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Digital Empowerment and Industrial Upgrading in The Service Sector: Insights from The Smart Transformation of Guangdong's Life-Oriented Services

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Abstract

As digital technologies rapidly advance, the service sector is evolving towards greater intelligence, personalization, and efficiency. Guangdong, one of China's most dynamic and technologically provides key transforming life-oriented services. This research examines the underlying concepts, policy landscape, challenges, and strategic responses related shift. highlights significant obstacles such as uneven technological capabilities, a lack professionals, limited public trust in digital platforms, and inadequate policy coordination. The study recommends a four-pronged strategy focused public involvement, development, enhancement, innovation to facilitate the digital upgrading of service industries. The findings foster high-quality development and serve as a reference for other regions undergoing similar changes.

Keywords

Smart Transformation; Life-Oriented Services; Digital Empowerment; Guangdong, Industrial Upgrading.

1. Introduction

The digital economy has emerged as a pivotal force instigating global economic restructuring, significantly altering various Notably, the service sector has undergone as a result of the incorporation of digital technologies, including artificial intelligence, big data analytics, and the Internet of Things (IoT). In this context, the intelligent transformation of services that cater needs-such as catering, domestic services, tourism, healthcare, and education-has become especially

Guangdong emerges as a prominent regional leader in this transformation. As the economy in China, is characterized by robust dynamic activities, and supportive policy frameworks. The province's advancements only mirror of modernization but also provide valuable that can be replicated the enhancement of the across the nation. This examines Guangdong as a representative elucidate the mechanisms, constraints, and potential pathways associated with the intelligent transformation of the service sector.

2. Theoretical Background and Literature Review

The transformation of life-oriented services can be analyzed various perspectives. The Theory of Planned Behavior posits that an individual's intention to act affected their attitudes, subjective norms, and perceived behavioral control. This framework elucidates the reasons behind users' reluctance to embrace services, the advantages they offer.

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Concurrently, Innovation Diffusion Theory delineates the progression of within across distinct stages: knowledge, persuasion, decision, implementation, and confirmation. This framework valuable for illustrating the shift initial the routine utilization of digital platforms within the service sector.

Recent research suggests that digital transformation encompasses not merely the adoption of technologies but also the reconfiguration of service delivery models, value chains, and regulatory frameworks. Furthermore, scholars have emphasized the significance of user trust, digital literacy, and institutional readiness in facilitating the efficacy of such transformation. Nevertheless, the body of literature concerning life-oriented services, particularly within developing economies, remains insufficient-thereby creating opportunities for empirical studies, such as the present one.

3. Research Context and Methodology

Guangdong presents a noteworthy context for empirical examination. In 2024, the output of its service industry attained 8.14 trillion RMB, largely due to substantial contributions from sectors such as cultural tourism, catering, healthcare, and education. Furthermore, the province has consistently outperformed nationwide indices in the realm of the digital economy, signifying a robust level of technological readiness.

The study employs a mixed-methods approach that combines a literature review, policy analysis, and field research. A structured survey was disseminated to residents in 14 cities, encompassing both urban and rural populations. The survey examined users' exposure to digital services, their acceptance, perceived risks, and expectations. While this research does not emphasize statistical details, the findings from the survey contributed to the identification of significant challenges and strategic priorities. To understand public familiarity with digital transformation in life-oriented services, a structured questionnaire was administered across multiple cities and counties in Guangdong Province. The results show varied levels of awareness among respondents, as illustrated in **Figure 1**.

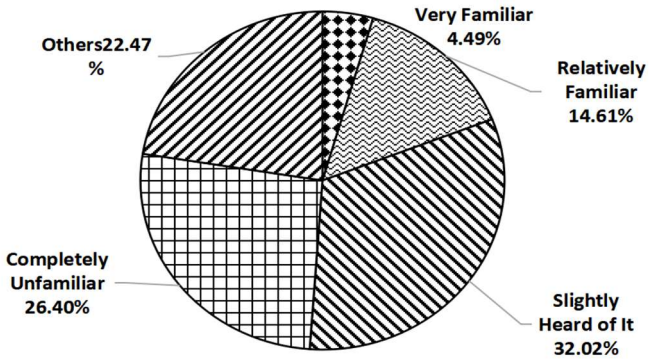


Figure 1. Residents' Awareness of Smart Service Transformation

4. Challenges in Smart Transformation

Notwithstanding substantial advancements, the intelligent transformation of life-oriented services in Guangdong is confronted with persistent structural and behavioral obstacles that hinder scalability, quality, and sustainability. This section will provide a more detailed exploration of these challenges.

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4.1. Uneven Technological Capabilities across Enterprises

A significant digital divide is evident between large-scale enterprises and small and medium-sized businesses (SMEs). Prominent firms have successfully incorporated advanced technologies, including artificial intelligence, smart terminals, and cloud-based service platforms. Conversely, numerous SMEs-particularly those located in rural regions or functioning within low-margin industries-face challenges arising from constrained resources, insufficient technical support, and substandard digital infrastructure.In addition to organizational size, regional disparities also shape digital exposure levels, as shown in **Figure 2**.

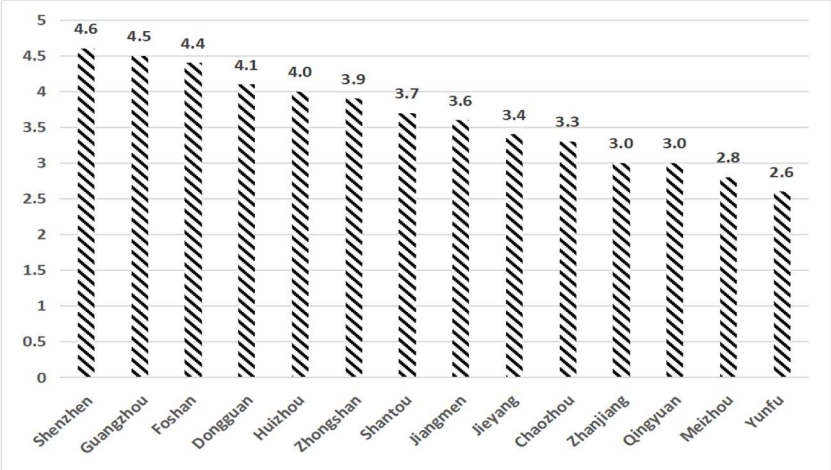


Figure 2. Regional Disparities in Types of Digital Service Exposure in Guangdong

Such an imbalance results in a fragmented quality of service and diminishes the overall efficiency of the digital ecosystem. Furthermore, the absence of interoperability among platforms intensifies operational challenges for smaller entities attempting to undergo digitization.

4.2. Shortage of Hybrid Talent

A significant limitation on transformation is the shortage of professionals who possess hybrid skills, enabling them to integrate expertise in service domains with digital proficiency. The majority of university programs continue to focus on conventional curricula, providing insufficient exposure to digital tools, including customer analytics and platform operations.

The circumstances faced by frontline service workers are considerably more critical. A significant number of these individuals lack fundamental digital literacy and receive little in the way of upskilling assistance. Consequently, this leads to a pervasive resistance to change, insufficient adaptation to smart tools, and a disparity between expected service levels and the actual capabilities available.

4.3. Erosion of Public Trust and Limited Participation

Despite advancements in technology, there persists a high level of public skepticism concerning data privacy, algorithmic fairness, and the accountability of platforms. Such apprehensions are particularly acute in sectors such as healthcare and finance, where sensitive information is at stake.

Furthermore, older adults, individuals from low-income backgrounds, and residents in remote areas frequently encounter usability challenges owing to intricate interfaces or limited digital literacy. In the absence of targeted support, these populations may face exclusion from the advantages offered by smart services.

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4.4. Policy Misalignment and Institutional Gaps

Existing policy frameworks, although ostensibly supportive, are characterized by fragmentation and a lack of alignment in their implementation. The responsibility for the development of smart services is frequently distributed among various agencies-including commerce, technology, and civil affairs-leading to overlapping mandates and inadequate coordination.

Additionally, legal frameworks are not keeping pace with technological advancements. Matters pertaining to platform regulation, data usage rights, and consumer protection demand more precise legal definitions and enhanced enforcement mechanisms to foster a reliable service environment.

5. Strategic Recommendations

Building upon the preceding analysis, this section delineates four strategic directions aimed at addressing the fundamental challenges associated with the smart transformation of life-oriented services in Guangdong. These recommendations are dedicated to enhancing inclusivity, scalability, and sustainability within the digital service landscape.

5.1. Boost Public Awareness and Promote Digital Inclusion

Public trust and engagement are essential components of intelligent transformation. In order to bridge the digital divide, it is imperative that local governments and enterprises prioritize campaigns focused on digital literacy, with particular emphasis on reaching rural residents and elderly populations. Community workshops, user-friendly applications, and concise video tutorials may function as effective means of outreach.

The involvement of citizens in the co-design of services-through mechanisms such as surveys or digital forums-has the potential to significantly enhance the relevance and accessibility of smart services. By engaging users as active collaborators rather than mere passive recipients, public trust is fortified, and rates of adoption are improved.

5.2. Accelerate the Cultivation of Digital-Savvy Talent

A digitally proficient workforce is essential for facilitating the transition. It is imperative that universities advocate for interdisciplinary programs that integrate service expertise with digital tools. Concurrently, corporations ought to endorse practical training opportunities through internships and certification programs. For the current workforce, especially those in frontline service positions, reskilling initiatives should be designed to be inclusive and adaptable. Online training platforms, microlearning applications, and government-supported initiatives can serve to address existing skill shortages. Additionally, incentives provided by employers can further promote ongoing learning and development.

5.3. Accelerate the Cultivation of Digital-Savvy Talent

Robust infrastructure serves as the foundation for digital services. It is imperative to extend broadband, 5G networks, and municipal data centers into lower-tier cities and rural regions to guarantee equitable access to services. The costs and risks associated with such development can be mitigated through public-private partnerships.

Moreover, fostering interoperability among platforms is essential for enhancing the efficiency of the ecosystem. Governments ought to advocate for open standards and data-sharing protocols in order to minimize fragmentation, encourage the participation of small and medium-sized enterprises (SMEs), and improve the overall coherence of services.

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5.4. Improve Policy Coherence and Regulatory Safeguards

Digital transformation necessitates a responsive and cohesively aligned institutional environment. The establishment of a centralized coordination body at the provincial level is advantageous as it can facilitate the harmonization of policies, decrease interdepartmental conflict, and guarantee the efficient implementation of initiatives.

Moreover, it is imperative that legal protections regarding data usage, algorithm accountability, with consumer rights are revised. The establishment of explicit guidelines and enforcement mechanisms is essential for enhancing transparency, safeguarding users, and fostering the institutional trust that is vital for sustainable innovation.

6. Conclusion

The intelligent transformation of life-oriented services in Guangdong exemplifies a wider trend towards digital empowerment and industrial enhancement. By examining its pathways and challenges, this research adds to the expanding body of knowledge regarding the modernization of the service sector. However, it is essential to recognize that transformation is an ongoing endeavor that necessitates continuous adaptation.

Future research endeavors might involve comparing Guangdong's model with other global digital hubs, for instance Singapore or South Korea, investigating trust mechanisms in artificial intelligence within public services, or evaluating the long-term effects on employment patterns. As China accelerates its digital strategy, insights derived from Guangdong will continue to serve as a crucial reference for regions striving for high-quality and inclusive digital development.

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References

[1] Zhou, W., Simire Maimaiti'aili, & Mubarak Shawkelati. (2024). Connotation, Mechanism, and Path: Digital Empowerment for the High-Quality Development of Public Cultural Services. Library Journal, (01), 8–15.

[2] Liu, J., Liu, M., & Pan, Z. (2023). Does Service Outsourcing Facilitate the Internationalization of China's Manufacturing Firms?-A Quasi-Natural Experiment from the Perspective of Industry Integration. Journal of International Trade Issues, (12), 132–150.

[3] Zhao, A., & Tian, F. (2021). How Can the Post-Pandemic Tax Structure Promote the Development of Life-Oriented Services? Taxation and Economy Research, (01), 41–50.

[4] Fang, F. (2020). The "Crisis" of the Pandemic Highlights the "Opportunity" of the Digital Economy. People's Forum, (S1), 11–13.

[5] Chen, W., & Qi, P. (2025). Logic, Drivers and Pathways for the Development of Service Consumption: Summary of the 27th National Forum on Theory and Practice of Consumption Economics. Consumption Economy, 1–4. Retrieved February 24, 2025, from http://kns.cnki.net/kcms/detail/43.1022.F.20250217.1148.004.html.