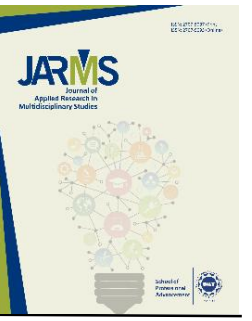
Journal of Applied Research and Multidisciplinary Studies (JARMS)
Volume 4 Issue 1, Spring 2023
ISSN(P): 2707-5087 ISSN(E): 2707-5095
Homepage: https://journals.umt.edu.pk/index.php/jarms



Article QR

Title:	**How Government Support Programs Enhance SMEs' Dynamic Capabilities and Digitalization: An Investigation of Common Facility Center Program**
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DOI:	https://doi.org/10.32350/jarms.41.13
History:	Received: March 15, 2023, Revised: May 25, 2023, Accepted: June 15, 2023, Published: June 30, 2023
Citation:	Awan, A. Z., & Shahzad, K. (2023). How government support programs enhance SMEs' dynamic capabilities and digitalization: An investigation of common facility center program. *Journal of Applied Research and Multidisciplinary Studies*, *4*(1), 317-342. https://doi.org/10.32350/jarms.41.13
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Conflict of Interest:	Author(s) declared no conflict of interest

A publication of
School of Professional Advancements
University of Management and Technology, Lahore, Pakistan

How Government Support Programs Enhance SMEs' Dynamic Capabilities and Digitalization: An Investigation of Common Facility Center Program

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Abstract

Amidst the increasing attention from governments and policymakers on the effectiveness of small and medium enterprise (SME) support programs, a notable gap exists regarding the effect of support programs on firms' digital transformation. Grounded in dynamic capability theory, the current study explored the role of Common Facility Centre (CFC) support program in catalyzing SMEs' digital transformation, with a specific focus on the mediating role of firms' reconfiguration capability. To test the hypotheses, the data was collected from 202 SMEs by employing a self-administered survey questionnaire and a multi-time and multi-source approach. The findings indicate that CFC support program significantly enhances SMEs' digital transformation, and firms' reconfiguration capability is a strong mediating mechanism for this effect to take place.

***Keywords*:** Common Facility Centre (CFC) program, digital transformation, reconfiguration dynamic capabilities, SMEs (small and medium-sized enterprises)

Introduction

The small and medium-sized enterprises' (SMEs) sector is a crucial driver of economic and social progress in both developed and developing economies (Ali et al., 2020; Bianchi et al., 2017; Shahzad, 2020). In the context of Pakistan, SMEs hold a significant importance, with approximately 3.2 million of these enterprises contributing directly to employment, the Gross Domestic Product (GDP), the balance of payments, the development of innovative products and services, and the overall quality of life in the country (Mui et al., 2018; Shahzad et al., 2023). Despite the well-recognized contributions of SMEs across various sectors and to the broader economic growth, these enterprises face significant challenges

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when it comes to competitiveness, particularly due to the rapid advancements in technology and digitalization (Shamsuddoha et al., 2009; Soomro & Shah, 2019). The inherent limitations of SMEs, such as their small size and limited financial resources, further compound the difficulties in acquiring, procuring, and retaining advanced technological assets to remain competitive (Ali et al., 2020; Liñán et al., 2020). Hence, there is a growing concern among government policymakers and scholars to investigate these factors comprehensively and develop strategies to enhance the digital capabilities of SMEs.

Existing literature on the competitiveness of SMEs highlights the pivotal role of external support to assist these firms in order to attain and sustain competitive performance (Adam & Lestari, 2017; Kulkarni, 2016; Kurdve et al., 2020; Shahzad, 2020). Notably, governments and international development agencies worldwide have introduced various programs, including export promotion, technology transfer, and business/skills development initiatives, aimed at supporting SMEs. Although, the literature generally affirms a positive impact of these support programs on SME performance (Cravo & Piza, 2019; Shahzad, 2015), a review of empirical studies yielded inconclusive results (Ayob & Freixanet, 2014; Falahat et al., 2020; Pergelova & Angulo-Ruiz, 2014). Likewise, the existing body of knowledge does not clearly elucidate how support programs contribute to the enhancement of digital capabilities within SMEs (Kurdve et al., 2020; Mubarik et al., 2016; Tan, 2009). Consequently, the primary objective of the current study is to investigate the effect mechanism of SME support programs.

For the purpose of our study, we have selected a specific support program that was initiated by the Government of Pakistan under the name of Common Facility Center (CFC). The CFC support program was designed to revolutionize the various aspects of SME operations, production processes, and overall business management practices (Seth et al., 2013; Shahzad, 2015). It extends SMEs' exposure to cutting-edge production machinery, advanced manufacturing techniques, and specialized digital skills and expertise. The program also provides SMEs with unique technological resources to adopt digitally advanced production systems and practices. The CFC support program operates on the premise that equipping SMEs with advanced digital production technologies and skills empowers them to generate greater customer value, elevate product quality, and

cultivate human and social capital (Ramanigopal et al., 2013). Given the importance of CFC support programs for SME digitalization, a few empirical studies investigated the mechanism through which such programs contribute to SMEs' digital transformation (Doh & Kim, 2014).

The existing literature highlighted the areas that warrant research to delve into firm's dynamic capabilities in order to understand the role they play to leverage and integrate the knowledge and skills provided by support programs to transform their technologies and production systems (Falahat et al., 2020). Dynamic capabilities, that is, "the ability to integrate, build, and reconfigure the internal and external competencies to address rapidly-changing environments" (Teece et al., 1997, p. 517) are considered as a means through which organizations drive and thrive through turbulent times (Martins, 2023). The capacity of firms to continuously maintain and enhance their competitiveness relies significantly on their ability to strategically adjust to shifts in technology and market dynamics. The scholars posit that a firm's capacity to integrate changes in its operations and systems plays a pivotal role in comprehending digital advancements and environmental turbulence (Martins, 2023; Monteiro et al., 2017). This perception, in turn, aids in the transformation of a firm's processes and practices, enabling the development of digital capabilities that ultimately enhance its ability to cater to both domestic and international customers (Dong et al., 2016). Reconfiguration capability can be referred to an organization's capacity to efficiently implement changes that drive the development of new products while seamlessly integrating the existing processes with new ones (Teece, 2014). The reconfiguration process encompasses the redeployment and reconfiguration of resources which could potentially involve redesigning the business model and realigning assets. Reconfiguration enables the firms to adapt to external changes, utilize acquired opportunities, and effectively distribute knowledge, while also exploring innovative applications for new technologies (Teece et al., 1997).

Given that, digitalization involves operational and technological changes and that CFC support programs must strive to help firms adapt to such changes, it is not clear how firms' ability to adjust and change their operations and processes (reconfiguration capability) can facilitate support programs' effort to drive firms' digital transformation. Accordingly, this study, based on dynamic capability theory (DCT), aims to investigate the

mediating role of firms' reconfiguration ability in the relationship between CFC support program and firms' digital transformation.

The current research contributes in two ways. Firstly, it enriched the landscape of support program literature by delving into the underlying mechanisms through which SME support programs influence firms' digital outcomes. Prior research has often overlooked the role of SMEs' dynamic capabilities in comprehending the mechanisms through which support programs exert their effects (Catanzaro et al., 2019; Doh & Kim, 2014; Mustaghis-ur-Rahman & Jalees, 2015). Scholars and policymakers have a keen interest in gauging the efficacy of SME support programs to determine whether these initiatives facilitate the development of digital capabilities and enhance the competitiveness of SMEs (Hottenrott & Lopes-Bento, 2014; Razumovskaia et al., 2020; Tan, 2009). However, the existing literature is notably deficient in providing empirical substantiation in this domain. This dearth of evidence is particularly pronounced in the context of Pakistan, given that prior studies in this region have predominantly focused on aspects related to SME production or market competitiveness (Shahzad, 2015; Shahzad et al., 2019; Seth et al., 2012). Secondly, the current study extended the literature focused on support programs within the context of a developing country, specifically Pakistan. The bulk of empirical literature on support programs has been anchored in the framework of developed economies. However, developing economies possess unique social, cultural, and governance landscapes that can significantly impact the mechanisms through which support programs bring about their effects (Nakku et al., 2020).

Context of the Study: CFC Support Program

The CFC support program stands as a cornerstone in the Government of Pakistan's efforts to bolster and enhance the capacity and competitiveness of SMEs. This program extends to SMEs access to cutting-edge technological infrastructure that would otherwise be beyond their reach to maintain in-house (Seth et al., 2012). The primary aim of CFC program is to foster knowledge development, impart essential skills, and facilitate the technological advancement of the manufacturing sector. It also encompasses SMEs' participation in initiatives aimed at augmenting productivity, reducing costs, and elevating quality standards, thereby enhancing their competitiveness on both local and global scales (Shah, 2018). CFC initiative aims to provide a shared pool of machinery, testing

facilities, inspection services, and technology-related support for the collective enhancement of SMEs within their respective regions or clusters (Choudhary et al., 2015; Jaware et al., 2011).

Furthermore, the CFC support program acts as a lifeline for companies and clusters with significant export potential. These entities often struggle to compete in domestic and international markets due to the inadequacy of their production technologies and technological capabilities. According to experts and industry observers, the revitalization of these industries hinges on technological modernization, product innovation and diversification, and the improvement of digital infrastructure (Karki, 2016; Nakku et al., 2020). The CFC support program, therefore, assists SMEs in acquiring technical knowledge and resources from CFC, creating a distinctive firm-specific resource pool that proves challenging for competitors to replicate (Khan, 2005; Al-Hudhaif, 2020). The CFC support program offers a range of facilities and services including production resources, laboratory and research and development services, technical training, consultancy, insights into the latest technological and market trends, and networking opportunities within their respective clusters. SMEs access these facilities and services on a paid basis to fortify their production systems, enhance innovation in their processes and products, and elevate their overall competitiveness (Shahzad, 2015; Seth et al., 2013).

Theory and Hypothesis Development

The current study primarily relies on DCT as proposed by Teece and colleagues in 1997 to formulate hypotheses regarding the potential direct and indirect contributions of CFC support program to the digital transformation of SMEs. According to DCT, a firm's competitive performance hinges on its ability to adapt and revamp its processes and systems in response to the ever-evolving business landscapes. However, the advent of the industry 4.0 revolution has introduced a significant challenge for enterprises in adopting and effectively utilizing digital technologies to deliver high-quality, innovative products, and services to their customers. In this context, DCT provides a sound rationale to conceptualize the firms that leverage CFC facilities. Moreover, services are more likely to undergo transformative changes in their systems and processes, enabling them to effectively confront and adapt to the challenges and opportunities posed by digitalization.

CFC Support Program and SMEs Digital Transformation

The rapid evolution of technology has ushered a fundamental shift in how markets and businesses worldwide cultivate and sustain their competitiveness. This transformation is epitomized by the advent of digitalization, encompassing the incorporation of digital technologies, ranging from fundamental components like internet usage and the adoption of e-business (Bouwman et al., 2019; Brennen & Kreiss, 2016) to cutting-edge advancements, such as social media platforms, big data, and artificial intelligence AI (Brennen & Kreiss, 2016; Todorovic et al., 2020). The rise of digitalization in the era of industry 4.0 has profoundly altered how SMEs create value and compete on local and global stages (Müller et al., 2018; Bouwman et al., 2019; Di Maria et al., 2022; Ivanov et al., 2022).

Digital transformation entails the adoption of advanced applications, digitalized business models, virtual reality technologies, and components of industry 4.0 including cloud computing, block-chain technology, and the Internet of Things (IoT) (Aslam et al., 2020; Haghnegahdar et al., 2022). SMEs are particularly susceptible to the impact of digitalization, given their heightened vulnerability to environmental disruptions and technological shifts as compared to larger organizations (Bouwman et al., 2019; Matarazzo et al., 2021). Meeting customer demands and responding to market dynamics without embracing digital transformation poses a significant challenge for SMEs (Müller et al., 2018; Del Giudice et al., 2019; Scuotto et al., 2019; Viswanathan & Telukdarie, 2021; Kergroach, 2020). Nevertheless, SMEs often lag in the adoption of digital technologies and capabilities (Müller et al., 2018; Bouwman et al., 2019; Cataldo et al., 2020; Nambisan et al., 2019; Tuselim & Yaacob, 2022; Nakku et al., 2020).

A CFC support program plays a pivotal role in facilitating the digital transformation of SMEs through a multifaceted approach. First and foremost, CFCs provide SMEs with access to state-of-the-art technological infrastructure including advanced production machinery and digital tools, which SMEs might not have the resources to procure individually. This access to cutting-edge technology empowers the SMEs to enhance their production processes, optimize efficiency, and meet the demands of a rapidly changing business environment. By utilizing these advanced resources, SMEs can develop their digital capabilities and integrate modern technologies into their operations to lay the foundation for their digital transformation journey (Bouwman et al., 2019; Müller et al., 2018).

Additionally, CFCs offer specialized trainings and technical expertise to SMEs. Through workshops, skill development programs, and consultation services, SMEs gain the knowledge and skills required to effectively navigate, adopt, and manage digital tools and technologies for a smoother transition to a more digitally-driven production process. This production capability does not only enable SMEs to adapt to digital advancements, however, it also encourages innovation and the creation of high-quality digitally-driven products and services (Bouwman et al., 2019).

Furthermore, CFCs serve as knowledge hubs, providing SMEs with insights into the latest technological and market trends (Ali et al., 2020). This market intelligence allows SMEs to make informed decisions about adopting digital solutions that align with customer needs and market demands. SMEs can remain competitive and relevant by leveraging this information to develop and tailor their digital strategies (Kurdve et al., 2020).

Another essential aspect of CFC support programs is the encouragement of collaboration and networking within SME clusters. Collaboration is a critical determinant of SMEs digital capacity which CFC support programs specifically target (Bouwman et al., 2019). SMEs within a CFC cluster are encouraged to exchange ideas, share best practices, and collaborate on projects. This collaborative environment fosters knowledge sharing and helps SMEs learn from one another's digital experiences (Lin & Lin, 2016). Such interactions facilitate the diffusion of digital knowledge and experiences among SMEs, fostering a culture of continuous learning and adaptation. As they collaborate, SMEs can collectively navigate the challenges of digital transformation and identify innovative solutions (Fernández-Olmos & Ramírez-Alesón, 2017).

In sum, CFC support programs lead to SME digital transformation by providing access to advanced technology, imparting the necessary skills and knowledge, offering insights into market trends, and promoting collaboration within SME clusters. These elements collectively empower SMEs to not only embrace digitalization, however, also leverage it as a catalyst for innovation, enhanced competitiveness, and sustained growth in an increasingly digital-driven business landscape.

Accordingly, it is hypothesized that:

H1: CFC support program usage positively influences SMEs' digital transformation.

Mediating Role of Reconfiguration Capability

Ever since Teece introduced the term dynamic capabilities, the theory has undergone further development, with Eisenhardt and Martin (2000) expanding it to encompass the role of strategic routines and repetitive actions as methods through which companies adapt to market fluctuations, construct new resource combinations, and manage the obsolescence of existing ones. Additionally, various proponents of dynamic capabilities including Zahra et al. (2006) and Ambrosini et al. (2009) placed particular emphasis on aspects like organizational configuration, strategic alignment, networking, and knowledge transfer. These aspects contribute to a firm's ability in order to create fresh resource bundles or transform existing capabilities.

Reconfiguration capability refers to an organization's capacity to adapt and adjust its structure, processes, and knowledge in response to external changes and opportunities. This capability enables an organization to effectively utilize the acquired opportunities by reconfiguring its internal components. Moreover, it also helps to disseminate newly acquired knowledge throughout the organization along with the identification and implementation of innovative uses for new technologies. In essence, this capability depicts an organization's proficiency to reorganize and adjust its existing resources, processes, and competencies in response to changes in its environment (Ambrosini et al., 2009; Teece, 2014). In the realm of SMEs, reconfiguring capabilities are the dynamic capacities that empower these businesses to navigate the ever-evolving and often challenging business landscape. SMEs, characterized by their resource constraints and greater susceptibility to external disruptions, rely on these capabilities to adapt swiftly and effectively. Resource adaptation is a core aspect, enabling SMEs to efficiently reallocate their limited assets including financial resources and human capital, to seize new opportunities or address emerging threats (Ali et al., 2020). Moreover, these capabilities extend to process flexibility, where SMEs can readily adjust internal workflows and operational procedures to accommodate shifts in customer preferences, market dynamics, or technological advancements (Kurdve et al., 2020). By forming strategic alliances and partnerships, SMEs can tap into additional expertise, resources, or market access, amplifying their competitive edge

(Lin & Lin, 2016). Additionally, reconfiguring capabilities empower SMEs to make adaptive and well-informed decisions, conduct risk assessments, identify emerging opportunities, and align their strategic choices with the dynamic business environment (Bouwman et al., 2019; Müller et al., 2018). While, mergers and acquisitions are less common in the SME context, they represent an advanced aspect of these capabilities, allowing SMEs to expand their market presence and diversify their offerings. In essence, reconfiguring capabilities are the linchpin for SMEs to remain agile, competitive, and responsive.

We argue that the CFC support program acts as a catalyst for SME digital transformation and the reconfiguration capability serves as the intermediary mechanism through which this transformation occurs. The CFC program provides SMEs with the foundational components necessary for digitalization, while the reconfiguration capability empowers SMEs to navigate the complex digital terrain and proactively drive their own transformation (Doh & Kim, 2014; Tan, 2009). In the context of SMEs, the reconfiguration capability enables them to recognize the significance of digital transformation, design tailored digital strategies, and make informed investment decisions (Bouwman et al., 2019; Ellström et al., 2022). As SMEs leverage the exposure and knowledge of advanced digital technologies and systems from CFC support program, their reconfiguration capability gets established for building the digital landscape and ultimately adopting digital technologies that align with their digital transformation objectives (Ayob & Freixanet, 2014; Pidduck & Zhang, 2022; Shahzad, 2015; Soluk et al., 2021).

The CFC support program's facilities and networking opportunities further create a conducive environment for SMEs in the manufacturing sector to acquire knowledge about digitally-enabled production systems, foster collaborations with local and international markets, and benchmark against industry best practices (Lin & Lin, 2016; Nasir et al., 2022). This, in turn, elevates the cognitive capabilities of SME managers, enabling them to discern technological opportunities and potential risks (Fernández-Olmos & Ramírez-Alesón, 2017; Matope & Mahove, 2021). Hence, the reconfiguring capability cultivated through the CFC support program serves as a catalyst, driving the adoption of digital advancements and facilitating the scanning, evaluation, and adoption of relevant technologies (Jafari-Sadeghi et al., 2022). Accordingly, it is hypothesized that;

H2: SMEs' reconfiguration capability mediates the relationship between CFC program usage and firm's digital transformation.

Research Methodology

Sample and Data Collection

The current study delved into the causal mechanisms underlying the impact of CFC support program. The target population comprised SMEs that had actively utilized the services and facilities provided by CFCs across Pakistan. These CFCs maintain comprehensive records of the SME clients they serve. To prepare the list of operational CFCs, we relied on the Small and Medium Enterprise Development Authority (SMEDA), an official government body exclusively dedicated to providing policy support to SMEs in Pakistan. Subsequently, a roster of approximately 500 SME clients was compiled through in-person visits and telephone communications with CFCs. Afterwards, a questionnaire was distributed, accompanied by a cover letter outlining the survey's objectives and expectations, to SMEs. Participants were informed, through a participant information sheet, that their involvement in the survey was entirely voluntary and they could leave the survey at any point in time without any prior intimation. We emphasized the professional confidentiality of the information provided, assuring respondents that their identities and those of their firms would remain undisclosed. Information regarding the utilization of CFC support program was sourced from CFCs, while the data concerning the mediating and outcome variables was collected from user SMEs. To mitigate the potential for common method bias, information on mediating and outcome variables was gathered from distinct sources within each SME. After about one-month and three follow-up communications, 230 responses were received, resulting in a response rate of 32%.

Within the final sample, 38% of SMEs maintained a workforce ranging from 51-150 employees, with an additional 53% of firms employing between 151-250 personnel. Furthermore, 71% of SMEs boasted a substantial industry presence spanning over nine years. In terms of ownership and management, the majority of SMEs, accounting for 71%, were family-owned and operated entities. Whereas, the remaining 29% were under the stewardship of professional non-family managers. A substantial pool of SMEs, that is, 71% relied on self-financing and had not sought external financial grants, while 12% had secured financial grants

from various financial institutions. In terms of market engagement, a significant 63% of SMEs were actively involved in export activities.

Measures

CFC Usage

The assessment of CFC support program's utilization was conducted directly by gathering information from CFCs themselves. The administration of each CFC provided ratings regarding the extent to which SMEs utilized common facilities and services provided by the respective support center. To facilitate this assessment, a questionnaire, indicating the list of facilities and services was completed by the project head of each CFC. The project head employed a 7-point Likert scale to rate the extent of CFC program utilization by their user SMEs, with a scale ranging from 1 (indicating *minimal usage*) to 7 (indicating *substantial usage*).

Reconfiguration Capability

The assessment of SMEs' reconfiguration capability comprised 10 items drawn from Pavlou and El Sawy's (2006) dynamic capabilities scale. In the literature, scholars used different terms, such as transforming capabilities, integrating, and learning capabilities, and reconfiguration capabilities. These terms were used to depict a firm's ability to adapt, reallocate resources, and strategically adjust internal systems and practices to adapt changing environmental conditions (Pavlou & El Sawy, 2006). Respondents from SMEs were requested to express their level of agreement or disagreement with the provided statements by using a 7-point Likert scale, where 1 represented "*strongly disagree*" and 7 represented "*strongly agree*." A higher score denoted a stronger presence of capability within the firm.

Digital Transformation

To assess digital transformation, 16 items were adapted from Wielgos et al. (2021) and Gillani et al. (2020) to measure the firm's digital strategy, digital integration, digital control, and the adoption of digital technologies. Respondents from the SMEs expressed their level of agreement or disagreement with the statements using a 7-point Likert scale, where 1 signified "*strongly disagree*," and 7 represented "*strongly agree*." A higher score indicated a greater degree of digital transformation within the firm,

reflecting an enhanced presence of digital strategy, integration, control, and technologies.

Control Variables

The firm's age, size, and industry were controlled in the analysis as the extant literature pointed out the potnetial influence of these factors on the effectiveness of suport programs and firm's transformation efforts (Catanzaro et al., 2019; Doh & Kim, 2014; Mustaghis-ur-Rahman & Jalees, 2015).

Results

Model Validation

In order to establish convergent and discriminant validity of the employed scales, we conducted Confirmatory Factor Analysis of the latent variables i.e. digital transformation and reconfiguration capabilities. Firstly, the fit indices of the hypothesized model were checked with latent variables. The results, presented in Table 1, showed good fit of the model with [$\chi 2$ = 174.99; $\chi 2/df$ = 2.01; CFI = .93; TLI = .91; and RMSEA = .07]. All the items loaded onto their respective latent factors with factor loadings ranging from 0.55 to 0.75, thus establishing convergent validity of the scales. For discriminant validity, we compared two factors model with a single factor model by combining items of both constructs. The results revealed a significantly poor model fit with [$\chi 2$ = 210.74; $\chi 2/df$ = 2.39; CFI = .89; TLI = .87; and RMSEA = .08] thus established the discriminant validity. We also compared AIC values of both model to determine which model fits best with the data.

Table 1

Results of Confirmatory Factor Analysis for Model Validation

CFA Models	*χ2*	*χ2/df*	CFI	TLI	RMSEA	AIC
Model 1: Hypothesized model	174.99	2.01	.93	.91	.07	240.99
Model 2: Combining both factors	210.74	2.39	.89	.87	.08	274.74

Note. *N*=200, *df* = degrees of freedom, CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean square error of approximation; AIC= Akaike Information Criterion

Mean, standard deviation, and correlations were calculated among the study's main variables and control variables. Table 2 shows that the use of CFC relates statistically significantly and positively to both, organizational reconfiguration capabilities and digital transformation. The relationship between reconfiguration capabilities and digital transformation was also statistically significant and positive. None of the control variables appeared significant and, thus were not included in the proceeding hypotheses testing for parsimony purpose.

Table 2

Mean, Standard Deviation, and Correlations

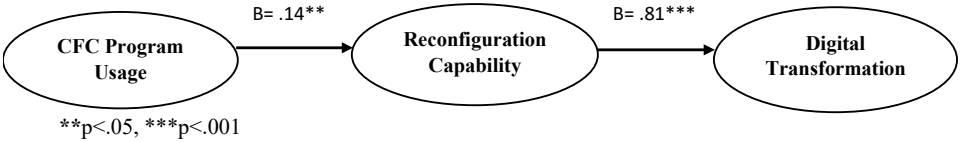
	Mean	*SD*	1	2	3	4	5
1. Age	2.74	.45	-				
2. Size	1.85	.65	.09	-			
3. Industry	2.5	1.1	.01	-.25	-		
4. CFC Use	6.01	.58	.24	.31	.41	-	
5.Digital Transformation	5.62	0.53	.07	.02	-.08	.13*	-
6. Reconfiguration	5.11	1.12	.13	.15	-.25	.14**	.81***

Note. *N*=200, *SD*= standard deviation, **p*<.1. ***p*<.05. ****p*<.001.

Hypothesis 1 proposed that the use of CFC support program's facilities and services relates positively to digital transformation of the businesses. This relationship was tested in a separate model. The findings indicated the positive effect of CFC support program usage on firm's digital transformation (effect= .13, $p<.1$), thus supporting H1. The second hypothesis posited that the relationship between CFC support program usage and firm's digital transformation was mediated by the firm's reconfiguration capability. The result of structural model indicated a significant mediation between the hypothesized relationship as bootstrap 2000 CI did not contain zero between the values of lower and upper limits. Thus, hypothesis 2 received support. However, the direct effect of CFC program usage on digital transformation in the presence of reconfiguration turned insignificant. This established that reconfiguration fully mediates the relationship between CFC program usage and firm's digital transformation.

Accordingly, the final model has been presented below in Figure 1.

Figure 1
Finalized Model



Discussion

A growing body of research recognizes the imperative for SMEs to undergo digital transformation in order to enhance their performance, with an acknowledgment of the supportive role played by government programs (Fernández-Olmos & Ramírez-Alesón, 2017; Ingley, 2016; Nakku et al., 2020; Pham et al., 2019; Joo et al., 2018). The current study investigated the mechanisms through which SME support programs contribute to SMEs' remaining competitive in the digital landscape by nurturing essential digital capabilities and technological adoption. The findings affirmed the positive impact of CFC support program on SMEs' digital transformation directly, and through firm's reconfiguration capability. Consequently, the outcomes furnished valuable insights for both theoretical development and practical applications within the field.

Theoretical Implications

The empirical confirmation of the substantial impact of the CFC support program on firm digital transformation, both directly and indirectly through the mediation of firm reconfiguration capability, carries profound theoretical implications in the domain of SMEs and support programs. Firstly, these findings underscored the pivotal role of external support programs, such as the CFC initiative, in catalyzing the digital transformation of SMEs (Ayob & Freixanet, 2014; Tan, 2009). This validation aligns with the dynamic capability theory, suggesting that SMEs can leverage external resources and knowledge to adapt and evolve in response to the ever-changing business environment (Falahat et al., 2020). By serving as a conduit for technological knowledge and resources, support programs, such as CFC facilitate the acquisition and integration of digital technologies, enabling the SMEs to fortify their digital capabilities and effectively compete in both national and international markets (Ali et al., 2020; Müller et al., 2018). This realization underscores the importance of

support programs as a driving force behind SMEs' digital transformation, as these initiatives empower SMEs to bridge the technological gap and thrive in the digital era (Cravo & Piza, 2019; Doh & Kim, 2014; Nakku et al., 2020; Pergelova et al., 2014).

Secondly, the significant mediating role of firm reconfiguration capability provides a unique lens to interpret the digital transformation journey of SMEs. The results illustrate that SMEs not only benefit directly from the CFC support program, however, also leverage this support to reconfigure their internal systems and practices, thereby enhancing their ability to adapt to digitalization challenges (Doh & Kim, 2014; Nakku et al., 2020). This points to the strategic significance of reconfiguration capabilities, which enable SMEs to flexibly reallocate resources, adjust operational procedures, and form strategic alliances in response to shifting market dynamics and customer preferences (Fernández-Olmos & Ramírez-Alesón, 2017). Consequently, the findings signified the profound importance of reconfiguration capabilities in fostering a comprehensive digital transformation process within SMEs. In a recent study, Awan and Shahzad (2022) reported an insignificant mediation effect of a firm's sensing capabilities. However, the findings shed new light on the substantial mediating potential of a firm's reconfiguration capabilities. This discovery extends the understanding of varied roles played by different dimensions within the realm of dynamic capabilities, namely sensing, seizing, and reconfiguration. It highlights that, in the context of leveraging support programs and resources to facilitate digital transformation, reconfiguration capabilities emerge as a significant factor. This insight underscores the multifaceted nature of dynamic capabilities and their distinct contributions to the establishment of digital transformation within firms.

The findings made a valuable contribution to the DCT by shedding light on the nuanced role of dynamic capabilities, specifically reconfiguration capability, in the context of SMEs' digital transformation. By demonstrating that SMEs can effectively leverage external support programs to enhance not only their sensing and seizing capabilities but their reconfiguration capabilities, this study extended the DCT framework. It underscored that dynamic capabilities are not limited to mere sensing and seizing of opportunities but also encompasses the ability to strategically reconfigure the internal systems and processes to adapt to the digital era (Bouwman et al., 2019; Müller et al., 2018). This extension of DCT underscores the

multidimensionality of dynamic capabilities, offering a more comprehensive understanding of how SMEs can thrive in a rapidly evolving digital business landscape. Ultimately, the study enriches DCT by emphasizing the adaptable and flexible nature of dynamic capabilities in the digital age. Moreover, the dynamic capabilities empower SMEs to navigate the challenges and opportunities presented by digital transformation, effectively. This conceptual advancement holds promise for further research within the dynamic capability framework, emphasizing the multifaceted nature of firm capabilities and their evolving role in a digitized business environment.

Policy Implications

The policy implications of the findings pertaining to the impact of CFC support program on firm digital transformation, mediated by reconfiguration capability, have far-reaching significance. Firstly, for SMEs and business practitioners, these results underscore the tangible benefits of engaging with government support programs like the CFC (Doh & Kim, 2014; Kurdve et al., 2020; Nakku et al., 2020). SMEs can leverage these programs to not only access the advanced technological infrastructure but also to develop their internal reconfiguration capabilities. It's crucial for SMEs to proactively engage with these support initiatives, since they provide a gateway to enhance their digital competencies and respond effectively to the challenges presented by the digital era. Business leaders and SME owners can use these findings to inform their strategic decisions and investment in technology, thereby fostering a culture of continuous adaptation and innovation.

From a policy perspective, these findings emphasize the need for governments and policymakers to invest in and expand support programs specifically designed to nurture digital transformation within SMEs (Tan, 2009). The success of the CFC support program in this study demonstrates the potential of government-led initiatives to stimulate economic growth and competitiveness through digitalization. To foster greater digital adoption, governments can consider allocating resources to create more support programs, increasing their outreach, and enhancing their functionality. This would involve not only providing access to advanced technologies but also offering educational resources and training to develop SMEs' reconfiguration capabilities. A well-designed policy framework can

promote a vibrant ecosystem where SMEs become resilient, adaptable, and highly competitive within the digital landscape (Ayob & Freixanet, 2014).

Furthermore, these findings shed light on the significance of integrating digitalization support programs into broader economic and industrial policies. Governments should align their initiatives with the digitalization agendas of the broader industry sectors, fostering synergy and collaboration. This approach can lead to a more comprehensive and integrated ecosystem where SMEs are better prepared to navigate the digital landscape. Ultimately, these practical and policy implications underscore the pivotal role of SMEs in shaping the digital future and highlight the responsibility of governments and policymakers in empowering them to thrive in this era of digital transformation.

Limitations and Future Research

Despite its several strengths and contributions, the current research abides by certain limitations which establish an opportunity for future researchers. Firstly, the sample comprising 202 user SMEs contains limitations and findings may not be generalizable to all SMEs. Future research could consider broader and more diverse samples. Secondly, the study relies on self-administered survey questionnaires. This approach might involve response bias or limited in-depth responses. Future research might incorporate qualitative methods or in-depth interviews to gain a deeper understanding of how SMEs approach CFC program and develop capabilities. Thirdly, while the findings indicate a positive association between the CFC support program, reconfiguration capability, and digital transformation, it cannot definitively establish causality. Future research could employ longitudinal designs to explore causal relationships and the sustained impact of the CFC support program on SMEs' digital transformation over an extended period. Future researchers may also compare and contrast the effectiveness of the CFC support program with other government support programs to understand which program is most effective. This would provide better policy guidelines to policymakers. Finally, the current research was focused on one country. Therefore, future researchers can explore how government support programs for SMEs in the context of Industry 4.0 differ across various countries and regions, considering variations in economic development and digital infrastructure.

Conclusion

The current study underscored the pivotal role of the government CFC support program in driving the digital transformation among SMEs. The CFC program enhances SMEs' reconfiguration capabilities which, in turn, helps the firms to achieve digital transformation, thus establishing the mediating role of dynamic capabilities for government support programs to foster SMEs' digital transformation. Moreover, this study also emphasized the practical importance of engaging with such support programs for SMEs and called for policy initiatives to expand and align the digitalization support programs within broader economic agendas. Ultimately, it highlighted the indispensable role of SMEs in shaping the digital landscape, making them a cornerstone of economic resilience and competitiveness in the digital era.

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