

Implications for Chinese SMEs from Senegalese Users' Adoption of E-commerce

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Abstract

This paper investigates the factors influencing the adoption of e-commerce among young Senegalese consumers and explores the implications for Chinese SMEs aiming to expand into emerging markets. With Senegal's youthful demographic and increasing internet access, e-commerce presents a growing opportunity, particularly for Chinese SMEs. However, the paper identifies several challenges, including security concerns, income levels, product authenticity issues, limited digital accessibility, and logistics constraints that hinder broader adoption. The study highlights the significance of understanding local market conditions. It offers valuable insights for Chinese small and medium-sized enterprises (SMEs) seeking to penetrate the Senegalese market through cross-border e-commerce. By addressing the unique barriers faced by Senegalese consumers, particularly in rural areas, SMEs can better tailor their strategies, ensuring successful market entry and sustainable growth in West Africa's emerging e-commerce landscape.

Keywords: Cross-border e-commerce; Chinese SMEs; Senegal; Africa

1. Introduction

E-commerce is booming all over the world, especially in emerging markets. West Africa is even considered as a growing hub for cross-border E-commerce. One of the most important reasons is its youthful demographic. According to the report released by the United Nations Population Fund (UNFPA) in 2024, West Africa's population exceeds 400 million, with 60% aged below 25. While many other countries in the world are facing the challenges and troubles caused by an aging population, West African countries don't need to worry about this problem at all. Taking Senegal as an example, Senegal has a population of 18.9 million, with 38% aged 0-14, and 33% aged 10-24, only 4% aged over 65, according to UNFPA (2025). Young groups have a high acceptance of new technologies, new life styles and consumption patterns. They are eager to use smart phones, very interested in E-commerce, and willing to adopt new brands. Products like phones and fashion products from China are quite popular among the young consumers.

China and Senegal maintain a comprehensive strategic cooperative partnership, which provides a solid political foundation for bilateral trade and investment exchanges. According to Ministry of Foreign Affairs, People's Republic of China, in 2024, the bilateral trade value between China and Senegal amounted to \$5.82 billion, with a year-on-year increase of 4.5%. Specifically, China's imports were \$1.09 billion and exports reached \$4.73 billion, with the focus on tea, mechanical and electrical products, and building materials. The partnership and the data demonstrate a promising prospect of cooperation between China and Senegal. However, it is also evident that China's major export categories are relatively limited.

Many Chinese companies are confronting intense competition at home. Some small enterprises in certain regions, including many manufacturing SMEs in Liaoning province, are even under survival pressure. It will be quite helpful if these SMEs can sell their products to international markets. Expanding into oversea markets doesn't necessarily mean a huge amount of investment and establishing subsidiaries abroad. For

SMEs, engaging in cross-border e-commerce to enable overseas consumers to purchase their products directly is a great alternative.

In order to help Chinese SMEs to understand how to engage in E-commerce effectively in emerging markets, this paper takes young Senegalese users as research samples to explore factors influencing their E-commerce adoption behavior.

2. Current Situation of E-Commerce Adoption in Senegal

This paper conducted a survey to investigate Senegalese consumers usage of e-commerce platforms. A total of 239 valid questionnaires were collected and the demographic details are shown in Table 1, and usage behavior details are shown in Table 2.

2.1. Demographic Characteristics

The average age of Senegal population is 19, which indicates the possibility of attracting the young group to new things relatively easily. The data collected by this paper also shows that young groups are the major users of e-commerce platforms. Specifically, according to the data, only 12.6% of the respondents are aged at 50 and over, and all the other respondents are under the age of 50.

Table 1. Demographic Characteristics

Variables	Categories	Frequency	Percentage
Gender	Male	118	49.4%
	Female	121	50.6%
Age	18-	1	0.4%
	18-29	149	62.3%
	30-49	59	24.7%
	50+	30	12.6%
Marital Status	Married	99	41.4%
	Single	140	58.6%
Professional Status	Student	115	48.1%
	Salaried Employee	101	42.3%
	unemployed	13	5.4%
	others	10	4.2%
Monthly Income	0 - 50 000 XOF (F. CFA)	29	12.1%
	50 000 - 150 000 XOF (F. CFA)	50	20.9%
	150 000 - 250 000 XOF (F. CFA)	39	16.3%
	250 000 XOF (F. CFA) +	121	50.6%

As for marital status, there are more single respondents than married ones, with 58.60% being single compared to 41.40% married. Moreover, professional statuses are divided into four groups:

students, employees, the unemployed and the others including pensions and entrepreneurs. Students accounts for 48.1% of the sample, followed by employees at 42.3%, while the unemployed constitute 5.4% and the remaining 4.2% falls into the “others” category.

As for monthly income, 12.1% of the respondents earn less than 50,000 XOF (West African CFA franc), corresponding to 85 US dollars; 20.9% earn between 50,000 XOF to 150,000 XOF (equivalent to 155 US dollars); 16.3% earn between 150 000 XOF to 250 000 XOF (equivalent to 425 US dollars); and over 50% of the respondents earn more than 250 000 XOF.

2.2. Usage Behavior

Table 2 shows the usage behavior in Senegal in terms of consumers online purchase experience, frequency, and payment methods. As shown in the table, 88.7% of the respondents have made an online purchase previously. More than half of them purchased online at least once a month. Specifically, 3.3% of the users shop online more than once a week, 7.9% of them do so every two weeks, and 46.4% make online purchases once a month. In terms of payment method, although half of the respondents (50.2%) use mobile payment services, 23.8% of them still rely on cash.

Table 2. Usage behavior in Senegal

Variables	Categories	Frequency	Percentage
Purchased online	Yes	212	88.7%
	No	27	11.3%
Frequency of use	Once a week	8	3.3%
	Once every two weeks	19	7.9%
	Once a month	111	46.4%
	Once a year	52	21.8%
	Less than once a year	41	17.2%
	Not sure	8	3.3%
	Total	239	100%
Payment method	A mobile payment service	120	50.2%
	A PayPal account	55	23.0%
	Cash	57	23.8%
	Others	7	2.9%

3. Factors influencing consumers e-commerce adoption in Senegal

Based on the survey and the interviews with some of the respondents, this paper summarizes nine key factors that influence consumers adoption of E-commerce in Senegal: security, income, authenticity, accessibility, privacy, network stability, perceive ease of use, logistics concerns, and payment services.

3.1. Security

Security is described as the extent to which consumers believe that their payment information is free from unauthorized access, use, modification, or destruction. Although there is a close relationship between security and confidentiality, there are still key distinctions. Leo (2004) delineated this difference: while confidentiality pertains to businesses' conscious decisions regarding the handling of consumer data, security concerns any unintended compromise of consumer data to a third party (e.g., computer hacking and identity theft). Thus, many Senegalese consumers perceive their credit card information as insecure when shared online.

3.2. Income

It is obvious that income is the most important factor affecting consumers behavior. In Senegal, the median monthly disposable income for working-age adults stands at roughly 250,000 West African CFA francs (XOF; World Bank, 2023)—a figure that directly influences consumers' ability to engage with e-commerce. This context is especially noteworthy considering that nearly 40% of Senegal's population survives on less than \$2.15 daily (World Bank, 2023), which restricts their capacity to spend on non-essential online items or acquire the digital tools needed for e-commerce participation.

3.3. Authenticity

Authenticity means the alignment between the quality of goods and services advertised online and their actual delivery to consumers (Akter et al., 2021). It encompasses the accuracy of product descriptions, adherence to stated features (e.g., materials, functionality), and consistency between marketing imagery and received items. In Senegal, authenticity concerns are a major deterrent to e-commerce adoption: ARTP (2024) notes that nearly 60% of Senegalese e-commerce consumers have reported receiving counterfeit or misrepresented products, often from informal sellers using misleading website content to attract customers. This mismatch between advertised and delivered quality erodes consumer trust and slows the diffusion of e-commerce (Kumar et al., 2020).

3.4. Accessibility

Accessibility refers to the extent to which users can readily obtain and utilize the technological resources necessary for e-commerce—including reliable internet connectivity, smartphones, formal payment tools, and digital literacy (ITU, 2023). In Senegal, accessibility is constrained by uneven digital infrastructure: while urban centers like Dakar boast 61% internet penetration (ITU, 2023), only 28% of rural households have reliable access to e-commerce-enabling technologies. Further, bank account penetration remains low (22% of adults; GSMA, 2022), and 35% of Senegalese adults lack the digital literacy skills to navigate e-commerce platforms independently (Senegal Digital Strategy 2025, 2023). These disparities limit widespread e-commerce adoption across the country.

3.5. Privacy and Confidentiality

Privacy and confidentiality reflect consumers' expectations that their personal information (e.g., contact details, browsing history, transaction data) will not be misused, shared with third parties without consent, or exploited for unsolicited communications (Smith et al., 2020). In Senegal, many people are afraid to disclose their personal information because they believe that this information will be used for other purposes; their browsing and transaction patterns can be captured online and the potential for misuse of this information can increase the level of confidentiality to an unacceptable level (Layne & Lee, 2001). According to a 2022 report, 73% of internet users express concerns about online privacy, fearing that personal data collected during e-commerce transactions could be used for fraudulent activities or targeted advertising

(GSMA, 2022). As Layne and Lee (2001) argue, such concerns erode trust in digital transactions—particularly in markets with weak data protection enforcement. While Senegal's 2021 Data Protection Act aims to regulate data handling, inconsistent enforcement persists (ARTP, 2024), exacerbating consumer anxiety.

3.6. Network Reliability

Network reliability refers to the stability, speed, and consistency of internet connectivity and digital infrastructure required for seamless e-commerce transactions (ARTP, 2024). It includes factors such as web server performance, data transfer speeds, and resistance to outages or signal disruptions. While Senegal's digital infrastructure has improved in recent years, network quality remains uneven across regions: Orange, Tigo, and Expresso—Senegal's three major internet service providers—cover 90% of urban areas but struggle with signal disruptions in rural regions, where 42% of users report failed online transactions due to connectivity issues (ITU, 2023). Outdated web servers and poorly optimized e-commerce platforms further compound these challenges, leading to frustrated user experiences and reduced adoption intent (Zhu et al., 2021).

3.7. Perceived Ease of Use of E-commerce Platforms

Perceived ease of use (PEOU) is a variable studied by lots of researches in the past several decades, however, it is still reflected as one of the most important reasons affecting Senegalese consumers purchasing behavior. PEOU is defined as the extent to which a person believes that the use of a particular system would be effortless. It shows if the users have difficulties in using the technology, i.e., e-commerce platforms in Senegal. Therefore, it is necessary that the e-commerce platforms should be well designed and adapted on the basis of consumer characteristics such as internet experience, age, education, etc.

3.8. Logistics Concerns

Some of the respondents reflected that they are willing to purchase online, however, the intention may be hindered by the disappointing logistics in Senegal, especially for users from rural areas. Logistics services are acceptable in capital city Dakar. However, they are frustrating in most other areas. Senegal's logistics sector is facing many challenges including deficient road and rail networks alongside limited delivery services outside Dakar, high import costs, and a fragmented market dominated by private operators. Other issues like poor addressing systems, a lack of qualified personnel also hamper home delivery efficiency and increase operational costs. In addition, stockouts stemming from e-commerce sellers insufficient inventory investment may also lead to logistics inefficiency. Additionally, regional delivery remains impractical due to low demand, impacting timelines and costs. Although mobility improvement projects are launched, the factors mentioned above still constrain delivery reliability, profitability, and access to non-urban areas.

3.9. Payment Services

While mobile payment is highly accepted in many countries in the world, lots of Senegalese consumers still rely on cash. Cash on delivery (COD) remains Senegal's primary e-commerce payment method. This is mainly rooted in the cultural norms of favoring physical currency, and also the low banking penetration. Many Senegalese lack basic trust in banks, because they believe banks charge them high service cost. And they prefer keeping money at home or use community-based savings schemes. Although e-money services like Orange Money, Tigo Cash are available, and the government is working hard to expand digital payments, consumers remain cautious. A key barrier that cannot be ignored is consumers distrust in online product quality, which in turn drives demand for COD. Therefore, consumers trust and payment habit hinder the shift

to adoption of digital payments which are critical for e-commerce growth.

4. Implications for Chinese SMEs

For Chinese SMEs—particularly those in Liaoning province, which once relied heavily on policy support—to successfully tap into the African market, several strategic considerations must be addressed.

4.1. Leveraging Digital Platforms

The growth of cross-border e-commerce has been significantly fueled by digital platforms such as Alibaba, Jumia, and Kilimall. These platforms serve as critical entry points for Chinese SMEs, allowing them to access a wide range of African consumers without the need for extensive physical infrastructure. Platforms like Jumia are particularly relevant, as they already have established networks in key African markets and can provide localized services, including logistics and customer support in local languages.

Chinese SMEs must learn to navigate these platforms effectively, optimizing product listings with local languages, currencies, and payment methods. While Chinese e-commerce giants like Alibaba have made inroads into Africa, smaller SMEs must utilize these platforms to establish a presence, build brand recognition, and gradually expand their market share.

4.2. Logistics and Supply Chain Considerations

One of the biggest hurdles for Chinese SMEs entering Africa is logistics. The infrastructure in many African countries, although improving, still faces significant challenges, particularly in terms of road networks, customs procedures, and last-mile delivery. Shipping times can be long, and reliability is often a concern for both consumers and businesses.

To address these issues, Chinese SMEs should explore partnerships with local logistics companies or e-commerce platforms that already have established supply chain networks. By leveraging these local resources, Chinese businesses can ensure faster delivery times, reduce costs, and build customer trust. Additionally, engaging in strategic partnerships with African-based warehouses or fulfillment centers can help mitigate some of the complexities of cross-border shipping and make the process more efficient.

4.3. Financial and Payment Challenges

The financial landscape in Africa presents another significant challenge for Chinese SMEs. Although mobile payment solutions have revolutionized payments in some regions, not all African countries have equally advanced payment infrastructures. Traditional banking systems can be cumbersome, with limited access to credit or foreign exchange services for SMEs.

To overcome this, Chinese SMEs can partner with local payment processors that have an understanding of local currencies and payment systems. For instance, by working with platforms that accept mobile money, SMEs can cater to a larger customer base in markets like Kenya, Nigeria, and Ghana, where mobile payments are widespread. Additionally, offering payment options like PayPal, Alipay can help overcome barriers to international transactions, making cross-border commerce smoother.

4.4. Cultural Sensitivity and Local Adaptation

Cultural differences between China and Africa can impact both product appeal and customer relationships. Chinese SMEs must invest in understanding the nuances of African consumer behavior. Product offerings need to be adapted to local tastes, needs, and cultural values. For instance, fashion and beauty products that are popular in China may not immediately resonate with African consumers unless they

are tailored to local skin tones or clothing styles.

Moreover, marketing strategies must be culturally sensitive. Localizing content, utilizing regional dialects, and understanding social trends will help Chinese SMEs to create more relatable and appealing campaigns. Collaborating with African influencers and local advertising agencies can also ensure that marketing efforts are impactful and well-received by the target audience.

4.5. Regulatory and Legal Challenges

Entering the African market is not without its regulatory hurdles. Each country has its own customs regulations, taxation policies, and import duties that can complicate cross-border transactions. Chinese SMEs must be aware of these regulations to avoid costly delays, fines, or disputes.

To navigate this complexity, SMEs can engage local legal consultants and customs brokers who can provide insights into the local regulatory landscape. Building relationships with local government bodies or chambers of commerce can also facilitate smoother market entry. Furthermore, Chinese SMEs should ensure compliance with international trade agreements and adhere to the African Union's efforts to create a more unified trading bloc across the continent, such as the African Continental Free Trade Area (AfCFTA).

4.6. Building Trust and Customer Loyalty

Establishing trust with African consumers is vital for Chinese SMEs. While Chinese products are often seen as affordable and high-quality, they may still face skepticism in some African markets due to past perceptions or negative experiences with counterfeit goods.

To build trust, SMEs must prioritize product quality, ensure transparent pricing, and provide excellent customer service. Offering warranties, clear return policies, and efficient customer support in local languages will help create a positive reputation. Long-term success in the African market will depend on how well Chinese SMEs manage customer satisfaction and build brand loyalty over time.

5. Conclusion

Cross-border e-commerce presents a wealth of opportunities for Chinese SMEs seeking to expand into Africa. By carefully navigating local market dynamics, adopting effective logistics and payment solutions, and ensuring product and service localization, Chinese SMEs can carve out a strong presence in this growing market. While challenges such as infrastructure, regulation, and consumer trust remain, the potential rewards for SMEs willing to make the necessary investments are significant. As the African e-commerce market continues to evolve, Chinese SMEs that act strategically and stay adaptable will be well-positioned for success in the coming years.

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