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Digital Engagement and Firm Profitability: An Empirical Investigation of Thai Large Hotels

กลยุทธ์การมีส่วนร่วมทางดิจิทัลและความสามารถในการทำกำไรขององค์กร: หลักฐานเชิงประจักษ์จากธุรกิจโรงแรมขนาดใหญ่ในประเทศไทย

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Abstract

This study examines the effect of digital engagement on firm profitability, with firm-consumer exchange and service innovation as mediators, and technology orientation as a moderator. Data were gathered from a census of 506 large hotels in Thailand with 132 usable responses resulting in multiple regression hypothesis tests. Results of data analyses indicate that higher levels of digital engagement positively influence firm-consumer exchange, service innovation, and profitability. However, technology orientation does not moderate the link between digital engagement and its outcomes, but it gives strength to the relationship between firm-consumer exchange and profitability. This study enhances service industry knowledge by illuminating how digital engagement can drive key business results. firms are encouraged to develop customer-centric digital strategies and use technology to drive engagement, innovation, and long-term profitability. Longitudinal designs, as well as broader contexts, will be important for future research.

Keywords: Digital Engagement, Firm-Consumer Exchange, Service Innovation, Technology Orientation, Firm Performance

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาผลของกลยุทธ์การมีส่วนร่วมทางดิจิทัลต่อความสามารถในการทำกำไรขององค์กร โดยมีการแลกเปลี่ยนข้อมูลระหว่างองค์กรและผู้บริโภคและนวัตกรรมบริการเป็นตัวกลาง และการมุ่งเน้นทางเทคโนโลยีเป็นตัวแปรแทรก ข้อมูลถูกรวบรวมจากแบบสอบถามทางไปรษณีย์จากโรงแรมขนาดใหญ่ในประเทศไทย 506 แห่ง ได้ผลตอบกลับที่ใช้ได้จำนวน 132 ชุด และวิเคราะห์ด้วยการถดถอยพหุคูณ ผลการวิจัยพบว่า การมีส่วนร่วมทางดิจิทัลส่งผลเชิงบวกต่อการแลกเปลี่ยนข้อมูลกับผู้บริโภค นวัตกรรมบริการ และความสามารถในการทำกำไร ขณะที่การมุ่งเน้นทางเทคโนโลยีไม่ส่งผลกำกับต่อความสัมพันธ์ระหว่างการมีส่วนร่วมทางดิจิทัลกับผลลัพธ์โดยตรง แต่กลับเสริมความสัมพันธ์ระหว่างการแลกเปลี่ยนข้อมูลกับความสามารถในการทำกำไร งานวิจัยนี้ช่วยเสริมองค์ความรู้ในภาคบริการ โดยเน้นให้เห็นว่าการมีส่วนร่วมทางดิจิทัลสามารถยกระดับประสิทธิภาพธุรกิจผ่านการสร้างนวัตกรรม การเชื่อมโยงผู้บริโภค และการเติบโตอย่างยั่งยืน องค์กรควรมุ่งเน้นกลยุทธ์ดิจิทัลที่ยึดผู้บริโภคเป็นศูนย์กลาง พร้อมใช้เทคโนโลยีเพื่อเพิ่มพูนการมีส่วนร่วมและผลลัพธ์ทางธุรกิจอย่างเป็นระบบ สำหรับอนาคต ควรมีการศึกษาในระยะยาว และขยายไปยังบริบทอุตสาหกรรมและพื้นที่อื่นเพื่อเพิ่มความครอบคลุมและลึกซึ้งทางวิชาการ

คำสำคัญ: กลยุทธ์การมีส่วนร่วมทางดิจิทัล, การแลกเปลี่ยนข้อมูลระหว่างองค์กรและผู้บริโภค, นวัตกรรมการบริการ, การมุ่งเน้นด้านเทคโนโลยี, ความสามารถในการทำกำไร

Introduction

Internet technology has completely transformed the contemporary lifestyles by changing the way people come to communicate and interact amongst themselves. With a huge rate of internet users inclusive of the seamless connectivity, user friendliness platforms and instant accessibility, internet technology has become the most widely utilized tools all over the world, changing the traditional way of communication (Fagua & Pacheco, 2020). This changing digital context has increased the pressure on firms to leverage these technologies to create a level of engaging experiences, foster innovation, and sustainably grow their businesses.

Digital engagement is a growing mechanism that transforms by acting as a real time connection mechanism for both firms and consumers by means of social media, blogs, and websites. It is defined as consumer participation in activities such as liking, sharing, commenting, and co-creating brand content. Digital engagement creates a collaborative value creation and enforces the firm–customer connection (Drummond et al., 2020). Grounded in Service-Dominant Logic (SDL), digital engagement is associated with the co-creation of value through the mutual integration of complementary resources and benefits, thereby enabling firms to better satisfy customer needs, design their offerings, and build trust and loyalty (Frooghi & Rashidi, 2019).

Digital engagement is clearly strategic at three key business layers, namely the firm-consumer exchange, service innovation and profitability. Exchange between firm and consumer leads to mutual understanding with firms able to glean insights that inform product and service development (Farha et al., 2022). Allowing for customer feedback and collaborations, service innovations use innovative problem-solving approaches and operational efficiency to push innovation beyond their traditional boundaries (Silva et al., 2024). In addition, digital engagement reinforces revenues, minimizes costs through co-creation programs, and increases customer retention and advocacy (Sashi et al., 2019). Technology orientation also acts as a key enabler of integration of cutting-edge tools, such as big data analytics and real time communication platforms, amplifying these outcomes. Furthermore, these technologies maximize productivity and value of digital engagement strategies (Binsaeed et al., 2023) However, the moderating impact of technology orientation has relatively not been investigated, especially in emerging economies, where digital transformation is still not mature enough.

The purpose of this study is to investigate the impact of digital engagement on firm profitability via their mediating influences of firm-consumer exchange and service innovation. Also, it explores the moderating impact of the technology orientation that helps in understanding how firms can align their digital engagement strategies with their technological capabilities. This study provides useful insight through empirical evidence collected from large hotels in Thailand, demonstrating how digital engagement and technology orientation can be leveraged for competitive advantage in a dynamic business environment.

Research Objective

The main objective of this research is to examine the influence of digital engagement on firm profitability. In addition, the specific objectives are as follows: A) To examine the influences of digital engagement on firm-consumer exchange, service innovation, and firm profitability; B) To examine the influences of firm-consumer exchange on service innovation; C) To examine the influences of firm-consumer exchange and service innovation on firm profitability; and D) To examine the moderating effects of technology orientation on the research relationships.

Literature Review

In this study, the effects of digital engagement on firm profitability are empirically investigated. Based on Service-Dominant Logic (SDL), value is co-created by interactions between firms and other stakeholders in which value is created by integrating resources among the parties and creates mutual benefits for each other (Frooghi & Rashidi, 2019). This study posits that digital engagement plays a very important role as a key mechanism that facilitates firm-consumer exchange and service innovation so that firms are able to cope with dynamic changes of market conditions and customer needs in a timely manner. Moreover, technology orientation is developed as a moderator by enhancing the efficiency and effectiveness of these interactions, as well as the profitability of the firm via higher customer satisfaction, retention, and operational efficiency. The hypothesized relationships are presented in Figure 1.

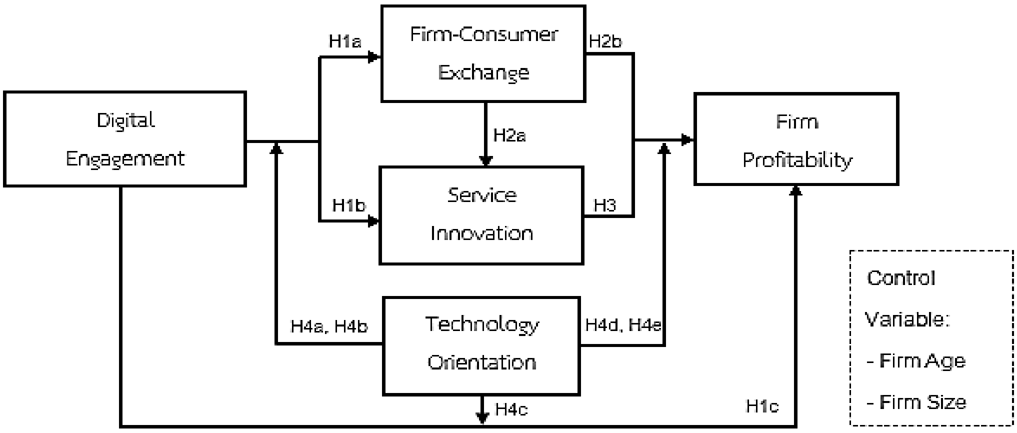

Figure 1 The Conceptual Model of Digital Engagement - Firm Profitability Relationships

Digital Engagement (DEG)

In this study, digital engagement refers to the real-time interaction between firms and consumers on online platforms like social media, websites, and blogs where consumers engage actively by liking, commenting, and sharing, as well as creating content in reaction to nonexclusive posts (Drummond et al., 2020). This interaction enables the firms to have a collaborative exchange of information and value to bridge the gap between firms and their customers. Digital engagement contributes significant consequences for firms, including firm-consumer exchange, service innovation, and firm profitability. Firstly, effective digital engagement translates to firm-consumer exchange. It is a critical outcome that involves real-time interactions and engaging exchanges between firms and their customers. Firms can use online networks and web platforms to create flexible ways of sharing information with others. In this process, firms' can quickly address customer needs, refine their offerings, and gain customers' trust through collaborative interactions (Guo et al., 2020). Secondly, service innovation occurs through digital engagement where real-time consumer feedback and co-creation are enabled. Through digital platforms, firms acquire feedback and learnings that help them improve their offerings according to customer expectations (Plangger et al., 2023). Thus, service innovation becomes a key outcome of effective digital engagement, as this interaction helps collaborate, break down traditional barriers, and expedite creative solutions (Silva et al., 2024). Lastly, digital engagement can lead to higher revenue and lower costs, which improves firm profitability. Brand awareness and customer purchase choices expand from actions such as recommendations, electronic word of mouth, and content distribution to generate increased sales and maintain customer loyalty. The digital platform lets customers work together with companies to shape products while smoothing marketing and bringing down inefficient processes. Firms develop trust-based digital connections with customers to maintain steady revenue streams that results in better profit outcomes. (Sashi et al., 2019). Therefore,

Hypothesis 1: Digital engagement has positive effect on (a) firm-consumer exchange, (b) service innovation, and (c) firm profitability.

Firm-Consumer Exchange (FCE)

The firm-customer exchange is a bi-directional flow of information and interactivity between a firm and its customer during which each party shares, receives and utilizes information in creating reciprocal value. Communication consists of both the processes that enable the exchange of customer insights, feedback, and expectations, as well as the results of these processes, which are the customer understanding and the customer preferences (Busagara, 2024). Through firm-consumer exchange, firms benefit by acquiring a wealth of information about the wants and needs of the customer, enhancing their ideas and service offerings (Farha et al., 2022). In the hotel sector, studies have pointed out that effective information exchange leads to effective service innovation where customer feedback and input is converted into meaningful service enhancement (Kankam-Kwarteng et al., 2022). Firm-consumer exchange also greatly affects profitability. Understanding customer needs accurately supports better brand perception and builds long term loyalty that eventually affects purchasing behavior and creates repeat business. (Franky & Syah, 2023). Thus, firm–customer exchange can be used to complement satisfaction and retain customers in order to increase the profitability. Therefore,

Hypothesis 2: Firm-consumer exchange has positive effect on (a) service innovation and (b) firm profitability.

Service Innovation (SIN)

Service innovation is a crucial outcome of digital engagement. It plays a vital role in enhancing firm profitability, particularly in competitive environments. In this study, service innovation is defined as the service development or significant enhancement of service concepts, delivery systems, or customer interaction channels that entails incorporating new capabilities to offer greater and better meet market needs. Service innovation includes both product and process innovations to improve customer interaction and processes operability (Mukanzi & Mwai, 2020). Profitability through service innovation is driven by first mover advantages, performance improvement, and customer retention. Firms that employ innovative approaches have a higher likelihood of finding opportunities that deliver financial success over a long period. The existed literature shows that service innovation benefit firms with repeat purchases, customer recommendations, higher sales, and stronger long term financial performance (Ibrahim & Kong, 2020). Therefore,

Hypothesis 3: Service innovation has positive effect on firm profitability.

Firm Profitability (FPF)

A key outcome of digital engagement is firm profitability, as digital engagement can facilitate closer firm and customer relations, encourage customer participation in service production and delivery and strengthens these relationships that are at the base of profitability. Firm profitability is defined as the firm’s ability to produce strong revenue shows when all costs are paid including production expenses taxes and operations (Rahman & Yilun, 2021). It is enhanced through increased sales driven by consumer behaviors, including willingness to pay premium prices, repurchases, and advocacy for the brand via online and offline platforms. Positive customer feedback delivered on platforms such as Facebook and Instagram will help to curb advertising costs, as this will greatly support profitability in term of cost reduction (Ali, 2023). Sales growth, net profit and cost reductions are metrics to gauge the impact of profitability. (Naibaho, 2023). Therefore, due to its central importance, firms must employ efficient tools, here in digital engagement. This research identifies digital engagement as a driver of profitability via its impact on firm-consumer exchange and service innovation, thereby highlighting its strategic role as a determinant of long-term business success.

Technology Orientation (TOT)

Technology orientation is a firm's capacity to adopt and integrate new technologies into its operations to interact with its customers timely and efficiently (Binsaeed et al., 2023). As customers' expectation increases towards firms' quick response on strong platforms such as Line, Facebook, and company website, the high level of technology orientation is required by firms to execute seamless exchanges. Service innovation is enhanced when firms orient toward technology by leveraging online feedback and real-time insights to co-create with consumers. Firms that integrate advanced technologies can better capture and utilize consumer ideas, as seen in Starbucks' transformation of customers into active contributors through social media (Barile et al., 2020). Furthermore, big data analytics is yet another one of the advanced tools that facilitates real time information sharing and coordination, thereby resulting in increased customer retention and profitability (Adewusi et al., 2024). Those firms that possess a strong technology orientation invest their R & D to obtain this technological knowledge that will enable either an incremental or radical innovative solution and quickly respond to the customer's demand (Giri et al., 2022). Such orientation gives rise to competitive advantages as it promotes firm-consumer exchange, service innovation, and firm profitability. As a result, technology orientation is suggested as an influential moderator in the relationships between digital engagement and firm-consumer exchange, service innovation, and firm profitability. Therefore,

Hypothesis 4: Technology orientation moderates (a) digital engagement-firm-consumer exchange relationship, (b) digital engagement-service innovation relationship, (c) digital engagement-firm profitability relationship, (d) firm-consumer exchange-firm profitability relationship, and (e) service innovation-firm profitability relationship.

Research Methodology

Sample Selection Procedure and Data Collection

The instrument used was a structured questionnaire, distributed via postal survey, targeting the entire population of 506 large hotels in Thailand, based on a census sampling approach. The questionnaire includes study objectives, samples demographic data, item scale quantities of each variable and specifies a timeline for submission and meticulously tracks the responses. The surveys were disseminated to large hotels in Thailand during the period from mid-January to mid-February

2025. The primary informants of the study are the marketing director, marketing executive, and marketing manager. Due to relocation issues or unreachable addresses, the number of successfully delivered surveys totaled 494, from which 134 responses were received. For the completed and returned questionnaire, 1 3 2 were usable. The effective response rate was approximately 26.72% (132×100/ 494). A response rate over 20% is deemed acceptable when employing a postal survey with a suitable follow-up method, according to Aaker et al (2001). To verify potential non-response bias and detect possible non-response errors, a comparison between the first and second wave data was conducted, as recommended by Armstrong and Overton (1977) In this regard, neither procedure showed significant differences because there were no statistically significant differences between the first and second waves at a 95% confidence level as standard ($p > .05$).

Measurement

All items were assessed on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), with the exception of firm size and firm age. Measurements are self-developed based on definitions established in the current literature. In this study, measurements of digital engagement, firm-consumer exchange, service innovation, firm profitability, and technology orientation are empirically developed, described as follows.

Digital engagement (DEG) as eight-item scale was developed to assess the firm's ability to enable real-time interaction, collaboration, and connection with consumers through online platforms.

Firm-consumer exchange (FCE) as five-item scale was developed to measure the effectiveness and quality of bidirectional information flow between firms and customers.

Service innovation (SIN) as five-item scale was established to measure the creation or improvement of service concepts, delivery channels, and client interaction systems.

Firm profitability (FPF) as five-item scale was created to measure how firms have achieved profitability through metrics such as increased sales growth, net profit, cost reductions, and improved customer retention driven by effective strategies.

Technology orientation (TOT) as five-item scale was developed to evaluate the firm’s capability to integrate, adapt, and effectively utilize advanced technologies in its operations, strategic decision-making, and customer interactions, ensuring improved efficiency, innovation, and competitive advantage.

Firm age was determined by the number of years a firm has been operated by using a dummy variable as less than or equal to 15 years = 0 and greater than 15 years = 1.

Firm size was determined by the number of employees in a firm by using a dummy variable as less than or equal to 100 employees = 0 and greater than 100 employees = 1

Data Analysis

The validity and reliability are verified, which results are shown in table 1. Confirmatory factor analysis is employed to investigate the fundamental connections among several items and to assess the possibility of condensing these items into a more limited set of factors. All factor loadings, ranging from 0.655 to 0.922, greater than the 0.40 criterion and are statistically significant (Nunnally & Bernstein, 1994). The measures' reliability was evaluated by Cronbach's alpha coefficients. The Cronbach alpha coefficients related to scale reliability range from 0.880 to 0.923, surpassing the 0.70 criterion (Nunnally & Bernstein, 1994). The research instrument is suitable for data collection to examine the indicated relationships. In addition, this study applied multiple regression analysis as a suitable statistical tool for examining the relationships, especially since all variables are gathered as categorical and interval data (Hair et al., 2010).

Table 1 Results of Measure Validation

Items	Factor Loadings	Cronbach Alpha
Digital engagement (DEG)	0.708 – 0.836	0.906
Firm-consumer exchange (FCE)	0.739 – 0.875	0.880
Service innovation (SIN)	0.655 – 0.922	0.887
Firm profitability (FPF)	0.781 – 0.898	0.923
Technology orientation (TOT)	0.823 – 0.905	0.922

Results and Discussion

Table 2 presents the descriptive statistics and correlation matrix for all variables. Multicollinearity may arise when the inter-correlation among predictor variables surpasses 0.80, signifying a strong relationship (Hair et al., 2010). The correlations, ranging from 0.576 to 0.788, indicate that potential relationships among the variables in the conceptual model are measurable. Additionally, variance inflation factors (VIFs) were utilized to evaluate the extent to which non-orthogonality across independent variables amplifies standard errors. The VIFs vary from 2.620 to 4.025, far within the threshold value of 10 (Hair et al., 2010). Therefore, this study does not encounter significant multicollinearity issues. All independent variables are appropriate for the investigation as they exhibit no inter-correlations.

Table 2 Descriptive statistics and correlation matrix

Variables	DEG	FCE	SIN	TOT	FPF	VIF
Mean	4.277	4.315	4.082	4.185	3.862	-
Standard deviation	0.551	0.576	0.611	0.692	0.682	-
Digital engagement (DEG)	1					2.620
Firm-consumer exchange (FCE)	0.725^{**}	1				3.273
Service innovation (SIN)	0.740^{**}	0.788^{**}	1			4.025
Technology orientation (TOT)	0.730^{**}	0.780^{**}	0.787^{**}	1		3.845
Firm profitability (FPF)	0.627^{**}	0.619^{**}	0.658^{**}	0.576^{**}	1	-

$^{**}p<0.05$ level (2-tailed)

Furthermore, table 3 shows the results of the relationships between digital engagement and its outcomes derived from multiple regression analysis. To verify and prove the conceptual model of the relationships. Firstly, digital engagement has positive effect on firm-consumer exchange (β = 0.759, p < 0.001). The existing research indicates that digital platforms improve information accessibility and fortify customer connections, enabling customers to effortlessly discuss and exchange information with firms, thereby enhancing firm-consumer interactions (Guo et al., 2020). Therefore, *Hypothesis 1a is supported*. Secondly, digital engagement has positive effect on service innovation (β = 0.821, p < 0.001) which relevant with the literature, digital engagement is operated in digital platform that is independence from physical barriers such as space and time. The independence allows firms to monitor real-time comment as well as being able to respond to any issues promptly. Besides, when deploying digital engagement, consumers have variety ways for proposing and refining products and processes (Plangger et al., 2023; Silva et al., 2024). Therefore, *Hypothesis 1b is supported*. Lastly, digital engagement has positive effect on firm profitability (β = 0.756, p < 0.001). This has been confirmed in the literature, digital engagement positively affects profitability via revenue creation and cost reduction. These activities, such as electronic word-of-mouth and information sharing, can increase brand visibility, place a role in purchase decisions, and create customer retention (Sashi et al., 2019). Furthermore, through facilitating co-creation, digital engagement allows companies to integrate customer data, improve processes, and minimize marketing expenses, leading to trust and customer loyalty to continue revenue growth (Weber, 2024).

Table 3 Results of Multiple Regression Analysis

Independent Variables	**Dependent Variables**					
	FCE	**SIN**	**SIN**	**FPF**	**FPF**	**FPF**
Digital engagement (DEG)	0.759***	0.821***		0.756***		
	(0.070)	(0.073)		(0.092)		
Firm-consumer exchange (FCE)			0.810***		0.680***	
			(0.060)		(0.084)	
Service innovation (SIN)						0.692***
						(0.076)
Firm age	-0.064	-0.051	0.015	-0.117	-0.158	-0.170
	(0.071)	(0.073)	(0.067)	(0.093)	(0.093)	(0.089)
Firm size	0.008	0.007	0.098	0.081	0.189	0.165
	(0.079)	(0.082)	(0.071)	(0.104)	(0.100)	(0.096)
Adjusted R^2	0.518	0.538	0.617	0.408	0.399	0.449

*p<.05, ***p<.001 Beta coefficients with standard errors in parenthesis

In addition, results of the relationships between firm-consumer exchange, service innovation, and firm profitability are presented in table 3. The first, firm-consumer exchange has positive effect on service innovation (β = 0.810, $p < 0.001$) which relevant with the literature, mentioned by Farha et al. (2022), exchanging information is the most important source of knowledge management, in another word, it is starting point of innovation. Information exchanging between firm and consumer provides multiple opportunities to learn that lead to improved service quality. Tacit and explicit knowledge sharing allow service provider to better understand the type of services that customers desire, ultimately lead to service innovation. Therefore, *Hypothesis 2a is supported*. The second, firm-consumer exchange has positive effect on firm profitability (β = 0.680, $p < 0.001$). Brand perception and long-term customer loyalty based on accurate customer needs information result in positive influence on buying behavior and repetitions (Franky & Syah, 2023). Using this exchange, firms are able to increase customer satisfaction and retention, and thereby profitability, therefore, *Hypothesis 2b is supported*. The Last, it is found that service innovation has a highly significant effect on firm profitability (β = 0.692, $p < 0.001$), which is consistent with the existing literature. The timely introduction of novel solutions leads to a first mover advantage which is valuable to the business (Ibrahim & Kong, 2020). Financial gains are driven by radical innovations in dynamic markets, while incremental innovations generate the same solutions in competitive markets. Firms that are able to exploit new knowledge (leverage) and that are first movers owing to innovation are best set to create long term profitability (Nejad, 2022). Therefore, *Hypothesis 3 is supported*.

Table 4 displays the results of the moderating effects. Interestingly, technology orientation does not moderate relationships between digital engagement- firm-consumer exchange (β = 0.010, $P<0.752$), service innovation (β = 0.044, $P<0.136$), firm profitability (β = 0.059, $P<0.203$). Although technology orientation contributes positively on the technological capabilities of a firm, it has a limited direct impact on digital engagement relationships. According to Borodako et al. (2022), showed that the market orientation which aims at understanding and satisfying customer needs has a stronger impact on quality of firm-consumer exchange than technological focus. Similarly, You and Brahmana (2023) suggested that, by studying service innovation, infrastructure is what provides technology orientation, but innovation is driven by actionable insights and adaptability derived from customer interactions. Simple technology organization alone is not sufficient for innovation, it needs to be supported by strategic alignment with engagement. Lastly, concerning firm profitability, Nassani et al. (2023), showed that technology orientation produces positive firm innovation performance but not towards profitability when there are not effective engagement strategies acting as a bridge with customers. To summarize, with technology orientation supporting technological readiness, digital engagement is genuinely a customer first model that extends beyond just technology but is focused on being accountable, agile, responsive, and relationship orientated. So, *Hypotheses 4a, 4b and 4c are not supported.* Furthermore, technology orientation does not have significant moderating effect on service innovation-firm profitability relationship (β = 0.021, $P < 0.645$). Obviously, profitability is not all about technological capability, it is about the alignment of innovations that have to meet the needs of customers and market requirements. Nguli and Odunga (2019) state that, while technology orientation provides the means for innovation, it will not affect financial success without strategic alignment and that, while technology orientation can facilitate financial success, it is not the sole driver of it. Therefore, *Hypothesis 4e is not supported*. On the other hand, technology orientation moderates the relationship between firm-consumer exchange and firm profitability (β = 0.104, $P < 0.05$). By means of adopting advanced tools such as real time communication platform and data analytics, firms might improve the efficiency and effectiveness of dealings with customers and thus result in better financial performance (Binsaeed et al., 2023; Adewusi et al., 2024). Therefore, *Hypothesis 4d is supported.*

Table 4 Results of Multiple Regression Analysis

Independent Variables	Dependent Variables				
	FCE	SIN	FPF	FPF	FPF
Digital engagement (DEG)	0.336***	0.312***	0.539***		
	(0.085)	(0.081)	(0.128)		
Firm-consumer exchange (FCE)				0.511**	
				(0.128)	
Service innovation (SIN)					0.613***
					(0.129)
Technology orientation (TOT)	0.447***	0.543***	0.238*	0.208*	0.090
	(0.063)	(0.060)	(0.095)	(0.104)	(0.115)
DEG* TOT	0.010	0.044	0.059		
	(0.031)	(0.029)	(0.046)		
FCE* TOT				0.104*	
				(0.049)	
SIN* TOT					0.021
					(0.046)
Firm age	-0.034	-0.023	-0.116	-0.162	-0.166
	(0.061)	(0.058)	(0.093)	(0.091)	(0.090)
Firm size	0.046	0.060	0.112	0.113	0.159
	(0.068)	(0.064)	(0.102)	(0.102)	(0.097)
Adjusted R^2	0.663	0.719	0.456	0.432	0.444

*p<.05, **p<.01, ***p<.001 Beta coefficients with standard errors in parenthesis

Conclusion

This study examines how digital engagement and technology orientation impact firm-consumer exchange, service innovation and firm profitability and their interrelationships. A mail survey was used to collect data from 132 large hotels in Thailand which were subsequently analyzed using multiple regressions. Results indicate digital engagement has a positive effect on firm-consumer exchange, service innovation and firm profitability. The exchange between firm and consumer is positively related to both service innovation and profitability, but service innovation leads to the profitability. It is found that technology orientation moderates the firm–consumer exchange profitability relationship and thus plays an important role in increasing interaction efficiency. It does not, however, moderate relationships between digital engagement and its outcomes, or between service innovation and profitability. In particular, firms should leverage digital engagement and technology orientation to strengthen firm-consumer exchanges, stimulate service innovation, and ultimately improve profitability. To take advantage of advanced technologies like big data analytics, and real time communication platforms firms can equally align their operations to the actual needs of their customers in the market. Digital strategies integrated with operational processes create competitive, response and ability to grow for long term in a rapidly changing environment. For future research, longitudinal impacts, other organizational factors, and digital engagement in other industries and geographies may be considered to better assess its possibilities.

Contributions and Directions for Future Research

Theorical and Managerial Contributions

This study contributes to the digital engagement literature by illustrating its important influences on firm–consumers such as firm–consumer exchange, service innovation, and firm profitability in the case of large hotels in Thailand. Through a focus on digital engagement as a value co creation mechanism, a framework is developed that shows how it bridges firms and customers through collaborative interactions, by utilizing Service Dominant Logic (SDL) as a guiding framework. Moreover, technology orientation plays a moderating role, highlighting its effect on the efficiency of firm – consumer exchanges in terms of the importance of aligning digital strategies with technological competences. By analyzing the interplay between digital engagement, technology orientation and key business outcomes in emerging markets this study fills a critical gap in the literature.

From a practical perspective, this research provides evidence of the need to pursue a customer centric digital strategy in order to improve firm – consumer interaction and improve firm innovation. To enhance operational efficiency and customer satisfaction, managers should explore investing in advanced tools, like big data analytics and real-time communication platforms. Moreover, the results suggest that firms should invest in developing robust, and responsive relationships with their customers where digital engagement is a key driver to profitability. For companies in emerging markets where digital transformation has yet to mature, sustainable competitive advantage necessitates the strategic adoption of technology in creating engagement.

Suggestions and Limitations

This study is limited to the study of large hotels in Thailand, as a result, where generalizability to other sectors asserted and/or to regimes or for smaller businesses with other operational attributes may be reduced. Additionally, a cross-sectional design does not account for how digital engagement and technology orientation evolve over time. Future research should complement these limitations by way of longitudinal studies regarding dynamic effects, larger samples in different industries and regions, and the use of mixed methods or advanced statistical techniques to provide more in-depth insights. Incorporating more variables, such as the organizational culture, market orientation and competitive intensity is also a way to gain a better understanding of how the digital strategies contribute towards the superior business outcomes.

Originality and Body of Knowledge

This study advances the body of knowledge by providing a more nuanced understanding of digital engagement and technology orientation as key drivers of firm performance. Building upon Service-Dominant Logic (SDL), digital engagement is conceptualized as a co-creation mechanism in exchanges between firms and consumers, which leads to service innovation and increased profitability. The novelty of this study lies in exploring the moderating influence of technology orientation, which shows a significant moderating effect on the efficiency enhancing relation between firm–consumer interactions, but very limited moderating effect on other relationships in the model. By extending digital engagement research to service-oriented industries in emerging markets, this study fills a significant gap in the literature and provides a validated framework for analyzing its outcomes. These findings provide new insights into how firms strategically integrate digital capabilities with technology orientation to generate innovation, reinforce customer trust and sustain competitive advantage. This foundation supports future research in diverse industries and longitudinal contexts.

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