

Designing a Shared Value Creation Model Based on Electronic Services in Semnan Province Electricity Distribution Company

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ABSTRACT

In the digital era, companies use electronic services to access global markets, provide higher-quality services, deliver organizational services, communicate with clients, and create shared value. Accordingly, the present study was conducted with the aim of presenting a shared value creation model based on electronic services in Semnan Province Electricity Distribution Company. The present study employed a qualitative approach. In this regard, the grounded theory method was used to identify the model factors in Semnan Province Electricity Distribution Company. Finally, the necessary strategies and recommendations were proposed to improve shared value creation based on electronic services in Semnan Province Electricity Distribution Company. Based on the grounded theory findings, 98 indicators and 25 subcategories within six main categories—causal conditions of shared value creation based on electronic services, attention to the phenomenon of shared value creation based on electronic services, intervening conditions of shared value creation based on electronic services, contextual conditions of shared value creation based on electronic services, strategies for shared value creation based on electronic services, and outcomes of shared value creation based on electronic services—constituted the components of the model. Based on the findings, in Semnan Province Electricity Distribution Company, the intervening conditions affect the causal conditions, and the causal conditions affect attention to shared value creation based on electronic services. On the other hand, the intervening conditions directly affect the strategies.

Keywords: shared value creation, electronic services, Semnan Province Electricity Distribution Company, grounded theory.

1. Introduction

In the contemporary digital economy, organizations increasingly compete not only through the quality of their products and services, but also through their ability to create value collaboratively with stakeholders. The traditional view of value creation, in which organizations independently design, produce, and deliver value to passive customers, has gradually been replaced by a service-centered and interaction-based perspective. In this perspective, customers, users, employees, public institutions, digital platforms, and other stakeholders participate actively in defining needs, exchanging knowledge, shaping service experiences, and improving organizational outcomes. This transformation is especially important in service organizations, where value is not embedded only in a tangible product but is realized through interaction, communication, experience, responsiveness, and continuous adaptation to changing user expectations (Gronroos & Voima, 2013; Helkkula et al., 2012; Saha et al., 2025).

The concept of value co-creation has become one of the central constructs in service management, marketing, digital transformation, and organizational strategy. Value co-creation emphasizes that value emerges through the integration of resources among multiple actors rather than through the unilateral actions of a single organization. In this regard, customers are not merely recipients of services; rather, they are active participants whose knowledge, expectations, behavioral patterns, feedback, and digital interactions contribute to the formation of value. This perspective has been developed in different research streams, including service logic, customer experience, digital platforms, brand communities, and service design. It has also been argued that the co-creation of value is a dynamic, multidimensional, and contextual process that requires the alignment of organizational capabilities, customer participation, technological infrastructure, and institutional conditions (Manser Payne et al., 2021; Saha et al., 2025; Skalen et al., 2015; Tuunanen et al., 2023).

The expansion of electronic services has intensified the importance of value co-creation because digital interfaces make interaction between organizations and customers more continuous, traceable, data-driven, and scalable. Electronic services provide organizations with the opportunity to redesign service delivery processes, reduce time and cost, improve accessibility, collect customer feedback, personalize services, and increase transparency. At the same time, they require organizations to rethink the role of

customers and subscribers as informed actors who can contribute to service improvement. Digital service environments enable users to participate in service evaluation, problem reporting, knowledge sharing, service customization, and decision support. Therefore, electronic services are not merely technical tools for automation; they are strategic mechanisms through which organizations can reconstruct relationships with users and generate shared value (Dineva, 2023; Stegmann et al., 2023; Tran et al., 2025; Turunen, 2025).

Digital transformation has also shifted the managerial logic of service organizations from internal efficiency toward ecosystem-based value creation. Organizations that adopt digital platforms and electronic service systems must manage multiple forms of value, including functional value, emotional value, social value, economic value, informational value, and relational value. Functional value is reflected in faster, easier, and more reliable access to services; emotional value is associated with trust, satisfaction, perceived security, and confidence; social value is reflected in participation, responsibility, transparency, and collective benefit. In this way, value co-creation becomes a bridge between organizational performance and stakeholder welfare. Research on digital service design has shown that micro-level mechanisms, such as user participation, feedback loops, resource integration, service adaptation, and digital interaction, are essential for supporting value co-creation in digital services (Dineva, 2023; Tuunanen et al., 2023; You, 2025).

In recent years, value co-creation has been investigated in various service contexts, including financial services, insurance, banking, healthcare, sport marketing, higher education, mobile applications, brand communities, and digital platforms. For example, studies in financial service ecosystems have emphasized that artificial intelligence-based services and digital servitization require new frameworks for understanding customer participation, data use, service personalization, and interactive value generation (Manser Payne et al., 2021). Studies in banking and insurance have similarly highlighted the importance of artificial intelligence tools, hybrid approaches, and customer-oriented digital systems for creating co-created value and strengthening public trust (Jalali Filshour et al., 2025). Research on branded mobile applications has also shown that user engagement, perceived usefulness, and interactive digital experiences can influence the outcomes of value co-creation (Tran et al., 2025). These findings indicate

that the logic of value co-creation is increasingly embedded in digital service systems across industries.

The role of digital leadership and managerial capability is also central to value co-creation. Digital transformation cannot succeed only through the adoption of technologies; it requires leadership that can align digital infrastructure, organizational culture, innovation, and customer participation. Digital leadership can strengthen competitive advantage when it supports ambidextrous innovation and facilitates collaborative value creation among stakeholders (Cai et al., 2024). Similarly, management can be understood as a design practice in which managers intentionally design value co-creation mechanisms, configure stakeholder interactions, and create institutional arrangements that enable users and organizations to produce value together (You, 2025). This design-oriented view is particularly relevant for public and utility organizations, where services are essential, stakeholder expectations are diverse, and organizational decisions have broad social and economic implications.

The electricity distribution industry represents a particularly important context for studying shared value creation based on electronic services. Electricity distribution companies are responsible for providing an essential public service that affects households, businesses, industries, public institutions, and regional development. The quality, continuity, accessibility, and responsiveness of electricity distribution services directly influence citizens' welfare, economic activity, and public trust. At the same time, electricity distribution companies operate in a complex environment characterized by regulatory requirements, technical infrastructure, peak-load pressures, environmental concerns, public expectations, and the need for operational reliability. These conditions make the industry highly dependent on effective communication with subscribers, accurate information exchange, service transparency, and timely response to requests and problems.

Electronic services in electricity distribution can create shared value by improving the relationship between the company and subscribers. Through electronic billing, online payment, digital request tracking, smart meters, automated communication systems, electronic tariffs, mobile applications, and subscriber portals, customers can access services more easily and organizations can reduce operational costs. More importantly, these tools can transform subscribers from passive service recipients into active participants in consumption management, service evaluation, demand response, information sharing, and

responsible energy use. When subscribers have access to accurate consumption data, payment information, service requests, and feedback channels, they are better able to make informed decisions and contribute to improving both their own welfare and the efficiency of the electricity distribution system.

The theoretical foundations of shared value creation are also consistent with the broader understanding of customer experience as a subjective, contextual, and interactional phenomenon. Value is not always determined by the organization's intended service design; rather, it emerges from the way customers experience, interpret, and use services in their own contexts. Helkkula et al. emphasized that value should be understood as an experience, which means that organizations must pay attention to customers' lived experiences, interpretations, and contextual conditions (Helkkula et al., 2012). In electricity distribution, this means that the value of electronic services depends not only on technical functionality but also on subscribers' trust, perceived ease of use, digital literacy, service reliability, and belief that electronic interaction improves their relationship with the company.

Prior research has also shown that value co-creation is strongly influenced by customer engagement, trust, and loyalty. In brand communities, value co-creation practices can strengthen loyalty through affective commitment and psychological ownership (Wang & Yang, 2025). Although electricity distribution companies differ from commercial brand communities, the underlying mechanism is relevant: when users feel that their needs, knowledge, and feedback are recognized, they are more likely to trust the organization and maintain constructive behavioral intentions. Similarly, multichannel technologies can support co-created value by creating multiple contact points for interaction, information exchange, and service access (Maleki Minbash Razgah et al., 2025). In utility services, this multichannel perspective is important because subscribers differ in age, digital literacy, service preferences, and willingness to adopt electronic services.

The literature further suggests that value co-creation should be examined as a process shaped by antecedents, mechanisms, and outcomes. Antecedents may include technological infrastructure, organizational culture, customer readiness, managerial support, digital leadership, and regulatory context. Mechanisms may include interaction, communication, feedback, service personalization, problem-solving, knowledge sharing, and resource integration. Outcomes may include satisfaction,

loyalty, service quality, efficiency, trust, innovation, social value, and organizational competitiveness (Saha et al., 2025; Stegmann et al., 2023; Tuunanen et al., 2023). This process-oriented logic is highly compatible with grounded theory because grounded theory allows researchers to identify causal conditions, contextual conditions, intervening conditions, strategies, and consequences directly from empirical data.

In addition, the use of digital technologies for value co-creation is closely related to innovation and service ecosystem thinking. Digital business models can generate value through the participation of multiple stakeholders and the integration of technological, organizational, and social resources (Schiaivone et al., 2021). In healthcare platforms, value co-creation has been found to operate as a dynamic process affecting platform effectiveness, indicating that digital value creation depends on continuous interaction among users, providers, and technological systems (Radpour et al., 2023). These insights are relevant to electricity distribution companies because electronic service systems similarly require the coordination of technical infrastructure, employees, managers, subscribers, contractors, and regulatory actors. Therefore, a model of shared value creation in electricity distribution must go beyond technology adoption and explain the broader organizational and social process through which electronic services produce value.

The development of electronic services also has implications for competitiveness and organizational sustainability. In emerging digital markets, entrepreneurship and innovation in electronic services can improve organizational responsiveness and market positioning (Cahyono, 2018). In addition, the management of policy mixes, infrastructure transitions, and incumbent systems shows that organizations operating in regulated and technically complex sectors face path dependencies, institutional constraints, and resistance to change (Johnstone et al., 2017). Electricity distribution companies are similarly shaped by inherited infrastructures, legal procedures, public expectations, and institutional routines. Therefore, shared value creation based on electronic services requires not only technological investment but also organizational flexibility, cultural change, senior management support, employee readiness, and subscriber-centered service design.

Customer participation in electronic services can also support learning and innovation. Earlier research on service innovation and technology-based value creation has emphasized that digital interactions can improve learning,

responsiveness, and user-oriented innovation when organizations systematically capture and use customer knowledge (Kaur, 2011; Lin & Chuang, 2012). This issue is particularly significant for electricity distribution because subscribers' data, complaints, service requests, consumption behavior, and satisfaction feedback can provide valuable input for improving service packages, optimizing communication, and designing more effective electronic systems. However, the value of such information depends on the organization's ability to analyze, interpret, and integrate it into decision-making processes.

Despite the increasing body of research on value co-creation and digital services, there remains a contextual gap in understanding how shared value creation based on electronic services can be modeled in public utility organizations, especially electricity distribution companies. Much of the existing literature has focused on commercial digital platforms, brand communities, financial services, healthcare, higher education, and mobile applications (Manser Payne et al., 2021; Schiaivone et al., 2021; Stegmann et al., 2023; Tran et al., 2025; Turunen, 2025). These contexts provide important theoretical insights, but electricity distribution companies have distinctive characteristics, including essential service obligations, regulatory constraints, technical complexity, public accountability, infrastructure dependency, and diverse subscriber groups. Consequently, models developed in other sectors cannot be directly transferred to the electricity distribution industry without contextual adaptation.

Furthermore, the Iranian electricity distribution context presents its own institutional and operational conditions. Issues such as traditional organizational structures, legal gaps in electronic service delivery, peak-load pressures, varying levels of subscriber digital literacy, preference for traditional service channels among some users, and the need for secure and reliable data management make the study of electronic service-based shared value creation particularly important. In this context, electronic services can produce value only when they are aligned with subscribers' expectations, organizational capabilities, technological infrastructure, managerial support, and broader economic and social conditions. Therefore, an empirically grounded model is needed to explain how these elements interact and how they can be transformed into practical strategies and outcomes.

A grounded theory approach is appropriate for this purpose because it enables the researcher to move from participants' experiences and organizational realities toward

an integrated conceptual model. Through interviews with managers, experts, and specialists, it becomes possible to identify the causal drivers of shared value creation, the central phenomenon, contextual and intervening conditions, strategic actions, and expected outcomes. Such a model can contribute theoretically by extending value co-creation literature to the electricity distribution sector and can contribute practically by guiding managers in designing electronic services that simultaneously improve subscriber satisfaction, organizational efficiency, trust, security, environmental responsibility, and service quality.

The present study aimed to design a shared value creation model based on electronic services in Semnan Province Electricity Distribution Company.

2. Methods and Materials

The present study was conducted using a qualitative research approach based on grounded theory. In terms of purpose, the study was fundamental, because it sought to develop theoretical understanding of the phenomenon of shared value creation based on electronic services and to explain the relationships among the relevant concepts in the context of Semnan Province Electricity Distribution Company (Zagzebski, 1996). Grounded theory was selected because this method enables the researcher to formulate and explain a process-oriented model directly from field data and participants' experiences. Accordingly, the study aimed to identify the dimensions, components, conditions, strategies, and consequences associated with shared value creation based on electronic services in Semnan Province Electricity Distribution Company.

Among the different approaches to grounded theory, including the systematic approach, the emergent approach, and the constructivist approach, the present study adopted the systematic grounded theory design (Sarmad et al., 2012). This approach was appropriate because it provides a structured analytical framework for identifying causal conditions, the central phenomenon, contextual conditions, intervening conditions, action/interaction strategies, and outcomes. The use of this design helped the researcher move systematically from raw interview data to conceptual categories and finally to an integrated theoretical model.

The participants consisted of managers, experts, and specialists who were knowledgeable about shared value creation and electronic services in Semnan Province Electricity Distribution Company. The data were collected through interviews with 13 managers and experts working in

the company. The inclusion criteria included having at least a bachelor's degree, a minimum of five years of relevant work experience in Semnan Province Electricity Distribution Company, and sufficient familiarity with the concepts of shared value creation and electronic services. Participants were selected because of their professional experience, organizational knowledge, and ability to provide rich information about the research phenomenon. In addition to these participants, the views of university professors and specialists in the fields of shared value creation and electronic services were used to assess the validity and reliability of the extracted model.

The main data collection tool in this study was a semi-structured interview. Before conducting the interviews, an interview protocol was developed based on the research objectives, the theoretical literature, and the main questions of the study. The validity of the interview protocol was reviewed before implementation. After this stage, the research data were collected through interviews with managers and experts involved in or familiar with shared value creation based on electronic services. The semi-structured format allowed the researcher to guide the discussion around the main research themes while also providing participants with the opportunity to explain their experiences, perceptions, and interpretations in detail.

The interviews focused on identifying the factors influencing shared value creation based on electronic services, the organizational and environmental conditions affecting this process, the strategies used or required to improve it, and the expected consequences for Semnan Province Electricity Distribution Company. The data obtained from the interviews were complemented by the researcher's observations and by theoretical insights derived from the literature. All stages of open coding, selective or focused coding, theoretical coding, and the final theoretical model were developed from the interview texts and the theoretical literature.

To ensure the validity of the data collection process, several qualitative validation techniques were used, including triangulation, member checking, avoidance of researcher bias, and peer review. Triangulation was applied by using multiple sources of information and analytical perspectives. Member checking was used to ensure that the researcher's interpretations were consistent with participants' intended meanings. The researcher also attempted to minimize personal bias during data collection and interpretation. Peer review was conducted to examine the consistency, clarity, and credibility of the coding process

and the extracted categories. These procedures enhanced the trustworthiness of the qualitative findings.

The data analysis process followed the systematic grounded theory procedures proposed by Strauss and Corbin (1990). After completing the interviews and preparing the written transcripts, the researcher carefully reviewed the interview texts in line with the objectives and questions of the study. The first stage of analysis was open coding. In grounded theory, coding may be conducted in different ways, such as word-by-word, sentence-by-sentence, or proposition-by-proposition analysis. In this study, proposition-by-proposition coding was used because the researcher had developed an initial understanding of possible codes during the interview process and sought to identify meaningful conceptual units within the participants' statements.

During open coding, the researcher extracted initial codes from the interview texts. Some codes were *in vivo* codes, meaning that they were derived directly from the exact words and expressions of the interviewees. In other cases, the researcher interpreted the meaning of participants' statements and assigned appropriate conceptual codes to them. These codes reflected the properties and characteristics of the concepts in the researcher's mind and usually referred to common themes emerging from the data. The researcher also compared the emerging codes with concepts identified in previous studies and assigned appropriate labels when theoretical consistency existed.

After open coding, axial coding was conducted. While open coding separates the data into different concepts and categories, axial coding links categories and subcategories based on their properties and dimensions. To identify the relationships among categories, the researcher used the paradigm model proposed by Strauss and Corbin (1990). This analytical paradigm connects subcategories to main categories through causal conditions, the central phenomenon, contextual conditions, intervening conditions, action/interaction strategies, and consequences. Causal conditions refer to events and factors that influence the phenomenon. The phenomenon is the main idea, event, or issue around which actions and interactions are organized. Intervening conditions are broad and general conditions that facilitate or constrain action/interaction strategies. Contextual conditions refer to specific environmental or

situational factors that affect the strategies. Action/interaction strategies are purposeful and directed actions used to respond to or manage the phenomenon. Consequences are the outcomes that result from these actions and interactions (Strauss & Corbin, 1990).

Simultaneously with open and axial coding, an analytical pattern was gradually developed to show the relationships among categories and subcategories. Once these relationships had been developed, selective coding was used to integrate the categories and subcategories identified during open and axial coding into an emerging theory. Selective coding made it possible to organize the extracted concepts around the central phenomenon of shared value creation based on electronic services and to formulate the final theoretical model (Bazargan, 2012).

To ensure the reliability and dependability of the findings, the procedures suggested by Merriam (2009) were applied. First, the researcher clarified his position in relation to the research context, including the assumptions underlying the study, the basis for selecting informed participants, and the social context in which the data were collected. Second, triangulation was used to strengthen both validity and reliability through the application of multiple methods of data collection and analysis. Third, an audit process was used through expert review, in which the process of data collection, category development, and research decisions was examined. These steps contributed to the credibility, dependability, and confirmability of the final grounded theory model.

3. Findings and Results

The findings of the grounded theory analysis showed that shared value creation based on electronic services in Semnan Province Electricity Distribution Company is a multidimensional phenomenon shaped by organizational, technological, managerial, contextual, and customer-related factors. Through open, axial, and selective coding, 98 indicators were extracted and classified into 25 subcategories within six main paradigm categories: causal conditions, attention to the phenomenon, intervening conditions, contextual conditions, strategies, and outcomes. The integrated classification of the extracted concepts is presented in Table 1.

Table 1

Categories, Subcategories, and Indicators of the Shared Value Creation Model Based on Electronic Services

Main Category	Subcategory	Indicators
Causal conditions of shared value creation based on electronic services	Dynamism of the electricity distribution industry	Importance of providing information to subscribers; subscribers' demands and expectations; subscribers' knowledge and awareness
Causal conditions of shared value creation based on electronic services	Culture-building	Managers' and employees' belief in shared value creation; emphasis on customer orientation in the electricity distribution industry; organizational culture of human resources; organizational strategies
Causal conditions of shared value creation based on electronic services	Economic and social pressures	Importance of social goals; importance of economic goals; importance of the public image of the enterprise
Causal conditions of shared value creation based on electronic services	Service development capability	Establishing constructive and respectful communication with subscribers; developing the competitiveness of the electricity distribution industry; designing, developing, and improving electronic service packages based on needs assessments and feedback; continuous monitoring and tracking of subscribers; needs assessment through the suggestion system
Attention to the phenomenon of shared value creation based on electronic services	Attention to social values	Value of subscribers' knowledge; multidimensional nature of issues and ambiguity in the consequences of policy implementation; environmental and social constraints
Attention to the phenomenon of shared value creation based on electronic services	Attention to emotional values	Value of subscribers' influence; monitoring and analyzing the value of target subscribers; changing subscribers' attitudes
Attention to the phenomenon of shared value creation based on electronic services	Attention to functional values	Value of providing fast and efficient electronic services; subscribers' lifetime value; cost-effectiveness of using electronic services
Intervening conditions of shared value creation based on electronic services	Knowledge and operational capabilities of the electricity distribution company	Company awareness of the importance of subscribers' satisfaction and opinions; complexity of processes and interactions among existing systems; level of awareness of decision-making managers; ability to provide appropriate and timely support to subscribers
Intervening conditions of shared value creation based on electronic services	Managerial barriers in the electricity distribution company	Perspective and mindset of senior managers of the Ministry of Energy; limited knowledge of senior management regarding electricity distribution policymaking; high cost of infrastructure development; resistance to change; lack of support and resource allocation by senior management
Intervening conditions of shared value creation based on electronic services	Existence of experienced approaches in the electricity distribution company	Learning from successful global experiences; development of modern approaches to corporate social initiatives in Iran; existence of a long-term horizon for company activities
Intervening conditions of shared value creation based on electronic services	Employees' readiness and capabilities	Effect of company size on implementing initiatives; stability of the company's position and profitability; data security and protection of subscribers' information; skilled, educated, and knowledge-based human resources
Contextual conditions of shared value creation based on electronic services	Complexity of the electricity distribution industry	Traditional organizational structure of the electricity distribution industry; legal gaps in the provision of electronic services; various cumbersome regulations
Contextual conditions of shared value creation based on electronic services	National technological infrastructure	Hardware and software equipment; development of international relations with other countries; modern communication networks and information systems
Contextual conditions of shared value creation based on electronic services	Environmental conditions of the electricity distribution industry	Subscribers' belief in value creation through electronic services; government economic policies; imbalance between electricity production and consumption in the country during peak-load seasons and critical periods
Contextual conditions of shared value creation based on electronic services	Subscribers' characteristics	Subscribers' values, expectations, and demands; high level of subscribers' awareness and knowledge; culture supportive of innovation and technology; subscribers' preference for using traditional services; high average age among consumers
Strategies for shared value creation based on electronic services	Organizational flexibility	Flexibility of organizational structures and processes; use of elites and experienced industry specialists for policymaking; willingness to solve problems and challenges; connection of electricity distribution contractors with the electronic service cycle

Strategies for shared value creation based on electronic services	Improvement of subscribers' motivation and capabilities	Subscribers' trust in electronic service delivery; improvement of subscribers' knowledge and skills; subscribers' enthusiasm for electronic services; provision of rewards and discounts in subscribers' costs for creating shared values
Strategies for shared value creation based on electronic services	Development of interactions with subscribers	Establishment of a subscribers' club and loyalty-building mechanisms; continuous and regular assessment of subscribers' behavior and attitudes; improvement of interaction between the company and subscribers; use of an automated voice menu
Strategies for shared value creation based on electronic services	Service development and improvement	Electronic presentation of tariffs and prices; development of infrastructures and software for providing electronic services; installation of controllable and observable meters for subscribers and the possibility of viewing information electronically; use of user-friendly applications
Outcomes of shared value creation based on electronic services	Improvement of subscribers' welfare and satisfaction	Increased subscriber satisfaction; increased subscriber welfare; improved quality of electricity distribution services; ease of using electronic services; reduction of in-person visits; increased traceability of requests; saving time and cost in service delivery
Outcomes of shared value creation based on electronic services	Improvement of financial and economic status	Economic growth of society; reduction of imports; greater sale of services; reduction of subscriber churn rate
Outcomes of shared value creation based on electronic services	Market development and strengthening of organizational position	Increased awareness of subscribers; possibility of attracting new subscribers; development of behavioral intentions among subscribers
Outcomes of shared value creation based on electronic services	Perceived security of electronic services	Sense of security in money transfer, bill payment, and check deposit; protection of private financial data; existence of defined access levels to accounts
Outcomes of shared value creation based on electronic services	Subscribers' citizenship behavior and loyalty	Word-of-mouth advertising; tendency to reuse electronic services; responsible behavior; participation in surveys and satisfaction assessments
Outcomes of shared value creation based on electronic services	Benefits of pursuing electronic services	Consumption and payment information required by subscribers; service marketing; reduction of paper consumption; reduction of fossil fuel consumption; facilitation of access to information; increased organizational agility in service delivery; shortened process of responding to subscribers

The first main category was the causal conditions of shared value creation based on electronic services. These conditions explain the factors that generate, stimulate, or intensify the need for shared value creation in Semnan Province Electricity Distribution Company. The findings showed that the dynamism of the electricity distribution industry, culture-building, economic and social pressures, and service development capability constitute the main causal foundations of the phenomenon. In this regard, the growing importance of providing information to subscribers, responding to subscribers' expectations, and increasing subscribers' knowledge and awareness have made electronic services a strategic necessity. At the same time, the belief of managers and employees in shared value creation, customer orientation, supportive organizational culture, and appropriate organizational strategies provide the cultural basis for the emergence of this phenomenon. Economic and social pressures also encourage the company to pursue both social and economic objectives and to protect its public image. Finally, the capability to develop services through respectful communication with subscribers, competitiveness, feedback-based electronic service packages, continuous monitoring, and systematic needs

assessment strengthens the causal foundation of shared value creation.

The second main category was attention to the phenomenon of shared value creation based on electronic services. This category reflects the central phenomenon around which the grounded theory model was organized. The findings indicated that attention to social, emotional, and functional values is essential for understanding shared value creation in electronic services. From the social perspective, subscribers' knowledge is valuable because subscribers can contribute to improving service design and policy implementation. However, the multidimensional nature of issues, ambiguity in the outcomes of policies, and environmental and social constraints make the process complex. From the emotional perspective, subscribers' influence, the analysis of target subscribers' value, and changes in subscribers' attitudes indicate that shared value creation is not limited to service delivery but also involves shaping perceptions, trust, and engagement. From the functional perspective, fast and efficient electronic services, subscribers' lifetime value, and the cost-effectiveness of electronic services demonstrate that practical utility is a core component of the phenomenon.

The third main category was the intervening conditions of shared value creation based on electronic services. These conditions either facilitate or restrict the implementation of strategies. The findings showed that the knowledge and operational capabilities of the electricity distribution company play an important role in supporting electronic service-based value creation. Awareness of subscribers' satisfaction, understanding the complexity of processes and system interactions, managerial awareness, and timely subscriber support are important facilitating factors. However, managerial barriers may weaken this process. These barriers include the mindset of senior managers, limited knowledge of senior management regarding policymaking in electricity distribution, high infrastructure development costs, resistance to change, and lack of support and resource allocation by senior management. In contrast, learning from successful global experiences, developing modern approaches to corporate social initiatives in Iran, and adopting a long-term horizon can strengthen the company's readiness. Employees' readiness, data security, organizational stability, profitability, and the presence of skilled and educated human resources also function as important intervening factors.

The fourth main category was the contextual conditions of shared value creation based on electronic services. These conditions represent the specific organizational, technological, environmental, and subscriber-related context in which strategies are designed and implemented. The findings showed that the electricity distribution industry is characterized by structural and regulatory complexity, including traditional organizational structures, legal gaps in electronic service delivery, and cumbersome regulations. National technological infrastructure also shapes the feasibility of electronic service development through hardware and software equipment, international relations, modern communication networks, and information systems. Environmental conditions, including subscribers' belief in the value-creating capacity of electronic services, government economic policies, and the imbalance between electricity production and consumption during peak-load seasons and critical periods, further influence implementation. In addition, subscribers' characteristics, including their expectations, knowledge, innovation-supportive culture, preference for traditional services, and high average age, affect the acceptance and effectiveness of electronic services.

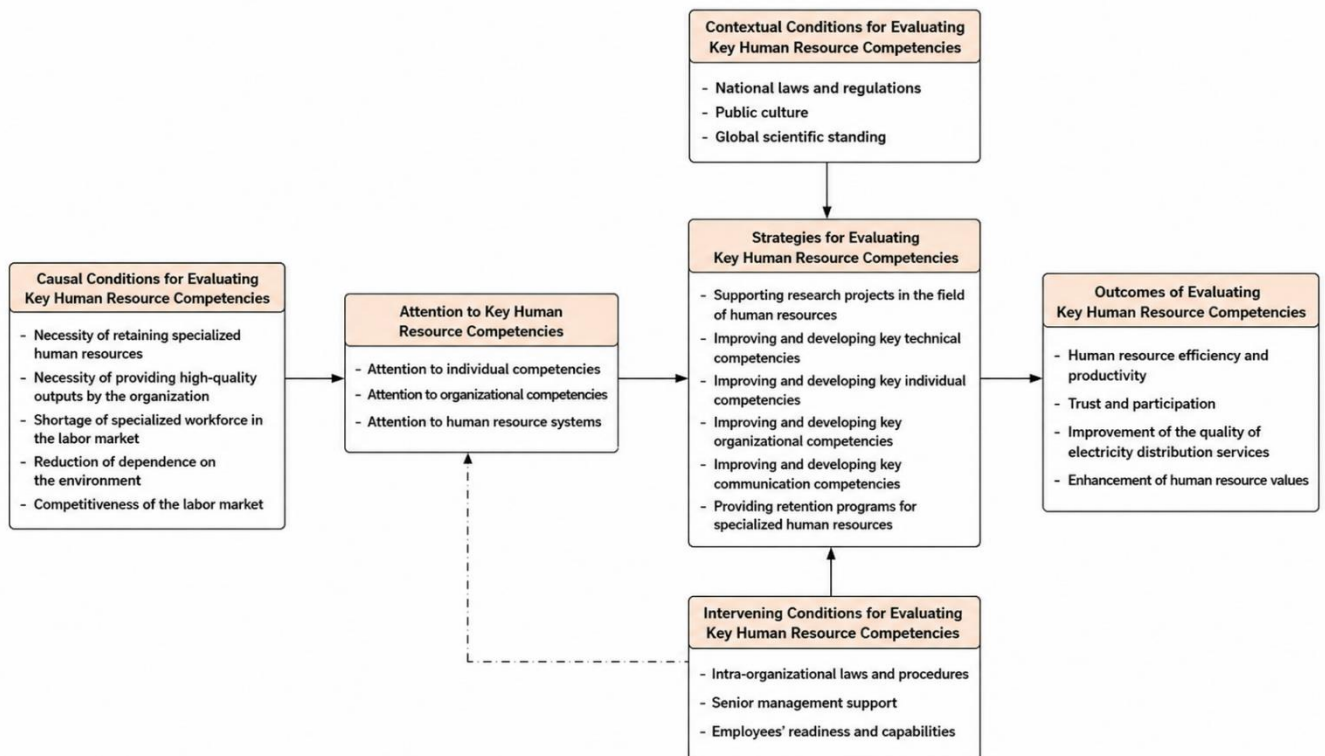
The fifth main category was the strategies for shared value creation based on electronic services. The findings

showed that the company can pursue shared value creation through organizational flexibility, improvement of subscribers' motivation and capabilities, development of interactions with subscribers, and service development and improvement. Organizational flexibility requires flexible structures and processes, the use of elites and experienced specialists in policymaking, problem-solving orientation, and the integration of contractors into the electronic service cycle. Improving subscribers' motivation and capabilities requires building trust in electronic service delivery, increasing subscribers' knowledge and skills, creating enthusiasm for electronic services, and offering rewards or discounts for participation in shared value creation. Developing interactions with subscribers also requires establishing subscribers' clubs, measuring subscribers' behavior and attitudes, improving company-subscriber interaction, and using automated voice menus. Finally, service development and improvement depend on electronic tariff presentation, infrastructure and software development, installation of controllable and observable meters, electronic access to information, and user-friendly applications.

The sixth main category was the outcomes of shared value creation based on electronic services. The findings demonstrated that implementing the identified strategies can lead to outcomes at the subscriber, organizational, economic, security, behavioral, and environmental levels. At the subscriber level, electronic service-based shared value creation improves welfare and satisfaction by increasing service quality, facilitating service use, reducing in-person visits, increasing request traceability, and saving time and cost. At the economic level, it contributes to financial improvement through economic growth, reduced imports, greater sale of services, and reduced subscriber churn. At the organizational level, it supports market development and strengthens the company's position by increasing awareness of subscribers, attracting new subscribers, and developing positive behavioral intentions. It also enhances perceived security by protecting private financial data and defining account access levels. Moreover, it promotes subscribers' citizenship behavior and loyalty through word-of-mouth advertising, reuse intention, responsible behavior, and participation in surveys. Finally, it creates operational and environmental benefits by facilitating access to consumption and payment information, supporting service marketing, reducing paper and fossil fuel consumption, increasing organizational agility, and shortening the response process.

Figure 1

Final Model of the Study



4. Discussion and Conclusion

The present study aimed to design a shared value creation model based on electronic services in Semnan Province Electricity Distribution Company. The grounded theory findings showed that the model consists of six main dimensions: causal conditions, attention to the central phenomenon, intervening conditions, contextual conditions, strategies, and outcomes. Overall, the results indicate that shared value creation based on electronic services is not merely a technological issue or a simple process of transferring traditional services to digital channels. Rather, it is a multidimensional organizational phenomenon shaped by the interaction of industry dynamism, culture-building, customer expectations, managerial capabilities, technological infrastructure, subscriber characteristics, strategic service development, and the resulting economic, social, behavioral, and operational outcomes. This finding is consistent with the contemporary view of value co-creation as a dynamic process that emerges from interaction among multiple actors, resources, and institutional conditions rather than from unilateral organizational action (Gronroos & Voima, 2013; Saha et al., 2025; Tuunanen et al., 2023).

The first major finding concerned the causal conditions of shared value creation based on electronic services. The results showed that the dynamism of the electricity distribution industry, culture-building, economic and social pressures, and service development capability constitute the main drivers of the model. This means that the need for electronic service-based shared value creation arises from both internal organizational pressures and external stakeholder demands. Subscribers' increasing expectations, their need for accurate information, and their growing awareness have made traditional one-way service delivery insufficient. This result aligns with studies emphasizing that digital service environments have transformed customers from passive recipients into active participants in value formation (Dineva, 2023; Tran et al., 2025). It also supports the argument that service organizations must design mechanisms that enable customers to participate in information exchange, service evaluation, and experience improvement (You, 2025). In the context of electricity distribution, such causal factors are particularly important because the service is essential, continuous, and closely connected with citizens' daily lives and economic activities.

The identification of culture-building as a causal condition suggests that shared value creation requires more than digital tools; it depends on managerial belief, employee commitment, customer orientation, and organizational strategies that support collaborative value formation. This finding is consistent with the digital leadership literature, which shows that digital transformation produces competitive advantage when leadership supports innovation, resource integration, and value co-creation (Cai et al., 2024). Similarly, studies on digital servitization show that the creation of value in AI-enabled and digital service ecosystems requires organizational readiness, stakeholder alignment, and a service-centered culture (Manser Payne et al., 2021). Therefore, in Semnan Province Electricity Distribution Company, electronic services can create shared value only when employees and managers believe that subscribers are not merely service users but active contributors to service quality, transparency, and organizational improvement.

The second finding concerned attention to the phenomenon of shared value creation based on electronic services, which included social, emotional, and functional values. This result demonstrates that the central phenomenon of the model is multidimensional. Functional value is reflected in fast, efficient, and cost-effective electronic services; emotional value is reflected in trust, satisfaction, attitude change, and perceived influence; and social value is reflected in subscribers' knowledge, participation, and awareness of broader environmental and social constraints. This finding is in line with the experience-based view of value, which argues that value is not embedded only in the technical features of a service but is realized through users' subjective experiences and contextual interpretations (Helkkula et al., 2012). It also corresponds with research showing that digital platforms and mobile applications create value when they combine usefulness, engagement, interaction, and user experience (Radpour et al., 2023; Tran et al., 2025).

The emphasis on social and emotional values is particularly important in public utility services. Electricity distribution companies often focus on operational reliability and technical efficiency, but the findings of this study show that subscribers' trust, perceptions, and sense of participation are also central to value creation. This result is supported by research on brand communities, which indicates that value co-creation can strengthen loyalty through affective commitment and psychological ownership (Wang & Yang, 2025). Although subscribers of an

electricity distribution company do not interact with the organization in the same way as members of brand communities, the same relational logic applies: when subscribers feel that their opinions are valued and their needs are addressed, their trust, cooperation, and positive behavioral intentions increase. This finding is also aligned with studies emphasizing the role of customer knowledge and user participation in digital service design (Turunen, 2025; Tuunanen et al., 2023).

The third finding related to intervening conditions. The study showed that knowledge and operational capabilities, managerial barriers, experienced approaches, and employees' readiness and capabilities influence the development of electronic service-based shared value creation. These conditions can either facilitate or constrain the implementation of strategies. This finding is consistent with research showing that digital value co-creation depends on organizational capabilities, managerial awareness, technical readiness, and the ability to coordinate multiple actors in a service ecosystem (Manser Payne et al., 2021; Schiavone et al., 2021). The finding also confirms that resistance to change, high infrastructure costs, limited managerial knowledge, and insufficient resource allocation can weaken digital transformation. This issue is especially relevant in regulated and infrastructure-based industries, where change is often constrained by traditional structures, institutional routines, and complex policy environments (Johnstone et al., 2017).

The role of employees' readiness and data security as intervening conditions is also important. Electronic services cannot generate shared value unless employees are able to support subscribers, manage digital interactions, protect information, and respond to technical or service-related problems. This result is consistent with the literature on digital content and service co-creation, which emphasizes that users' participation must be supported by organizational systems capable of managing digital interaction and trust (Dineva, 2023). It also supports studies on multichannel technologies, which suggest that digital channels can create value only when they are properly prioritized, integrated, and supported by organizational capabilities (Maleki Minbash Razgah et al., 2025). Therefore, in the electricity distribution context, employee competence, process integration, and data protection are not secondary issues; they are structural requirements for successful electronic service-based value creation.

The fourth finding concerned contextual conditions, including the complexity of the electricity distribution

industry, national technological infrastructure, environmental conditions, and subscribers' characteristics. This result indicates that shared value creation does not occur in a vacuum but is embedded in a specific institutional, technological, and social context. Traditional organizational structures, legal gaps, cumbersome regulations, government economic policies, peak-load pressures, and varying subscriber preferences all shape the feasibility and effectiveness of electronic services. This finding is consistent with the metatheoretical view that value co-creation is context-dependent and must be understood through the interaction of actors, institutions, resources, and practices (Saha et al., 2025). It also aligns with studies suggesting that digital transformation in value co-creation differs across sectors because each industry has its own technological, regulatory, and stakeholder conditions (Schiavone et al., 2021; Stegmann et al., 2023).

The identification of subscribers' characteristics as contextual conditions is particularly meaningful. The findings showed that subscribers' expectations, awareness, innovation-supportive culture, preference for traditional services, and average age can affect the acceptance of electronic services. This result is consistent with research on customer value validation and service design, which highlights the importance of understanding user needs, capabilities, and contextual constraints before designing digital services (Turunen, 2025). It is also aligned with earlier studies on customer relationship and technology-based service value, which indicate that customer knowledge, readiness, and perceived usefulness influence participation in service innovation (Kaur, 2011; Lin & Chuang, 2012). Therefore, the company must avoid assuming that all subscribers are equally ready or willing to use electronic services; instead, service design must be sensitive to differences in age, literacy, trust, digital access, and prior service habits.

The fifth finding related to strategies for shared value creation based on electronic services. The extracted strategies included organizational flexibility, improvement of subscribers' motivation and capabilities, development of interactions with subscribers, and service development and improvement. These strategies show that the organization must act simultaneously at internal and external levels. Internally, it must make structures and processes more flexible, use expert knowledge, improve infrastructure, and connect contractors to the electronic service cycle. Externally, it must build subscriber trust, improve subscriber skills, establish loyalty mechanisms, measure behavior and

attitudes, and provide user-friendly electronic tools. This finding strongly aligns with the design-based view of management, which argues that managers should intentionally design mechanisms that enable value co-creation among stakeholders (You, 2025). It also corresponds with the idea that micro-level mechanisms such as interaction, feedback, adaptation, and resource integration are necessary for the design of digital services (Tuunanen et al., 2023).

The strategic role of interaction with subscribers supports previous findings that digital services create value through continuous communication rather than one-time service delivery. In digital health platforms, value co-creation has been conceptualized as a dynamic process in which user interaction, platform capabilities, and organizational responses jointly determine effectiveness (Radpour et al., 2023). Similarly, digital business models in service ecosystems require the coordination of multiple stakeholders to produce sustainable and mutually beneficial outcomes (Schiavone et al., 2021). In the present study, strategies such as subscribers' clubs, continuous assessment of subscriber behavior, automated voice menus, electronic tariffs, controllable meters, and user-friendly applications show that value creation depends on building a digital interaction architecture. These findings are also supported by studies on multichannel technologies and digital platforms, which emphasize that value increases when customers can interact through accessible, integrated, and responsive channels (Maleki Minbash Razgah et al., 2025; Tran et al., 2025).

The sixth finding concerned the outcomes of shared value creation based on electronic services. The findings showed that the implementation of the identified strategies can improve subscribers' welfare and satisfaction, enhance financial and economic status, develop the market and organizational position, increase perceived security, strengthen citizenship behavior and loyalty, and generate operational and environmental benefits. These outcomes are consistent with the literature showing that value co-creation can improve satisfaction, loyalty, trust, innovation, service quality, and organizational performance (Saha et al., 2025; Wang & Yang, 2025). The finding also supports research in financial and insurance services, where digital tools and artificial intelligence-based systems have been associated with value co-creation, public satisfaction, and trust (Jalali Filshour et al., 2025). In the electricity distribution context, such outcomes are especially important because improved electronic services can reduce in-person visits, save time and cost, increase request traceability, improve access to

consumption and payment information, reduce paper use, and support more responsible energy consumption.

The environmental and societal outcomes of the model also deserve attention. Reducing paper consumption, reducing fossil fuel consumption through fewer physical visits, improving access to information, and increasing organizational agility indicate that electronic service-based shared value creation can support both organizational efficiency and public welfare. This result is compatible with the broader understanding of value co-creation as a process that can generate economic, social, and relational benefits simultaneously (Gronroos & Voima, 2013; Saha et al., 2025). It also supports the view that digital transformation should not be evaluated only by technological adoption but by its capacity to produce meaningful benefits for stakeholders (Stegmann et al., 2023; You, 2025). Therefore, the proposed model extends the concept of value co-creation to a public utility context by showing how electronic services can connect service quality, subscriber satisfaction, economic efficiency, trust, loyalty, and environmental responsibility.

The findings of this study should be interpreted in light of several limitations. First, the study was conducted in Semnan Province Electricity Distribution Company, and although the grounded theory approach provided rich and contextualized insights, the findings may not be directly generalizable to all electricity distribution companies or other public service organizations. Second, the data were collected through interviews with managers and experts, meaning that subscribers' direct experiences and perceptions were not independently examined in the present phase. Third, although qualitative validation procedures were used, the interpretation of interview data may still be influenced by the researcher's analytical perspective. Finally, the model was developed qualitatively and was not statistically tested through quantitative modeling.

Future studies are suggested to validate the proposed model using quantitative methods such as structural equation modeling, interpretive structural modeling, or mixed-method designs. Researchers can examine the relationships among causal conditions, contextual conditions, intervening conditions, strategies, and outcomes in larger samples and across different electricity distribution companies. Future research should also include subscribers as direct participants to compare managerial perceptions with customer experiences. Comparative studies between provinces, public utility sectors, or countries can further clarify how institutional, technological, and cultural

differences influence electronic service-based shared value creation. Longitudinal studies may also be useful for assessing how shared value creation evolves as electronic services mature over time.

From a practical perspective, managers of electricity distribution companies should treat electronic services as strategic instruments for shared value creation rather than merely as tools for administrative automation. The company should strengthen digital infrastructure, simplify electronic service processes, improve subscriber education, and develop user-friendly applications that respond to different levels of digital literacy. Managers should also create systematic mechanisms for collecting and analyzing subscriber feedback, monitoring satisfaction, and improving service packages based on actual user needs. In addition, employee training, senior management support, data security, transparent communication, and incentive mechanisms for subscribers should be prioritized to increase trust, participation, loyalty, and the effective use of electronic services.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethics Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were considered.

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