

Received 25 April 2025
Revised 13 October 2025
4 March 2026
21 May 2026
14 June 2026
Accepted 22 June 2026

Generative AI and the human touch: unpacking well-being in SME services

Luan-Thanh Nguyen and Tri-Quan Dang

Ho Chi Minh City University of Foreign Languages-Information Technology, HUFLIT, Ho Chi Minh City, Vietnam, and Centre for Business Informatics and Industrial Management (CBIIM), UCSI University, Kuala Lumpur, Malaysia

Keng-Boon Ooi

Centre for Business Informatics and Industrial Management (CBIIM), UCSI University, Kuala Lumpur, Malaysia; FORE School of Management, New Delhi, India; Korea University Business School, Korea University, Seoul, South Korea and Faculty of Business, Design, and Arts, Swinburne University of Technology Sarawak Campus, Kuching, Malaysia

Lai-Ying Leong

Teh Hong Piow Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Kampar, Malaysia, and

Garry Wei-Han Tan 

Centre for Business Informatics and Industrial Management (CBIIM), UCSI University, Kuala Lumpur, Malaysia; Department of Marketing, The University of Jordan, Amman, Jordan and Faculty of Business, Design, and Arts, Swinburne University of Technology Sarawak Campus, Kuching, Malaysia

Abstract

Purpose – This study aims to examine how customers perceive and engage with generative artificial intelligence (GenAI)-enabled services provided by small and medium-sized enterprises (SMEs), with a particular focus on value co-creation and well-being outcomes. While prior studies have mainly investigated GenAI adoption from the firm perspective, this research shifts attention to customer-level psychological and experiential mechanisms in an emerging economy context.

Design/methodology/approach – Drawing on service-dominant logic and Sustainable Development Goal 3, the study adopts a quantitative approach. Data were collected from 180 Vietnamese consumers, predominantly educated youths aged 18–24, who had prior experience with GenAI-powered services offered by SMEs. Partial least squares structural equation modeling was used to test the proposed hypotheses.

Findings – The results indicate that perceived knowledge about GenAI and perceived marketplace influence are positively associated with customers' value co-creation behavior. Value co-creation is positively associated with



both value-in-use and emotional well-being. In addition, value-in-use is positively associated with perceptions of social well-being, whereas emotional well-being is not significantly associated with social well-being.

Originality/value – This study extends GenAI research by moving beyond firm-level adoption to examine customer-centric outcomes in SME service contexts in an emerging economy. It highlights perceived knowledge and marketplace influence as critical antecedents of value co-creation and demonstrates how AI-enabled services contribute to social value primarily through functional value-in-use rather than emotional pathways.

Keywords GenAI, SMEs, Value co-creation, Well-being, Consumer behaviour, Emerging economy

Paper type Research paper

1. Introduction

In a small coffee shop nestled on a small street in Ho Chi Minh City, the owner begins her morning by checking her phone, not for messages, but for insights. Her newly integrated generative artificial intelligence (GenAI) assistant has analyzed customer reviews overnight, predicted the preferences of returning customers and even suggested sustainable packaging solutions based on market trends. When a loyal customer walks in later that morning, the owner greets her by name and already knows she prefers oat milk and is interested in eco-friendly products. The customer smiles, not just because the coffee is perfect, but because she feels seen, understood and part of something more meaningful. This is not just convenience. This is value-in-use in action which is generated by hybrid intelligence which include the human and GenAI. It is the real-time, human-centered benefit that customers experience when artificial intelligence (AI) works quietly in the background to personalize services, respect their values and make their lives just a bit easier. A small-entrepreneur, the use of GenAI is more than a tool for operational efficiency, it's a bridge between technological advancement and social well-being. According to recent surveys, a sizable portion of SMEs are implementing GenAI technologies to improve customer engagement and operations ([Mae Anderson, 2024](#)). For example, according to a survey conducted by Teneo and the US Chamber of Commerce, 98% of small businesses are using AI-enabled tools, with 47% specifically using GenAI tools like chatbots and image creation ([Mae Anderson, 2024](#)). Furthermore, according to a DBS survey, 73% of SME leaders intend to spend money on GenAI solutions to increase productivity ([Gemma Iso, 2025](#)). In many developing markets, including Vietnam, small and medium-sized businesses (SMEs) are the foundation of the economy ([OECD, 2023](#)). However, in contrast to big corporations, these companies frequently do not have access to sophisticated infrastructure, a wealth of resources or comprehensive customer analytics. GenAI makes everything equal and gives SMEs the ability to provide individualized services, encourage environmentally friendly operations and even involve underserved populations, such as senior citizens who require easier-to-use interfaces or individuals with disabilities who require specialized support ([Modgil et al., 2025](#)). Although GenAI demonstrates substantial technological potential, the broader social effects of these advancements on consumers remain insufficiently understood. When using AI-augmented services, how do users feel? Do they appreciate and acknowledge these advantages? And do customers think that GenAI used by SMEs as a springboard to accomplish more general social objectives like Sustainable Development Goal (SDG 3) (Good Health and Well-Being or Positive Social Impact) of the UN?

Social impact has emerged as a critical outcome in the context of technology-enabled service innovation, particularly for SMEs leveraging GenAI. Drawing from the use of GenAI in marketing, which uses strategic, evidence-based marketing approaches to improve

business (Dwivedi *et al.*, 2023), this study views GenAI-enabled services in SMEs as mechanisms not only for business value creation but also for fostering social well-being. These AI-driven services, ranging from personalized customer to inclusive digital access (Acar, 2024), have the potential to shape behaviors, support vulnerable populations and contribute meaningfully to social and emotional outcomes in local communities (Baabdullah, 2024). However, the knowledge space regarding the antecedents of how customers perception toward social impact when SMEs used GenAI is limited and thus remains under-explored.

With service-dominant logic (SDL) as a theoretical lens on hybrid intelligence, the interaction between businesses, customers and AI can be seen as a value co-creation process, where all actors contribute and integrate resources (Simón *et al.*, 2024). In AI-powered personalized customer service, customers provide contextual information, feedback and preferences, while AI models process this data, generate personalized recommendations and enhance customer interactions (Simón *et al.*, 2024). A key aspect of SDL is the co-creation of value, emphasizing the collaborative development of services where both customers and AI actively participate in mutually beneficial resource integration. Following value co-creation theories, customers are not merely passive recipients of AI-driven services; rather, they are active participants in shaping and refining AI interactions (Saha *et al.*, 2020). Through continuous engagement, such as feedback loops and preference updates, customers help improve AI accuracy and service relevance, leading to enhanced well-being, whether by reducing cognitive load, minimizing search effort or receiving highly tailored assistance. The unique nature of SDL lies in its value-in-use perspective (Nadeem *et al.*, 2021; Ranjan and Read, 2016), which highlights the subjective benefits customers experience during interaction rather than merely consuming a predefined AI-generated solution. Value co-creation occurs within a joint sphere of human and machine intelligence (S. Li *et al.*, 2021), where AI augments human capabilities while customers and employees contribute insights to improve AI-driven services as depicted in Figure 1. Thus, applying a value co-creation and value-in-use approach, businesses can design AI-enabled customer service systems that enhance well-being, foster personalized engagement and create adaptive, human-centered AI solutions (Amin and Di Pietro, 2025). This dynamic interaction implies that value is cocreated at a single point of interaction, reinforcing the role of AI as a facilitator of both customer satisfaction and overall well-being. With the importance of GenAI in SMEs to facilitate the value co-creation process, the perception of customers toward how GenAI used in SMEs and the customer's belief how their voice matters are crucial to boost their willingness to participate in co-creation (Bandura, 1986; Hasan *et al.*, 2024), which then results in greater value-in-use and positive social impact.

Reviewing the prior literature on GenAI, value co-creation, the study identified some research gaps. First, existing literature has focused primarily on adoption and implementation of GenAI from a business perspective, providing a limited insights on perception and experience of customers when using GenAI-powered products and services. In other words, numerous previous studies have explored how GenAI supports to businesses and drives their adoption (Creely and Blannin, 2025; Fu *et al.*, 2025; Teng *et al.*, 2025), while few research has paid enough attention to how GenAI helps businesses influence customers' well-being and contribute to positive social impact. Second, although scholars realize that GenAI provides opportunities for SMEs to offer personalized products and services to customers (Fu *et al.*, 2025), allow employees to focus on customer value (Teng *et al.*, 2025) and reduce the operational cost (Creely and Blannin, 2025) then improve the positive social impact (Emerald Publishing, 2025; Zhu and Dolnicar, 2025). However, there is no evidence

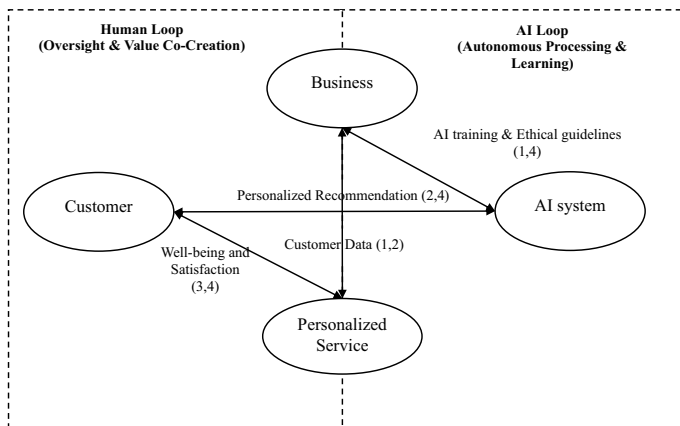


Figure 1. Hybrid intelligence

Note(s): (1) Business provides data and products/services then through AI offer personalization to customers; (2) AI recommends products based on user behavior; (3) Customers provide feedback (e.g. “Not interested,” “Show more like this”); (4) AI refines recommendations based on human input, improving personalization

Source: By authors

on how customers actually perceive and experience social benefits-especially in the context of SMEs. Third, as seen through the lens of SDL, value is not built into AI technology itself, but rather in the interactions between small businesses and their customers (Saha *et al.*, 2020). This point of view focuses on value-in-use, which means that customers get unique value from using GenAI services in their own situations, like getting personalized help, faster service or emotional support. SDG3 calls for people to be healthy and happy, and these experiences can help people reach that goal (Emerald Publishing, 2025). However, there is not a lot of real-world evidence on how customers get this kind of value-in-use or how small businesses use GenAI to improve social well-being. As the result, there is a need to investigate how GenAI adoption, cocreating value with customers and social impact outcomes all work together.

To address these gaps, the present study investigates how customers perceive and engage with GenAI-enabled services offered by small and medium-sized enterprises (SMEs). GenAI, as a subset of AI and machine learning, refers to systems capable of autonomously generating new and contextually relevant outputs, such as text, images and solutions, based on learned patterns rather than predetermined rules (M. Kim, 2023). SMEs, defined here according to European criteria, are firms using fewer than 200 workers with an annual turnover below VND 200bn (European Commission, 2021). This study simultaneously examines key psychological factors, perceived knowledge of GenAI and perceived marketplace influence, that drive customer engagement in value co-creation behaviors. The study also introduces value-in-use and emotional well-being as critical antecedents of social well-being perception, marking the first empirical effort to link cognitive-motivational mechanisms to well-being outcomes in AI-driven SME services. By integrating SDL with SDG 3 (Good Health and Well-being), this study conceptualizes customers as active cocreators of value rather than passive recipients of technology and answers the following:

RQ. How do customers perceive and engage with GenAI-enabled SME services and in what ways do these experiences influence their emotional and social well-being?

This integration bridges microlevel consumer experiences (emotional fulfillment and perceived empowerment) with macrolevel social objectives (collective well-being and inclusive service ecosystems), thus offering a multilevel framework for assessing social impact. Furthermore, by concurrently examining cognitive (perceived knowledge) and normative (marketplace influence) antecedents, the study delineates dual pathways through which customers engage in value co-creation within GenAI-enabled SME environments.

This article initially introduces a theoretical model and the development of hypotheses. The research methodology, results, conclusion, implications and limitations are subsequently presented.

1.1 Hypotheses development and conceptual framework

Recent studies have expanded understanding of GenAI beyond functional efficiency toward its emotional and social dimensions in service contexts. [Yoon et al. \(2025\)](#) emphasized both the bright and dark sides of GenAI services, noting how affective and trust-related mechanisms shape user well-being and social trust. Similarly, [Creely and Blannin \(2025\)](#) explored human–AI co-creativity, showing that emotional design and perceived authenticity influence engagement and acceptance. In organizational and nontechnological settings, [Modgil et al. \(2025\)](#) and [Teng et al. \(2025\)](#) demonstrated that GenAI’s value creation increasingly depends on users’ perceived psychological comfort, empathy and relational trust with AI interfaces. Together, these studies highlight that emotional resonance and perceived trustworthiness are critical antecedents of customer engagement and value co-creation in GenAI-enabled service experiences, providing an essential foundation for the present research’s focus on social well-being outcomes in SME services.

1.2 Perceived knowledge about generative artificial intelligence in small and medium-sized enterprises

Perceived knowledge refers to the beliefs consumers hold regarding their understanding of a particular issue ([Wilcock et al., 2004](#)). In this study, perceived knowledge regarding GenAI in SMEs refers to the degree to which customers believe they understand how small and medium-sized enterprises (SMEs) apply GenAI technologies in designing, producing and delivering personalized products or services that may affect their satisfaction and well-being. Perceived knowledge significantly influences risk perceptions and behavioral intentions ([Liao et al., 2020](#)). The SDL framework suggests that co-creation necessitates resource integration, with user knowledge serving as a crucial operand resource that influences and determines service outcomes ([Vargo and Lusch, 2008](#)). In addition, the technology acceptance model and social cognitive theory suggest that knowledge enhances users’ ability to engage effectively with technological services, thereby increasing their propensity to participate in co-creation ([Bandura, 1986](#)). Various studies have demonstrated a significant correlation between customer perceived knowledge and behavior ([Joshi and Rahman, 2019](#); [Liao et al., 2020](#); [Wilcock et al., 2004](#)). Recent studies further indicate that customers who comprehend how GenAI functions are more likely to provide feedback, personalize interactions and engage actively with AI-driven interfaces, behaviors consistent with value co-creation ([Creely and Blannin, 2025](#); [Fu et al., 2025](#); [Teng et al., 2025](#)). As a result, we propose the following hypothesis:

H1. Perceived knowledge about GenAI in SMEs will be positively associated with customers' value co-creation behavior.

1.3 Perceived marketplace influence

Social perception significantly influences judgment and behavior (Leary *et al.*, 2014). In the context of sustainable consumption, perceived marketplace influence refers to the belief that an individual's actions in the marketplace can affect the behavior of other consumers and organizations, motivating their own engagement (Leary and Vann, 2016). From the perspective of the SDL, when consumers recognize that their purchasing decisions can impact market trends and business practices, they are more inclined to engage actively in the development of services or products (Vargo and Lusch, 2004). This influence promotes behaviors including feedback provision, offering customization and codeveloping solutions, essential activities in value co-creation. Consequently, perceived marketplace influence is defined as customers' belief that their individual purchasing decisions and engagement behaviors, particularly toward products and services powered by GenAI, can influence how small and medium-sized enterprises (SMEs) design, produce and deliver their offerings. This construct reflects customers' perceived ability to shape marketplace outcomes by supporting technology-driven innovations that align with widely recognized principles of social responsibility, such as ethical use of AI, transparency, inclusivity and sustainability (Mohr *et al.*, 2001). Previous studies have established a positive correlation between perceived marketplace influence and customer engagement in the purchasing process of products or services beneficial to society and the environment (Leary *et al.*, 2014; Leary and Vann, 2016). Following the study of Batat and Hammedi (2023), customer perception of the significance of their input enhances motivation to participate in co-creation activities. This belief fosters proactive engagement, including the provision of reviews, feedback and interaction with AI tools that enhance products and services. As a result, we propose the following hypothesis:

H2. Perceived marketplace will be positively associated with customers' value co-creation behavior.

1.4 Value co-creation behavior

According to the S-D Logic proposed by Vargo and Lusch (2008), value is not inherent in the product but is cocreated through its utilization. In S-D logic, the roles of producers and consumers are indistinguishable, indicating that value is perpetually cocreated, collaboratively and reciprocally, in interactions between providers and beneficiaries through the amalgamation of resources and the utilization of competencies (Vargo *et al.*, 2008). This study demonstrates that value co-creation behavior, defined by customer engagement and interaction with GenAI systems, allows SMEs to provide personalized, contextually relevant services. The integration of human input and AI capabilities enhances the perceived value-in-use of the cocreated service experience (M. M. Li *et al.*, 2024). This aligns with S-D logic, which underscores that value is phenomenologically established in use and it illustrates how GenAI-enabled SMEs can flexibly modify offerings to meet specific customer requirements, resulting in emotional fulfillment, convenience and functional advantage (Grönroos and Voima, 2013). Customer participation in co-creation enhances the AI system's refinement and alignment with their preferences, thereby augmenting value-in-use, the subjective perception of benefit derived from using the service. As a result, we propose the following hypothesis:

H3. Value co-creation behavior will be positively associated with influences customers' value in use.

The concept of emotional well-being encompasses the degree to which customers encounter positive emotional experiences, like satisfaction, peace of mind, empowerment and trust (Uslu and Tosun, 2024), during and following their interactions with services or products provided by SMEs that incorporate GenAI technologies. In the context of GenAI adoption by SMEs, emotional well-being includes customers' perceptions of being supported, understood and valued through personalized, responsive and intelligent service experiences facilitated by AI (B. J. Kim and Lee, 2024). The investigation conducted by Zhou *et al.* (2024) in social commerce reveals the connection between value co-creation and emotional well-being. Furthermore, Uslu and Tosun (2024) demonstrate that value co-creation significantly enhances customer satisfaction and emotional well-being. As small and medium enterprises use GenAI to improve service delivery, incorporating elements like automated recommendations, virtual assistance or tailored interactions, customers might encounter emotional advantages such as decreased stress, heightened confidence in their decision-making and an enhanced feeling of connection or control. The emotional responses play a significant role in shaping overall subjective well-being and affect the perception of service value (Khan *et al.*, 2020). As a result, we propose the following hypothesis:

H4. Value co-creation behavior will be positively associated with influences customers' emotional well-being.

1.5 Social well-being perception

In the field of SMEs implementing GenAI, value-in-use can manifest through hyper-personalized services, rapid responses or astute recommendations that enhance customers' daily experiences (Rezazadeh *et al.*, 2025). When customers perceive that these AI-enhanced offerings fulfill their immediate needs while also fostering inclusivity, accessibility or environmental awareness, they are more inclined to associate these services with wider social advantages (El-Shihy *et al.*, 2024). This corresponds with SDL, which posits that value is not inherent in the product or service but is cocreated through its utilization (Vargo and Lusch, 2008). Consequently, when SMEs use GenAI to collaboratively generate value with customers, the perceived personal advantage may extend to perceptions of social welfare, including equity, community empowerment or diminished information asymmetry (Kot and Leszczyński, 2022). As the result, we propose the following hypothesis:

H5. Value-in-use will be positively associated with customers' perception of social well-being when engaging with GenAI-powered SMEs.

Within GenAI-enabled services offered by SMEs, customers may experience emotional relief due to ease of access, responsiveness and personalized attention, fostering a sense of being understood and valued (Modgil *et al.*, 2025). These emotional gains extend beyond the self, influencing perceptions of societal good. According to Lin Li *et al.* (2025), emotions from service experiences can inform broader judgments about fairness, societal benefit and collective progress. Hence, when customers feel emotionally supported by intelligent services, they may infer that these innovations contribute positively to societal well-being, promoting trust in technology's role in inclusive service delivery, equitable access and mental health support (B. J. Kim and Lee, 2024; Quaye *et al.*, 2024). Thus, emotional well-being can act as a precursor to heightened social well-being perception, reinforcing the belief

that such technologies advance community-level outcomes. We propose the following hypothesis:

- H6. Emotional well-being will be positively associated with customers' perception of social well-being when interacting with GenAI-powered SMEs.

Based on the hypothesis's development, the conceptual model has been presented in [Figure 2](#).

2. Methodology

This study's empirical data was gathered from users through a questionnaire consisting of two main sections. The initial section examines essential consumer demographics, including gender, age, education level, occupation and income level. Section 2 corresponds with the research model and includes six components. To ensure the effectiveness of all instruments, each construct was measured using multiple items ([Appendix 1](#)), all adapted from prior studies and modified to fit the context of GenAI use in SMEs. The questionnaire uses a seven-point Likert scale, from 1 (strongly disagree) to 7 (strongly agree), for the evaluation of all items. Value Co-creation Behavior items were derived from [Yi and Gong \(2013\)](#), emphasizing customer participation and feedback engagement. Value-in-use items are derived from the works of [Vargo and Lusch \(2008\)](#), highlighting both practical and affective utility. Emotional well-being was assessed by modifying items from [Uslu and Tosun \(2024\)](#), whereas the perception of social well-being was informed by contemporary frameworks in AI-enabled service research ([Colenberg et al., 2020](#); [Dey and Gibbon, 2017](#)). Perceived knowledge about GenAI in SMEs and perceived marketplace influence adapted from [Liao et al. \(2020\)](#) and [Joshi and Rahman \(2019\)](#), respectively. All items underwent pilot testing with 30 respondents to verify clarity and reliability prior to extensive distribution.

Partial least squares structural equation modeling (PLS-SEM) was used to evaluate the theoretical model presented in this study. The target population consisted of Vietnamese consumers who have engaged with or made purchases from SMEs using GenAI-powered services, such as AI chatbots, AI-generated content and AI-based personalization. Vietnam was selected as the research context because it represents one of Southeast Asia's most dynamic emerging economies, where SMEs account for over 97% of total enterprises and are rapidly adopting AI technologies to enhance service delivery and customer engagement

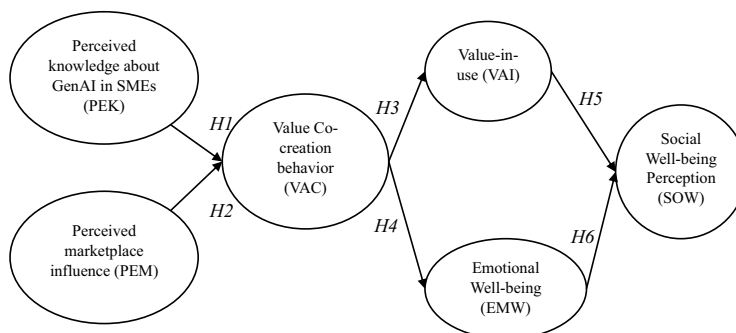


Figure 2. Conceptual model

Source: By authors

(Thi Viet and Nguyen, 2025). The Vietnamese government’s National Digital Transformation Program (2025–2030) has further accelerated the integration of AI and automation in SME operations, making the country an appropriate and theoretically relevant context to explore how GenAI-driven services influence customer perceptions, engagement and well-being (Jamie Nguyen, 2024; Phi Nhat, 2024). A purposive sampling method was used to recruit participants who possessed knowledge of or experience with GenAI in service contexts. Data were gathered using an online survey disseminated through social media platforms, professional networks and consumer forums centered on AI and digital innovation in Vietnam. Participants were required to meet the following criteria:

- be at least 18 years of age;
- have made a purchase from a small or medium-sized enterprise using AI technology within the past 12 months; and
- be residents of Vietnam.

The sample size emerged as a significant concern due to the application of structural equation modeling to evaluate the mentioned assumptions. G-power (version 3.1.9.7) determined that the minimum sample size necessary for PLS-SEM analysis is 102 (Duc et al., 2024; Phan et al., 2025). A total of 180 responses were obtained, fulfilling the minimum sample size requirement.

Prior to participation, all respondents were informed about the purpose of the study, the voluntary nature of participation and the confidentiality of their responses. Participants provided informed consent before completing the questionnaire and were informed that they could withdraw from the survey at any time. Ethical approval for this study was obtained from the university ethics review board prior to data collection.

The demographic details of the respondents are shown in Table 1. Of the respondents, 63.33% are women and 36.67% are men. The majority of responders (69.44%) were in the

Table 1. Demographics of the respondents

(n = 180)	Items	Frequency	%
Gender	Male	66	36.67
	Female	114	63.33
Age group	18–24 years	125	69.44
	25–35 years	39	21.67
	35–44 years	13	7.22
	45 years and above	3	1.67
Educational level	High school or below	4	2.22
	Vocational/college diploma	16	8.89
	Bachelor’s degree	131	72.28
Occupation	Postgraduate degree (Master’s/PhD)	29	16.11
	Student	40	37.22
	Office worker/employee	52	28.89
	Freelancer/business owner	67	37.22
	Government/public sector	21	11.67
Monthly income (VND) (VND 2.6 million = \$100, in April, 2025)	Less than 5 million VND	41	22.78
	5–10 million VND	5	2.78
	10–20 million VND	109	60.56
	More than 20 million VND	25	13.89

Source(s): By authors

18–24 age range. Furthermore, the majority are educated; almost 72.28% of them hold a bachelor's degree or higher. Most of them are working with more than 62.78% of respondents. A total of 77.22% of respondents claimed their monthly income is above 5 million.

3. Results and discussion

3.1 Measurement model assessment

Survey surveys may exhibit common method bias when the same person answers all questions (Podsakoff *et al.*, 2003). To reduce method bias, variables are randomly placed on questionnaire pages to reduce order effects and discourage respondents from detecting causal correlations (Hulland *et al.*, 2018). Two statistical analyses were undertaken to evaluate the severity of the common method bias. Using Harman's single factor test, the study found that a single common factor explained 42.597% of variation, which was below the 50% threshold (Ooi and Tan, 2016; Wang *et al.*, 2022; Wong *et al.*, 2023). We found that the variance inflation factor (VIF) of all variables in the research model ranged from 1.000 to 3.298. The VIF score below 3.3 shows no structural model collinearity (Hew *et al.*, 2020; Lim *et al.*, 2021; Yuan *et al.*, 2021).

Assessing Cronbach's alpha (α), item loading, composite reliability (CR) and average variance extracted (AVE) values determined the reliability and validity of the research variables. Table 2 demonstrates that all constructs have strong internal reliability, with Cronbach's α and CR exceeding the threshold of 0.7 (except PEK4 and PEM1, however, the AVE of PEK and PEM are 0.5 (Hair *et al.*, 2011; Tan and Ooi, 2018), the study still keeps these items). For convergent validity, we set a threshold of 0.7 item loading and AVE of 0.5. Table 2 also shows that all item loadings and constructs' AVE are above the indicated threshold values, indicating high convergent validity.

Researchers evaluate discriminant validity using the heterotrait-monotrait (HTMT) ratio (Henseler *et al.*, 2015). Table 3 reveals that the HTMT ratios of all constructs are below the acceptable threshold of 0.90. Results suggest our research model has strong discriminant validity.

3.2 Structural model assessment

A structural model analysis is performed to assess the research model's R^2 , Q^2 , f^2 and postulated path linkages. To measure the model's explanatory power, the determinant coefficient R^2 was assessed first. R^2 values of 0.236 indicate the model explains 23.6% of the variance in social well-being perception, showing acceptable explanatory power. The Stone–Geisser Q^2 value was derived using blindfolding to assess the model's predictive significance. Hair *et al.* (2014) found that the route model's prediction accuracy is satisfactory, as the Q^2 value of SOW is 0.196. This study assessed impact size f^2 using Cohen (2013) guidelines, including 0.02, 0.15 and 0.35 indicating small, medium and large effects. Tables 4 and 5 summarize tested determinant coefficient (R^2), predictive relevance (Q^2) and effect size (f^2). Research hypotheses are tested using SmartPLS 4.0 and PLS-SEM. To test the significance of path coefficients in the research model, we used the bootstrapping subsampling technique (5,000 subsamples). Table 6 and Figure 3 indicate that five of six hypotheses for direct effects are supported based on direct relationship test findings except $H6$. In particular, PEK ($\beta=0.490$, $t=6.557$, $p<0.001$) and PEM ($\beta=0.328$, $t=4.244$, $p<0.001$) significantly drive VAC, supporting $H1$ and $H2$. Moreover, VAC drives VAI ($\beta=0.749$, $t=14.507$, $p<0.001$) and EMW ($\beta=0.762$, $t=19.536$, $p<0.001$), supporting $H3$ and $H4$. Finally, VAI ($\beta=0.425$, $t=4.356$, $p<0.001$) substantially correlates with SOW, $H5$ is supported. However, EMW ($t=1.053$, $p>0.05$) unexpectedly correlated with SOW. So, $H6$ is not supported.

Table 2. Measurement model results

Constructs	Items	Loading	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
EMW	EMW1	0.912	0.941	0.943	0.955	0.811
	EMW2	0.915				
	EMW3	0.927				
	EMW4	0.910				
	EMW5	0.835				
PEK	PEK1	0.849	0.877	0.887	0.911	0.672
	PEK2	0.789				
	PEK3	0.847				
	PEK4	0.744				
	PEK5	0.864				
PEM	PEM1	0.928	0.922	0.923	0.945	0.811
	PEM2	0.920				
	PEM3	0.887				
	PEM4	0.865				
SOW	SOW1	0.777	0.873	0.926	0.911	0.719
	SOW2	0.843				
	SOW3	0.888				
	SOW4	0.879				
VAC	VAC1	0.794	0.875	0.879	0.909	0.668
	VAC2	0.749				
	VAC3	0.859				
	VAC4	0.830				
	VAC5	0.851				
VAI	VAI1	0.881	0.892	0.892	0.925	0.755
	VAI2	0.900				
	VAI3	0.869				
	VAI4	0.824				

Source(s): By authors

Table 3. HTMT 0.90

Constructs	EMW	PEK	PEM	SOW	VAC	VAI
EMW						
PEK	0.846					
PEM	0.803	0.873				
SOW	0.391	0.495	0.588			
VAC	0.838	0.850	0.794	0.498		
VAI	0.741	0.831	0.764	0.519	0.846	

Source(s): By authors

4. Discussion, theoretical and managerial implications, limitations and future research directions

4.1 Discussion

The structural model results support five of the six proposed hypotheses. For *H1*, the positive and significant relationship between perceived knowledge about GenAI and value co-creation behavior highlights that informed customers are more likely to engage

Table 4. R^2 , Q^2 results

Constructs	R^2 (explained variance)	Q^2 (predictive relevance)
EMW	0.581	0.595
SOW	0.236	0.196
VAC	0.601	0.585
VAI	0.562	0.538

Source(s): By authors**Table 5.** Effect size f^2

Constructs	EMW	PEK	PEM	SOW	VAC	VAI
EMW				0.005		
PEK					0.227	
PEM					0.101	
SOW						
VAC	1.387					1.281
VAI				0.127		

Source(s): By authors**Table 6.** Structural model results

Hypothesis	Path	Path coefficient (β)	T-value	p-values	Remarks
H1	PEK $\rightarrow$ VAC	0.490	6.557	0.000	Supported
H2	PEM $\rightarrow$ VAC	0.328	4.244	0.000	Supported
H3	VAC $\rightarrow$ VAI	0.749	14.507	0.000	Supported
H4	VAC $\rightarrow$ EMW	0.762	19.536	0.000	Supported
H5	VAI $\rightarrow$ SOW	0.425	4.356	0.000	Supported
H6	EMW $\rightarrow$ SOW	0.083	1.053	0.292	Unsupported

Source(s): By authors

in co-creation. This builds on prior research by [Fu et al. \(2025\)](#) and [Teng et al. \(2025\)](#), which primarily focused on the business side of GenAI adoption, by shifting attention toward customer engagement and agency. It also reinforces SDL, emphasizing that knowledge empowers consumers to become value cocreators ([Vargo and Lusch, 2008](#)). Similarly, *H2* supports the notion that perceived marketplace influence is positively associated with value co-creation behavior – an insight that extends beyond [Hammedi et al. \(2024\)](#), who focused on the voice of the consumer, by showing how normative beliefs about market impact can also drive participatory behavior. In line with previous literature emphasizing the experiential nature of value ([Grönroos and Voima, 2013](#)), *H3* confirms that value co-creation is positively associated with value-in-use. This result strengthens the understanding that collaborative interactions between customers and GenAI-enabled SMEs lead to enhanced personalized service outcomes. Furthermore, *H4* highlights the emotional benefits of co-creation, aligning with affective events theory ([Weiss and Cropanzano, 1996](#)) and extending the findings of [Kim \(2023\)](#), who observed emotional satisfaction in service innovation contexts, but without the GenAI lens. The

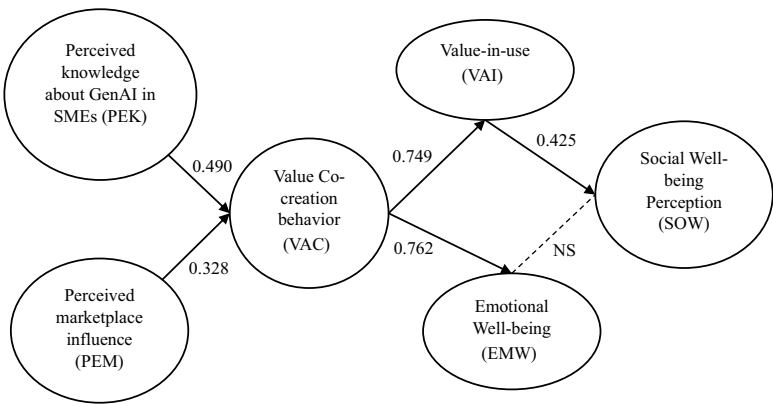


Figure 3. Structural model results
Source: By authors

relationship between value-in-use and social well-being offers a novel contribution by linking microlevel service outcomes with macrolevel societal perceptions, a connection that remains underexplored in GenAI literature (Creely and Blannin, 2025; Emerald Publishing, 2025). Finally, the results for *H6* indicate that emotional well-being is not positively associated with perceptions of social well-being, providing an interesting insight to the broader validation of SDG 3 (Good Health and Well-being) in AI-powered service contexts. While emotional well-being contributes to individual satisfaction and psychological fulfillment, its effect may not extend to how customers evaluate collective or societal well-being. This outcome could stem from measurement boundaries that capture primarily individual affective states rather than socially oriented outcomes, or from cultural tendencies that distinguish personal emotions from community-based judgments. It may also reflect a theoretical misalignment, as affective responses often occur at an individual level, whereas social well-being reflects evaluative, relational and ethical considerations. These findings suggest that SMEs should make their societal and community contributions more visible and explicitly connect personalized GenAI services with inclusive, transparent and socially responsible practices.

4.2 Theoretical contributions

This study makes several important contributions to the literature on GenAI, value co-creation and social impact within the context of SMEs. First, this study advances the social impact literature by providing empirical evidence on how customers experience and derive value from GenAI-enabled services. It establishes that social impact in AI-mediated SME contexts is not solely a technological outcome, but a human-centered process shaped by customer perceptions, engagement and co-creation behaviors (Baabdullah, 2024; Dwivedi et al., 2023). The findings show that GenAI can serve as a social enabler when customers perceive transparency, control and personalization, reinforcing the idea that responsible AI deployment in SMEs can enhance community trust and shared well-being. Second, by integrating perceived knowledge and perceived marketplace influence as antecedents of value co-creation, this study enriches SDL theory (Vargo and Lusch, 2004, 2008) with a dual-path cognitive–normative model that explains why customers engage with

GenAI-driven services. The results reveal that customers' sense of agency and understanding of AI functions jointly motivate participation in value creation, underscoring that value-in-use emerges through meaningful human and AI collaboration rather than technological automation alone (Simón *et al.*, 2024). Third, the nonsignificant relationship between emotional well-being and social well-being offers a nuanced theoretical contribution. It suggests that while GenAI interactions may enhance individual emotional satisfaction (e.g. personalization and convenience), they do not automatically translate into perceived social connectedness or collective benefit. This finding highlights a "human disconnect" in GenAI-mediated service encounters, where emotional gratification remains individual rather than communal, signaling a need for SMEs to design AI experiences that visibly foster inclusion, empathy and societal contribution (Lin Li *et al.*, 2025; Modgil *et al.*, 2025). Finally, drawing on the Yi and Gong (2013) co-creation framework, this study identifies that behaviors such as providing feedback, adapting preferences and cooperating with AI interfaces contribute more strongly to social well-being perceptions than mere information sharing. These behaviors embody the "human touch" in GenAI contexts, demonstrating that meaningful social value arises not from the algorithm itself, but from customers' willingness to humanize their interactions with AI-enabled services (Saha *et al.*, 2020; Simón *et al.*, 2024).

4.3 Practical implications

From a practical standpoint, the findings offer concrete guidance for SME service owners seeking to leverage GenAI for both business growth and positive social outcomes.

First, SMEs should proactively inform customers about how GenAI is used in their services, clarifying what the AI does, how it personalizes experiences and how data are protected. As demonstrated, higher perceived knowledge of GenAI increases customers' willingness to cocreate. Simple initiatives such as short explainer videos, transparent chatbot disclosures or interactive tutorials can enhance trust and engagement.

Second, among the four co-creation behaviors identified by Yi and Gong (2013), information sharing, responsible behavior, personal interaction and feedback provision, this study indicates that feedback provision and personal interaction most strongly contribute to customers perceived social well-being. SME owners should therefore design GenAI touchpoints that invite two-way dialogue, allow for feedback customization and promote human–AI collaboration rather than automation alone. For example, allowing customers to codesign product features or provide real-time feedback on AI recommendations can heighten feelings of inclusion and collective benefit.

Third, SMEs can strengthen customers' sense of agency by highlighting how their participation drives ethical, inclusive or sustainable outcomes. This can be achieved through participatory design platforms, social media acknowledgments of customer input or reward programs linked to socially responsible choices. When customers perceive that their actions shape business practices, they are more likely to sustain co-creation behaviors that foster shared well-being.

Finally, beyond efficiency, GenAI should be designed to serve human needs, emotional satisfaction, empathy and accessibility. Personalized recommendations, empathetic AI tone and multilingual or inclusive interfaces can promote emotional well-being, which in turn supports customers' perceptions of social value and fairness. To enhance the practical applicability of the findings, this study proposes a SME GenAI social impact implementation checklist (Appendix 2). The checklist translates the empirical findings into actionable managerial guidelines that help SME owners evaluate whether their GenAI-enabled services effectively support customer co-creation, emotional well-being and social impact outcomes. The framework is grounded in the study's core constructs, including perceived knowledge,

perceived marketplace influence, value co-creation behavior, value-in-use, emotional well-being and social well-being perception. The checklist can be used periodically as an internal monitoring and continuous improvement tool. In addition, policymakers and SME support organizations may adapt the framework into AI-readiness assessment programs, training workshops or digital transformation guidelines to promote responsible and socially beneficial GenAI adoption among SMEs.

Government agencies, chambers of commerce and industry associations can use these insights to create SME-friendly AI literacy programs and co-creation toolkits. Establishing clear ethical standards and community feedback channels will ensure that GenAI adoption aligns with national social and sustainability goals.

4.4 Limitations and future research directions

Despite its contributions, this study is not without limitations. First, the use of purposive sampling within the Vietnamese context, while appropriate for capturing insights from customers familiar with GenAI-enabled SME services, may constrain the generalizability of findings across different cultural or economic environments. Future research should expand the sampling scope to multiple regions or countries to validate the model's applicability and strengthen external validity. Second, the cross-sectional design limits the ability to infer causal relationships over time; hence, longitudinal or experimental approaches are recommended to examine how customer perceptions and value co-creation behaviors evolve with sustained engagement in GenAI-enabled services. Third, although demographic characteristics such as age, gender and education were reported, they were not included as control variables in the structural model to preserve theoretical parsimony. Future studies could incorporate these controls to test potential moderating effects and verify the robustness of the model across customer subgroups. Fourth, while the study integrated cognitive (perceived knowledge) and normative (marketplace influence) factors, it did not capture affective or relational dimensions such as trust in AI, perceived empathy or AI-human emotional alignment. Including these constructs could offer a more comprehensive understanding of how users emotionally and socially interact with GenAI-driven services. Fifth, the model focused primarily on customer-level perceptions and experiences, potentially overlooking the organizational and technological readiness of SMEs. Future research could adopt a dyadic perspective that considers firm-side capabilities and constraints to better reflect the multidimensional dynamics of value co-creation within AI-enhanced SME ecosystems. Sixth, the construct of perceived knowledge captures customers' subjective understanding of GenAI technologies rather than their actual expertise. While this perception is central to behavioral intention, discrepancies between perceived and actual knowledge could lead to ineffective or even counterproductive co-creation behaviors, particularly in high-stakes service contexts such as finance or healthcare. Future studies should therefore differentiate between perceived and objective knowledge to examine how knowledge accuracy moderates the quality and outcomes of co-creation across different types of GenAI-enabled services. Finally, although perceived marketplace influence was hypothesized to have a positive effect on value co-creation, its impact may not always be uniformly beneficial. Customer perceptions of influence may, under certain conditions, result in adverse outcomes, for example, when GenAI-generated outputs produce unanticipated errors that disadvantage either the customer or the SME. This suggests that the valence of marketplace influence is likely context-dependent, shaped by perceived fairness, transparency and alignment between customer and firm interests. Future research could adopt a more nuanced approach to explore the bidirectional nature of marketplace influence and its ethical implications in AI-mediated service interactions.

Declaration of generative AI and AI-assisted technologies in the manuscript preparation process

During the preparation of this work, the author(s) used ChatGPT-4 for editorial purposes, including grammar correction, language enhancement and improving the overall clarity of the manuscript. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the published article.

Journal of Social
Impact in
Business
Research

143

References

- Acar, O.A. (2024), "Commentary: reimagining marketing education in the age of generative AI", *International Journal of Research in Marketing*, Vol. 41 No. 3, pp. 489-495, doi: [10.1016/j.ijresmar.2024.06.004](https://doi.org/10.1016/j.ijresmar.2024.06.004).
- Amin, A. and Di Pietro, L. (2025), "Advancing social impact through corporate social innovation: a systematic literature review", *Journal of Social Impact in Business Research*, Vol. 1 No. 2, pp. 81-102, doi: [10.1108/JSIBR-11-2024-0053](https://doi.org/10.1108/JSIBR-11-2024-0053).
- Baabdullah, A.M. (2024), "Generative conversational AI agent for managerial practices: the role of IQ dimensions, novelty seeking and ethical concerns", *Technological Forecasting and Social Change*, Vol. 198, p. 122951, doi: [10.1016/j.techfore.2023.122951](https://doi.org/10.1016/j.techfore.2023.122951).
- Bandura, A. (1986), "Social foundations of thought and action: social cognitive theory", *Englewood Cliffs*, Prentice Hall, NJ.
- Batat, W. and Hammedi, W. (2023), "The extended reality technology (ERT) framework for designing customer and service experiences in phygital settings: a service research agenda", *Journal of Service Management*, Vol. 34 No. 1, pp. 10-33, doi: [10.1108/JOSM-08-2022-0289](https://doi.org/10.1108/JOSM-08-2022-0289).
- Cohen, J. (2013), "Statistical power analysis for the behavioral sciences", In *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed., Routledge, doi: [10.4324/9780203771587](https://doi.org/10.4324/9780203771587).
- Colenberg, S., Appel-Meulenbroek, R., Romero Herrera, N. and Keyson, D. (2020), "Conceptualizing social well-being in activity-based offices", *Journal of Managerial Psychology*, Vol. 36 No. 4, pp. 327-343, doi: [10.1108/JMP-09-2019-0529](https://doi.org/10.1108/JMP-09-2019-0529).
- Creely, E. and Blannin, J. (2025), "Creative partnerships with generative AI. Possibilities for education and beyond", *Thinking Skills and Creativity*, Vol. 56, doi: [10.1016/j.tsc.2024.101727](https://doi.org/10.1016/j.tsc.2024.101727).
- Dey, C. and Gibbon, J. (2017), "Moving on from scaling up: further progress in developing social impact measurement in the third sector", *Social and Environmental Accountability Journal*, Vol. 37 No. 1, pp. 66-72, doi: [10.1080/0969160X.2017.1285712](https://doi.org/10.1080/0969160X.2017.1285712).
- Duc, D.T.V., Mai, L.T.V., Dang, T.-Q., Le, T.-T. and Nguyen, L.-T. (2024), "Unlocking impulsive buying behavior in the metaverse commerce: a combined analysis using PLS-SEM and ANN", *Global Knowledge, Memory and Communication*, doi: [10.1108/GKMC-05-2024-0266](https://doi.org/10.1108/GKMC-05-2024-0266).
- Dwivedi, Y.K., Kshetri, N., Hughes, L., Slade, E.L., Jeyaraj, A., Kar, A.K., Baabdullah, A.M., Koohang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M.A., Al-Busaidi, A.S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., Wright, R. (2023), "So what if ChatGPT wrote it? Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy", *International Journal of Information Management*, Vol. 71, doi: [10.1016/j.ijinfomgt.2023.102642](https://doi.org/10.1016/j.ijinfomgt.2023.102642).
- El-Shihy, D.A.M., Abdelraouf, M., Hegazy, M. and Hassan, N.M. (2024), "The influence of AI chatbots in fintech services on customer loyalty within the banking industry", *Future of Business Administration*, Vol. 3 No. 1, pp. 16-28, doi: [10.33422/fba.v3i1.644](https://doi.org/10.33422/fba.v3i1.644).
- Emerald Publishing (2025), "Harnessing the power of generative AI for small business to create social impact: enablers and barriers", available at: www.emeraldgrouppublishing.com/calls-for-papers/harnessing-power-generative-ai-textsc-business-create-social-impact-enablers-and

- European Commission (2021), "DocsRoom – European commission", available at: <https://ec.europa.eu/docsroom/documents/47335>
- Fu, B., Hadid, A. and Damer, N. (2025), "Generative AI in the context of assistive technologies: Trends, limitations and future directions", *Image and Vision Computing*, Vol. 154, doi: [10.1016/j.imavis.2024.105347](https://doi.org/10.1016/j.imavis.2024.105347).
- Gemma Iso (2025), "Small businesses betting big on gen AI – 7 in 10 SMEs invest to stay competitive", available at: <https://theindependent.sg/small-businesses-betting-big-on-gen-ai-7-in-10-smes-invest-to-stay-competitive>
- Grönroos, C. and Voima, P. (2013), "Critical service logic: making sense of value creation and co-creation", *Journal of the Academy of Marketing Science*, Vol. 41 No. 2, pp. 133-150, doi: [10.1007/s11747-012-0308-3](https://doi.org/10.1007/s11747-012-0308-3).
- Hair, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2014), "A primer on partial least squares structural equation modeling", *Long Range Planning*, Vol. 46 Nos 1-2, pp. 184-185, doi: [10.1016/j.lrp.2013.01.002](https://doi.org/10.1016/j.lrp.2013.01.002).
- Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011), "PLS-SEM: indeed a silver bullet", *Journal of Marketing Theory and Practice*, Vol. 19 No. 2, pp. 139-152, doi: [10.2753/MTP1069-6679190202](https://doi.org/10.2753/MTP1069-6679190202).
- Hammedi, W., Parkinson, J. and Patrício, L. (2024), "SDG commentary: services that enable well-being of the human species", *Journal of Services Marketing*, Vol. 38 No. 2, pp. 153-163, doi: [10.1108/JSM-09-2023-0324](https://doi.org/10.1108/JSM-09-2023-0324).
- Hasan, M.M., Chang, Y., Lim, W.M., Kalam, A. and Shamim, A. (2024), "A social cognitive theory of customer value co-creation behavior: evidence from healthcare", *Journal of Health Organization and Management*, Vol. 38 No. 9, doi: [10.1108/JHOM-02-2024-0074](https://doi.org/10.1108/JHOM-02-2024-0074).
- Henseler, J., Ringle, C.M. and Sarstedt, M. (2015), "A new criterion for assessing discriminant validity in variance-based structural equation modeling", *Journal of the Academy of Marketing Science*, Vol. 43 No. 1, pp. 115-135.
- Hew, J.J., Wong, L.W., Tan, G.W.H., Ooi, K.B. and Lin, B. (2020), "The blockchain-based halal traceability systems: a hype or reality?", *Supply Chain Management: An International Journal*, Vol. 25 No. 6, doi: [10.1108/SCM-01-2020-0044](https://doi.org/10.1108/SCM-01-2020-0044).
- Hulland, J., Baumgartner, H. and Smith, K.M. (2018), "Marketing survey research best practices: evidence and recommendations from a review of JAMS articles", *Journal of the Academy of Marketing Science*, Vol. 46, pp. 92-108, doi: [10.1007/s11747-017-0532-y](https://doi.org/10.1007/s11747-017-0532-y).
- Joshi, Y. and Rahman, Z. (2019), "Consumers' sustainable purchase behaviour: modeling the impact of psychological factors", *Ecological Economics*, Vol. 159, pp. 235-243, doi: [10.1016/j.ecolecon.2019.01.025](https://doi.org/10.1016/j.ecolecon.2019.01.025).
- Khan, I., Hollebeek, L.D., Fatma, M., Islam, J.U. and Riivits-Arkonsuo, I. (2020), "Customer experience and commitment in retailing: does customer age matter?", *Journal of Retailing and Consumer Services*, Vol. 57, doi: [10.1016/j.jretconser.2020.102219](https://doi.org/10.1016/j.jretconser.2020.102219).
- Kim, B.J. and Lee, J. (2024), "The mental health implications of artificial intelligence adoption: the crucial role of self-efficacy", *Humanities and Social Sciences Communications*, Vol. 11 No. 1, doi: [10.1057/s41599-024-04018-w](https://doi.org/10.1057/s41599-024-04018-w).
- Kim, M. (2023), "What is generative AI?", IBM Research, available at: <https://research.ibm.com/blog/what-is-generative-AI>
- Kot, M. and Leszczyński, G. (2022), "AI-activated value co-creation. An exploratory study of conversational agents", *Industrial Marketing Management*, Vol. 107, pp. 287-299, doi: [10.1016/j.indmarman.2022.10.013](https://doi.org/10.1016/j.indmarman.2022.10.013).
- Leary, R.B. and Vann, R.J. (2016), "Perceived marketplace influence and sustainable consumption: does what we do matter?", in Kim, K.K. (Ed.), *Celebrating America's Pastimes: Baseball, Hot Dogs, Apple Pie and Marketing?*, Springer International Publishing, p. 879.

- Leary, R.B., Vann, R.J., Mittelstaedt, J.D., Murphy, P.E. and Sherry John, F. (2014), "Changing the marketplace one behavior at a time: perceived marketplace influence and sustainable consumption", *Journal of Business Research*, Vol. 67 No. 9, pp. 1953-1958, doi: [10.1016/j.jbusres.2013.11.004](https://doi.org/10.1016/j.jbusres.2013.11.004).
- Li, L., Yu, M., Choi, H.-S.C. and Lee, H. (2025), "Exploring the psychological benefits of value co-creation in tourism: enhancing hedonic and eudaimonic well-being through empowerment, social connectedness, and positive emotions", *Journal of Vacation Marketing*, p. 13567667251320112, doi: [10.1177/13567667251320111](https://doi.org/10.1177/13567667251320111).
- Li, M.M., Reinhard, P., Peters, C., Oeste-Reiss, S. and Leimeister, J.M. (2024), "A value Co-Creation perspective on data labeling in hybrid intelligence systems: a design study", *Information Systems*, Vol. 120, doi: [10.1016/j.is.2023.102311](https://doi.org/10.1016/j.is.2023.102311).
- Li, S., Peng, G., Xing, F., Zhang, J. and Zhang, B. (2021), "Value co-creation in industrial AI: the interactive role of B2B supplier, customer and technology provider", *Industrial Marketing Management*, Vol. 98, pp. 105-114, doi: [10.1016/j.indmarman.2021.07.015](https://doi.org/10.1016/j.indmarman.2021.07.015).
- Liao, C., Yu, H. and Zhu, W. (2020), "Perceived knowledge, coping efficacy and consumer consumption changes in response to food recall", *Sustainability (Switzerland)*, Vol. 12 No. 7, doi: [10.3390/su12072696](https://doi.org/10.3390/su12072696).
- Lim, A.F., Lee, V.H., Foo, P.Y., Ooi, K.B. and Wei-Han Tan, G. (2021), "Unfolding the impact of supply chain quality management practices on sustainability performance: an artificial neural network approach", *Supply Chain Management*, doi: [10.1108/SCM-03-2021-0129](https://doi.org/10.1108/SCM-03-2021-0129).
- Mae Anderson (2024), "Almost all small businesses are using a software tool that is enabled by GenAI", available at: <https://apnews.com/article/small-business-artificial-intelligence-productivity-f6fa7b2a1ce0a9f2e5b8b48670b3098a>
- Modgil, S., Gupta, S., Kar, A.K. and Tuunanen, T. (2025), "How could generative AI support and add value to non-technology companies – a qualitative study", *Technovation*, Vol. 139, doi: [10.1016/j.technovation.2024.103124](https://doi.org/10.1016/j.technovation.2024.103124).
- Mohr, L.A., Webb, D.J. and Harris, K.E. (2001), "Do consumers expect companies to be socially responsible? The impact of corporate social responsibility on buying behavior", *Journal of Consumer Affairs*, Vol. 35 No. 1, pp. 45-72, doi: [10.1111/j.1745-6606.2001.tb00102.x](https://doi.org/10.1111/j.1745-6606.2001.tb00102.x).
- Nadeem, W., Tan, T.M., Tajvidi, M. and Hajli, N. (2021), "How do experiences enhance brand relationship performance and value co-creation in social commerce? The role of consumer engagement and self brand-connection", *Technological Forecasting and Social Change*, Vol. 171, p. 120952, doi: [10.1016/j.techfore.2021.120952](https://doi.org/10.1016/j.techfore.2021.120952).
- Nguyen, J. (2024), "AI will change the game of tech business in Vietnam by 2024", E27, available at: <https://e27.co/ai-will-change-the-game-of-tech-business-in-vietnam-by-2024-this-is-what-you-need-to-know-about-it-20240304/>
- OECD (2023), "Digitalisation of SMEs", available at: www.oecd.org/en/topics/digitalisation-of-smes.html
- Ooi, K.B. and Tan, G.W.H. (2016), "Mobile technology acceptance model: an investigation using mobile users to explore smartphone credit card", *Expert Systems with Applications*, Vol. 59, doi: [10.1016/j.eswa.2016.04.015](https://doi.org/10.1016/j.eswa.2016.04.015).
- Phan, L.-G.N., Tri, D.Q., Dang, S.-H. and Nguyen, L.-T. (2025), "Hooked on livestreaming: What drives customer repurchase intention in E-Commerce?", *Journal of Creative Communications*, Vol. 21 No. 1, doi: [10.1177/09732586241311001](https://doi.org/10.1177/09732586241311001).
- Phi Nhat (2024), "Vietnam innovation challenge 2024: sparking innovation for semiconductor and AI industries", Hanoi Times, available at: <https://hanoitimes.vn/vietnam-innovation-challenge-2024-sparking-innovation-for-semiconductor-and-ai-industries-326360.html>
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *In Journal of Applied Psychology*, Vol. 88 No. 5, doi: [10.1037/0021-9010.88.5.879](https://doi.org/10.1037/0021-9010.88.5.879).

- Quaye, J.N.A., Halsall, J.P., Winful, E.C., Snowden, M., Opuni, F.F., Hyams-Ssekasi, D., Afriyie, E.O., Opoku-Asante, K., Ocloo, E.C. and Fairhurst, B. (2024), "Social enterprises and the sustainable development goals (SDGs): a means to an end", *Environment, Development and Sustainability*, Vol. 28 No. 4, doi: [10.1007/s10668-024-05359-x](https://doi.org/10.1007/s10668-024-05359-x).
- Ranjan, K.R. and Read, S. (2016), "Value co-creation: concept and measurement", *Journal of the Academy of Marketing Science*, Vol. 44 No. 3, pp. 290-315, doi: [10.1007/s11747-014-0397-2](https://doi.org/10.1007/s11747-014-0397-2).
- Rezazadeh, A., Kohns, M., Bohnsack, R., António, N. and Rita, P. (2025), "Generative AI for growth hacking: how startups use generative AI in their growth strategies", *Journal of Business Research*, Vol. 192, doi: [10.1016/j.jbusres.2025.115320](https://doi.org/10.1016/j.jbusres.2025.115320).
- Saha, V., Mani, V. and Goyal, P. (2020), "Emerging trends in the literature of value co-creation: a bibliometric analysis", *Benchmarking: An International Journal*, Vol. 27 No. 3, pp. 981-1002, doi: [10.1108/BIJ-07-2019-0342](https://doi.org/10.1108/BIJ-07-2019-0342).
- Simón, C., Revilla, E. and Jesús Sáenz, M. (2024), "Integrating AI in organizations for value creation through human-AI teaming: a dynamic-capabilities approach", *Journal of Business Research*, Vol. 182, doi: [10.1016/j.jbusres.2024.114783](https://doi.org/10.1016/j.jbusres.2024.114783).
- Tan, G.W.H. and Ooi, K.B. (2018), "Gender and age: do they really moderate mobile tourism shopping behavior?", *Telematics and Informatics*, Vol. 35 No. 6, doi: [10.1016/j.tele.2018.04.009](https://doi.org/10.1016/j.tele.2018.04.009).
- Teng, D., Ye, C. and Martinez, V. (2025), "Gen-AI's effects on new value propositions in business model innovation: evidence from information technology industry", *Technovation*, Vol. 143, doi: [10.1016/j.technovation.2025.103191](https://doi.org/10.1016/j.technovation.2025.103191).
- Thi Viet, D.D. and Nguyen, L.-T. (2025), "Unveiling the impact of big data and predictive analytics adoption on sustainable supply chain management: an employee-centric perspective", *SAGE Open*, Vol. 15 No. 3, doi: [10.1177/21582440251363128](https://doi.org/10.1177/21582440251363128).
- Uslu, A. and Tosun, P. (2024), "Tourist personality, value co-creation, and emotional well-being", *International Journal of Consumer Studies*, Vol. 48 No. 1, doi: [10.1111/ijcs.12995](https://doi.org/10.1111/ijcs.12995).
- Vargo, S.L. and Lusch, R.F. (2004), "Evolving to for logic marketing", *The Journal of Marjeting*, Vol. 68 No. 1, pp. 1-17, doi: [10.1300/J047v07n04_02](https://doi.org/10.1300/J047v07n04_02).
- Vargo, S.L. and Lusch, R.F. (2008), "Service-dominant logic: continuing the evolution", *Journal of the Academy of Marketing Science*, Vol. 36 No. 1, pp. 1-10, doi: [10.1007/s11747-007-0069-6](https://doi.org/10.1007/s11747-007-0069-6).
- Vargo, S.L., Maglio, P.P. and Akaka, M.A. (2008), "On value and value co-creation: a service systems and service logic perspective", *European Management Journal*, Vol. 26 No. 3, pp. 145-152, doi: [10.1016/j.emj.2008.04.003](https://doi.org/10.1016/j.emj.2008.04.003).
- Wang, G., Tan, G.W.H., Yuan, Y., Ooi, K.B. and Dwivedi, Y.K. (2022), "Revisiting TAM2 in behavioral targeting advertising: a deep learning-based dual-stage SEM-ANN analysis", *Technological Forecasting and Social Change*, Vol. 175, p. 121345, doi: [10.1016/j.techfore.2021.121345](https://doi.org/10.1016/j.techfore.2021.121345).
- Weiss, H.M. and Cropanzano, R. (1996), "Affective events theory: a theoretical discussion of the structure, causes and consequences of affective experiences at work", in Staw, B.M. and Cummings, L.L. (Eds), *Research in Organizational Behavior: An Annual Series of Analytical Essays and Critical Reviews*, Elsevier Science/JAI Press, Vol. 18, pp. 1-74.
- Wilcock, A., Pun, M., Khanona, J. and Aung, M. (2004), "Consumer attitudes, knowledge and behaviour: a review of food safety issues", *In Trends in Food Science and Technology*, Vol. 15 No. 2, pp. 56-66, doi: [10.1016/j.tifs.2003.08.004](https://doi.org/10.1016/j.tifs.2003.08.004).
- Wong, L.W., Tan, G.W.H., Ooi, K.B. and Dwivedi, Y. (2023), "The role of institutional and self in the formation of trust in artificial intelligence technologies", *Internet Research*, Vol. 33 No. 1, doi: [10.1108/INTR-07-2021-0446](https://doi.org/10.1108/INTR-07-2021-0446).
- Yi, Y. and Gong, T. (2013), "Customer value co-creation behavior: scale development and validation", *Journal of Business Research*, Vol. 66 No. 9, pp. 1279-1284, doi: [10.1016/J.JBUSRES.2012.02.026](https://doi.org/10.1016/J.JBUSRES.2012.02.026).

Yoon, S.H., Yang, S.B. and Lee, S.H. (2025), "Comprehensive examination of the bright and dark sides of generative AI services: a mixed-methods approach", *Electronic Commerce Research and Applications*, Vol. 70, doi: [10.1016/j.elerap.2025.101491](https://doi.org/10.1016/j.elerap.2025.101491).

Yuan, Y.P., Wei-Han Tan, G., Ooi, K.B. and Lim, W.L. (2021), "Can COVID-19 pandemic influence experience response in mobile learning? ", *Telematics and Informatics*, Vol. 64, p. 101676, doi: [10.1016/j.tele.2021.101676](https://doi.org/10.1016/j.tele.2021.101676).

Zhou, Y., Kumar, S. and Furuoka, F. (2024), "Enhancing customer value co-creation and stickiness in social commerce: integrating PLS-SEM and NCA for deeper insights into customer-to-customer dynamics", *Humanities and Social Sciences Communications*, Vol. 11 No. 1, doi: [10.1057/s41599-023-02586-x](https://doi.org/10.1057/s41599-023-02586-x).

Zhu, O.Y. and Dolnicar, S. (2025), "Achieving social impact through business research aimed at contributing to climate change mitigation", *Journal of Social Impact in Business Research*, Vol. 1 No. 2, pp. 55-71, doi: [10.1108/JSIBR-11-2024-0047](https://doi.org/10.1108/JSIBR-11-2024-0047).

Appendix 1

Table A1. Measurement items

Constructs	Items	References
Perceived knowledge about GenAI in SMEs (PEK)	PEK1: I understand that SMEs use GenAI to enhance product and service personalization	Liao <i>et al.</i> (2020)
	PEK2: I am aware that SMEs adopt GenAI to improve customer service and response speed	
	PEK3: I know that GenAI helps SMEs reduce operational costs and optimize business efficiency	
	PEK4: I believe that SMEs use GenAI responsibly to protect customer data and privacy	
	PEK5: I feel confident in my understanding of how GenAI technologies are used by SMEs in service delivery	
Perceived marketplace influence (PEM)	PEM1: I believe that by choosing GenAI-powered services from SMEs, I can influence others in my community to do the same	Joshi and Rahman (2019)
	PEM2: My decisions to support GenAI-powered SMEs can shape how other businesses offer smarter, more personalized services	
	PEM3: If I continue using GenAI-enhanced services, more companies will adopt this technology to improve customer experiences	
	PEM4: I feel that my support for GenAI-powered SMEs encourages innovation and responsible technology use in the market	
Value co-creation behavior (VAC)	VAC1: I actively participate in improving the service I receive from SMEs using AI	Yi and Gong (2013)
	VAC2: I provide feedback to help the business enhance its AI-powered services	
	VAC3: I share ideas or suggestions on how AI features can better serve my needs	
	VAC4: I collaborate with GenAI-powered businesses by personalizing service options for myself	
Value-in-use (VAI)	VAI1: Using AI-powered services from SMEs improves my daily convenience	Vargo and Lusch (2008)
	VAI2: The AI-enhanced services provide meaningful benefits for my lifestyle	
	VAI3: I feel the service is more useful because of the AI features it offers	
	VAI4: AI-powered services help me achieve better outcomes than traditional services	
Emotional well-being (EWB)	EWB1: Using this GenAI-powered service made me feel that I contributed something meaningful to my happiness	Uslu and Tosun (2024)
	EWB2: This GenAI-powered service helped satisfy my personal needs and expectations	
	EWB3: I believe this service experience was emotionally beneficial to me	
	EWB4: I feel emotionally uplifted after using this GenAI-powered service	
	EWB5: This service made me feel that I did something good for myself	

(continued)

Table A1. Continued

Constructs	Items	References
Social well-being perception (SOW)	SOW1: I believe the use of AI makes services more accessible and inclusive for everyone	Colenberg <i>et al.</i> (2020) and Dey and Gibbon (2017)
	SOW2: I feel that businesses using AI are more socially responsible	
	SOW3: I appreciate AI features that help underserved or vulnerable customers (e.g. language support, mental health support)	
	SOW4: I believe that GenAI adoption by SMEs contributes to a fairer society by addressing social needs through innovative services	

Table A2. SME GenAI Social impact implementation checklist

Strategic area	Managerial action	Example implementation	Self-assessment (✓)	Readiness score (1–5)
Customer AI transparency	Clearly explain how GenAI is used in services	Chatbot disclosure, AI usage notice, FAQ section	☐	–
Customer AI literacy	Educate customers about AI personalization and data usage	Short tutorial videos and onboarding guides	☐	–
Human–AI interaction	Maintain human support alongside AI systems	Human escalation option in chatbot	☐	–
Feedback co-creation	Enable customers to provide real-time AI feedback	“Was this recommendation useful?” button	☐	–
Participatory service design	Involve customers in improving AI-driven services	Customer voting for new AI features	☐	–
Ethical AI practices	Communicate fairness, privacy and responsible AI use	Data protection statement, ethical AI policy	☐	–
Emotional well-being support	Design empathetic and user-friendly AI interactions	Friendly conversational tone, personalized support	☐	–
Inclusive accessibility	Ensure AI services are accessible to diverse users	Multilingual interface, disability-friendly design	☐	–
Social value communication	Highlight how customer participation contributes to social outcomes	Sustainability badges, community impact reporting	☐	–
Community engagement	Foster customer communities around AI-enabled services	Online customer forums, co-creation campaigns	☐	–

Source(s): Created by authors

Managerial interpretation guide: SME managers can use this checklist as a practical self-assessment tool to evaluate the social readiness of their GenAI-enabled services. Each item should be scored on a five-point scale, where 1 indicates “not implemented” and 5 indicates “fully implemented and consistently practiced.” A total score between 40 and 50 suggests a highly developed human-centered GenAI strategy with strong social impact orientation. Scores between 25 and 39 indicate moderate readiness, where AI systems support customer engagement but still require improvements in transparency, empathy or participatory design. Scores below 25 suggest that GenAI adoption remains primarily technology-driven and may not yet generate meaningful social well-being outcomes for customers. The checklist can also function as a continuous improvement framework. SME managers may conduct periodic evaluations (e.g. quarterly or

biannually) to monitor whether their AI-enabled services increasingly promote customer trust, co-creation, inclusiveness and perceived social value. In addition, policymakers, chambers of commerce and SME support agencies may adapt this framework into training programs or AI-readiness toolkits to encourage responsible and socially sustainable GenAI adoption among SMEs.

Corresponding author

Garry Wei-Han Tan can be contacted at: garrytanweihan@gmail.com