Digital Transformation and Socio-Cultural Influences on Consumer Decision Making in China

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Abstract. China's consumer market presents a paradoxical picture of technological efficiency and cultural traditions coexisting side by side. Although the consumer behaviour of young groups is highly dependent on digital tools such as algorithmic recommendations and mobile payments, it is still deeply driven by cultural rules such as human relations and face culture (MianZi). This study builds an integrative framework to show how technological tools in the digital transformation and China-specific socio-cultural rules synergistically reshape the decision-making of modern Chinese consumers, in response to the shortcomings of existing theories that ignore the interaction between technology and culture. This study critically integrates classical theories such as the Technology Acceptance Model (TAM) and the Differential Mode of Association, and it uses the research methodology that combines literature analysis and case study analysis. Based on the above elements of the study, it is found that technological innovations optimise decision-making processes through transformation of information access and reinvention of payment behaviour. Meanwhile, deep socio-cultural roots, especially reconciliation mechanisms based on the logic of human emotions and conflicting values, have always constituted the deep rules of decision-making and have given rise to new forms in digital scenarios. Typical cases, such as Pinduoduo's social e-commerce model, illustrate the deep combination of algorithmic efficiency and cultural psychology, driving consumer behaviour to elevate to emotional identity and value co-creation. This study not only breaks through the theoretical limitations of unidimensional explanations and provides new examples for understanding the unique efficiency-meaning paradox of consumers in China's emerging markets.

Keywords: Digital-Cultural Dual-Wheel Drive, Consumer Decision Making in China, Technology Acceptance Model, Differential Mode of Association, Social E-commerce.

1. Introduction

Against the strategic backdrop of the 14th Five-Year Plan to accelerate the construction of a digital China, the scale of China's digital economy continues to expand, accounting for 41.5 percent of Gross Domestic Product (GDP) in 2022 [1]. Consumer behaviour in China presents a complex picture of technological rationality alongside traditional values, and there are significant theoretical differences between the established studies. The technological school of thought focuses on the unidirectional impact of digital tools, such as Davis' TAM, which emphasises the dominant role of

Perceived Usefulness (PU) and Perceived Ease-Of-Use (PEOU) on consumer behaviour [2]. The cultural school of thought adheres to the analysis of social norms and utilizes Fei's Differential Mode of Association theory to explain the constraints on RenQing networks and consumer behaviour [3]. However, such a compartmentalised perspective makes it difficult to explain the contradictory decision-making of contemporary Chinese consumers: Young people rely on the efficiency of algorithmic recommendations but are also caught up in the cultural norms of face-consumption, which reveals a systematic neglect of the 'technology-culture' interaction in existing theories [4].

This study breaks through the limitations of unidimensional explanations and proposes the 'digital-cultural dual-wheel drive' framework, aiming to reveal how technological tools (e.g. mobile payments, social e-commerce) and cultural rules (e.g. RenQing relations, intergenerational values) synergistically reshape decision-making logic. Its theoretical importance is reflected in a triple innovation. Firstly, the study fills the gap in the integration of technological models and socio-cultural theories, providing new solutions for the study of consumption in emerging markets. Secondly, the study corrects the cognitive bias of technological determinism and argues for the enduring dominance of cultural factors in the digital scene. Finally, the study deconstructs the unique paradox of Chinese consumers' pursuit of efficiency and value, providing a fulcrum for the localised adaptation of global consumption theory.

To achieve the above objectives, the study adopts the hybrid research methodology of literature analysis and case study analysis. By critically integrating classical theories such as the TAM and the Differential Mode of Association theory, this study first constructs a two-dimensional analysis framework of efficiency and value and then selects typical consumption scenarios to empirically demonstrate the interaction mechanism between technological convenience and cultural motivation. This research design of 'theoretical construction - empirical deconstruction - practical deduction' not only ensures academic rigour but also provides action references for policymakers and enterprises.

2. Literature review

In the background of the rapidly advancing digital wave, TAM has become a cornerstone of research on digital consumer behaviour because of its explanatory power of technology adoption mechanisms. TAM, proposed by Davis, states that PU and PEOU are the two core variables that influence willingness to use technology, and this model has long been proven to have high predictive power in e-commerce, mobile payment, etc. [2]. A large number of empirical studies support the model in the current situation of mobile payment prevalence in China. Relevant studies have pointed out that PEOU significantly reduces users' cognitive burden by simplifying the payment process, while PU is manifested in transaction efficiency, such as the reduction of payment latency is closely related to increased user satisfaction [5]. More studies of Chinese contexts use extended TAM. For example, studies of online paid knowledge platforms show that the explanatory power of the model is significantly enhanced by including variables such as trust and risk perception in the TAM [6]. This means that while PU and PEOU are core drivers, external variables like trust are essential in the selection of digital tools. In addition, with the acceleration of digitalisation and the transformation of retailing methods, the Omni Channel theory consumption has emerged as a complement to TAM. Omni Channel theory suggests that focusing only on the functionality of technological tools cannot explain the behaviour paths of consumers in a multi-touch environment, and that the seamless experience of integrating online and offline has become a new competitive advantage [7]. In China, omnichannel continues to upgrade. The successful practice of Alibaba's Freshippo and new retail experimental supermarkets shows that the paths of online ordering, 30-minute rapid delivery, and

intelligent terminal applications significantly enhance operational efficiency and consistency of consumer experience, improving customer stickiness and loyalty.

Although technological pathways chart the structure of digital empowerment, the reality of consumption in China cannot ignore its deep socio-cultural roots. First, Fei's Differential Mode of Association theory emphasises the hierarchical and differential nature of interpersonal relationships in China, and it is an important cultural perspective for understanding an individual's position in the network of social relationships and its impact on behaviour [3]. In consumption situations, the Differential Mode of Association is reflected in non-instrumental dynamics in actions such as recommendation by family and friends and relationship maintenance. For example, some of the live broadcasts use acquaintance grouping and friends and family interaction as a unique selling point, which leverages the power mechanism of trust and relational capital in social networks. Second, face (MianZi) consumption is an important complementary dimension in explaining Chinese consumers' iconic behaviour. Rooted in the pursuit of 'face' in Confucian culture, Chinese consumers often use luxury goods and other conspicuous consumption to reveal their social status and seek recognition in social situations. Numerous research has shown that face-consciousness significantly influences consumers' luxury purchase intentions and channel choices [8]. In the digital age, the face drive has extended to the online consumption field. Users maintain and enhance their self-image through posting pictures, commenting and social seeding behaviors [9]. Additionally, the researchers also pointed out that face awareness showed different manifestations across generations, and face awareness interacted with platform type to influence users' decision-making paths and identity structure [10].

In summary, most of the existing studies provide a unilinear explanation from either the technological dimension or the cultural dimension and lack a two-way integration perspective. However, the current state of consumption in China is at the intersection of technological convenience and cultural rules driven by synergy. While technological tools bring convenience and efficiency to consumption, cultural rules give emotional motivation and social value to these behaviors. Therefore, this study integrates the analyses of both digital tools and cultural rules to further reveal the dual influences on Chinese consumers' decision-making.

3. Impacts of digital transformation on consumer decision-making

Based on the 'information-assessment-purchase' chain of the consumer decision-making process, this study finds that the impact of digital transformation focuses on the efficiency revolution of information access and the cognitive restructuring of payment behaviour. These two areas respectively correspond to the PU/PEOU in TAM and the behavioral interventions of Mental Accounting theory, which together constitute a dual-track system for the penetration of digital technology into consumer decision-making.

3.1. Efficiency revolution of information access

On the one hand, the algorithmic recommendation system reconstructs the decision logic through the dual path of the TAM. In the dimension of PU, collaborative filtering algorithms analyse user behaviour traces and establish a dynamic mapping between interest labels and product libraries to reduce the cognitive cost of information screening. In the dimension of PEOU, the smart operation of a one-click purchase interface simplifies consumer action chain and significantly shortens the decision-making steps. Douyin builds interest labels through user behaviour data (e.g., browsing duration, page view, likes, comments) and uses collaborative filtering algorithms to accurately

match product content, greatly reducing the time cost for consumers to search and filter information. For example, during the Douyin e-commerce 618 Shopping Festival in 2023, this platform's Gross Merchandise Volume (GMV) grew by 72.74% year-on-year [11]. A large number of consumers watch recommendable or shareable short videos and then quickly complete the payment through the one-click-purchase function at the bottom of the video. The one-click-purchase button embedded directly in the short video interface reduces the multi-step shopping operation to a single step.

On the other hand, the scoring system of user-generated content relies on the TAM framework to build decision shortcuts. In this field, PU is reflected in the aggregated group experience of ratings to hedge against the risk of information asymmetry, which derives the 'high ratings = low risk' heuristic judgment. PEOU speeds up the option comparison process by designing standardised information structures through explicit interfaces (e.g., labeling and sorting functions). The mechanism is to translate complex quality assessments into quantifiable numerical trust symbols. The Daping application builds an online reputation mapping mechanism with star ratings and a number of reviews at the core of the ratings. This helps consumers identify high-quality merchants at the early stage of decision-making, effectively reducing the risk of store selection [12]. In this mechanism, PU is reflected in the fact that users rely on this platform ratings as a proxy for quality, and that users do not need to test the waters themselves to form a propensity to consume. PEOU is reflected in this application structured presentation of numerous merchant information through a precise tagging system combined with an intelligent sorting function, which allows users to complete screening and comparison in a very short time.

3.2. Cognitive restructuring of payment behaviour

Firstly, mobile payments reconfigure the perception of currency through the Mental Accounting theory. Relevant scholars point out that consumers view e-wallets as virtual entertainment accounts independent of savings, and payment pain is significantly blunted [13]. Cashless transactions abstract amounts and erode price sensitivity, while the PEOU of TAM further dissipates decision resistance-QR code payment takes only 0.3 seconds, helping to simplify the payment path and increase the frequency of consumption [14]. The essence of this mechanism is the cognitive reconfiguration of the consumer's mental accounting by technological convenience, shifting payment behaviour from a value measure to an experience priority. By splitting the consumption amount into installment accounts, Alipay's Ant Credit Pay enables users to perceive that the current expense is only a small amount, which in turn reduces the pain of payment and enhances the impulse to spend. Meanwhile, its interest-free period mechanism further softens the user's filter on price, and even if the total price is higher, the user will be more willing to pay due to the lower current installment amount. In addition, Ant Credit Pay is embedded in the Alipay interface, which is seamlessly connected to the code-sweeping experience, allowing users to complete their purchases with just a tap [15].

Secondly, credit payment tools contribute to decision bias through a dual behavioral economic mechanism. In the time dimension, the 'Buy Now, Pay Later' model delays payment pain, and Generation Z perceives credit lines as disposable income. In the social dimension, installment consumption is constructed as a symbol of an upscale lifestyle, intensifying financial leverage through social climbing. Relevant scholars indicate that JD Baitiao's delayed payment function significantly reduces the immediate burden of payment [16]. Simultaneously, posting pictures on social media reinforces the identity tagging effect, leading to a shift towards instant cash rather than cash-in/cash-out.

4. Socio-cultural implicit rules for consumer decision-making

Although digital transformation has reshaped the technological path of consumer decision-making, the Chinese market is unique in that technological efficiencies have always been nested in deep cultural genes. Differential Mode of Association theory and face consumption theory reveal that RenQing networks and value systems constitute the implicit operating system for decision-making [3, 17]. This cultural rule has given rise to the new form of expression in digital scenarios, which is the dynamic reconciliation of relational binding logic and conflicting values in RenQing society.

4.1. Logic of decision-making in a humane society

Under the flexible networks of the Differential Mode of Association, consumption behaviour becomes a symbolic practice of relationship maintenance and identity announcement, with rule strengths that often transcend economic rationality. The gift economy is one of the more classic of these, with its essence being the favor/RenQing exchange and relationship capitalization. Consumers build three types of relational capital through holiday gift-giving: horizontal reciprocity with friends and family (reinforcement of emotional ties), vertical clinging to higher status (Gifts to the powerful in exchange for resources), and implicit face-saving competition (Gift value as a marker of social status). This mechanism transforms physical commodity value from a usage function to the reproduction of a network of relationships. WeChat red envelopes not only serve as a digital continuation of traditional Chinese gifts, which reinforce the emotional investment between family and friends, but are also used to show respect to elders and express clinging to superiors. Showing the number of red packets on social media becomes a symbolic act of wealth and status, which is used to deepen the face construction.

Another classic influence is conformity. Consumer behaviour triggered by the bandwagon effect is algorithmically magnified in the digital age as social identity activities and face-saving contests. Its core mechanism consists of the following three aspects. The first is social identity drive. Individuals acquire a sense of belonging to the group by imitating the consumption of Key Opinion Leader (KOL) to avoid being left behind. The second is symbolic premium generation. The same product becomes a class pass. The third is algorithmic positive feedback. E-platforms push content based on popularity, creating a reinforcing loop of exposure, imitation, and re-exposure. This mechanism drives consumption decisions from individual choices to group behavioral performances. Relevant studies have found that female users on the Rednote are strongly influenced by KOL's same-type notes. Especially in the 'see now, buy now' mode, the majority of users do not want to be left behind and impulsively follow the trend, and then post their own same-type notes. This kind of consumer behaviour is a conformity performance under social pressure, behind which the algorithm is driven by positive feedback to form a circular mechanism [18].

4.2. Conflict and reconciliation of values

In the value conflict, conflicts caused by intergenerational differences are more significant. In China, intergenerational consumption conflicts mainly occur between the frugal consumption of the older generation, which has been nurtured by their life experiences, and the consumption of pleasuring oneself, which has been spawned by Generation Z's need for self-expression. Reconciling intergenerational consumption conflicts needs to rely on a cultural core of familism. Children fulfill their filial duties by purchasing low-priced goods, and algorithmic technologies provide compatible solutions. The case study shows that young Danes have long been purchasing health care and

household goods for their elderly parents through discounted platforms. This consumer behaviour not only extends the emotional care of parents but also demonstrates a proactive approach to maintaining family relationships [19]. Especially under the influence of digital technology, young consumers are using the personalised and low-priced information provided by platforms as a tool to reconcile traditional values with modern consumer convenience.

Moreover, the rise of China chic is a powerful expression of national identity in a conflict of values. The most important mechanism in the consumption of China chic is the re-assignment of cultural symbols. Traditional elements (e.g., landscape patterns and Chinese characters) are removed from the mere labelling of historical symbols and are reconstructed as symbols of national cultural pride. Simultaneously, digitalisation accelerates the process through rapid content distribution and validation services, creating a way of transforming cultural identity into consumer power. Li Ning is the benchmark case. The WuDao collections incorporates Taoism's 'yin and yang' symbols into its design, and they blend Chinese red and Chinese character patterns with modern tailoring. Li Ning integrates traditional cultural symbols into the design and utilizes the help of e-commerce push and social communication mechanism. It successfully transforms cultural confidence into purchasing power, forming the synergy of cultural identity and commercial innovation [20].

5. A typical case study of digital and cultural synergy

When technological efficiency and cultural genes are combined in-depth, consumer decision-making no longer stays at the level of instrumental rationality but is upgraded to a new paradigm of emotional identity and value co-creation. This synergistic effect is particularly obvious in the contemporary Chinese consumer scene. Pinduoduo's 'social e-commerce' model is a perfect illustration of the synergy between digital tools and cultural psychology in Chinese society. Its success depends not only on its technical design, but also on its compliance with the deep rules of the Chinese RenQing relations network. The group buying and bargain features are the combination of technological algorithms and consumer psychology.

From the perspective of the algorithmic mechanism, Pinduoduo provides low-priced entrances through an embedded group-buying algorithm and intelligent recommendation system. After the user initiates a group buying with the one-click button on the interface, the system automatically pushes it to WeChat friends based on the social relationship chain and generates a sense of urgency using a countdown acceleration algorithm. Algorithmic tools eliminate the need for users to actively search, and they allow users to join activities by simply clicking on the share button, which quickly reaches a wider group through social contagion. From the perspective of consumer psychology, the mechanism of group buying activates the relationship network of debt of gratitude/RenQing such as 'helping to get a bargain price for somebody' and 'helping group buying'. Users participate in Pinduoduo's purchasing activities not only because of the low price but also because of the strong conformity motivation formed by social pressure. They fear lagging if they do not engage in the same consumption activities and take pride in their ability to successfully invite friends, which is the mind of rivalry. Purchasing behaviour is no longer a purely rational choice, but impression management in social scenarios. Furthermore, when group-buying is successfully converted into social currency, many users share screenshots of group-buying in their social media to show their meticulousness in planning or popularity, which further inspires a new positive cycle of imitation and algorithmic recommendation.

Pinduoduo's social contagion is the product of the fusion of technology and culture. The intermediaries of social e-commerce platforms, the acquaintance inviters, are the catalysts of the platform's popularity and consumer conversion, and they use trust relationships to enhance the

contagion effect [21]. Pinduoduo is using the acquaintance-based network to dismantle the traditional information gap and transform interpersonal relationships into consumption paths. In this process, algorithms provide the underlying framework and socio-culture gives behavioral meaning. The design of 'group-buying + barging' not only makes low prices the entry point but also makes consumption the expressive behaviour in interpersonal interaction. This is a new consumption pattern driven by both digital and culture. Hence, the core of the Pinduoduo's 'social e-commerce' model is that technology is only a tool, while cultural empowerment is the deeper factor in decision-making. Digital algorithms push low-priced goods into deep relational networks to catalyse conformity behaviour. Meanwhile, the debt of gratitude and face awareness in traditional Chinese society provide emotional and symbolic motivation for consumer decision-making. Ultimately, consumer choice is no longer an individual rational decision, but the result of a combination of cultural identity and social performances.

6. Conclusion

By deconstructing the interaction mechanism between digital transformation and social culture, this study reveals the dual-driven logic of Chinese consumers' decision-making -Technological tools significantly improve decision-making efficiency, but cultural rules always dominate deeper motivations. This finding challenges the general perception of technological determinism and supports the assertion of the persistence of cultural genes. Even in high-penetration digital consumption, RenQing relationships and value identities remain the underlying coordinate system for behavioral choices.

From a theoretical perspective, this study breaks away from the unidimensional perspective of existing studies and constructs a framework of 'digital-cultural dual-wheel drive'. This framework clarifies how technological convenience optimises the decision-making chain and reveals how culture penetrates the surface of technology to dominate the nature of behaviour. The multidimensional perspective framework offers new solutions for understanding the efficiency-value paradox of consumer behaviour in emerging markets. From a practical perspective, companies should develop technology-culture composite strategies, such as combining algorithmic efficiency with traditional symbolic value. Governments need to balance innovation incentives with risk management, strengthen credit regulation and support the digital inheritance of culture. However, this study still has limitations in sample coverage and it could be deepened in two main directions in the future. The first is to track the evolutionary impact of long-term digitisation on cultural values. The second is to conduct cross-cultural comparative research, promoting localised adaptation of global consumption theories. For example, it explores differences in the regulation of technology acceptance between collectivism and individualism.

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