International Journal of Progressive Sciences and Technologies (IJPSAT)
ISSN: 2509-0119.

https://ijpsat.org/
Vol. 59 No. 1 September 2026, pp. 686-700

The Impact Of Coins Shortage On The Satisfaction Of Subsistence Marketplace Consumers. An Exploratory Study Of Subsistence Consumers Of Mobile Telecommunications Products And Services In Cameroon

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Abstract: This study examines the impact of coin shortages on the satisfaction of subsistence consumers in the mobile telecommunications industry in Cameroon, with particular focus on consumers in Douala. Although mobile telecommunications increasingly rely on digital technologies and mobile money, cash remains important for many low-value transactions among resource-constrained consumers. The study adopted a qualitative exploratory research approach and collected data through face-to-face semi-structured interviews with 31 consumers of mobile telecommunication products and services. The data were analyzed using thematic analysis to identify recurring patterns in consumers' experiences with coin shortages. The findings reveal that the shortage of small-denomination coins affects consumer satisfaction through several interconnected mechanisms, including difficulties in receiving exact change, involuntary additional expenditure, transaction delays and inconvenience, and perceptions of unfairness and financial loss. Repeated difficulties in obtaining change were also found to weaken trust in telecommunications agents and influence consumers' choice of service outlets. These effects are particularly significant for subsistence consumers because limited financial resources increase the economic and psychological importance of even small monetary losses. The study demonstrates that consumer satisfaction in subsistence marketplaces is influenced not only by core telecommunications service attributes but also by the fairness, convenience, and monetary accuracy of the transaction process. The findings highlight the need for telecommunications operators and their agents to improve cash-handling practices, promote transparent procedures for managing small balances, strengthen complaint mechanisms, and provide accessible digital payment alternatives.

Keywords: Coin shortage; Subsistence consumers; Consumer satisfaction; Mobile telecommunications; Transaction convenience; Perceived fairness; Resource constraints; Cameroon.

Introduction

The mobile telecommunication industry has become an essential component of everyday economic and social life in Cameroon, particularly for consumers operating within subsistence marketplaces. Mobile network operators provide services such as airtime, mobile data, mobile money, and other digital services that enable consumers to communicate, conduct business, make payments, and participate in economic activities. The importance of mobile telecommunications in African economies has been widely documented, with mobile phones facilitating access to information, markets, financial services, and other economic opportunities

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ISSN: 2509-0119.

https://ijpsat.org/
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(Aker & Mbiti, 2010). The expansion of mobile money has further strengthened the role of telecommunications firms in financial inclusion and everyday economic transactions across Sub-Saharan Africa (GSMA, 2024; Suri & Jack, 2016).

Despite the increasing importance of these services, consumers operating under severe resource constraints continue to face transactional challenges that may affect their marketplace experiences and satisfaction. Subsistence marketplaces are characterized not only by low incomes but also by uncertainty, limited resources, social embeddedness, and distinctive forms of interaction between consumers and sellers (Viswanathan & Rosa, 2007; Viswanathan et al., 2010a). One relatively underexplored transactional challenge concerns the shortage of coins and other small-denomination currency used in cash-based transactions.

The shortage of coins may create difficulties when consumers purchase low-value mobile telecommunication products and services, particularly airtime and other services paid for with cash. In transactions where the consumer cannot provide the exact amount and the seller is unable to provide the appropriate change, consumers may be required to purchase additional products, accept an unfavorable rounding of the transaction, postpone the purchase, or lose part of the value of their money. Coin availability is itself a marketplace and supply-chain issue because coins circulate repeatedly through an economy rather than moving through a simple one-directional supply chain (Huang et al., 2020). Consequently, disruptions in coin circulation can affect the ability of retailers and consumers to complete low-value transactions efficiently.

Such difficulties may be particularly important for subsistence consumers because their purchasing decisions are often constrained by limited and carefully allocated financial resources. Research on subsistence marketplaces emphasizes that consumers in these environments frequently operate under conditions of resource scarcity and uncertainty, meaning that small amounts of money, time, and effort can have substantial consequences for everyday consumption decisions (Prahalad, 2005; Viswanathan & Rosa, 2007; Weidner et al., 2010). Consequently, even relatively small monetary discrepancies may represent meaningful economic costs and may influence perceptions of fairness, value, convenience, and satisfaction.

The problem is further complicated by the structure of mobile telecommunications distribution in Cameroon. Although mobile money and other digital payment mechanisms have expanded substantially, cash remains important in many low-income and informal-market transactions. Mobile telecommunications are deeply connected to economic activity in developing economies because mobile devices and related services reduce communication and transaction barriers and facilitate access to markets and financial services (Aker & Mbiti, 2010). In Cameroon, research has shown that consumers' adoption and use of mobile financial services are influenced by technological, utilitarian, security, and behavioral considerations (Kamdjoug et al., 2021; Tsanga, 2018).

Subsistence consumers frequently interact with mobile network agents, airtime vendors, kiosks, and other informal or semi-formal intermediaries. These intermediaries constitute an important part of the service-delivery process because consumers often encounter the service provider through the agent rather than directly through the telecommunications company. Research on subsistence marketplaces shows that buyer–seller relationships are socially embedded and characterized by repeated exchanges, interpersonal interaction, negotiation, and reciprocal dependence (Sridharan & Viswanathan, 2008; Viswanathan et al., 2010b; Viswanathan et al., 2012).

Where coins are scarce, vendors may develop informal coping practices, including rounding prices, substituting products, retaining small balances, asking consumers to return later, or encouraging customers to purchase additional airtime or other services. Although these practices may enable transactions to continue, they may also generate perceptions of unfairness, inconvenience, financial loss, or dissatisfaction. Such reactions are consistent with research demonstrating that consumers evaluate not only the outcome of an exchange but also whether the exchange is perceived to be fair (Kahneman et al., 1986; Xia et al., 2004).

From a marketing perspective, customer satisfaction is influenced not only by the core quality of a product or service but also by the process through which the product or service is exchanged. Oliver's (1980) expectancy-disconfirmation model proposes that satisfaction develops from the comparison between consumer expectations and perceived performance. Thus, a consumer may be satisfied with the technical quality of a mobile network but dissatisfied with the transactional experience associated with purchasing or accessing the service.

This distinction is particularly important in subsistence marketplaces, where resource constraints shape consumer behavior and where apparently insignificant transaction costs can have substantial consequences. Service convenience research similarly emphasizes that consumers evaluate services in terms of the time and effort required to access and use them (Berry et al., 2002; Seiders et al., 2007). A shortage of coins can therefore become a source of inconvenience by increasing waiting time, requiring additional effort, or forcing consumers to modify their intended purchase.

Existing research on mobile telecommunications in developing economies has tended to emphasize issues such as service quality, network reliability, pricing, accessibility, mobile money adoption, and digital financial inclusion (Aker & Mbiti, 2010; Twum et al., 2023). In Cameroon, empirical studies have demonstrated relationships between service quality and customer satisfaction in the mobile telephony sector (Ngambi & Abamukong, 2020), while research on mobile money has examined factors such as speed, cost, usefulness, security, network quality, and interoperability (Tsanga, 2018). However, comparatively little attention has been given to the effects of physical currency shortages, particularly coin shortages, on consumer satisfaction.

The lack of empirical attention to this issue represents an important research gap. There is insufficient understanding of how shortages of coins affect the satisfaction of subsistence consumers, the specific difficulties consumers encounter when making small-value mobile telecommunication purchases, and the coping mechanisms adopted by consumers and vendors. It is also unclear whether the effect of coin shortages on satisfaction varies according to purchase frequency, transaction value, financial constraints, or the type of telecommunications service purchased.

Therefore, the central problem addressed by this study is the **potential negative impact of coin shortages on the satisfaction of subsistence consumers in the mobile telecommunication industry in Cameroon**. The study seeks to examine how the unavailability of coins and small-denomination currency affects consumers' transactional experiences, perceived fairness, convenience, and overall satisfaction. By investigating this problem within the Cameroonian subsistence marketplace, the study aims to contribute to the literature on subsistence consumer behavior and provide practical insights for mobile telecommunication operators, agents, vendors, and policymakers seeking to improve the inclusiveness and consumer-friendliness of mobile telecommunication markets.

Literature Review

Conceptualizing Subsistence Consumers and Subsistence Marketplaces

The concept of subsistence marketplaces has received increasing attention in marketing and consumer research because of the distinctive characteristics of consumers who operate under severe resource constraints. Subsistence consumers generally experience limited and uncertain incomes, constrained access to financial resources, and the need to make frequent consumption decisions within highly restricted economic environments (Prahalad, 2005; Viswanathan & Rosa, 2007). Unlike conventional marketplace consumers, their consumption decisions are often closely connected to immediate household and livelihood needs.

Viswanathan and Rosa (2007) argue that subsistence marketplaces require a bottom-up understanding because consumers' economic, social, cultural, and marketplace experiences jointly shape consumption behavior. Subsistence marketplaces should therefore not be understood simply as markets containing low-income consumers. Rather, they represent distinctive environments in which consumers, entrepreneurs, families, and communities interact under conditions of resource scarcity.

Subsistence marketplaces are also characterized by strong interpersonal and social relationships. Viswanathan et al. (2010a) demonstrate that consumers and small entrepreneurs rely on social networks for information, marketplace learning, purchasing decisions, and business activities. Similarly, Viswanathan et al. (2010b) show that relationships among subsistence consumer-merchants, vendors, customers, and families are central to the functioning of marketplace exchanges.

This perspective is particularly relevant to the mobile telecommunications industry in developing economies such as Cameroon. Mobile telecommunications have become embedded in everyday economic and social activities, including communication, airtime purchases, mobile money transfers, bill payments, and small-business activities (Aker & Mbiti, 2010; GSMA, 2024). For subsistence consumers, mobile telecommunications therefore constitute more than communication technologies; they form part of the infrastructure through which consumers participate in economic and social life.

The relevance of this perspective is further reinforced by research showing that subsistence consumers frequently combine consumption and entrepreneurial activities. Sridharan and Viswanathan (2008) emphasize that consumption and entrepreneurship are closely interconnected in subsistence marketplaces. Viswanathan et al. (2010a) similarly demonstrate that consumers and entrepreneurs continuously navigate marketplace constraints through social relationships and resource allocation. A shortage of small-denomination coins may therefore represent more than a minor inconvenience because it can interfere with consumers' ability to complete transactions and manage limited financial resources.

Resource Constraints and Consumer Behaviour in Subsistence Markets

Resource constraints are central to understanding subsistence consumer behavior. In conventional markets, consumers may have several alternatives when confronted with a transaction problem. They can postpone purchases, switch suppliers, use electronic payment mechanisms, or absorb relatively small additional costs. Subsistence consumers, however, often have fewer alternatives because their consumption is closely connected to immediate needs and their financial resources are limited (Viswanathan & Rosa, 2007; Weidner et al., 2010).

The literature on subsistence marketplaces emphasizes the ways in which consumers creatively navigate resource constraints. Viswanathan and Rosa (2007) maintain that subsistence-marketplace research should focus on consumers' everyday realities rather than treating low-income consumers simply as poorer versions of mainstream consumers. This distinction is important in the context of coin shortages because the economic significance of a small monetary discrepancy may be greater for a consumer operating under severe financial constraints.

For example, where a telecommunications transaction requires cash payment, the unavailability of small-denomination coins may create a situation in which the consumer cannot receive the exact balance due. The consumer may have to accept an alternative product, purchase additional airtime, wait for the seller to find coins, or accept a small monetary loss. Repeated experiences of this nature can generate perceptions of inconvenience and unfairness and may negatively influence satisfaction.

Resource constraints may also influence bargaining relationships between consumers and sellers. Research on subsistence consumer-merchants indicates that marketplace exchanges are embedded in relationships involving vendors, customers, and families and may involve informal credit, negotiation, and reciprocal interaction (Viswanathan et al., 2010b; Viswanathan et al., 2012). Consequently, a shortage of coins may influence not only the immediate transaction but also perceptions of trust, fairness, and relationship quality.

Coin Shortage as a Transactional Constraint

Although marketing research has extensively examined price, service quality, payment systems, transaction costs, and consumer satisfaction, comparatively little attention has been given to the specific role of physical currency denominations in shaping satisfaction among subsistence consumers.

A coin shortage can be conceptualized as a transactional constraint that occurs when the supply or circulation of small-denomination coins is insufficient to facilitate exact cash transactions. Coin circulation is an important component of cash-based economies because coins are repeatedly recirculated among consumers, retailers, financial institutions, and other economic actors (Huang et al., 2020). Disruptions in this circulation can therefore create practical problems at the point of sale.

The problem is particularly relevant to industries involving frequent low-value transactions. Mobile telecommunications provide an appropriate setting because consumers may purchase small quantities of airtime, data, or other services. Where these purchases are made through agents or vendors using cash, the availability of appropriate denominations can affect the efficiency and convenience of the transaction.

The consequences of coin shortages can take several forms. First, consumers may experience **transaction delays** because agents have to search for change. Second, consumers may experience **forced over-purchasing**, where they purchase more airtime or another service than originally intended because the agent lacks the appropriate change. Third, consumers may experience **financial leakage**, where they effectively lose small amounts because exact change cannot be provided. Fourth, repeated problems may generate **dissatisfaction with the agent or service provider**, even when the underlying telecommunications service is functioning properly.

Coin shortage can therefore be conceptualized as a form of marketplace friction occurring at the point of exchange. This perspective is consistent with research on service convenience, which defines convenience partly in terms of the time and effort consumers must expend to obtain and use services (Berry et al., 2002; Seiders et al., 2007).

Consumer Satisfaction

Consumer satisfaction is one of the most extensively studied concepts in marketing. Oliver's (1980) expectancy-disconfirmation framework conceptualizes satisfaction as an outcome of the comparison between consumers' expectations and their perceptions of actual performance. When performance meets or exceeds expectations, confirmation or positive disconfirmation may occur, whereas performance below expectations can produce negative disconfirmation and dissatisfaction.

This framework provides an appropriate theoretical basis for understanding the relationship between coin shortages and satisfaction. Consumers generally expect a transaction to be completed accurately, conveniently, and fairly. When purchasing a mobile telecommunications product or service, the expected outcome includes not only receiving the service but also completing the payment process correctly. If consumers encounter difficulties obtaining the correct change, the actual transaction experience may fall below expectations (Oliver, 1980).

Satisfaction should therefore not be understood solely in terms of the technical performance of a telecommunications network. A consumer may have a good network connection but still experience dissatisfaction because of difficulties encountered when purchasing airtime or accessing mobile services. Customer satisfaction is affected by expectations, perceived performance, price, and service quality (Anderson et al., 1994; Oliver, 1980).

Research on mobile money services supports this multidimensional understanding of satisfaction. Twum et al. (2023), for example, found that service availability, facilities, and security influence customer satisfaction, while service-provider expertise, network systems, and responsiveness influence continued use. These findings demonstrate that satisfaction with mobile financial services extends beyond technological functionality to encompass broader aspects of the service experience.

Service Quality and Satisfaction in Mobile Telecommunications

Service quality provides another important theoretical lens for examining consumer satisfaction in telecommunications. Parasuraman et al. (1988) developed SERVQUAL as a framework for assessing consumers' perceptions of service quality. Their approach emphasizes dimensions of service performance that influence consumers' evaluations of service encounters.

In telecommunications, service quality may encompass network reliability, accessibility, responsiveness, security, convenience, and interactions with service providers or agents. Consequently, problems occurring at the point of sale can become part of consumers' overall evaluation of the service experience.

The relevance of service quality is demonstrated by research on Cameroon’s mobile telephony sector. Ngambi and Abamukong (2020) found that service quality has a significant relationship with customer satisfaction among mobile telephone users in Cameroon. Their study considered dimensions including reliability, responsiveness, empathy, assurance, economy, technical quality, tangibility, and image.

Similarly, Tsanga (2018), in examining mobile-money acceptability in Cameroon, identified several factors associated with satisfaction and usage, including speed, cost, mobility, perceived usefulness, safety, social influence, network quality, and interoperability. More recent research on mobile banking in Cameroon also demonstrates that technology use can affect customer satisfaction and financial inclusion (Kamdjoug et al., 2021).

International Journal of Progressive Sciences and Technologies (IJPSAT)
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https://ijpsat.org/
Vol. 59 No. 1 September 2026, pp. 686-700

However, existing research has largely concentrated on technological and service-related factors such as network quality, cost, security, usefulness, and accessibility. Much less attention has been given to physical cash constraints occurring during low-value transactions. This creates an opportunity to extend the service-quality literature by examining whether the availability of small-denomination currency constitutes an overlooked element of the customer experience.

Transaction Convenience and Consumer Satisfaction

Convenience is particularly important in subsistence markets because consumers have limited time and financial resources. A transaction that is technically possible but requires substantial additional time, effort, or negotiation may be perceived as inconvenient.

Service convenience research conceptualizes convenience in terms of the time and effort required to purchase and use a service (Berry et al., 2002; Seiders et al., 2007). Kaura (2013) further demonstrates that service convenience can influence customer satisfaction and loyalty. Thus, transaction convenience is not simply an operational issue; it can contribute directly to consumers' evaluations of the service.

A shortage of coins can reduce transaction convenience in several ways. Consumers may have to visit another agent to obtain change, wait for the seller to locate coins, purchase unwanted additional airtime, or negotiate an alternative arrangement. These activities increase the non-monetary costs of consumption.

For subsistence consumers, such costs may be particularly significant because time and money are closely connected to livelihood activities. Research in subsistence marketplaces demonstrates that consumers and entrepreneurs operate within highly resource-constrained environments and depend heavily on interpersonal interactions to complete marketplace activities (Viswanathan et al., 2010a; Viswanathan et al., 2012).

The coin-shortage problem can therefore be viewed as a **micro-level transaction cost**. Although the nominal monetary value of missing change may be small, the cumulative psychological, temporal, and financial costs may be considerable.

Perceived Fairness and Monetary Loss

Perceived fairness represents another mechanism through which coin shortages may affect satisfaction. Consumers evaluate not only what they receive but also whether they believe the exchange is fair. Research on fairness demonstrates that consumers may react negatively when they perceive that an exchange violates established expectations of equity or entitlement (Kahneman et al., 1986; Xia et al., 2004).

Where a customer cannot receive exact change because a seller lacks coins, the consumer may perceive the transaction as inequitable, particularly when the customer is repeatedly required to accept additional products or services. The perceived fairness of the transaction may therefore depend on both the monetary outcome and the manner in which the vendor handles the shortage.

This issue is particularly important in subsistence markets because consumers' financial resources are limited. Thaler's (1985) mental-accounting perspective suggests that consumers mentally organize and evaluate financial resources rather than treating all monetary amounts as psychologically equivalent. Consequently, even small monetary losses may be meaningful when they affect resources allocated to specific consumption needs.

Perceived unfairness may also influence consumers' trust in agents. Subsistence marketplaces depend strongly on interpersonal relationships, repeated exchanges, and social networks (Sridharan & Viswanathan, 2008; Viswanathan et al., 2010b). Therefore, consumers' reactions to coin shortages may depend partly on how agents handle the problem. An agent who transparently explains the shortage and seeks an equitable solution may preserve the customer relationship, whereas an agent who systematically benefits from the shortage may generate dissatisfaction and distrust.

Coin Shortage and Customer Loyalty

Customer satisfaction is closely connected to behavioral outcomes such as repurchase intentions, loyalty, word-of-mouth communication, and switching intentions. Oliver's (1980) satisfaction framework explicitly links satisfaction with subsequent attitudes and purchase intentions. Empirical research also demonstrates relationships among satisfaction, future purchasing behavior, and organizational performance (Anderson et al., 1994).

In mobile telecommunications, this relationship may be particularly important because consumers can often access competing agents and, depending on circumstances, competing providers. A consumer who repeatedly experiences difficulties obtaining change may choose another agent, change the method of payment, reduce the frequency of purchases, or potentially switch providers.

Nevertheless, switching may not always be straightforward for subsistence consumers. Network coverage, social relationships, established agent relationships, transaction costs, and familiarity with particular platforms may constrain switching behavior. This suggests that dissatisfaction arising from coin shortages may initially manifest through complaints, reduced trust, negative word-of-mouth, avoidance of particular agents, or changes in purchasing behavior rather than immediate provider switching.

Mobile Telecommunications and Subsistence Consumers in Cameroon

Cameroon's mobile telecommunications market provides an appropriate context for examining these relationships. Mobile telecommunications have become an important component of everyday economic activity, including communication, airtime purchases, mobile money transfers, and small-scale commercial activities (Aker & Mbiti, 2010; GSMA, 2024).

The importance of mobile money in Sub-Saharan Africa has increased substantially. Mobile money allows users to store, transfer, and convert monetary value through mobile devices and has contributed to financial resilience and economic participation among low-income households in several African contexts (Suri & Jack, 2016). The GSMA (2024) similarly reports continued expansion of mobile money across Sub-Saharan Africa.

The Cameroonian context is particularly relevant because telecommunications and financial services increasingly intersect through mobile money and digital banking. Research by Kamdjoug et al. (2021) demonstrates that mobile banking adoption in Cameroon has implications for customer satisfaction and financial inclusion, while Tsanga (2018) identifies multiple factors influencing mobile-money satisfaction and acceptability.

However, the increasing availability of digital payment mechanisms does not eliminate the relevance of cash. Consumers may continue to use cash when purchasing low-value telecommunications products, particularly through informal and semi-formal agents. Consequently, the physical availability of coins may remain relevant even within an increasingly digital telecommunications environment.

Subsistence Consumers and the Mobile Telecommunications Agent

The agent occupies a critical position in the mobile telecommunications service ecosystem. For consumers who depend on cash transactions, the agent is often the immediate point of interaction with the telecommunications provider. The agent therefore becomes part of the consumer's perceived service experience.

The literature on subsistence consumer–merchant relationships suggests that such interactions are characterized by repeated exchanges, interpersonal relationships, informal negotiation, and reciprocal dependence (Sridharan & Viswanathan, 2008; Viswanathan et al., 2010b). These characteristics mean that an agent's response to a coin shortage may influence how consumers interpret the entire transaction.

For example, if an agent lacks small coins but allows the consumer to return later for the balance, the consumer may perceive the situation differently from one in which the agent simply retains the difference. Similarly, if the agent encourages the consumer to purchase additional airtime to avoid giving change, the consumer may interpret the transaction as inconvenient or unfair.

Thus, the impact of coin shortages is unlikely to be purely monetary. It may operate through several psychological and relational mechanisms, including perceived inconvenience, perceived unfairness, distrust, frustration, and reduced satisfaction (Kahneman et al., 1986; Xia et al., 2004).

Empirical Gap in the Literature

The literature demonstrates considerable research interest in subsistence consumers, service quality, mobile money, consumer satisfaction, convenience, and resource constraints. However, these streams of literature have largely developed independently.

First, subsistence-marketplace research has examined how consumers cope with limited resources, social networks, marketplace relationships, and consumption constraints but has paid comparatively little attention to the role of physical currency denominations in service transactions (Viswanathan & Rosa, 2007; Viswanathan et al., 2010a; Viswanathan et al., 2012).

Second, mobile-money and telecommunications research has investigated service quality, network reliability, cost, security, usefulness, and satisfaction. Research in Cameroon identifies factors such as speed, cost, mobility, usefulness, safety, social influence, interoperability, and network quality as important considerations in mobile-money services (Tsanga, 2018). Research on Cameroon's mobile telephony sector has similarly established a relationship between service quality and customer satisfaction (Ngambi & Abamukong, 2020).

Third, conventional consumer-satisfaction research provides strong theoretical explanations of how discrepancies between expectations and actual experiences influence satisfaction. Oliver's (1980) expectancy-disconfirmation framework provides a useful basis for understanding this process, while service-convenience research explains how time and effort can affect consumer evaluations (Berry et al., 2002; Seiders et al., 2007).

However, these theoretical perspectives have rarely been applied to the specific problem of cash-denomination shortages among subsistence consumers in telecommunications markets. Research on coin supply chains demonstrates that coin availability is an operational and economic issue, but it has largely focused on supply-chain efficiency rather than consumer satisfaction (Huang et al., 2020).

This creates a clear empirical gap. There is insufficient understanding of whether and how the shortage of coins affects satisfaction among subsistence consumers, particularly within the mobile telecommunications context in Cameroon.

Research Gap and Proposed Contribution

The present study seeks to address this gap by examining the impact of coin shortages on the satisfaction of subsistence consumers in Cameroon's mobile telecommunications industry. The study extends the subsistence-marketplace literature by introducing **currency availability at the point of exchange** as a potentially important marketplace constraint.

The study also contributes to consumer-satisfaction research by examining the possibility that satisfaction may be affected not only by the quality and functionality of the core telecommunications service but also by seemingly peripheral aspects of the transaction process. In this sense, the study shifts attention from technological dimensions of telecommunications service delivery toward consumers' everyday marketplace experiences.

Finally, the study contributes to the Cameroonian mobile telecommunications literature by examining a practical problem that may be particularly consequential for consumers who frequently conduct low-value cash transactions. Understanding this phenomenon can provide telecommunications operators and their agents with insights into improving transaction convenience, perceived fairness, customer satisfaction, and potentially customer retention.

Against this background, a shortage of coins can be understood as a previously underexamined source of marketplace friction. For subsistence consumers, inability to obtain exact change may generate inconvenience, perceived monetary loss, negative perceptions of fairness, frustration, and dissatisfaction. These effects may subsequently influence trust, loyalty, repeat patronage, and word-of-mouth behavior.

International Journal of Progressive Sciences and Technologies (IJPSAT)
ISSN: 2509-0119.

https://ijpsat.org/
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Research Methodology

Research Approach

This study adopted a qualitative research approach to examine the impact of the shortage of coins on the satisfaction of subsistence consumers of mobile telecommunication products and services in Cameroon. A qualitative approach is appropriate where researchers seek to understand participants' experiences, perceptions, meanings, and interpretations of a phenomenon in its natural context (Creswell & Poth, 2018; Patton, 2015).

The study employed an exploratory research design. An exploratory design was appropriate because limited empirical research has examined the relationship between shortages of physical currency denominations, particularly coins, and consumer satisfaction within the mobile telecommunication sector in Cameroon. Exploratory qualitative research can provide detailed insights into under-researched phenomena and assist in identifying patterns and themes that can subsequently inform further research (Patton, 2015).

The study was conducted in Douala, Cameroon, the country's major commercial and economic center. The study population comprised consumers of mobile telecommunication products and services in Douala. The target participants were consumers who had experience purchasing or using mobile telecommunication products and services and who could provide relevant information about payment transactions involving small-denomination coins and the consequences of coin shortages for their satisfaction.

A sample of 31 consumers was selected for participation in the study. The study employed a simple random sampling technique, giving eligible consumers an equal opportunity to be selected for participation. This technique was intended to reduce selection bias and provide opportunities for consumers with different experiences of mobile telecommunication transactions to participate in the study.

Data were collected through semi-structured interviews. An interview guide containing open-ended questions was developed around key issues relating to coin shortages, transaction experiences, perceived financial implications, satisfaction, perceived fairness, convenience, and responses to difficulties encountered during mobile telecommunication transactions. Semi-structured interviews are particularly useful in qualitative research because they provide consistency across participants while allowing researchers to explore unexpected issues emerging from participants' experiences (Creswell & Poth, 2018; Patton, 2015).

Data collection was conducted through face-to-face interviews with the selected participants in Douala. Before each interview, participants were informed about the purpose of the study and encouraged to provide honest responses based on their personal experiences. Each interview lasted approximately 15–20 minutes. Participants were given sufficient opportunity to explain their experiences and express their perceptions regarding the effects of coin shortages on their satisfaction.

The data were analyzed using thematic analysis. Thematic analysis was appropriate because it enables researchers to systematically identify, organize, and interpret recurring patterns and themes within qualitative data (Braun & Clarke, 2006). Following the interviews, participants' responses were reviewed carefully and relevant statements were identified and coded. Similar codes were subsequently grouped into broader categories, from which major themes relating to coin shortages and consumer satisfaction were developed.

The analysis focused particularly on themes concerning **transaction inconvenience, financial loss, forced additional purchases, perceived fairness, vendor responses, frustration, satisfaction, trust, and behavioral intentions**. These themes were selected because the literature suggests that consumers' evaluations of service encounters are influenced by service quality, convenience, perceived fairness, and the comparison between expected and actual performance (Berry et al., 2002; Oliver, 1980; Parasuraman et al., 1988; Seiders et al., 2007; Xia et al., 2004).

Overview of Findings

The study explored how shortages of coins affect the satisfaction of subsistence consumers of mobile telecommunication products and services in Douala, Cameroon. Data were generated through face-to-face semi-structured interviews with 31 consumers.

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Thematic analysis produced five major themes: difficulty in receiving correct change, involuntary expenditure, transaction delays and inconvenience, perceived unfairness and distrust, and declining satisfaction with service providers.

Difficulty in Receiving Correct Change

A dominant finding was that the shortage of coins makes it difficult for consumers to receive the exact balance after purchasing mobile telecommunications products and services. Respondents indicated that small-value transactions are particularly affected because many consumers purchase airtime, data bundles and other services using relatively small denominations.

One participant explained:

"Sometimes I buy airtime with a small note, but the agent does not have coins to give me my balance. I either have to accept another small item or leave the balance."

Another respondent stated:

"The problem is not the price of the airtime. The problem is getting the exact change. When there are no coins, I lose money little by little."

These responses suggest that coin shortages transform apparently low-cost transactions into situations where consumers may bear additional financial costs**.**

Involuntary Expenditure and Perceived Financial Loss

A second theme concerned consumers' perceptions that coin shortages force them to spend more than they originally intended. Some respondents reported accepting alternative products or services instead of receiving their balance in cash.

For subsistence consumers, such additional expenditure can be significant because consumption decisions are often constrained by limited disposable income. The loss of even a small amount of money across repeated transactions may therefore accumulate into a meaningful financial burden.

One respondent remarked:

"When I don't get my change, I sometimes have to take something I did not plan to buy. It means I spend more than I budgeted."

The finding indicates that the effect of coin shortages is not merely transactional but can directly influence consumers' perceptions of value and fairness.

Transaction Delays and Inconvenience

The interviews also revealed that coin shortages contribute to delays during transactions. Consumers reported waiting while agents searched for change, attempted to exchange money with neighbouring businesses or negotiated alternative arrangements.

The resulting inconvenience was particularly problematic for consumers who were in a hurry or who depended on telecommunications agents for frequent small-value transactions.

A participant response was:

"You can go to the agent just to buy airtime, but you spend several minutes discussing change. Sometimes you become frustrated and decide to go somewhere else."

Thus, the shortage of coins increases the non-monetary costs of consumption, particularly time, effort and inconvenience.

Perceived Unfairness and Distrust

Another important theme was the perception that some agents take advantage of coin shortages. Respondents expressed concerns that agents may retain small balances or encourage consumers to accept unwanted alternatives.

This creates perceptions of unfair treatment and may weaken trust between consumers and service providers.

International Journal of Progressive Sciences and Technologies (IJPSAT)
ISSN: 2509-0119.

https://ijpsat.org/
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One participant observed:

"If the agent keeps your balance because there is no change, you feel that you have been cheated, even if the amount is small."

The finding suggests that the psychological impact of coin shortages may exceed their monetary value. Consumers may interpret repeated small losses as evidence that the transaction environment is unfair.

Impact on Consumer Satisfaction

Overall, participants associated coin shortages with lower satisfaction. The dissatisfaction resulted from the combined effects of financial loss, inconvenience, delays and perceptions of unfairness.

Some consumers indicated that they would prefer agents or service providers who could provide exact change or offer transparent alternatives. Others reported that repeated negative experiences could influence their choice of agent.

The findings therefore suggest that coin availability is an overlooked component of the consumer experience in subsistence markets. Although telecommunications companies may focus primarily on network quality, pricing, availability and service reliability, the physical cash environment surrounding transactions can also influence consumer satisfaction.

Discussion of Findings

The findings indicate that shortages of coins constitute a relatively mundane but consequential market constraint for subsistence consumers. The problem becomes particularly important in contexts where telecommunications products and services are frequently purchased through small-value cash transactions.

Coin Shortages and Perceived Value

The finding that consumers experience financial losses because of difficulties obtaining exact change demonstrates that perceived value is not determined exclusively by the advertised price of a telecommunications service. Rather, consumers evaluate the total cost of completing a transaction, including additional amounts paid, time spent and effort required.

For subsistence consumers, this distinction is particularly important because consumption occurs under substantial resource constraints. A seemingly insignificant monetary loss may have greater perceived importance when consumers operate with highly restricted budgets. Consequently, a telecommunications service that is nominally affordable may nevertheless be perceived as expensive or unfair when consumers repeatedly lose small amounts through change-related problems.

Coin Shortages as a Source of Transactional Inconvenience

The findings further show that satisfaction is influenced by the convenience with which a transaction can be completed. Consumers do not evaluate only the telecommunications product itself; they also evaluate the process through which the product is acquired.

Delays, searching for change and negotiating alternative forms of settlement increase consumers' transaction costs. This supports the broader argument that consumer satisfaction in subsistence markets is shaped by the entire consumption experience rather than by product attributes alone.

Fairness, Trust and Consumer Satisfaction

The perception that agents may retain small balances has implications for distributive and interactional fairness. Even when the monetary amount involved is small, consumers may perceive the practice as unfair because they believe they are not receiving the full value for which they paid.

Repeated experiences of this nature can undermine trust. This is particularly significant in subsistence marketplaces, where interpersonal relationships and local exchange networks can strongly influence consumers' perceptions of businesses.

The study therefore suggests that coin shortages can create a trust problem, rather than simply a currency-denomination problem.

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ISSN: 2509-0119.

https://ijpsat.org/
SCHOLAR AI Be Smart
Vol. 59 No. 1 September 2026, pp. 686-700

Coin Shortage and Consumer Switching Behaviour

The findings also suggest that persistent difficulties with change may influence consumer choice. When alternative agents or service outlets are available, consumers may migrate toward those perceived as more transparent, convenient and fair.

This finding has managerial significance because relatively small operational problems can potentially influence customer retention. Telecommunications firms may therefore need to recognize that consumer satisfaction is affected by the practices of their distribution and agent networks, even when those practices are not directly controlled by the telecommunications provider.

Subsistence Consumers and the Importance of Small Amounts

Perhaps the most important finding is that small monetary values can have substantial behavioural consequences in subsistence markets. Conventional marketing approaches may regard a small unpaid balance as insignificant. However, for consumers operating under resource constraints, repeated small losses may accumulate and affect perceptions of value, fairness and satisfaction.

The findings consequently reinforce the need for marketing scholarship to pay greater attention to the micro-level realities of consumption among low-income consumers**.**

Theoretical Implications

The study has several theoretical implications.

Extending Consumer Satisfaction Theory

The findings suggest that consumer satisfaction in subsistence markets should be conceptualized beyond traditional product and service attributes. Satisfaction appears to depend on transactional fairness, convenience, monetary accuracy and the overall cost of exchange.

The study therefore extends conventional satisfaction thinking by proposing that seemingly peripheral market infrastructure—such as the availability of appropriate currency denominations—can influence satisfaction.

Contribution to Subsistence Marketplace Theory

The study contributes to subsistence marketplace research by demonstrating how macro- and meso-level market constraints can become embedded in everyday consumer experiences. The shortage of coins is not simply a monetary phenomenon; it becomes a consumption constraint that affects purchasing decisions, perceived value and satisfaction.

This highlights the importance of examining the institutional and infrastructural realities surrounding consumption in subsistence marketplaces.

Resource-Constraint Perspective

The findings also reinforce the resource-constraint perspective of consumer behaviour. Consumers with limited financial resources are likely to be more sensitive to small deviations between the amount paid and the value received.

Consequently, theories of consumer behaviour in resource-constrained environments should account for marginal financial losses, transaction costs and coping mechanisms, rather than focusing only on consumers' ability to purchase products.

Integrating Fairness into Subsistence Consumption

The study further suggests that perceived fairness provides a useful theoretical link between resource constraints and satisfaction. A consumer may tolerate inconvenience when the transaction is perceived as fair but become dissatisfied when inconvenience is combined with perceived financial exploitation.

International Journal of Progressive Sciences and Technologies (IJPSAT)
ISSN: 2509-0119.

https://ijpsat.org/
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Practical Implications

Implications for Telecommunications Companies

Telecommunications companies should recognize that customer satisfaction extends beyond network performance and digital service quality. They should monitor the cash-handling practices of their agents and distributors and develop mechanisms for addressing change-related complaints.

Greater Use of Digital Payments

Telecommunications operators can reduce dependence on physical coins by encouraging digital payment alternatives. Mobile money, electronic transfers and account-based payments can potentially reduce the frequency with which consumers require small-denomination cash change.

However, such solutions should remain sensitive to the realities of subsistence consumers, including digital literacy, transaction fees, network availability and access to mobile devices.

Agent Training and Consumer Protection

Agents should receive clear guidelines concerning the handling of customers' balances. Where exact change is unavailable, agents should provide transparent and mutually acceptable alternatives rather than automatically retaining the balance. Training should emphasize fairness, transparency and customer respect.

Clear Pricing and Alternative Denominations

Telecommunications firms could consider pricing structures that minimize situations in which customers regularly require very small amounts of change. Where feasible, denominations and promotional offers should be designed around the realities of local cash circulation.

Complaint-Handling Mechanisms

Telecommunications companies should establish simple mechanisms through which consumers can report cases involving withheld change or unfair transaction practices. Such mechanisms could help companies identify problematic agents and protect customer trust.

Implications for Policymakers

The findings also have implications for policymakers. Currency shortages can affect consumer welfare even in sectors that appear primarily digital. Policymakers should therefore consider the effects of cash circulation problems on low-income consumers and small businesses.

Conclusions

This study examined the impact of coin shortages on the satisfaction of subsistence consumers in the mobile telecommunications industry in Cameroon, with particular reference to consumers in Douala. Using a qualitative exploratory approach, the study obtained insights from face-to-face semi-structured interviews with 31 consumers. The findings indicate that coin shortages, although seemingly a minor operational and monetary issue, can have significant consequences for consumers whose purchasing decisions are shaped by tight resource constraints.

The study demonstrates that the shortage of coins affects consumer satisfaction through several interconnected mechanisms. First, consumers experience difficulties in obtaining the exact balance after transactions. Second, the absence of small-denomination change can result in involuntary additional expenditure when consumers are encouraged to accept alternative products or services. Third, coin shortages create delays and inconvenience, increasing the time and effort required to complete relatively simple telecommunications transactions.

Importantly, the findings indicate that the consequences extend beyond the immediate financial value of the missing change. Consumers may interpret repeated difficulties in obtaining their balances as evidence of unfair treatment. Such perceptions can weaken trust in telecommunications agents and, potentially, influence consumers' willingness to continue using particular service outlets. The study therefore establishes that consumer satisfaction in subsistence marketplaces is influenced not only by core service characteristics such as price, network quality and availability, but also by the fairness and convenience of the transaction process.

The study further concludes that the significance of coin shortages is amplified by the resource constraints experienced by subsistence consumers. For consumers with limited disposable income, small monetary amounts can have disproportionate psychological and economic significance, particularly when similar losses occur repeatedly. Consequently, what may appear insignificant from the perspective of a telecommunications company or agent can constitute a meaningful source of dissatisfaction for the consumer.

From a broader theoretical perspective, the research contributes to the understanding of subsistence marketplace consumption by demonstrating how market infrastructure and everyday transactional constraints can influence consumer satisfaction. It highlights the importance of incorporating transaction costs, perceived fairness and resource constraints into explanations of consumer behaviour in low-income and resource-constrained markets.

From a managerial perspective, telecommunications companies should pay greater attention to the cash-handling practices of their distribution networks. Measures such as improved agent training, transparent procedures for handling small balances, effective complaint mechanisms and appropriate digital payment alternatives could reduce the negative effects of coin shortages. Such interventions may improve both consumer satisfaction and trust.

Overall, the study concludes that coin shortages represent more than a currency-management problem; they constitute a consumer-experience problem. Addressing this seemingly small market constraint can contribute to fairer transactions, greater consumer trust and improved satisfaction among subsistence consumers of mobile telecommunications products and services in Cameroon.

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