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Business Value Creation Through Super Apps: Evidence from A Retail Enterprise in Shaanxi Province, China

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ABSTRACT: This study examined the role of super apps in business value creation, particularly customer value creation, among selected retail enterprises in Shaanxi Province, China. Specifically, it assessed the extent of super app implementation in terms of integrated service breadth, embedded commerce and transaction enablement, customer engagement and relationship management, ecosystem and partner integration, data and analytics enablement, and governance, privacy, and security management practices. It also examined customer value creation in terms of convenience and transaction efficiency, service integration and seamless experience, personalization and relevance, trust and perceived security, and engagement quality and responsiveness. A quantitative comparative correlational research design was employed involving 350 purposively selected employees who were directly involved in or knowledgeable about super app use in retail operations. Data were gathered through a researcher-made questionnaire and analyzed using frequency and percentage, weighted mean, standard deviation, one-way analysis of variance, and Pearson product-moment correlation. The findings showed that super app implementation was generally favorable, with an overall mean of 3.005 and standard deviation of 0.614. Governance, privacy, and security management practices obtained the highest mean of 3.032, while ecosystem and partner integration registered the lowest mean of 2.961. Customer value creation was likewise positively assessed, with an overall mean of 2.976 and standard deviation of 0.624. Engagement quality and responsiveness recorded the highest mean of 3.032, whereas convenience and transaction efficiency obtained the lowest mean of 2.928. No significant differences were found in the overall assessments of super app implementation or customer value creation when respondents were grouped according to highest educational attainment, job position, length of work experience, and type of retail enterprise, as all significance values exceeded the 0.05 level. Correlation analysis further revealed that all six dimensions of super app implementation were significantly and positively associated with overall customer value creation, with coefficients ranging from $r = .507$ to $r = .599$, all at $Sig. < .001$. Overall super app implementation was also significantly related to all five customer value dimensions, with coefficients ranging from $r = .526$ to $r = .593$, all at $Sig. < .001$. These findings indicate that more systematic implementation of super apps is associated with stronger customer value outcomes. Based on the results, the study proposed the Super App-Enabled Value Creation and Innovation Enhancement Plan to strengthen service integration, transaction efficiency, ecosystem partnerships, customer engagement, analytics utilization, and platform governance among retail enterprises in Shaanxi Province.

KEYWORDS: super apps, customer value creation, retail enterprises, digital platforms, service integration, customer engagement, Shaanxi Province, China

1. INTRODUCTION

Across the global digital economy, firms are increasingly pressured to create measurable value from platform-based infrastructures that combine payment, communication, commerce, and service delivery in a single interface. In Asia, “super apps” have become a practical response to platform consolidation by bundling many everyday transactions inside one application, often supported by an ecosystem of third-party services (Hasselwander, 2024; van der Vlist et al., 2024). China’s case is particularly instructive because super apps have not only expanded through feature aggregation but have also been shaped by conglomerate strategies, finance, and infrastructural control over distribution and embedded services (Jia et al., 2022). At the same time, the global diffusion of the super app model signals that value creation is no longer only about standalone products; it increasingly depends on how firms position themselves within multi-sided platform environments and manage interactions at scale (Rangaswamy et al., 2020).

The main global problem, however, is that value creation in data-intensive platform environments remains difficult to operationalize and uneven in outcomes. Many organizations invest heavily in analytics and artificial intelligence initiatives but struggle to convert these efforts into tangible performance improvements, market gains, or sustained innovation outputs (Elia et al., 2022; Shollo et al., 2022). In practice, the mechanisms that should convert data into value—such as transparency, data access, and

proactive adaptation—often exist in partial form or are poorly coordinated across units and partners (Elia et al., 2022). This challenge is amplified in platform settings because value depends on cross-organizational complementarities: what a firm can achieve is shaped not only by its internal capabilities, but also by how effectively it integrates with platform infrastructures and partners (Hsu, 2013; Zhu et al., 2020). Consequently, the promise of super apps as engines of business value creation appears plausible, but it still demands careful empirical examination at the enterprise level.

Super apps may be defined as multi-purpose platform applications that concentrate multiple services—such as messaging, payments, retail, mobility, and deliveries—inside a single interface and expand through ecosystem strategies and developer integration (Hasselwander, 2024; van der Vlist et al., 2024). In China, super app power is also linked to corporate and infrastructural mechanisms through which a dominant platform can embed services, shape distribution, and deepen lock-in across everyday activities (Jia et al., 2022). A related operational feature in the Chinese context is the "mini-program" model, where lightweight services run inside the super app's infrastructure, making the platform itself a substitute for downloading many standalone applications (Cheng et al., 2020).

Customer value creation is commonly treated as the set of benefits experienced by users through interactions that reduce transaction frictions, improve convenience, and strengthen the perceived usefulness of a service offering. Demand-side strategy scholarship places consumer value creation at the center of business model viability, arguing that value capture is ultimately conditional on a credible, experience-based value proposition for users (Priem et al., 2017). In digital business platforms, customer value is also tied to the volume and quality of interactions and the platform's ability to reduce transaction costs across different user groups (Rangaswamy et al., 2020). From a co-creation perspective, customer value may be understood as emerging through interactional processes—meaning value is produced in and through user–platform–partner interactions rather than being delivered unilaterally by the firm (Ramaswamy & Ozcan, 2018). In super app environments, this definition becomes especially relevant because customers often "assemble" value by combining embedded services (for example, payment plus delivery plus loyalty functions) within a single platform journey (van der Vlist et al., 2024).

Business value creation is typically conceptualized as improvements in firm outcomes that can include operational performance, process efficiency, customer experience and market enhancement, and product or service innovation (Elia et al., 2022). Importantly, evidence from information systems research suggests that value frequently depends on complementarities among technologies and processes rather than on isolated technology adoption. For instance, resource complementarity studies indicate that integrating internal enterprise systems with external digital business technologies can yield stronger value effects than either capability alone, particularly when integration capabilities are built intentionally (Hsu, 2013). Similarly, research on e-business process components suggests that technical, relational, and business components must be orchestrated together to produce competitive performance, implying that "value creation" is often a managed transformation rather than a direct technology effect (Zhu et al., 2020).

Innovation capability, in the context of super app-enabled enterprises, may be treated as the firm's capacity to recombine resources, data, and ecosystem relationships to develop new or improved offerings, processes, and value propositions. Data-driven value creation research supports the view that firms require capability bundles—technical, human, process, and strategic—to convert large-scale data into innovation and performance gains (Brinch et al., 2021; Božič & Dimovski, 2019). Recent work on machine learning value creation also suggests that firms often shift among different value creation mechanisms over time, reconfiguring applications and organizational conditions as they learn what produces real benefits (Shollo et al., 2022). In super app ecosystems, this likely means innovation capability is not just an internal research-and-development issue; it is partly an ecosystem coordination problem, shaped by platform integration, data access, and the firm's ability to convert platform-enabled interactions into learning and new service designs (Rangaswamy et al., 2020; Zhu et al., 2020).

Taken together, the literature suggests a compelling but still incomplete picture: super apps may provide an unusually efficient infrastructure for customer value creation and enterprise innovation, yet the translation into business value is neither automatic nor uniform. This is why enterprise-focused evidence—such as studies situated in a specific regional economy like Shaanxi Province—matters. It allows the analysis to move from broad claims about platform dominance and ecosystem expansion toward the more practical question of how, for whom, and under what conditions super app participation becomes a reliable pathway to customer value creation, business value creation, and innovation capability.

Despite the widespread availability of super app platforms, the current problem in the retail sector lies in the gap between adoption and value realization. Many retail enterprises have integrated super app features such as digital payments, online storefronts, or embedded mini-programs, yet these integrations often remain transactional rather than strategic. Retailers frequently report rising operational complexity, margin pressure from platform fees, and difficulties in differentiating their offerings within crowded digital marketplaces. At the same time, customer expectations for convenience, speed, personalization, and seamless service continue to increase. This mismatch suggests that participation in super app ecosystems does not automatically translate into improved business performance or sustained customer value creation. Instead, value outcomes appear to depend on how enterprises configure their operations, leverage platform data, and align digital practices with their broader business models.

From a scholarly perspective, a clear research gap remains. Existing studies on super apps tend to focus on platform power, ecosystem governance, or consumer adoption at a macro level, often emphasizing dominant firms and national-scale outcomes. Less

attention has been given to how retail enterprises in specific regional contexts create value through super app participation, particularly in terms of customer value creation, internal business value dimensions, and innovation capability. Empirical work that integrates these constructs at the enterprise level, especially outside China's largest metropolitan markets, is limited. Consequently, there is insufficient evidence explaining why some retail firms benefit from super app integration while others experience limited or uneven returns. Addressing this gap, the present study situates super app usage within the operational realities of retail enterprises in Shaanxi Province, aiming to generate context-sensitive insights into how business value is created, constrained, or transformed in platform-based retail environments.

Statement of the Problem

This study aims to determine the role of super apps in business value creation among selected retail enterprises in Shaanxi Province, China. Specifically, it seeks to answer the following questions:

1. What is the profile of the respondents in terms of:
   1.1. highest educational attainment
   1.2. job position in the retail enterprise
   1.3. length of work experience
   1.4. type of retail enterprise
2. What is the assessment of the respondents on the extent of implementation of super apps in retail enterpriValses in terms of the following dimensions:
   2.1. integrated service breadth
   2.2. embedded commerce and transaction enablement
   2.3. customer engagement and relationship management
   2.4. ecosystem and partner integration
   2.5. data and analytics enablement
   2.6. governance, privacy, and security management practices
3. Is there a significant difference in the assessment of respondents on the extent of implementation of super apps in retail enterprises when grouped according to profile variables?
4. What is the assessment of the respondents on customer value creation through super app platforms in terms of the following dimensions:
   4.1. convenience and transaction
   4.2. service integration and seamless experience
   4.3. personalization and relevance
   4.4. trust and perceived security
   4.5. engagement quality and responsiveness
5. Is there a significant difference in the assessment of respondents on customer value creation through super app platforms when grouped according to profile variables?
6. What is the significant relationship between the extent of implementation of super apps in retail enterprises and customer value creation through super app platforms?

2. METHODS

Research Design

The study employed a quantitative comparative correlational research design to determine the role of super apps in customer value creation among selected retail enterprises in Shaanxi Province, China. A quantitative approach was used because the study required numerical measurement of respondents' assessments of the extent of super app implementation and customer value creation using structured rating scales. This approach allowed the study to generate objective summaries of perceptions across groups and to produce statistically testable results that can support evidence-based recommendations for retail enterprises.

The comparative component of the design was applied because the study examined whether respondents' assessments significantly differ when grouped according to profile variables, specifically highest educational attainment, job position in the retail enterprise, length of work experience, and type of retail enterprise. This comparison was necessary because differences in professional background and organizational context may shape how super app implementation practices are perceived and how customer value outcomes are evaluated. By testing group differences, the study identified whether perceptions are consistent across respondent categories or whether certain groups report systematically higher or lower assessments.

The correlational component was used because the primary purpose of the study was to test the relationship between the extent of implementation of super apps and customer value creation through super app platforms. A correlational approach was appropriate because the study did not manipulate variables or impose experimental conditions; instead, it examined naturally occurring variations in implementation practices and perceived customer value outcomes across participating retail enterprises. This design

enabled the study to determine whether higher levels of implementation were statistically associated with stronger customer value creation, and it also supported dimension-level correlation analysis to identify which aspects of super app implementation were most closely linked to specific customer value dimensions.

Locale and Participants

The study was conducted in selected retail enterprises located in Shaanxi Province, China, a region that occupies a strategic position in Western China's economic and commercial development. Shaanxi Province serves as a major transportation and logistics hub linking inland regions to national and cross-regional markets. In recent years, the province has experienced steady growth in its retail sector, driven by urbanization, digital commerce expansion, and the widespread adoption of platform-based services. Retail enterprises in the province operate within an increasingly competitive environment where digital platforms, particularly super apps, play a central role in daily business transactions and customer interactions.

The participants of the study consisted of 350 purposefully selected employees from retail enterprises located in Shaanxi Province, China. The use of purposive sampling was appropriate because the study required respondents who are directly involved in, or sufficiently knowledgeable about, the use of super app platforms in retail operations. Rather than relying on random selection, the study intentionally targeted individuals whose roles allow them to provide informed assessments of super app implementation and customer value creation.

To be included in the study, participants were required to meet the following criteria. First, they were currently employed in a retail enterprise operating within Shaanxi Province. Second, they held positions related to management, supervision, operations, marketing, customer service, or digital platform coordination, as these roles were more likely to involve regular interaction with super app functionalities. Third, participants had at least one year of work experience in the retail enterprise to ensure sufficient exposure to the organization's use of super apps. Finally, participants were directly involved in or familiar with the enterprise's use of super apps for activities such as payment processing, customer communication, order management, promotions, or data monitoring.

Employees who do not have direct or indirect involvement with super app usage, temporary staff with very limited exposure to platform-based operations, and individuals unwilling to provide informed consent were excluded from the study. By applying these selection criteria, the study ensured that participants possess the necessary experiential knowledge to provide reliable and meaningful responses, thereby strengthening the validity of the findings related to super app implementation and customer value creation in retail enterprises.

Research Instrument

The study utilized a researcher-made questionnaire as the primary data-gathering instrument. The instrument was developed based on an extensive review of related literature on super app implementation, customer value creation, and digital platform–enabled retail operations. The questionnaire was designed to capture respondents' assessments in a structured and quantifiable manner, consistent with the quantitative comparative correlational design of the study.

The questionnaire was divided into three main parts, each corresponding to the major constructs of the study.

Part I: Profile of the Respondents. This part gathered information on the respondents' highest educational attainment, job position in the retail enterprise, length of work experience, and type of retail enterprise. These variables was used as grouping factors in the analysis of significant differences.

Part II: Extent of Implementation of Super Apps in Retail Enterprises. This part measured the independent variable of the study. It consisted of six sub-constructs, with six statements per sub-construct, yielding a total of thirty-six items. The sub-constructs include integrated service breadth; embedded commerce and transaction enablement; customer engagement and relationship management; ecosystem and partner integration; data and analytics enablement; and governance, privacy, and security management practices. Each statement was designed to reflect observable practices and organizational routines related to super app usage in retail operations.

Part III: Customer Value Creation through Super App Platforms. This part measured the dependent variable of the study. It consisted of five sub-constructs, also with six statements per sub-construct, resulting in a total of thirty items. The sub-constructs included convenience and transaction efficiency; service integration and seamless experience; personalization and relevance; trust and perceived security; and engagement quality and responsiveness. The statements were phrased to reflect respondents' assessments of customer-level outcomes associated with super app–enabled retail interactions.

All statements in Parts II and III were rated using a four-point Likert scale, with response options ranging from Strongly Disagree to Strongly Agree. The use of a four-point scale was intended to reduce neutral responses and encourage clearer evaluative judgments from respondents.

Data Gathering and Statistical Analysis

The data gathering procedure was conducted in a systematic and ethical manner to ensure the accuracy, reliability, and integrity of the collected data. Prior to data collection, the researcher secured the necessary approvals from the appropriate academic

authorities. Formal communication was then initiated with selected retail enterprises in Shaanxi Province to request permission to administer the questionnaire to their employees. The purpose of the study, the nature of participation, and the expected time commitment was clearly explained to organizational representatives.

Once permission is granted, the researcher identified eligible participants based on the established inclusion criteria. The questionnaire was administered either in printed form or through an online survey platform, depending on the preference and operational conditions of the participating enterprises. Before respondents answer the questionnaire, they were provided with a brief introduction explaining the objectives of the study, assurances of confidentiality, and instructions for completing the instrument. Participation was strictly voluntary, and informed consent was obtained from all respondents.

During the data collection phase, respondents were given sufficient time to complete the questionnaire without disruption to their regular work responsibilities. The researcher remained available to clarify instructions or address procedural questions, while avoiding any influence on respondents' answers. Completed questionnaires were collected promptly, and responses from the online survey platform were securely downloaded and stored.

After data collection, all responses were reviewed for completeness and consistency. Incomplete or invalid questionnaires were excluded from the final dataset. The validated data were then encoded, tabulated, and prepared for statistical analysis using appropriate software. Throughout the entire data gathering process, ethical standards related to anonymity, confidentiality, and responsible data handling were strictly observed to protect both the participants and the participating organizations.

The data collected in this study were subjected to appropriate statistical treatments consistent with the quantitative comparative correlational research design. Prior to analysis, all completed questionnaires were coded, encoded, and screened for accuracy, completeness, and consistency. Descriptive and inferential statistics were then applied to address each research question.

Descriptive statistics was used to summarize the profile of the respondents and their assessments of the study variables. Frequency counts and percentages were employed to describe the respondents' profile in terms of highest educational attainment, job position in the retail enterprise, length of work experience, and type of retail enterprise. For the extent of implementation of super apps and customer value creation through super app platforms, weighted mean and standard deviation was used to determine the central tendency and variability of responses across each dimension and sub-dimension.

Inferential statistics were utilized to test differences and relationships among the variables. To determine whether there are significant differences in respondents' assessments of the extent of implementation of super apps when grouped according to profile variables, appropriate tests such as the independent samples t-test or one-way analysis of variance was applied, depending on the number of groups within each profile variable. The same statistical procedures was used to test differences in respondents' assessments of customer value creation through super app platforms across the specified profile variables.

To examine the relationship between the extent of implementation of super apps and customer value creation through super app platforms, correlation analysis was employed. Pearson product–moment correlation coefficient was used to determine the strength and direction of the relationship between the variables, provided that the assumptions of normality and linearity were met. If these assumptions were not satisfied, an appropriate non-parametric alternative was applied. Correlation analysis was also conducted at the dimension level to identify specific aspects of super app implementation that were most strongly associated with particular customer value dimensions.

All hypotheses were tested at a predetermined level of significance. The results of the statistical analyses were presented in tabular form and interpreted in relation to the research questions, hypotheses, and conceptual framework. The findings served as the basis for drawing conclusions and for proposing an organizational enhancement plan aimed at improving super app–enabled value creation among retail enterprises in Shaanxi Province, China.

Ethical Considerations

Ethical principles were strictly observed throughout the conduct of this study to ensure the protection of participants and the integrity of the research process. Prior to data collection, the researcher obtained approval from the appropriate academic authorities to conduct the study. Formal permission was also sought from the participating retail enterprises before administering the research instrument to their employees.

Participation in the study was entirely voluntary. All potential respondents were informed of the purpose of the study, the nature of their participation, and their right to decline or withdraw from the study at any stage without any negative consequences. Informed consent was obtained from each participant before the administration of the questionnaire.

The study ensured anonymity and confidentiality of all respondents. No personal identifiers, such as names or employee identification numbers, were collected. Responses was used solely for academic purposes and were reported only in aggregated form. The identities of participating retail enterprises were not disclosed in any part of the study, including reports, publications, or presentations.

Data collected from the respondents were handled with strict confidentiality. Completed questionnaires and electronic data files were securely stored and accessed only by the researcher. Digital data were protected through password-secured storage, and

physical documents were kept in a secure location. All data were retained only for the duration necessary to complete the study and were disposed of responsibly thereafter.

The researcher avoided any form of deception, coercion, or undue influence during the data gathering process. Respondents were not pressured to provide particular answers, and the researcher remained neutral in all interactions. Ethical standards related to honesty, objectivity, and respect for participants' rights were upheld throughout the research to ensure that the study is conducted in a responsible and ethically sound manner.

3. RESULTS

Table 1. Profile of the Respondents

Profile Variable	Category	Frequency	Percentage
Highest Educational Attainment	High school or vocational	21	6.0%
Highest Educational Attainment	Associate degree	42	12.0%
Highest Educational Attainment	Bachelor's degree	209	59.7%
Highest Educational Attainment	Master's degree or higher	78	22.3%
Highest Educational Attainment	Total	350	100.0%
Job Position in the Retail Enterprise	Owner / Senior management	45	12.9%
Job Position in the Retail Enterprise	Middle management / Supervisor	99	28.3%
Job Position in the Retail Enterprise	Operational staff	115	32.9%
Job Position in the Retail Enterprise	Marketing / Customer service staff	91	26.0%
Job Position in the Retail Enterprise	Total	350	100.0%
Length of Work Experience	Less than 1 year	28	8.0%
Length of Work Experience	1-3 years	134	38.3%
Length of Work Experience	4-6 years	112	32.0%
Length of Work Experience	More than 6 years	76	21.7%
Length of Work Experience	Total	350	100.0%
Type of Retail Enterprise	Grocery / Convenience retail	100	28.6%
Type of Retail Enterprise	Apparel / Fashion retail	101	28.9%
Type of Retail Enterprise	Pharmacy / Health retail	58	16.6%
Type of Retail Enterprise	General merchandise / Other retail	91	26.0%
Type of Retail Enterprise	Total	350	100.0%

Profile of the Respondents. The study involved 350 respondents from selected retail enterprises in Shaanxi Province, China. In terms of educational attainment, the majority were bachelor's degree holders with 209 respondents or 59.7 percent, followed by those with a master's degree or higher with 78 or 22.3 percent. Operational staff constituted the largest group according to job position with 115 respondents or 32.9 percent, followed by middle management or supervisors with 99 or 28.3 percent. With respect to work experience, 134 respondents or 38.3 percent had one to three years of experience, while 112 or 32.0 percent had four to six years. For type of retail enterprise, apparel or fashion retail had the highest representation with 101 respondents or 28.9 percent, closely followed by grocery or convenience retail with 100 or 28.6 percent. The profile indicates representation from different educational, occupational, experiential, and retail backgrounds, although bachelor's degree holders constituted a substantial majority of the sample.

Table 2. Summary Assessment of Extent of Implementation of Super Apps

Indicator	Weighted Mean	Standard Deviation	Qualitative Description	Verbal Interpretation	Rank
Integrated Service Breadth	3.02	0.719	Agree	Implemented	2
Embedded Commerce and Transaction Enablement	3.01	0.770	Agree	Implemented	3
Customer Engagement and Relationship Management	3.00	0.729	Agree	Implemented	4
Ecosystem and Partner Integration	2.96	0.727	Agree	Implemented	5
Data and Analytics Enablement	3.01	0.742	Agree	Implemented	3
Governance, Privacy, and Security Management Practices	3.03	0.751	Agree	Implemented	1
Overall Mean	3.00	0.614	Agree	Implemented	

Assessment of the Extent of Implementation of Super Apps. The respondents generally agreed that super apps were implemented in their retail enterprises, as shown by the overall weighted mean of 3.005 and standard deviation of 0.614. Among the six dimensions, governance, privacy, and security management practices obtained the highest mean of 3.032, followed by integrated service breadth at 3.021. Embedded commerce and transaction enablement and data and analytics enablement both obtained a mean of 3.008, while customer engagement and relationship management registered 2.997. Ecosystem and partner integration received the lowest mean of 2.961. Although the differences among the dimension means were relatively small, the results suggest that respondents perceived security, governance, and integrated services as slightly more established than external ecosystem and partner integration.

Table 3. Summary Assessment of Customer Value Creation through Super App Platforms

Indicator	Weighted Mean	Standard Deviation	Qualitative Description	Verbal Interpretation	Rank
Convenience and Transaction Efficiency	2.93	0.749	Agree	Evident	4
Service Integration and Seamless Experience	2.97	0.775	Agree	Evident	3
Personalization and Relevance	2.99	0.744	Agree	Evident	2
Trust and Perceived Security	2.97	0.729	Agree	Evident	3
Engagement Quality and Responsiveness	3.03	0.738	Agree	Evident	1
Overall Mean	2.98	0.624	Agree	Evident	

Assessment of Customer Value Creation through Super App Platforms. Customer value creation was likewise assessed positively, with an overall weighted mean of 2.976 and standard deviation of 0.624, verbally interpreted as Agree and Evident. Engagement quality and responsiveness obtained the highest mean of 3.032, suggesting that respondents particularly recognized the

contribution of super apps to timely and effective customer interaction. Personalization and relevance followed with 2.987, while trust and perceived security obtained 2.969 and service integration and seamless experience registered 2.965. Convenience and transaction efficiency received the lowest mean of 2.928. Nevertheless, all dimensions remained within the Agree range, indicating that customer value was evident across the five measured areas, although transaction convenience may still offer comparatively greater room for improvement.

Differences According to Profile Variables

Differences in the Extent of Implementation of Super Apps. No significant differences were found in the overall assessment of super app implementation when respondents were grouped according to the four profile variables. For highest educational attainment, the result was F = 0.868, Sig. = 0.458; for job position, F = 0.533, Sig. = 0.660; for length of work experience, F = 0.875, Sig. = 0.454; and for type of retail enterprise, F = 1.259, Sig. = 0.288. Since all significance values were greater than the 0.05 level of significance, the null hypotheses were not rejected. The findings indicate that perceptions regarding the implementation of super apps were generally comparable across respondents regardless of educational attainment, organizational position, work experience, or type of retail enterprise.

Differences in Customer Value Creation through Super App Platforms. No significant differences were observed in the respondents' overall assessments of customer value creation when grouped according to profile characteristics. The analysis yielded F = 1.039, Sig. = 0.375 for highest educational attainment; F = 0.750, Sig. = 0.523 for job position; F = 0.275, Sig. = 0.843 for length of work experience; and F = 0.795, Sig. = 0.497 for type of retail enterprise. All significance values exceeded 0.05; hence, the corresponding null hypotheses were not rejected. This suggests that perceptions of customer value creation were relatively consistent across the different respondent groups and were not substantially differentiated by their educational, occupational, experiential, or retail-enterprise characteristics.

Table 4. Overall Correlation Results: Extent of Implementation of Super Apps and Customer Value Creation

Variable 1	Variable 2 Sub-construct	Pearson r	Sig.	Decision on Ho	Interpretation
Overall Extent of Implementation of Super Apps	Convenience and Transaction Efficiency	0.550	<.001	Reject Ho	Significant Moderate Positive Relationship
Overall Extent of Implementation of Super Apps	Service Integration and Seamless Experience	0.593	<.001	Reject Ho	Significant Moderate Positive Relationship
Overall Extent of Implementation of Super Apps	Personalization and Relevance	0.526	<.001	Reject Ho	Significant Moderate Positive Relationship
Overall Extent of Implementation of Super Apps	Trust and Perceived Security	0.566	<.001	Reject Ho	Significant Moderate Positive Relationship
Overall Extent of Implementation of Super Apps	Engagement Quality and Responsiveness	0.541	<.001	Reject Ho	Significant Moderate Positive Relationship
Overall Extent of Implementation of Super Apps	Overall Customer Value Creation	0.666	<.001	Reject Ho	Significant Strong Positive Relationship

Relationship between Super App Implementation and Customer Value Creation. The correlation analysis established significant positive relationships between the dimensions of super app implementation and customer value creation. Integrated service breadth had a correlation of r = 0.599 with overall customer value creation, embedded commerce and transaction enablement had r = 0.569, customer engagement and relationship management had r = 0.539, ecosystem and partner integration had r = 0.517, data and analytics enablement had r = 0.507, and governance, privacy, and security management practices had r = 0.582. All relationships were significant at Sig. < 0.001. At the aggregate level, overall super app implementation was significantly and positively related to overall customer value creation at r = 0.666, Sig. < 0.001. Overall implementation was also significantly associated with convenience and transaction efficiency (r = 0.550), service integration and seamless experience (r = 0.593), personalization and relevance (r = 0.526), trust and perceived security (r = 0.566), and engagement quality and responsiveness (r = 0.541). Thus, the null hypothesis of no significant relationship was rejected.

4. DISCUSSION

The respondents generally assessed the extent of super app implementation favorably, with an overall mean of 3.00 and a standard deviation of 0.614, qualitatively described as Agree and verbally interpreted as Implemented. This indicates that super app functions were perceived to be present across the major operational dimensions examined in the study, although implementation had not yet reached the highest possible interpretive level. Among the dimensions, Governance, Privacy, and Security Management Practices obtained the highest weighted mean of 3.03, while Ecosystem and Partner Integration received the lowest mean of 2.96. The relatively narrow difference of 0.07 suggests that implementation was generally balanced across dimensions rather than characterized by one highly developed area and one distinctly weak area.

The stronger assessment of governance, privacy, and security management may indicate that participating enterprises have already given considerable attention to customer data handling, transaction security, consent procedures, and platform compliance. In contrast, the comparatively lower assessment of ecosystem and partner integration suggests that coordination with suppliers, delivery providers, and third-party service partners may still require further development. Although the differences among the dimensions were modest, this pattern may be operationally important because the value of a super app depends not only on internal platform use but also on the extent to which related services and external partners are integrated into a coherent business process.

These findings are consistent with the observations of Hsu (2013), Zhu et al. (2020), and Elia et al. (2022), who argue that business value does not result from technology adoption alone. Rather, value emerges when digital capabilities are aligned with organizational processes, managerial practices, data utilization, and complementary resources. The close clustering of the implementation means may therefore suggest that retail enterprises are beginning to use super apps as interconnected business systems rather than as isolated digital features. At the same time, the absence of Strongly Agree ratings indicates that these practices may still be developing. Technology availability, by itself, does not ensure value creation; managerial coordination, process design, analytics capability, and consistent service execution remain necessary.

Customer value creation through super app platforms was likewise assessed positively, with an overall mean of 2.98 and a standard deviation of 0.624, qualitatively described as Agree and verbally interpreted as Evident. This result suggests that respondents generally perceived super apps as contributing to customer value across the dimensions examined. Engagement Quality and Responsiveness obtained the highest weighted mean of 3.03, while Convenience and Transaction Efficiency received the lowest mean of 2.93. The 0.10 difference between the highest and lowest means again reflects a relatively compact distribution, indicating that customer value was evident across several dimensions rather than being concentrated in a single aspect of the customer experience.

The relatively stronger assessment of engagement quality and responsiveness suggests that super apps may be particularly useful in supporting timely communication, customer interaction, and service responsiveness. By comparison, the lower assessment of convenience and transaction efficiency indicates that customers may still encounter avoidable steps, delays, or procedural complexity in activities such as ordering, payment, delivery tracking, refunds, or post-purchase support. This distinction is important because a platform may provide multiple services while still requiring further process simplification to make the customer journey genuinely seamless.

The findings support the arguments of Ramaswamy and Ozcan (2018), Priem et al. (2017), and Rangaswamy et al. (2020), who emphasize that customer value in digital platforms is created through interaction, convenience, continuity, and the usefulness of the overall service experience. The relatively similar ratings across the customer value dimensions suggest that respondents perceived value as arising from a combination of integrated services, personalization, security, responsiveness, and transaction support. However, the moderate level of agreement also indicates that platform participation alone is insufficient to guarantee superior customer value. The quality of implementation and the way digital features are incorporated into actual customer processes appear to remain critical.

The correlational findings further reinforce this interpretation. Overall super app implementation was significantly and positively related to overall customer value creation, with a correlation coefficient of $\mathbf{r = 0.666, p < .001}$. This represents a strong positive relationship and led to the rejection of the null hypothesis. The result indicates that respondents who reported stronger implementation of super app practices also tended to report stronger customer value outcomes. Although the association is statistically significant, it should not be interpreted as evidence that super app implementation directly causes improvements in customer value because the study used a correlational design.

Among the customer value dimensions, Service Integration and Seamless Experience showed the strongest relationship with overall super app implementation ($\mathbf{r = 0.593, p < .001}$), followed by Trust and Perceived Security ($\mathbf{r = 0.566}$), Convenience and Transaction Efficiency ($\mathbf{r = 0.550}$), Engagement Quality and Responsiveness ($\mathbf{r = 0.541}$), and Personalization and Relevance ($\mathbf{r = 0.526}$). All relationships were statistically significant at $\mathbf{p < .001}$. The pattern suggests that stronger super app implementation is most closely associated with customers' ability to move smoothly across service functions, although meaningful associations were also observed in security, convenience, engagement, and personalization.

This pattern is consistent with platform ecosystem theory, interactional value co-creation, and information technology business value perspectives. Rangaswamy et al. (2020), Ramaswamy and Ozcan (2018), Hsu (2013), and Zhu et al. (2020) suggest that digital

platform value emerges when technological capabilities are connected with business processes and customer interactions. The positive relationships across all customer value dimensions support the view that platform value is created through coordinated processes rather than through a single technological feature. Reduced transaction friction, integrated services, data-enabled relevance, trust, and responsive interaction appear to function as interconnected components of customer value creation.

Taken together, the findings indicate that super app implementation and customer value creation were both positively assessed and significantly associated within the participating retail enterprises. The strong relationship between the two major constructs provides empirical support for strengthening super app practices in an integrated manner. Particular attention may be directed toward ecosystem and partner integration and convenience and transaction efficiency because these received the comparatively lower assessments, while service integration and seamless experience merit continued emphasis because this dimension demonstrated the strongest association with overall super app implementation. These results provide a clear empirical basis for the proposed organizational enhancement plan aimed at improving super app-enabled value creation and innovation capability among retail enterprises in Shaanxi Province.

CONCLUSION

1. The respondent profile indicates that the findings primarily reflect the perceptions of a professionally educated retail workforce, with bachelor's degree holders forming the majority. Operational staff, employees with one to three years of work experience, and respondents from apparel or fashion and grocery or convenience retail enterprises were also strongly represented. The composition of the sample provides perspectives from employees occupying different levels and working across several common forms of retail enterprise.
2. Super apps are implemented to a generally favorable extent among the participating retail enterprises. Governance, privacy, and security management practices emerged as the strongest implementation dimension, suggesting that enterprises have given considerable attention to security controls, data protection, and responsible platform use. Ecosystem and partner integration received the lowest assessment, indicating that external coordination with suppliers, delivery services, and other platform partners may not yet be as fully developed as internal and customer-facing super app functions.
3. The absence of significant differences in super app implementation across educational attainment, job position, work experience, and retail-enterprise type suggests that implementation practices are experienced relatively consistently across respondent groups. Super app adoption therefore appears to function as an organization-wide operational practice rather than one perceived differently only by particular professional or organizational groups.
4. Customer value creation through super apps is evident across all five dimensions. Engagement quality and responsiveness emerged as the strongest area, indicating that super apps contribute particularly to communication, customer interaction, and service responsiveness. Convenience and transaction efficiency ranked lowest, suggesting that although super apps create customer value overall, some transactional processes may still involve unnecessary steps, delays, or operational friction that can be further reduced.
5. The absence of significant differences in customer value creation according to the four profile variables indicates that the perceived benefits of super apps are generally shared across respondent categories. The findings suggest that customer value outcomes are not confined to the perceptions of particular educational groups, organizational positions, levels of experience, or types of retail enterprises.
6. The statistically significant positive correlation between super app implementation and customer value creation demonstrates that stronger implementation is associated with greater perceived customer value. The overall correlation of $r = 0.666$ indicates a substantial positive relationship. Integrated service breadth showed the strongest association with overall customer value among the six implementation dimensions, followed by governance, privacy, and security management practices. The results support the central proposition of the study that more systematic and integrated use of super apps is associated with stronger customer value outcomes. The correlational design, however, supports association rather than definitive causal inference.

RECOMMENDATIONS

1. Retail enterprises may design organization-wide super app development programs that remain inclusive of employees from different educational backgrounds, job positions, levels of experience, and retail sectors. Although respondent groups did not significantly differ in their assessments, training and implementation support should still account for differences in employee responsibilities and exposure to digital platforms. Operational employees, supervisors, and customer-facing personnel may be actively involved in identifying practical problems encountered during actual platform use.
2. Retail enterprises may sustain their relatively strong governance, privacy, and security practices while giving greater attention to ecosystem and partner integration, which obtained the lowest mean among the implementation dimensions. Enterprises may establish clearer digital coordination procedures with suppliers, delivery providers, payment services, and

third-party platform partners. Greater interoperability among these services may help transform super apps from transaction tools into more integrated business platforms.

3. Since no significant differences in super app implementation were identified across the four profile variables, improvement initiatives may be implemented at the organizational level rather than limited to particular demographic or professional groups. Common standards for platform integration, transaction handling, customer communication, analytics use, privacy protection, and partner coordination may be adopted across departments, while role-specific training may be provided where operational requirements differ.
4. Retail enterprises may prioritize improvements in convenience and transaction efficiency, which received the lowest assessment among the customer value dimensions. Management may review the number of steps required for ordering, payment, refunds, delivery tracking, and customer support and remove unnecessary procedures where feasible. At the same time, the relatively strong result for engagement quality and responsiveness should be sustained through timely responses, clear communication, effective resolution of customer concerns, and consistent service standards.
5. Since customer value creation did not differ significantly according to respondent profile, customer value strategies may be developed as enterprise-wide service standards. Retail enterprises may establish common performance indicators for transaction speed, seamless service integration, personalization, security, responsiveness, and customer engagement. Periodic customer feedback may also be incorporated because the present findings represent employee assessments of customer value rather than direct evaluations obtained from customers themselves.
6. The significant positive relationships between super app implementation and customer value creation should serve as the empirical basis of the proposed organizational enhancement plan. Priority may be given to integrated service breadth, governance, privacy, and security management practices, and embedded commerce and transaction enablement, which showed comparatively stronger relationships with overall customer value creation. Particular attention may also be given to improving service integration and seamless experience, which had the strongest association with overall super app implementation among the customer-value dimensions. Future studies may directly obtain customer responses, examine additional retail enterprises or provinces, and employ longitudinal or predictive designs to determine whether improvements in super app implementation are followed by measurable changes in customer value, business performance, and innovation capability.

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