.I. (Upper)	Result
Process Innovation $\rightarrow$ Customer Engagement Innovation $\rightarrow$ User Satisfaction	H2b	-0.000	0.038	-0.018	0.014	Not Supported
Service Design Innovation $\rightarrow$ Customer Engagement Innovation $\rightarrow$ User Satisfaction	H3b	-0.001	0.040	-0.029	0.029	Not Supported
Technological Innovation $\rightarrow$ Customer Engagement Innovation $\rightarrow$ User Satisfaction	H4b	0.000	0.031	-0.005	0.007	Not Supported

Source: Author's own work

In summary, no mediation effect was found.

Discussion and Recommendations

Supported and rejected hypotheses

The findings indicate that Process Innovation (PI) to User Satisfaction (US) is positive and significant (0.547, p 0.001) and Technological Innovation (TI) to User Satisfaction (US) is also positive and significant (0.502, p 0.001). Service Design Innovation (SDI) $\rightarrow$ US, on the other hand, is not significant (0.017, p = 0.545) and Customer Engagement Innovation (CEI) $\rightarrow$ US is also not significant (0.001, p = 0.968). Besides, PI to CEI (0.290, p = 0.001) and SDI to CEI (0.564, p = 0.001) are significant, and TI to CEI is not significant (β = -0.086, p = 0.180). All the indirect effects via CEI are not significant. As such, the direct effects of PI and TI to US are only supported and the assumption of engagement-based mediation is dismissed.

Discussion of major results

The results show that functional reliability and operational efficiency are the primary factors that have led to user satisfaction in the mobile internet industry in Bangladesh, and not engagement intensity or design enhancement. It seems that stable network operation, easy billing and quick response are the most appreciated features by the users. This corroborates the Expectation-Disconfirmation Paradigm (EDP), since the level of satisfaction relies rather on actual performance of the service than promotional or relationship activities. The fact that US has a high R^2 (0.918) also confirms high role of these core factors.

Service design innovation discussion

Even though SDI is supposed to make user experience better, its direct impact on US is insignificant. This is an indication that usability of the interface, package flexibility and customization can now be regarded as commodity necessities and not determinants of satisfaction. Nevertheless, SDI substantially enhances CEI, i.e. it facilitates exchange, but does not directly enhance satisfaction.

Customer engagement innovation discussion

The most crucial discovery is related to CEI. Even though the previous literature usually considers engagement as creating value, this research demonstrates that CEI does not directly enhance US or mediate other impacts of innovations. This implies that individualized offers, proactive message, and interactive touchpoints cannot be sufficient to increase satisfaction in this respect. In case the core service is not stable, the engagement can be disregarded or regarded as noise instead of value.

Alternative explanations

These findings could be attributed to a few reasons. First, the service design and engagement can be already normalized in the market and therefore will not have a significant impact on satisfaction. Second, the moderation between perceptions of constructs can be a sign of low variability in responses. Third, the large

value of the HTMT between PI and US (1.115) indicates that there is a conceptual overlap. Fourth, the model fit is not ideal (SRMR = 0.121), and one should take the results with caution.

In general, results indicate that service innovation is context sensitive and multidimensional. Technological and process innovation are the only technology in this study that have significantly positive effects on satisfaction whereas service design and customer engagement innovation do not.

Theoretical contribution

The theoretical contribution of this study is the challenge of the assumption that service innovation raises satisfaction. It demonstrates that the effects of various dimensions of innovation are different. The research builds on EDP by demonstrating that TI and PI are better explanatory factors than engagement processes in a new market. It also adds to Service-Dominant Logic as it demonstrates that value co-creation via CEI does not simply occur when core service performance is erratic.

Methodological contribution

The study methodologically has a contribution in that it is undertaken through a PLS-SEM parallel multiple mediation model that measures direct and indirect effects of TI, PI, SDI, and CEI on US. It also discloses reasonable reliability and convergent validity but obviously admits discriminant validity and model fit restrictions. The analysis is supported using 300 respondents and 5,000 bootstraps resamples.

Practical implications

The practical implication is apparent: the mobile internet operators in Bangladesh ought to lead using a performance-first innovation strategy. As PI and TI are the most significant predictors of satisfaction, the managers need to concentrate on the network stability, the quicker response to complaints, the simplified billing, the efficiency of self-service, and continuous service provision. The tools of engagement can assist in communication, but not the quality of operations.

Recommendations

According to the results, it is offered to propose the following recommendations:

Value technology reliability

The operators need to enhance the consistent coverage, high speed, and continuity of the services since the performance of technology has a high impact on satisfactory aspects.

Enhance effectiveness in the process

Strategic priorities should be given to clear billing, fast problem-solving, and effective self-service systems since process innovation has the greatest direct impact on satisfaction.

Approach service design as supportive

The service design cannot and must be enhanced, yet it cannot bring higher levels of satisfaction by itself in the absence of trusted core service.

Make the methods of engagement simple

Non-promotional and selective and relevant but not regular and frequent personalized communication and proactive outreach must be used.

Enhance control of quality and communication of services

To enhance the quality-of-service provision by digital promotional messages, the policy makers ought to provide equilibrium in the various regulations.

Limitations

There are a few limitations in the study. It concentrates solely on the mobile internet industry in Bangladesh hence little generalization can be made. Its cross-sectional structure identifies the perceptions at a single point in time. The research is also based on self-reported information, and that could contain perceptual bias. Moreover, between PI and US and the non-optimal SRMR (0.121), discriminant validity issues need to be approached carefully.

Future study directions

This model should be tested in future studies in other sectors and nations to find out whether the results are context specific. Longitudinal studies may evaluate the relevance of CEI in cases where service reliability increases with time. Other variables that may be included in future research are perceived intrusiveness, digital fatigue, cognitive overload, privacy concern, and trust. Survey data would also be strong by integrating it with the objective measures of network uptime, number of complaints, or app usage statistics.

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Appendix A: Full Measurement Scales

The following survey instrument was used to collect data from 300 mobile internet subscribers in Bangladesh. All items in Sections B and C were measured using a five-point Likert scale (1 = Strongly Disagree to 7 = Strongly Agree).

Section A: User demographics

- **Age** (Open-ended)
- **Gender:** Male, Female, Other
- **Monthly Income Level (BDT):** Below 10,000; 10,000–30,000; 30,001–50,000; 50,001–70,000; Above 70,000
- **Highest Level of Education:** Secondary or below, Higher Secondary, Bachelor's Degree, Master's Degree, Above Master's

Sections B & C: Measurement items

Construct	Item Code	Measurement Item	Adapted Source
Technological Innovation (TI)	TI1	The speed of the internet is consistently satisfactory.	Lee et al. (2015)
	TI2	The mobile network provides strong and wide coverage (4G/5G).	
	TI3	The service is reliable with minimal interruptions.	
	TI4	The quality of streaming and downloads is excellent. (Removed)	
Process Innovation (PI)	PI1	The subscription and billing process is simple and user-friendly.	Chen et al. (2017)
	PI2	I can easily access self-service features through the app or USSD.	
	PI3	My problems are resolved in real-time or with minimal delay.	
	PI4	Billing and payment processes are streamlined and error-free.	
Service Design Innovation (SDI)	SDI1	I am able to customize my data packages according to my needs.	Lusch & Nambisan (2015)
	SDI2	I find the bundled services (calls, data, and entertainment) useful.	
	SDI3	The pricing plans offered are innovative and flexible.	
	SDI4	The overall service layout is designed to be highly intuitive for the user.	
Customer Engagement Innovation (CEI)	CEI1	The mobile app is interactive and easy to use.	Payne et al. (2008)
	CEI2	Social media support is responsive and helpful. (Removed)	
	CEI3	I regularly receive personalized offers based on my usage pattern.	
	CEI4	The operator engages me through personalized and proactive digital communication.	
User Satisfaction (US)	US1	I am satisfied with the overall mobile internet service.	Oliver (2014)
	US2	I would recommend this service to others.	
	US3	I believe I receive good value for the money I pay.	
	US4	I intend to continue using this mobile internet service.	

Note: Items TI4 and CEI2 were excluded from the final structural model analysis because their outer loadings fell below the required 0.50 threshold during scale purification.

RESEARCH ARTICLE

Shifting corporate mindset from operating cost to strategic capital: A theoretical framework and empirical investigation

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Abstract: The prevailing operating mindset in contemporary corporate environments, characterized by short-term efficiency optimization, incremental improvement, and tactical responsiveness, has been increasingly identified as a fundamental barrier to sustainable value creation and long-term organizational resilience. This paper introduces the construct of Strategic Capital as a higher-order organizational resource that transcends the traditional dichotomy between operational excellence and strategic intent, arguing that the shift from an operating mindset to a strategic capital orientation constitutes a critical transformation for firms operating in volatile, uncertain, complex, and ambiguous (VUCA) environments. Drawing upon the resource-based view (RBV), dynamic capabilities theory, and upper echelons theory, we develop a multi-dimensional theoretical framework that conceptualizes Strategic Capital as comprising four interdependent dimensions: strategic cognition, strategic resource orchestration, strategic relational capital, and strategic adaptive capacity. Through a mixed-methods research design involving survey data from 312 senior executives across six industries and qualitative case analyses of eight organizations that have undergone mindset transformation, we empirically validate the proposed framework and demonstrate that organizations exhibiting higher levels of Strategic Capital achieve significantly superior performance outcomes across both financial and non-financial metrics. Our findings reveal that the transition from operating mindset to Strategic Capital is neither linear nor automatic but rather a punctuated equilibrium process mediated by leadership commitment, organizational learning mechanisms, and institutional voids. The paper contributes to the strategic management literature by offering a parsimonious yet comprehensive construct that bridges the micro-macro divide in organizational cognition research, and provides practitioners with a diagnostic toolkit for assessing and cultivating Strategic Capital within their organizations.

Keywords: *Operating mindset; Strategic capital; Strategic cognition; Dynamic capabilities; Strategic leadership*

Introduction

The contemporary business landscape is characterized by unprecedented levels of volatility, uncertainty, complexity, and ambiguity, collectively referred to as VUCA conditions (Bennett & Lemoine, 2014). Organizations across industries confront disruptive technological change, shifting geopolitical dynamics, evolving regulatory frameworks, and increasingly sophisticated competitive pressures that demand not merely operational efficiency but strategic foresight and adaptive capacity (Teece, Pisano, & Shuen, 1997; Teece, 2007). Despite widespread recognition that strategic orientation is essential for long-term survival and prosperity, a persistent and pervasive operating mindset continues to dominate corporate decision-making processes, resource allocation patterns, and organizational culture in many firms (March, 1991; Levinthal & March, 1993).

An operating mindset, as conceptualized in this study, refers to a cognitive and organizational orientation that prioritizes short-term operational efficiency, incremental process improvement, and tactical

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responsiveness to immediate market demands over long-term strategic positioning and value creation. This mindset manifests in organizational behaviors such as excessive reliance on historical performance metrics, risk-averse decision-making, siloed functional thinking, and a preoccupation with cost minimization at the expense of innovation and growth (Benner & Tushman, 2003; March, 1991). While operational excellence remains a necessary condition for organizational survival, it is increasingly insufficient as a basis for sustainable competitive advantage in dynamic environments (Barney, 1991; Teece, 2007).

The strategic management literature has long recognized the tension between operational and strategic orientations. Porter's distinction between operational effectiveness and strategic positioning laid the foundational groundwork for understanding that performing similar activities better than rivals (operational effectiveness) is fundamentally different from performing different activities or performing similar activities in different ways (strategic positioning) (Porter, 1996). Subsequent research has extended this distinction by examining how cognitive frames, organizational routines, and institutional logics shape the relative emphasis that organizations place on operational versus strategic concerns (Ocasio, 1997; DiMaggio & Powell, 1983). However, the existing literature suffers from several important gaps that limit both theoretical understanding and practical guidance.

First, prior research has predominantly treated the operating mindset and strategic orientation as a binary dichotomy, overlooking the possibility of a higher-order construct that subsumes and transcends both orientations (O'Reilly & Tushman, 2013). Second, the mechanisms through which organizations transition from an operating mindset to a more strategically oriented posture remain under-theorized and under-investigated empirically (Eisenhardt & Martin, 2000; Helfat & Peteraf, 2009). Third, the performance implications of this transition have not been adequately quantified, particularly in the context of VUCA environments where the value of strategic orientation may be amplified (Teece, 2007). Fourth, the role of leadership, organizational learning, and institutional context in facilitating or inhibiting this transition requires systematic investigation (Hambrick & Mason, 1984; Khanna & Palepu, 2010).

To address these gaps, this paper introduces the construct of Strategic Capital, defined as the aggregate organizational capacity to conceive, cultivate, and capitalize upon strategic resources, relationships, and cognitive frameworks that generate sustainable competitive advantage over time. We argue that Strategic Capital represents a meta-capability that integrates and transcends both operational and strategic orientations, enabling organizations to achieve operational excellence as a byproduct of strategic intent rather than as an end in itself. This conceptualization is grounded in the Resource-Based View (Barney, 1991; Wernerfelt, 1984), Dynamic Capabilities Theory (Teece et al., 1997; Teece, 2007), and Upper Echelons Theory (Hambrick & Mason, 1984). The central research question guiding this study is: How does the shift from an operating mindset to a Strategic Capital orientation manifest in organizational practice, what mechanisms drive and mediate this transition, and what are the performance consequences for organizations operating in VUCA environments?

This paper makes several contributions to the strategic management literature. Theoretically, we develop a multi-dimensional framework for Strategic Capital that draws upon and extends the Resource-Based View, Dynamic Capabilities Theory, and Upper Echelons Theory (Barney, 1991; Teece, 2007; Hambrick & Mason, 1984). Empirically, we provide evidence from a mixed-methods investigation that validates the proposed framework and quantifies the performance effects of Strategic Capital. Practically, we offer a diagnostic toolkit that enables leaders to assess their organizations' current position on the operating mindset-to-Strategic Capital continuum and identify specific intervention points for accelerating the transition.

Theoretical Background and Literature Review

The operating mindset: Conceptual foundations

The concept of an operating mindset draws upon several streams of research in organizational cognition, strategic management, and behavioral strategy. At its core, the operating mindset reflects a cognitive

orientation toward exploitation rather than exploration, efficiency rather than effectiveness, and certainty rather than ambiguity (March, 1991; Levinthal & March, 1993). March's seminal distinction between exploration and exploitation provides a foundational lens for understanding the operating mindset, which privileges exploitation-oriented activities such as refinement, efficiency gains, and incremental improvement over exploration-oriented activities such as search, experimentation, and innovation (March, 1991).

Cognitive psychology and organizational cognition research demonstrate that individuals and organizations develop cognitive frames and mental models that shape attention, interpretation, and action (Tripsas & Gavetti, 2000; Gavetti & Levinthal, 2000). The operating mindset constitutes a particular type of cognitive frame that directs organizational attention inward toward internal processes and efficiency metrics rather than outward toward environmental opportunities and threats. This attentional narrowing is reinforced by organizational structures, measurement systems, and incentive mechanisms that reward operational performance while undervaluing strategic contribution (Ocasio, 1997). The behavioral theory of the firm further explains how organizational routines and standard operating procedures become self-reinforcing, creating path dependencies that make it difficult for organizations to shift from an operating to a strategic orientation (March, 1991; Levinthal & March, 1993).

Institutional theory adds another layer of explanation by highlighting how normative pressures and mimetic behaviors perpetuate the operating mindset across industries (DiMaggio & Powell, 1983; Lawrence & Suddaby, 2006). Organizations that adopt strategic orientations that deviate from industry norms may face legitimacy challenges, particularly in mature industries where operational efficiency is deeply institutionalized as the primary logic of organizing. DiMaggio and Powell's (1983) concept of isomorphic pressures helps explain why the operating mindset persists even when its limitations become apparent: organizations conform to industry norms not because these norms are optimal but because conformity confers legitimacy and reduces uncertainty.

Strategic orientation: From strategy as plan to strategy as capital

The evolution of strategic thinking from the classical design school through the positioning school to the resource-based and dynamic capabilities perspectives has progressively shifted the conceptualization of strategy from a deliberate plan to an organizational capability (Mintzberg, 1987; Porter, 1996). Mintzberg's (1987) distinction between intended, emergent, and realized strategies highlighted the limitations of viewing strategy as a purely deliberate process and drew attention to the organizational capacities that enable strategic adaptation. The resource-based view extended this insight by arguing that sustainable competitive advantage derives not from strategic positioning per se but from the deployment of valuable, rare, inimitable, and non-substitutable (VRIN) resources and capabilities (Wernerfelt, 1984; Barney, 1991).

Dynamic capabilities theory further advanced the conceptualization of strategy by introducing the notion that sustainable advantage in dynamic environments requires not merely the possession of VRIN resources but the capacity to sense opportunities, seize them through organizational reconfiguration, and transform the organization accordingly (Teece et al., 1997; Teece, 2007). Teece's (2007) three-component framework of sensing, seizing, and transforming provides a process-based understanding of strategic capability that moves beyond the static resource-based view. However, the dynamic capabilities literature has been criticized for being tautological and for insufficiently specifying the microfoundations of dynamic capabilities, particularly the cognitive and behavioral mechanisms through which individuals and organizations develop and deploy them (Priem & Butler, 2001; Eisenhardt & Martin, 2000).

The concept of Strategic Capital introduced in this paper builds upon and extends these theoretical streams by conceptualizing strategy not merely as a plan, position, or capability but as a form of organizational capital that accumulates through deliberate investment in strategic cognitive resources, relational assets, and adaptive capacities. This conceptualization draws an analogy to the economic notion of capital as an accumulated stock that yields a flow of services over time, suggesting that strategic capacity can be built,

invested in, depreciated, and converted into competitive advantage in ways analogous to physical, human, and social capital (Pitelis, 2009).

The resource-based view and strategic capital

The resource-based view provides a foundational theoretical anchor for the concept of Strategic Capital. Barney's (1991) seminal contribution established that resources that are valuable, rare, inimitable, and non-substitutable form the basis for sustainable competitive advantage. Strategic Capital extends this logic by arguing that the capacity to identify, develop, combine, and reconfigure such resources constitutes a higher-order resource in itself, one that satisfies the VRIN criteria more robustly than many individual resources (Wernerfelt, 1984; Barney, 1991). The meta-capability to orchestrate resources strategically is inherently valuable because it enables the firm to adapt its resource portfolio to changing environmental conditions; rare because few firms develop it systematically; inimitable because it is causally ambiguous and socially complex; and non-substitutable because no alternative mechanism can replicate the integrative function it serves (Barney, 1991; Foss & Ishikawa, 2007).

The resource orchestration literature further supports the Strategic Capital construct by emphasizing that resources alone do not create advantage; rather, it is the strategic management of resources through structuring, bundling, and leveraging activities that generates value (Sirmon, Hitt, & Ireland, 2007). Sirmon et al.'s (2007) resource orchestration framework provides a process-based complement to the resource-based view that aligns closely with the Strategic Capital construct, particularly the dimensions of strategic resource orchestration and strategic adaptive capacity proposed in this study. However, our framework extends resource orchestration theory by explicitly incorporating the cognitive dimension of strategic capital, recognizing that resource orchestration decisions are fundamentally shaped by the cognitive frames and mental models of organizational leaders (Adner & Helfat, 2003).

Upper echelons theory and strategic cognition

Hambrick and Mason's (1984) upper echelons theory provides the final theoretical pillar for the Strategic Capital framework by establishing that organizational outcomes are partially predicted by the characteristics of top management teams. The theory posits that executives' cognitive bases and values shape their perceptual filters, which in turn influence strategic choices and organizational performance (Hambrick & Mason, 1984). The strategic cognition dimension of Strategic Capital extends upper echelons theory by specifying the cognitive mechanisms through which executives can move beyond the operating mindset and develop more strategically oriented perceptual filters. These mechanisms include strategic sensemaking, systems thinking, temporal horizon extension, and paradoxical cognition (Nadkarni & Barr, 2008; Gavetti & Levinthal, 2000).

Recent advances in the cognitive foundations of strategy further support the importance of strategic cognition as a dimension of Strategic Capital. Research on attention-based views of the firm demonstrates that how organizations allocate attention across issues and answers fundamentally shapes strategic behavior (Ocasio, 1997). The operating mindset can be understood as a particular pattern of attention allocation that over-weights operational issues and under-weights strategic ones. Shifting to a Strategic Capital orientation requires a fundamental redistribution of organizational attention toward strategic issues, long-term horizons, and cross-functional interdependencies (Ocasio, 1997; Nadkarni & Barr, 2008).

Conceptual Framework: Dimensions of Strategic Capital

Based on the theoretical foundations outlined above, we propose a four-dimensional model of Strategic Capital that captures the essential elements of the transition from operating mindset to strategic orientation. The four dimensions are: (1) Strategic Cognition, (2) Strategic Resource Orchestration, (3) Strategic Relational Capital, and (4) Strategic Adaptive Capacity. These dimensions are conceptualized as interdependent and mutually reinforcing components of a higher-order construct, with Strategic Cognition serving as the cognitive foundation that shapes and enables the other three dimensions. The framework

draws upon the Resource-Based View (Barney, 1991; Wernerfelt, 1984), Dynamic Capabilities Theory (Teece et al., 1997; Teece, 2007), Upper Echelons Theory (Hambrick & Mason, 1984), and the attention-based view of the firm (Ocasio, 1997).

Strategic cognition

Strategic Cognition refers to the collective cognitive capacity of an organization's leadership and workforce to perceive, interpret, and act upon strategic opportunities and threats in ways that transcend the immediate operational context. It encompasses four sub-dimensions: strategic sensemaking, which involves the ability to construct meaningful narratives about environmental change and organizational identity; systems thinking, which enables leaders to understand interdependencies and feedback loops across organizational and environmental systems; temporal horizon extension, which involves the capacity to consider long-term consequences and delayed effects of current decisions; and paradoxical cognition, which enables the simultaneous holding and integration of contradictory strategic demands such as exploration and exploitation, efficiency and innovation, or stability and change (Hambrick & Mason, 1984; Gavetti & Levinthal, 2000; Nadkarni & Barr, 2008).

Organizations dominated by an operating mindset typically exhibit weak strategic cognition, as evidenced by short planning horizons, reactive rather than proactive environmental scanning, and difficulty managing strategic tensions (March, 1991; Ocasio, 1997). In contrast, organizations with high Strategic Cognition demonstrate the ability to reframe challenges, identify non-obvious connections between distant environmental trends, and maintain strategic direction while adapting tactical approaches. The development of strategic cognition is not merely an individual-level phenomenon but is embedded in organizational structures, processes, and cultures that either enable or constrain strategic thinking (Tripsas & Gavetti, 2000; Ocasio, 1997).

Strategic resource orchestration

Strategic Resource Orchestration refers to the organizational capacity to strategically structure, bundle, and leverage resources in ways that create and sustain competitive advantage. Unlike operational resource management, which focuses on the efficient allocation and utilization of existing resources within established patterns, strategic resource orchestration involves the creative recombination of resources, the development of new resource configurations, and the divestiture of resources that no longer serve strategic objectives (Sirmon, Hitt, & Ireland, 2007). This dimension includes the capacity for strategic investment decisions that sacrifice short-term returns for long-term positional advantage, the development of resource combinations that generate synergistic value exceeding the sum of individual resource contributions, and the construction of resource barriers that protect competitive positions from imitation and substitution (Barney, 1991; Wernerfelt, 1984).

The transition from operating mindset to Strategic Resource Orchestration requires a fundamental shift in how organizations evaluate investment opportunities, allocate capital, and measure returns. Operating mindset organizations typically employ discounted cash flow and return on investment metrics that favor incremental improvements to existing businesses. Strategic Capital organizations, by contrast, develop complementary evaluation frameworks that incorporate option value, positional advantage, learning potential, and competitive dynamics into resource allocation decisions (Bower & Gilbert, 2005; Sirmon et al., 2007). This does not mean abandoning financial discipline but rather embedding strategic considerations within the resource allocation process itself.

Strategic relational capital

Strategic Relational Capital encompasses the network of strategic relationships that an organization cultivates with external stakeholders, including customers, suppliers, alliance partners, regulatory bodies, academic institutions, and community organizations, for the purpose of accessing resources, knowledge, and legitimacy that extend beyond organizational boundaries. While operating mindset organizations tend

to view relationships primarily through transactional and efficiency lenses, Strategic Capital organizations invest in relational assets that provide strategic optionality, market intelligence, and collaborative innovation potential (Pitelis, 2009; Lawrence & Suddaby, 2006). This dimension recognizes that in an increasingly interconnected and interdependent business environment, competitive advantage increasingly derives from the quality, diversity, and strategic positioning of an organization's relational network rather than solely from internal resources and capabilities.

Strategic Relational Capital differs from conventional conceptualizations of social capital in several important respects. First, it emphasizes the strategic positioning of relationships rather than merely their quantity or density. Second, it incorporates both bridging capital, which connects the organization to diverse and distant networks, and bonding capital, which deepens relationships within strategic partnerships. Third, it explicitly recognizes the dynamic nature of relational capital, which must be continuously maintained, renewed, and reconfigured as strategic conditions change. Fourth, it acknowledges that relational capital can depreciate through neglect, disruption, or changes in the strategic relevance of particular relationships (Lawrence & Suddaby, 2006; Pitelis, 2009).

Strategic adaptive capacity

Strategic Adaptive Capacity refers to the organizational capability to detect, interpret, and respond to environmental changes in ways that preserve strategic coherence while enabling strategic evolution. It encompasses the capacity for strategic renewal, which involves the fundamental reconfiguration of organizational strategy, structure, and systems in response to environmental shifts; strategic resilience, which enables the organization to absorb and recover from strategic shocks while maintaining core purpose and identity; and strategic agility, which permits rapid reallocation of resources and attention in response to emerging opportunities and threats (Teece, 2007; Helfat & Peteraf, 2009).

This dimension is particularly critical in VUCA environments, where the pace and unpredictability of change render static strategic plans obsolete and demand ongoing strategic adaptation (Teece et al., 1997). The relationship between Strategic Adaptive Capacity and the other three dimensions of Strategic Capital is reciprocal and reinforcing. Strategic Cognition provides the perceptual and interpretive foundation for detecting environmental changes and formulating adaptive responses. Strategic Resource Orchestration provides the resource flexibility needed to execute adaptive responses. Strategic Relational Capital provides access to external resources, knowledge, and perspectives that enhance the organization's adaptive potential. Conversely, the exercise of adaptive capacity strengthens each of the other dimensions by providing experiential learning opportunities, testing and refining cognitive frameworks, and demonstrating the value of strategic resource and relational investments (Eisenhardt & Martin, 2000; Helfat & Peteraf, 2009).

Table 1: Dimensions of strategic capital: Operating mindset versus strategic capital indicators

Dimension	Sub-dimensions	Operating Mindset Indicator	Strategic Capital Indicator
Strategic Cognition	Sensemaking, Systems Thinking, Temporal Extension, Paradoxical Cognition	Short-term, reactive, siloed	Long-term, proactive, integrative
Strategic Resource Orchestration	Structuring, Bundling, Leveraging, Divesting	Efficiency-focused allocation	Position-focused configuration
Strategic Relational Capital	Bridging Capital, Bonding Capital, Relational Positioning	Transactional relationships	Strategic network positioning
Strategic Adaptive Capacity	Renewal, Resilience, Agility	Resistance to change	Dynamic reconfiguration



Figure 1: Conceptual framework

Hypotheses Development

The Strategic Capital framework suggests that organizations that successfully transition from an operating mindset to a strategic orientation are better positioned to achieve superior organizational performance. Drawing on the Resource-Based View (Barney, 1991; Wernerfelt, 1984), Dynamic Capabilities Theory (Teece et al., 1997; Teece, 2007), and Upper Echelons Theory (Hambrick & Mason, 1984), we argue that Strategic Capital functions as a higher-order capability that enables firms to create, sustain, and renew competitive advantage.

Strategic Cognition enables organizations to anticipate environmental changes, identify strategic opportunities, and formulate responses that extend beyond short-term operational concerns. Prior research suggests that managerial cognition and strategic attention significantly influence organizational outcomes and strategic effectiveness (Ocasio, 1997; Nadkarni & Barr, 2008). Therefore:

H1: Strategic Cognition positively influences organizational performance.

Strategic Resource Orchestration facilitates the effective structuring, bundling, and leveraging of organizational resources to create value and sustain competitive advantage. Resource orchestration theory emphasizes that competitive advantage depends not only on resource possession but also on how resources are managed and deployed (Sirmon, Hitt, & Ireland, 2007). Therefore:

H2: Strategic Resource Orchestration positively influences organizational performance.

Strategic Relational Capital provides organizations with access to external knowledge, resources, legitimacy, and innovation opportunities through strategically managed stakeholder relationships. Research suggests that relational networks contribute significantly to organizational learning, adaptability, and competitive advantage (Lawrence & Suddaby, 2006; Pitelis, 2009). Therefore:

H3: Strategic Relational Capital positively influences organizational performance.

Strategic Adaptive Capacity enables organizations to respond effectively to environmental uncertainty, disruptions, and emerging opportunities. Dynamic capabilities research emphasizes that adaptive organizations are better able to sustain performance in turbulent environments (Teece, 2007; Helfat & Peteraf, 2009). Therefore:

H4: Strategic Adaptive Capacity positively influences organizational performance.

The four dimensions collectively constitute the higher-order construct of Strategic Capital. Organizations that possess stronger Strategic Capital are expected to demonstrate superior financial and non-financial performance because they can better align resources, capabilities, relationships, and strategic decision-making processes with environmental demands (Barney, 1991; Teece, 2007). Therefore:

H5: Strategic Capital positively influences organizational performance.

Organizations characterized by a dominant operating mindset tend to emphasize short-term efficiency, routine exploitation, and operational control at the expense of strategic flexibility and innovation (March, 1991; Levinthal & March, 1993). Consequently, the operating mindset is expected to inhibit the development of Strategic Capital. Therefore:

H6: Operating Mindset negatively influences Strategic Capital.

Research Methodology

Research design

This study employs a sequential mixed-methods research design combining quantitative survey research with qualitative case analysis. The mixed-methods approach was selected for several reasons. First, the nascent state of the Strategic Capital construct required both quantitative validation of the proposed measurement framework and qualitative exploration of the mechanisms and processes underlying the operating mindset-to-Strategic Capital transition. Second, the complexity of organizational mindset transformation demanded methodological triangulation to ensure the robustness and credibility of findings. Third, the practical objective of developing a diagnostic toolkit necessitated both the identification of quantifiable indicators and the understanding of contextual factors that shape the transformation process.

The research proceeded in three phases. Phase one involved expert interviews and focus groups with 24 senior strategists and organizational development professionals to refine the theoretical framework and develop the measurement instrument. Phase two comprised a large-scale survey of senior executives across six industries to quantitatively validate the Strategic Capital construct and test the proposed hypotheses. Phase three involved in-depth qualitative case studies of eight organizations selected on the basis of their position on the operating mindset-to-Strategic Capital continuum, including four organizations that had recently undergone significant mindset transformation and four organizations that remained predominantly operating mindset-oriented.

Sample and data collection

The survey sample consisted of 312 senior executives from organizations across six industries: financial services, information technology, manufacturing, healthcare, energy, and professional services. Industries were selected to represent variation in environmental dynamism, competitive intensity, and regulatory complexity. Within each industry, organizations were selected using stratified random sampling based on firm size and geographic location. Potential respondents were identified through professional associations, industry directories, and executive education alumni networks. The target respondents were C-suite executives, senior vice presidents, and directors with strategic decision-making authority. The final response rate was 38.7 percent, which is within the acceptable range for executive surveys.

Table 2: Sample distribution and descriptive statistics by industry

Industry	N	Percentage	Mean SC Score	Mean OM Score
Financial Services	58	18.6%	4.32	3.18
Information Technology	54	17.3%	4.67	2.89
Manufacturing	52	16.7%	3.78	3.95
Healthcare	50	16.0%	3.91	3.67
Energy	49	15.7%	3.85	4.02
Professional Services	49	15.7%	4.21	3.34

Measurement

The Strategic Capital construct was measured using a 32-item scale developed through the expert interview process in Phase one and refined through a pilot study with 45 executives. Each of the four dimensions was measured by eight items reflecting the sub-dimensions identified in the conceptual framework. All items were measured on a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The operating mindset was measured using a 12-item scale adapted from existing measures of exploitation orientation and operational effectiveness focus. Organizational performance was measured using a balanced scorecard approach incorporating financial performance (return on assets, revenue growth, market-to-book ratio), customer performance (customer satisfaction, market share), internal process performance (operational efficiency, innovation output), and learning and growth performance (employee development, knowledge management).

Control variables included firm size (measured by number of employees), firm age, industry environmental dynamism (measured using a composite index of market volatility, technological change, and regulatory change), and CEO tenure. Leadership commitment to strategic transformation was measured using a six-item scale assessing the extent to which senior leadership actively championed strategic thinking, invested in strategic capabilities, and modeled strategic behavior. Organizational learning mechanisms were measured using an eight-item scale assessing the presence and quality of formal and informal learning structures, knowledge sharing processes, and experimentation cultures. Institutional voids were measured using a five-item scale adapted from Khanna and Palepu's institutional void framework, assessing the degree to which market intermediaries, regulatory frameworks, and talent markets were underdeveloped.

Analytical approach

Quantitative data were analyzed using structural equation modeling (SEM) with maximum likelihood estimation. The measurement model was assessed through confirmatory factor analysis (CFA) to establish convergent and discriminant validity of the Strategic Capital construct. The structural model was then estimated to test the hypothesized relationships between Strategic Capital, its antecedents, mediators, and performance outcomes. Model fit was evaluated using conventional criteria including chi-square to degrees of freedom ratio, comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). Qualitative case data were analyzed using a combination of pattern matching, explanation building, and cross-case synthesis techniques following Yin's case study methodology.

Results

Measurement model validation

The confirmatory factor analysis provided strong support for the four-dimensional model of Strategic Capital. The measurement model exhibited excellent fit indices: chi-square/df = 2.14, CFI = 0.96, TLI = 0.95, RMSEA = 0.041, SRMR = 0.032. All factor loadings were statistically significant at the 0.001 level and exceeded the 0.70 threshold, with standardized loadings ranging from 0.74 to 0.93 across the four dimensions. Convergent validity was established through average variance extracted (AVE) values exceeding 0.50 for all dimensions: Strategic Cognition AVE = 0.68, Strategic Resource Orchestration AVE = 0.62, Strategic Relational Capital AVE = 0.59, and Strategic Adaptive Capacity AVE = 0.65. Discriminant validity was confirmed using Fornell and Larcker's criterion, as the square root of the AVE for each dimension exceeded the inter-dimensional correlations.

The second-order factor structure, with Strategic Capital as a higher-order construct subsuming the four dimensions, was also supported. The second-order factor loadings were: Strategic Cognition = 0.89, Strategic Resource Orchestration = 0.84, Strategic Relational Capital = 0.78, and Strategic Adaptive Capacity = 0.82. The fit indices for the second-order model did not differ significantly from the first-order model (delta CFI = 0.01), supporting the contention that Strategic Capital constitutes a coherent higher-order construct. Composite reliability values ranged from 0.88 to 0.93 across the four dimensions, exceeding the 0.70 threshold.

Table 3: Measurement model: Reliability and validity statistics

Dimension	Cronbach's Alpha	Composite Reliability	AVE	Factor Loadings Range
Strategic Cognition	0.92	0.93	0.68	0.78-0.93
Strategic Resource Orchestration	0.89	0.90	0.62	0.74-0.90
Strategic Relational Capital	0.87	0.88	0.59	0.75-0.88
Strategic Adaptive Capacity	0.90	0.91	0.65	0.76-0.91

Structural model results

The structural model results provided strong support for the hypothesized relationships. Strategic Capital had a significant positive effect on overall organizational performance ($\beta = 0.47, p < 0.001$), explaining 22.1 percent of the variance in performance. When decomposed by performance dimension, Strategic Capital had the strongest effect on learning and growth performance ($\beta = 0.53, p < 0.001$), followed by internal process performance ($\beta = 0.49, p < 0.001$), customer performance ($\beta = 0.42, p < 0.001$), and financial performance ($\beta = 0.38, p < 0.001$). These results suggest that the performance benefits of Strategic Capital flow through a causal chain beginning with enhanced learning and growth, which improves internal processes, which in turn enhances customer outcomes and ultimately financial performance.

The operating mindset had a significant negative effect on Strategic Capital ($\beta = -0.31, p < 0.01$), confirming that organizations dominated by operating mindset are less likely to develop Strategic Capital. However, the relationship was moderated by environmental dynamism: the negative effect of operating mindset on Strategic Capital was stronger in highly dynamic environments ($\beta = -0.44, p < 0.001$) than in moderately dynamic environments ($\beta = -0.22, p < 0.05$). This finding is consistent with the theoretical argument that operating mindset is particularly detrimental in VUCA environments where strategic agility and adaptability are paramount.

Mediation analysis

Leadership commitment significantly mediated the relationship between operating mindset and Strategic Capital. The indirect effect through leadership commitment was -0.14 (95% CI: -0.23 to -0.06), indicating that operating mindset organizations tend to have leaders who are less committed to strategic transformation, which in turn inhibits Strategic Capital development. Organizational learning mechanisms also served as a significant mediator, with an indirect effect of -0.11 (95% CI: -0.19 to -0.04). Operating mindset organizations were less likely to invest in learning structures and experimentation cultures, which constrained their Strategic Capital development. Institutional voids moderated the operating mindset-Strategic Capital relationship, with the negative effect of operating mindset on Strategic Capital being amplified in contexts with higher institutional voids (interaction $\beta = -0.18, p < 0.01$). This suggests that the operating mindset is particularly constraining in environments where market and institutional support structures are weak.

Table 4: Structural model results (SC=strategic capital, OM=operating mindset)

Path	Coefficient	SE	t-value	p-value
SC -> Overall Performance	0.47	0.06	7.83	< 0.001
SC -> Financial Performance	0.38	0.07	5.43	< 0.001
SC -> Customer Performance	0.42	0.06	7.00	< 0.001
SC -> Process Performance	0.49	0.06	8.17	< 0.001
SC -> Learning Performance	0.53	0.06	8.83	< 0.001
OM -> SC	-0.31	0.08	-3.88	< 0.01
OM $\times$ Dynamism -> SC	-0.18	0.06	-3.00	< 0.01
Leadership Commitment (indirect)	-0.14	0.04	-	< 0.01
Organizational Learning (indirect)	-0.11	0.04	-	< 0.01

Qualitative case findings

The qualitative case analysis revealed three key patterns in the operating mindset-to-Strategic Capital transition. First, the transition was best characterized as a punctuated equilibrium process rather than a gradual linear progression. Organizations typically experienced extended periods of operating mindset dominance punctuated by crisis events or leadership changes that created windows of opportunity for strategic reorientation. These triggering events included competitive disruption, regulatory change, technological discontinuity, financial distress, and leadership succession. The critical factor was not the

nature of the trigger itself but rather the organization's capacity to seize the window of opportunity for strategic transformation.

Second, successful transitions were characterized by a sequence of interdependent changes across multiple organizational dimensions simultaneously rather than sequential changes in individual dimensions. Organizations that attempted to change cognitive orientations without corresponding changes in resource allocation patterns, organizational structures, and measurement systems typically experienced regression to the operating mindset. Conversely, organizations that pursued structural changes without addressing underlying cognitive frames found that new structures were quickly subverted by existing mental models. The most successful transformations addressed all four dimensions of Strategic Capital concurrently, using changes in one dimension to reinforce changes in others.

Third, the transition required the development of organizational ambidexterity at the strategic level. Organizations did not simply abandon operational concerns in favor of strategic ones but rather developed the capacity to simultaneously pursue operational excellence and strategic innovation. This strategic ambidexterity was achieved through structural differentiation, where distinct organizational units focused on exploitation and exploration activities, combined with senior leadership integration, where the top management team actively managed the tensions and synergies between operational and strategic orientations.

Discussion

Theoretical implications

This study makes several theoretical contributions to the strategic management literature. First, the introduction and empirical validation of the Strategic Capital construct addresses the longstanding limitation of treating operational and strategic orientations as a binary dichotomy. By demonstrating that Strategic Capital constitutes a higher-order construct that integrates and transcends both orientations, we provide a more nuanced theoretical lens for understanding how organizations can pursue operational excellence as a byproduct of strategic intent rather than as an alternative to it. This reconceptualization has implications for the exploration-exploitation literature, which has struggled to explain how organizations can simultaneously pursue both orientations without suffering from the coordination costs and cultural conflicts typically associated with ambidexterity (March, 1991; O'Reilly & Tushman, 2013).

Second, the four-dimensional framework of Strategic Capital provides a comprehensive and parsimonious taxonomy of the components necessary for strategic orientation that integrates insights from the Resource-Based View, Dynamic Capabilities Theory, and Upper Echelons Theory (Barney, 1991; Teece, 2007; Hambrick & Mason, 1984). This integrative contribution is significant because prior research has examined these theoretical perspectives in relative isolation, with resource-based scholars focusing on resource stocks, dynamic capabilities scholars focusing on organizational processes, and upper echelons scholars focusing on leadership characteristics. The Strategic Capital framework demonstrates that these perspectives are complementary rather than competing and that a complete understanding of strategic orientation requires attention to cognitive, resource, relational, and adaptive dimensions simultaneously. This finding is consistent with research emphasizing the interaction between managerial cognition, organizational capabilities, and strategic resource deployment in shaping firm performance (Adner & Helfat, 2003; Nadkarni & Barr, 2008).

Third, the finding that the operating mindset-to-Strategic Capital transition follows a punctuated equilibrium pattern contributes to the organizational change literature by demonstrating that mindset transformation is not a gradual, incremental process but rather one characterized by periods of stability interrupted by episodic bursts of change. This finding aligns with prior studies suggesting that organizational transformation often occurs through discontinuous shifts triggered by environmental or internal pressures rather than through continuous adaptation (Tripsas & Gavetti, 2000; Henderson & Clark, 1990). Furthermore, our results extend existing theory by identifying leadership commitment,

organizational learning, and institutional context as critical mechanisms that determine whether a triggering event leads to successful transformation or regression to the operating mindset (Hambrick & Mason, 1984; DiMaggio & Powell, 1983).

The significant positive relationship between Strategic Capital and organizational performance further supports the central propositions of the Resource-Based View and Dynamic Capabilities Theory. Specifically, organizations that develop superior cognitive, resource, relational, and adaptive capacities are better positioned to create and sustain competitive advantage under conditions of uncertainty and change (Barney, 1991; Teece et al., 1997). The results also reinforce previous findings that organizational adaptability and strategic flexibility are increasingly important determinants of long-term performance in dynamic environments (Eisenhardt & Martin, 2000; Helfat & Peteraf, 2009).

Practical implications

The findings of this study have several important practical implications for organizational leaders. The validated Strategic Capital framework provides a diagnostic tool that enables leaders to assess their organizations' current position on the operating mindset-to-Strategic Capital continuum and identify specific dimensions requiring development. The four-dimensional structure suggests that effective transformation requires attention to multiple dimensions simultaneously rather than focusing on any single dimension in isolation. Leaders should begin by assessing the cognitive dimension, as strategic cognition provides the foundation for the other three dimensions, and then develop integrated transformation initiatives that address resource orchestration, relational capital, and adaptive capacity in a mutually reinforcing manner. This recommendation is consistent with prior research emphasizing the role of managerial cognition and strategic attention in organizational adaptation and performance (Ocasio, 1997; Nadkarni & Barr, 2008).

The mediating role of leadership commitment highlights the critical importance of visible, sustained, and authentic leadership engagement in the transformation process. Leaders who merely articulate strategic aspirations without modeling strategic behavior, investing in strategic capabilities, and rewarding strategic contributions are unlikely to catalyze genuine mindset change. This finding supports Upper Echelons Theory, which argues that executive cognition and values significantly influence organizational outcomes (Hambrick & Mason, 1984). It also aligns with evidence that strategic leadership plays a central role in enabling organizational renewal and change (Adner & Helfat, 2003).

The mediating role of organizational learning mechanisms underscores the need to invest in formal and informal structures that promote experimentation, knowledge sharing, and reflective practice. Organizations that rely solely on formal strategic planning processes without creating a broader culture of strategic learning are unlikely to develop the depth of Strategic Capital needed for sustained competitive advantage. This observation is consistent with organizational learning research, which highlights the importance of balancing exploration and exploitation while continuously updating organizational knowledge and capabilities (March, 1991; Levinthal & March, 1993).

Limitations and future research

This study has several limitations that should be acknowledged and addressed in future research. First, the cross-sectional survey design limits causal inference. While the structural model results are consistent with the hypothesized causal relationships, they cannot definitively establish causation. Longitudinal research tracking the development of Strategic Capital and its performance effects over time would strengthen causal claims and provide insight into the temporal dynamics of the transformation process (Miller & Tsang, 2011).

Second, the reliance on single-respondent survey data raises concerns about common method bias, although the Harman single-factor test and marker variable analysis did not indicate significant bias. Future

studies may benefit from collecting data from multiple respondents and organizational levels to enhance the robustness of findings and reduce potential response bias (Fornell & Larcker, 1981).

Third, the study focused on six industries in a limited geographic context, which may limit the generalizability of findings to other industries and institutional environments. Future research should examine Strategic Capital in a broader range of contexts, including emerging economies, state-owned enterprises, and non-profit organizations, where the dynamics of the operating mindset-to-Strategic Capital transition may differ (Khanna & Palepu, 2010).

Fourth, the measurement of Strategic Capital, while demonstrating strong psychometric properties in this study, requires further validation and refinement across diverse organizational populations. Future research should also investigate potential negative consequences of excessive Strategic Capital, such as strategic overreach, analysis paralysis, or the neglect of operational fundamentals. Such investigations would contribute to identifying optimal levels and configurations of Strategic Capital under varying environmental conditions and organizational contexts (Teece, 2007; O'Reilly & Tushman, 2013).

Conclusion

This paper has introduced and empirically validated the construct of Strategic Capital as a framework for understanding and facilitating the shift from operating mindset to strategic orientation in contemporary organizations. Through a mixed-methods investigation combining survey data from 312 senior executives and qualitative case analyses of eight organizations, we have demonstrated that Strategic Capital, comprising strategic cognition, strategic resource orchestration, strategic relational capital, and strategic adaptive capacity, is a coherent higher-order construct that significantly predicts organizational performance across financial and non-financial metrics. The transition from operating mindset to Strategic Capital follows a punctuated equilibrium pattern mediated by leadership commitment, organizational learning mechanisms, and institutional context, and is most critical in VUCA environments where operational efficiency alone is insufficient for sustainable competitive advantage.

The theoretical contribution of this research lies in its integration of the resource-based view, dynamic capabilities theory, and upper echelons theory into a unified framework that transcends the traditional dichotomy between operational and strategic orientations. The practical contribution lies in the provision of a diagnostic toolkit that enables organizational leaders to assess and develop their organizations' Strategic Capital across four interdependent dimensions. As organizations navigate increasingly complex and uncertain environments, the capacity to shift from an operating mindset to a Strategic Capital orientation may well determine not only their competitive position but their very survival.

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RESEARCH ARTICLE

Service failure and recovery in revenue administration: An empirical study of taxpayer satisfaction in Ethiopia

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Abstract: This study examines the incidence and types of service failures encountered by taxpayers in the Ethiopian Ministry of Revenue and evaluates the effectiveness of organizational recovery responses in shaping taxpayer satisfaction. Drawing upon justice theory and the disconfirmation paradigm, the research investigates the relationship between service failure types, organizational recovery responses, and taxpayer satisfaction across three branch offices in Addis Ababa. Using a quantitative explanatory research design, data were collected from 388 taxpayers through structured questionnaires, with a response rate of 90.3%. The findings reveal an alarmingly high service failure rate of 86.9%, with discomfort from employee and departmental service, management decision delays, and procedural problems identified as the most prevalent failure types. Critically, 42.6% of affected taxpayers received no organizational response, and 61.7% received no compensation. Multiple regression analysis demonstrates that distributive justice ($B = 0.424$, $p < 0.001$), interactional justice ($B = 0.415$, $p < 0.001$), and procedural justice ($B = 0.213$, $p < 0.001$) are all significant predictors of taxpayer satisfaction, collectively explaining 72.4% of the variance. The study highlights the urgent need for systematic service recovery strategies in revenue administration and provides empirical evidence to guide policy reforms aimed at improving taxpayer satisfaction and voluntary compliance in developing country contexts.

Keywords: Service failure, Service recovery, Taxpayer satisfaction, Revenue administration, Justice theory, Ethiopia, Public sector

Introduction

Revenue administration constitutes a fundamental pillar of governance in any nation, serving as the primary mechanism through which governments finance public services, infrastructure, and social welfare programs. The effectiveness of revenue administration directly influences a country's fiscal capacity, economic stability, and the social contract between citizens and the state. In this context, the quality of service provided by revenue authorities assumes critical importance, as it shapes taxpayer perceptions of governmental legitimacy, fairness, and trustworthiness. When service failures occur in tax administration, they not only inconvenience individual taxpayers but also threaten the broader goals of voluntary compliance and revenue mobilization that underpin effective governance.

Service failures in public sector organizations are particularly consequential because citizens typically have no alternative service providers. Unlike private sector contexts where dissatisfied customers can switch to competitors, taxpayers are obligated to interact with the designated revenue authority regardless of their satisfaction levels. This captive relationship creates a unique dynamic in which service failures may be tolerated with less vocal complaint behavior but may generate deeper resentment, reduced trust, and increased propensity for tax evasion or avoidance. Research has consistently demonstrated that customer satisfaction in service encounters is generally lower for services than for physical products, and this gap is

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often more pronounced in public sector services where monopolistic conditions and bureaucratic structures impede service quality improvements (Zeithaml et al., 2013).

The Ethiopian Ministry of Revenue, established through the merger of the Ministry of Revenues, the Ethiopian Customs Authority, and the Federal Inland Revenues in 2008, bears responsibility for collecting customs duties and domestic taxes from over 13,000 active taxpayers in Addis Ababa alone. Despite its mandate to provide equitable, efficient, and quality service, preliminary evidence and anecdotal reports suggest that taxpayers frequently encounter a range of service failures including procedural delays, unresponsive staff, inadequate communication, and insufficient compensation for organizational errors. However, systematic empirical investigation of these service failures and their consequences for taxpayer satisfaction has been notably lacking in the Ethiopian context and, more broadly, in the literature on revenue administration in developing countries.

This study addresses this gap by pursuing three primary objectives: (1) to identify and categorize the types of service failures encountered by taxpayers in the Ethiopian Ministry of Revenue, (2) to assess the organizational responses to these failures and their perceived fairness, and (3) to empirically determine the effects of perceived justice dimensions on taxpayer satisfaction following service failures. By examining these issues through the lens of justice theory, the study contributes to both the theoretical understanding of service recovery in public administration and the practical improvement of revenue services in Ethiopia and similar developing country contexts.

Literature Review

Service failure in public administration

Service failure is generally described as service performance that falls below a customer's expectations, leading to dissatisfaction (Wilson et al., 2016). In public sector contexts, service failures can manifest in various forms including bureaucratic delays, unresponsive or discourteous staff, incorrect information, inadequate facilities, and failure to deliver promised outcomes. The consequences of service failures in public administration extend beyond individual dissatisfaction to affect institutional legitimacy, citizen trust, and compliance behavior. When citizens perceive that government agencies fail to deliver services adequately, their willingness to comply with governmental obligations such as tax payment may diminish, creating a vicious cycle of reduced compliance and deteriorating service quality.

Research on service failure in public sector organizations has identified several distinctive characteristics that differentiate it from private sector service failure. First, the mandatory nature of many public services means that customers cannot simply exit the relationship when dissatisfied; instead, they may engage in voice behavior, negative word-of-mouth, or reduced compliance. Second, public sector service failures often involve complex bureaucratic procedures that make recovery more challenging, as frontline employees may lack the authority or resources to implement effective recovery measures. Third, the political dimensions of public service delivery mean that service failures can have implications for governmental legitimacy and electoral accountability that go beyond the commercial consequences faced by private firms.

In the specific context of revenue administration, service failures are particularly problematic because they directly affect the relationship between taxpayers and the state. Potluri and Mangnale (2011) noted that nearly half of customers are dissatisfied by services provided by both public and private sectors in Ethiopia, including the Ministry of Revenue. Studies on the former Ethiopian Revenue and Customs Authority revealed that revenue offices operated with insufficient facilities and equipment, and that the knowledge, attitude, and willingness of service providers to support customers were below expected levels (Demirew et al., 2015; Tewodros, 2015). These findings highlight the systemic nature of service quality challenges in Ethiopian revenue administration and underscore the need for evidence-based interventions.

Service recovery and the justice framework

Service recovery refers to the actions taken by an organization in response to a service failure, with the aim of rectifying the problem and restoring customer satisfaction (Wilson et al., 2016). The effectiveness of service recovery is critically important because research has demonstrated that customers who experience effective recovery after a failure may become more loyal than customers who never experienced a problem in the first place, a phenomenon known as the service recovery paradox (McCollough et al., 2000; Maxham et al., 2001). However, the paradox does not always hold; poor recovery can exacerbate the negative effects of the original failure, leading to a double deviation effect that severely damages the customer relationship.

Justice theory provides the dominant theoretical framework for understanding how customers evaluate service recovery efforts. The theory proposes that customers assess recovery fairness along three dimensions: distributive justice, which concerns the fairness of outcomes received; procedural justice, which relates to the fairness of policies and processes governing the recovery; and interactional justice, which involves the quality of interpersonal treatment during the recovery encounter (Blodgett et al., 1997; McColl-Kennedy et al., 2003; Tax et al., 1998). This tripartite framework has been extensively validated across diverse service contexts and cultures, and it provides a comprehensive lens through which to examine taxpayer evaluations of recovery efforts in revenue administration.

The application of justice theory to revenue administration is particularly appropriate because taxation inherently involves issues of fairness and equity. Taxpayers who perceive that the revenue authority treats them unfairly during service encounters are likely to generalize this perception to the tax system as a whole, potentially undermining voluntary compliance. The confirmation-disconfirmation paradigm further explains that taxpayer satisfaction is determined by the gap between their expectations and their perceptions of actual service recovery performance. When recovery performance exceeds expectations, positive disconfirmation occurs, leading to higher satisfaction; when it falls short, negative disconfirmation leads to dissatisfaction (Oliver et al., 1997).

Empirical evidence on service recovery in public and private sectors

Empirical research on service recovery has been conducted across various service contexts, with the majority of studies focusing on private sector settings. McCollough et al. (2000) investigated customer satisfaction after service failure and recovery in the airline industry, finding that satisfaction following recovery was lower than in error-free service, challenging the service recovery paradox. Sparks and McColl-Kennedy (2001) examined justice strategy options for service recovery in Australian hotels, demonstrating that different combinations of justice dimensions produced significantly different satisfaction outcomes. Cheng et al. (2018) confirmed the positive relationship between service recovery dimensions and customer satisfaction in Malaysia's hotel industry, while Ibrahim et al. (2014) established similar findings in Uganda's telecommunications sector.

In the public sector context, however, empirical evidence remains limited. The few studies that have examined service recovery in public organizations have generally found that recovery efforts are less systematic and less effective than in the private sector, largely due to bureaucratic constraints, limited employee empowerment, and absence of market-driven incentives for service improvement. Assefa (2014) studied service recovery in Ethiopian retail banks and found significant effects of perceived justice on customer satisfaction, but the banking sector, while regulated, operates with greater market orientation than revenue administration. The current study extends this line of inquiry by examining service failure and recovery specifically in the context of Ethiopian revenue administration, where the dynamics of the taxpayer-authority relationship create a distinctive environment for service recovery evaluation.

Research Methodology

Research design and setting

This study adopted an explanatory research design within a quantitative research approach. The explanatory design was appropriate for establishing cause-and-effect relationships between the perceived justice dimensions of service recovery and taxpayer satisfaction. The study was conducted in Addis Ababa, Ethiopia, where the majority of government head offices including the Ministry of Revenue are located, and where the majority of government revenue is collected. The quantitative approach enabled systematic measurement of variables through structured instruments and statistical testing of hypothesized relationships, facilitating generalization of findings to the broader taxpayer population.

Population, sampling, and sample size

The target population comprised 13,014 active taxpayers registered across three branches of the Ethiopian Ministry of Revenue in Addis Ababa: the Large Taxpayers Branch (793 taxpayers), the Medium Taxpayers Branch (4,448 taxpayers), and the West Addis Ababa Small Taxpayers Branch (7,773 taxpayers). Cluster sampling was employed because the population was heterogeneous across taxpayer categories and because this technique provides practical advantages in accessing naturally occurring organizational groupings. The sample size was determined using Yamane's (1967) formula at a 5% precision level, yielding a sample of 388 taxpayers. Proportional allocation distributed the sample across clusters as follows: 24 from the Large Taxpayers Branch, 132 from the Medium Taxpayers Branch, and 232 from the Small Taxpayers Branch. This allocation ensured that each taxpayer category was represented in proportion to its share of the total population.

Data collection

Data were collected through structured self-administered questionnaires comprising three sections. The first section captured demographic information and service failure experience, including whether the respondent had encountered a service failure, the type of failure experienced, the organizational response received, and whether compensation was provided. The second section measured the three perceived justice dimensions using items adapted from established scales in the service recovery literature, with responses recorded on a five-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). Procedural justice items assessed fairness and accessibility of organizational policies; interactional justice items measured employee courtesy, empathy, and effort; and distributive justice items evaluated the adequacy and fairness of outcomes received. The third section measured overall customer satisfaction with the service recovery process. The questionnaire was pre-tested on non-sample taxpayers and refined based on expert review. Internal consistency was verified through Cronbach's alpha, with values of 0.801 (procedural justice), 0.870 (interactional justice), 0.712 (distributive justice), and 0.808 (customer satisfaction), all exceeding the 0.70 threshold.

Data analysis

Data analysis proceeded through several stages. First, descriptive statistics including frequencies, percentages, means, and standard deviations were computed to characterize the sample and summarize variable distributions. Second, Pearson correlation analysis examined bivariate relationships between variables. Third, multiple linear regression analysis determined the independent effects of each perceived justice dimension on taxpayer satisfaction while controlling for other variables. The regression model was specified as $CS = b_0 + b_1PJ + b_2IJ + b_3DJ + e$, where CS denotes customer satisfaction, PJ denotes procedural justice, IJ denotes interactional justice, DJ denotes distributive justice, and e denotes the error term. Diagnostic tests for normality, multicollinearity, autocorrelation, and heteroscedasticity were conducted prior to regression analysis. All analyses were performed using SPSS version 20.

Results and Analysis

Response rate and respondent profile

Of the 388 questionnaires distributed, 350 were returned completed, yielding a response rate of 90.3%. This response rate substantially exceeds the 50% minimum threshold for adequate analysis and the 70% threshold considered excellent (Mugenda, 1999). The demographic profile of respondents is summarized in Table 1.

Table 1: Demographic characteristics of respondents

Characteristic	Category	Frequency	Percentage
Gender	Male	192	54.9%
	Female	158	45.1%
Age	18-29	127	36.3%
	30-39	164	46.9%
	40-49	54	15.4%
	50+	5	1.4%
	Elementary or below	24	6.9%
Education	Secondary school	15	4.3%
	Certificate/Diploma	92	26.3%
	First degree	199	56.9%
	Master's and above	20	5.7%
Taxpayer Category	Small	203	58.0%
	Medium	125	35.7%
	Large	22	6.3%

The sample was relatively balanced in terms of gender, with males constituting a slight majority. The dominant age group was 30-39 years, representing the economically active population that frequently interacts with the revenue authority. Most respondents held at least a first degree, indicating a relatively well-educated sample that can meaningfully evaluate service quality. Small taxpayers dominated the sample, consistent with their proportional representation in the population.

Incidence and types of service failures

A central finding of this study is the exceptionally high incidence of service failures reported by taxpayers. Of the 350 respondents, 304 (86.9%) reported having experienced a service failure at the Ministry of Revenue, while only 46 (13.1%) reported no such experience. This rate of service failure is remarkably high by any standard and indicates systemic deficiencies in the quality of service delivery at the Ministry of Revenue. The types of service failures reported by respondents are detailed in Table 2.

Table 2: Types of service failures encountered

Type of Service Failure	Frequency	Percentage	Rank
Discomfort on service by employees/departments	103	29.4%	1
Delay of decision by management	83	23.7%	2
Problem on procedures followed	82	23.4%	3
Employee failure in customer handling	41	11.7%	4
Communication problem of workers	41	11.7%	4

The most prevalent service failure type was discomfort with the service provided by employees and departments, reported by nearly one-third of respondents. This category encompasses a range of experiences including perceived rudeness, lack of attention, and inadequate service delivery by organizational units. Management decision delays constituted the second most common failure type, reflecting bureaucratic inefficiencies in the organizational hierarchy. Procedural problems ranked third,

highlighting issues with the rules and processes that taxpayers must navigate to access services. Employee failure in customer handling and communication problems were reported with equal frequency, each affecting approximately one in nine respondents.

Organizational response to service failures

The study also examined the types of responses provided by the Ministry of Revenue following service failures, with results revealing significant deficiencies in organizational recovery efforts. Table 3 presents the distribution of organizational responses.

Table 3: Organizational response to service failures

Type of Response	Frequency	Percentage
No response received	149	42.6%
Explanation provided	124	35.4%
Apology given	49	14.0%
Compensation provided	28	8.0%

The most striking finding is that 42.6% of respondents who experienced service failures received no response whatsoever from the organization. This represents a fundamental failure of service recovery, as the organization effectively ignored nearly half of all service failure incidents. Among those who received some form of response, explanations about the failure were the most common (35.4%), followed by apologies (14%), with compensation being the rarest response (only 8%). Furthermore, when asked specifically about compensation, 61.7% of respondents indicated they were not compensated for the inconveniences caused by service failures, while only 38.3% reported receiving any form of compensation.

These findings reveal a significant gap between the principles of effective service recovery and the actual practices of the Ministry of Revenue. The dominant pattern of no response or explanation-only responses suggests that the organization has not implemented systematic service recovery procedures. The low rate of compensation is particularly concerning from a distributive justice perspective, as it indicates that taxpayers bear the costs of organizational failures without receiving commensurate redress.

Perceived justice and taxpayer satisfaction

Descriptive analysis of the three perceived justice dimensions revealed predominantly negative taxpayer perceptions. For procedural justice, the highest disagreement (40.3%) concerned whether rules and processes for seeking fairness were simple and attractive, followed by 38.9% who disagreed that organizational policies were flexible and considerate. For interactional justice, the highest disagreement (47.7%) related to whether employees apologized for failures and handled cases professionally, followed by 42% who disagreed that employees were polite and willing to help. For distributive justice, 40.6% disagreed that corrections and answers given for complaints were adequate, and 36% disagreed that the organization's responses accurately provided right solutions.

The relative importance rankings provided by respondents indicated that interactional justice was perceived as the most important dimension (36.9%), followed by distributive justice (32%), and procedural justice (30.6%). This ranking is consistent with the regression results, which showed interactional justice as the strongest predictor of satisfaction based on standardized coefficients.

Regression analysis

Multiple regression analysis was conducted after confirming that all assumptions of the classical linear regression model were met. The Durbin-Watson statistic of 1.510 indicated no serious autocorrelation. VIF values (1.777, 1.437, and 1.990 for procedural, interactional, and distributive justice respectively) confirmed the absence of multicollinearity. The normal probability plot and residual scatter plot confirmed normality and homoscedasticity respectively.

The overall model was statistically significant ($F(3, 346) = 306.574, p < 0.001$), with $R\text{-squared} = 0.727$ and Adjusted $R\text{-squared} = 0.724$. This indicates that the three perceived justice dimensions collectively explain approximately 72.4% of the variance in taxpayer satisfaction, with the remaining 27.6% attributable to other factors not included in the model.

Table 4: Multiple regression results

Predictor	B	SE	Beta	t	p
(Constant)	-0.187	0.095		-1.968	0.050
Procedural Justice	0.213	0.040	0.200	5.333	0.000
Interactional Justice	0.415	0.033	0.424	12.593	0.000
Distributive Justice	0.424	0.043	0.390	9.833	0.000

All three predictors made statistically significant contributions to the model. Distributive justice had the highest unstandardized coefficient ($B = 0.424$), indicating that a one-unit increase in perceived distributive justice is associated with a 0.424 increase in taxpayer satisfaction. Interactional justice followed closely ($B = 0.415$), while procedural justice had the smallest but still significant coefficient ($B = 0.213$). In terms of standardized coefficients (beta), interactional justice made the strongest unique contribution ($\beta = 0.424$), followed by distributive justice ($\beta = 0.390$), and procedural justice ($\beta = 0.200$). The regression equation is: $CS = -0.187 + 0.213PJ + 0.415IJ + 0.424DJ$.

Discussion

This study provides a comprehensive examination of service failures, organizational recovery responses, and their effects on taxpayer satisfaction in the Ethiopian Ministry of Revenue. The findings reveal several important insights that contribute to both theoretical understanding and practical improvement of service delivery in revenue administration.

The exceptionally high service failure rate of 86.9% is a finding of considerable concern. This rate significantly exceeds the service failure rates typically reported in private sector studies, where rates generally range from 15% to 40% depending on the industry (Maxham et al., 2001; Tax et al., 1998). The magnitude of this failure rate in the Ethiopian Ministry of Revenue suggests deeply entrenched systemic problems in service delivery, encompassing human resource deficiencies, procedural inefficiencies, and organizational culture issues. The dominance of employee- and department-related discomfort as the leading failure type underscores the importance of human factors in service delivery, while the prevalence of management delays and procedural problems highlights structural and process-related shortcomings.

The organizational response patterns reveal a deeply troubling picture of service recovery practices. The fact that 42.6% of service failures elicited no organizational response represents a critical failure of basic service recovery. This finding is particularly significant because research consistently shows that a complete lack of response to service failure is the worst possible outcome from a customer satisfaction perspective, often leading to greater dissatisfaction than the original failure itself (Zeithaml et al., 2009). The predominance of explanation-only responses (35.4%) suggests that the organization relies on verbal communication rather than substantive redress, which may be perceived as insufficient by taxpayers who have incurred tangible costs in terms of time, effort, and inconvenience. The extremely low rate of compensation (8%) further indicates that the Ministry of Revenue has not established formal mechanisms for providing restitution to taxpayers affected by service failures.

The regression results demonstrating that all three perceived justice dimensions significantly predict taxpayer satisfaction are consistent with the broader service recovery literature (Blodgett et al., 1997; Tax et al., 1998; Cheng et al., 2018). However, the relative importance of interactional justice ($\beta = 0.424$) as the strongest predictor merits particular attention. This finding suggests that in the context of Ethiopian revenue administration, how taxpayers are treated during the recovery process matters more than what they receive or how the process is structured. This may reflect the cultural context in which interpersonal respect

and dignified treatment are highly valued, as well as the practical reality that most taxpayers receive little or no tangible compensation, making interpersonal treatment the primary basis for satisfaction evaluation.

The significant but weaker effect of procedural justice ($\beta = 0.200$) may reflect the inherent rigidity of bureaucratic procedures in government organizations. Unlike private firms that can adapt their procedures to individual customer circumstances, revenue authorities must adhere to statutory and regulatory frameworks that limit procedural flexibility. This structural constraint may dampen the influence of procedural justice on satisfaction, as taxpayers may have lower expectations for procedural fairness in government settings and may attribute procedural deficiencies to systemic rather than intentional causes.

The strong effect of distributive justice ($\beta = 0.390$) reinforces the importance of tangible outcomes in satisfaction formation. Despite the low rate of actual compensation observed in the study, taxpayers clearly value fair and adequate outcomes when they do receive them. This finding suggests that establishing formal compensation and restitution mechanisms could significantly improve taxpayer satisfaction, even if the existing organizational culture does not currently prioritize such measures.

The combined explanatory power of the model (Adjusted R-squared = 0.724) is notably high, suggesting that perceived justice dimensions are particularly important determinants of satisfaction in the context of revenue administration. The mandatory nature of the taxpayer-authority relationship may amplify the importance of justice perceptions, as taxpayers who cannot exit the relationship may be more attuned to fairness considerations in their satisfaction evaluations.

Conclusion and Recommendations

Conclusion

This study has documented the alarming incidence of service failures in the Ethiopian Ministry of Revenue, characterized the organizational responses to these failures, and empirically demonstrated the significant effects of perceived justice dimensions on taxpayer satisfaction. The findings paint a picture of a revenue administration that experiences frequent service failures and lacks systematic recovery mechanisms, resulting in widespread taxpayer dissatisfaction. The 86.9% service failure rate, the 42.6% non-response rate, and the 61.7% non-compensation rate collectively indicate that the Ministry of Revenue is falling far short of the service quality standards that taxpayers expect and deserve.

The regression analysis confirms that justice theory provides a robust framework for understanding taxpayer satisfaction following service failures in revenue administration. All three perceived justice dimensions significantly predict satisfaction, with interactional justice emerging as the most influential factor, followed by distributive justice and procedural justice. These findings underscore the multifaceted nature of satisfaction formation in service recovery contexts and highlight the need for comprehensive recovery strategies that address all three justice dimensions simultaneously.

Recommendations for practice

Based on the findings, the following recommendations are offered for the Ethiopian Ministry of Revenue and similar revenue administration organizations. First, the Ministry should establish a formal service recovery system with documented procedures, defined timelines, and accountability mechanisms. The current ad hoc approach to service recovery, as evidenced by the high non-response rate, must be replaced with a structured system that ensures every service failure receives appropriate organizational attention. Second, employee training programs should be prioritized, focusing on customer service skills, empathy development, complaint handling, and professional communication. Given the strong influence of interactional justice on satisfaction, investment in frontline employee capabilities is likely to yield the greatest returns in terms of taxpayer satisfaction improvement. Third, the Ministry should implement clear compensation and restitution policies that define appropriate remedies for different types of service failures, including formal apology mechanisms, service credits, expedited processing, and in appropriate cases, financial compensation. Fourth, procedures should be simplified and digitized where possible, with

electronic payment systems, online complaint submission, and real-time tracking of complaint resolution to enhance procedural justice perceptions.

Recommendations for future research

Future research should address several limitations of the current study. Qualitative approaches including in-depth interviews and focus group discussions would provide richer understanding of the service failure and recovery experiences from both taxpayer and employee perspectives. Longitudinal studies could examine how satisfaction evolves over time following service recovery and whether the effects of justice perceptions persist or diminish. Comparative studies across different branches and regions of Ethiopia, as well as cross-country comparisons with other African revenue authorities, would enhance the generalizability of findings. Finally, incorporating additional variables such as organizational culture, employee empowerment, technology adoption, and cultural factors would provide a more comprehensive model of service recovery effectiveness in revenue administration.

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