SUSTAINABILITY OF COMPETITIVE ADVANTAGE BASED ON SUPPLY CHAIN MANAGEMENT, INFORMATION TECHNOLOGY CAPABILITY, INNOVATION, AND CULTURE OF MANAGERS OF SMALL AND MEDIUM CULINARY BUSINESSES IN SURAKARTA

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Abstract: Obtaining a lasting competitive advantage is the objective of any firm. The management of these businesses has a significant impact on their operational effectiveness. The management culture has a significant impact on the corporate environment. This descriptive study intends to investigate and analyze the managerial culture mediating the impact of innovation, information technology capability, and supply chain management (SCM) on sustainable competitive advantage (SCA). Data on the 1,211 restaurants in Surakarta that registered with the Surakarta City Cooperatives and SMEs Office in 2020 were collected using a survey approach through a questionnaire with Google forms. The Slovin method was used to determine the sample size, which included 301 respondents, of whom 282 questionnaires (93.69%) could be processed. Proportional random sampling was employed as a sample strategy, while AMOS 26 was used as a data analysis method. The hypothesis test's findings show that 1) SCM, ITC, and innovation have a substantial impact on the manager's culture (COM), 2) SCM and Innovation have a considerable impact on SCA, 3) ITC has no significant impact on SCA, and 4) COM blocks the effects of SCM, ITC, and Innovation on SCA. The research's theoretical and applied consequences are crucial for company culture and sustainability.

Keywords: Supply Chain Management, Information Technology Capability, Innovation, Culture of Manager, Sustainability of Competitive Advantage

1. Introduction

The level of commercial rivalry has increased due to globalization, with many similar products being offered on the market at reduced rates while maintaining or improving their quality. Since there are numerous product options, it benefits consumers. Producers must adapt their business practices to thrive, though. Therefore, businesspeople need to develop anything to set their company apart from rivals. Consumer perceptions of value outweigh those of competitors. To put it another way, companies need a Sustainable Competitive Advantage (SCA) to use supply chain management to survive strong competition (Afraz et al., 2021).

The capacity for information technology (ITC) can also help with SCA (Bayer, Haug, & Hvam, 2020; Ngobe, 2020). Khaddam, Irtaimeh, and Bader (2020) and Chiu and Yang (2019) expressed a contrary viewpoint, claiming that ITC has a negligible impact. The next element is innovation (I). According to Gebremichael and Tekle (2020) and Sulistyo and Ayuni (2020), it considerably and favorably affects competitive advantage. Al Mamun and Fazal (2018) presented an opposing viewpoint.

The Culture of Managers (COM), particularly for MSMEs, affects SCA. According to Vargas, Mantilla, and de Sousa Jabbour (2018) and Bi, Davison, and Smyrnios (2019), they have a considerable impact. Leadership was mentioned as a further element of competitive advantage in small enterprises by Jardon and Martínez-Cobas (2019). However, competitiveness does not simply result from culture; it develops from entrepreneurial leadership. Distinct departments in major businesses manage SCM, IT, and me. For instance, the Research and Development division is in charge of creation. Unlike SMEs, it has more resources. Thus the owner/manager takes care of everything themselves. The business manager's function becomes the focal point for managing the company's operations, including business management.

The prior investigations overlooked a legitimate gap in the literature. As a result, this descriptive study aims to evaluate and assess the managerial culture's role in mediating the impact of innovation, information technology capability, and supply chain management (SCM) on sustained competitive advantage (SCA). This study focuses on food-related SMEs in Surakarta, which was selected due to the city's constant promotion as a city that supports tourism. Several initiatives were made, such as the Madhang application, a home-based food mart, and the MSME Culinary Expo, which constructed 13 culinary shelters in Manahan, the western city, Mojosongo, Solo Square, and Galabo during the day and night. The government also discovered a forum for coaching and communication in Solo Kuliner Sejahtera (SOKUL SEJAHTERA), with Deed No. 22 dated September 22, 2020, KEP. MENKUMHAM Republic of Indonesia Number AHU.009472.AH.01.07.2020.

Sadly, fewer companies are now registered with the

Surakarta Cooperatives and MSMEs Service (2017 1,359, 2018 1,377, 2019 1,338, 2020 1,211). The interviews with several parties made it clear that Covid-19 was the cause of this deterioration. With less business, there is more competition since there is more demand. Surakarta's culinary SMEs must adapt to commercial competitiveness in several ways, including using mobile technology to sell their products online. Researchers intend to explore and analyze COM in mediating the impacts of SCM, ITC, and I on SCA based on the findings of studies and phenomena addressing the influence of SCM, ITC, I, and COM on currently existing SCA.

2. Literature Review and Hypotheses Development

2.1 Strategic Management

According to Glueck in Cherunilam (2015), a strategy is an all-encompassing, integrated plan that works with the business environment to accomplish firm objectives. Strategic management is known as the art and science of developing, carrying out, and evaluating each choice made by firm departments to achieve the organization's goal. Strategic management is required for the progress of resources and their effective usage with suitable strategy to acquire the greatest results from input (Ivanova-Gongne et al., 2022). The staff of the strategic management department at large corporations is committed to developing goal-oriented strategies that are easily implementable to achieve improved results (Khan & Ghayas, 2022; Tiep Le & Nguyen, 2022). Earlier studies have undoubtedly emphasized strategic management's importance to an organization's effectiveness. Importantly, strategic management directly impacts performance (Gryshchenko et al., 2022). As a result, past studies concluded that strategic management is essential for business performance (Masenya, 2022; Rachmawati et al., 2022).

2.2 *Resource-Based Theory (RBT)*

The organization needs to develop all of its resources so that it is challenging to copy and outperforms its rivals. Resources with four characteristics—valuable, rare, imperfectly imitated, and unique historical or organizational—can potentially offer a competitive advantage (Barney & Clark, 2007). Meanwhile, resources like culture, trust, human resources, and information technology can be developed to generate long-term competitive advantage (IT managerial skills). On the other hand, the resource-based view theory explains that resources are essential for performance (Sukaatmadja et al., 2021). The resources available to that organization determine how well the organization performs (Ivanova-Gongne et al., 2022). The organization's main goal should be to advance understanding with practical resources to attain sustainability (Gryshchenko et al., 2022; Huang, 2022). Additionally, this idea shows how important resources are and how businesses cannot compete in the market without them.

2.3 Operation Management

Using operations management, inputs are transformed into products and services as outputs (Heizer, Render, & Munson, 2017). The operations manager's role includes providing the business with goods and services. Still, it also includes developing an operations plan. Because they relate to plans and all other operational determinations, operations tactic judgments are essential to corporate processes (Sanders & Reid, 2013). In fact, operation management is a full process that transfers raw materials to finished goods that are ready for delivery (Xu et al., 2022). Because the nature of business varies between these countries, so does how that country's operations are managed (Masenya, 2022). The goal of organizations working to implement sustainability in operation management is to improve the performance of operation managers through efficient training in their particular fields of competence (Rachmawati et al., 2022).

2.4 *Supply Chain Management (SCM)*

It is a cooperative network of suppliers, producers, distributors, and retailers that works to procure basic materials, execute the production process, and coordinate the delivery of finished goods to clients (Ivanova-Gongne et al., 2022). Modern businesses need a strong supply chain since competition is growing. Clients always check the product's transit time (Taghipour et al., 2022). On the other hand, a company's ability to expand globally depends heavily on how well its supply chain department performs (Tseng et al., 2022). Any company can improve its performance through supply chain management to gain a competitive advantage (Sun et al., 2022). Similarly, modern firms' supply chain departments significantly influence sustainability in the business sector (Zhu et al., 2022). As a result, supply chain management should be improved in the modern business world.

2.5 Information Technology Capability (ITC)

According to Pérez-López and Alegre (2012) and Turulja and Bajgorić (2016), IT competence comprises knowledge, operations, and infrastructure. These three interact and impact how well a company can use its resources to its benefit. Getting a competitive edge involves obtaining, putting into use, combining, and rearranging relevant resources (Cepeda & Arias-Pérez, 2019). ICT plays a significant part in managing work since it helps firms expand in a useful way (Qosasi et al., 2019). Any company's supply chain division can be improved if information sharing is done appropriately.

Similarly, ICT enables firms to share information and use it for their own benefit (Zaidan, 2017). The sector's lack of attention may diminish the capacity of enterprises in the current day. Businesses at the top of the market are more likely to embrace ICT innovation for marketing and business success.

2.6 Innovation (I)

It deals with transformation and rebirth. Companies can benefit from the invention by gaining a competitive edge, according to Porter in Carayannis, Sindakis, and Walter (2015). It encompasses new corporate structures, modifications to marketing strategies, and novel approaches to customer service in the development process, from concepts to products or services. Due to introducing of new goods and services to the market, innovation is changing business trends (Ajmal, Jabeen, & Vihari, 2021). Modern firms should prioritize innovation to comprehend current business and product trends (Barić, 2017; Latifah et al., 2020). Then, existing items should be adjusted as necessary. In the contemporary business environment, the idea of innovation and corporate sustainability are closely related. Chinese companies focus on innovation to gain a competitive edge in the target market (Albassami et al., 2019).

2.7 Culture of Manager (COM)

Business owners and management's values will determine the policies that apply to their enterprise. Because organizational leaders are the ones who can develop, manage, and modify the organizational culture, leadership culture is essential (Weiss & Molinaro, 2010). Owner-manager practices and skills are prevalent in administrative work and influence corporate knowledge and communication flows (Culkin & Smith, 2000; Martin & Halstead, 2003). In addition, managers' cultures are closely related to company cultures because they directly impact how well businesses function (Porcu et al., 2020). The managers who any corporation courteously employs have little influence from their culture on the workplace (Andrei et al., 2020). On the other hand, managers actively trying to boost company performance are more likely to have a strong cultural impact on the workplace (Gunkel et al., 2013). Managerial negativity is not beneficial for enterprises. On the other hand, a positive culture is appropriate for corporate performance in the contemporary world (Zhao, Wang, & Li, 2020).

2.8 Sustainable Competitive advantage (SCA)

Suppose a business can provide economic value above and beyond what its rivals can. In that case, it has a competitive edge (Barney & Hesterly, 2012). According to Barney and Hesterly (2012), when something only lasts a short while, it has a transient quality. If they last longer, these benefits may also be long-lasting (Heizer et al., 2017). Because their goal is to gain a competitive advantage, modern businesses aim to achieve sustainable growth (Choiriah & Sudibyo, 2020). Business requires sustainability since products and services without them are less appealing to consumers (Brin, Nehme, & Lardo, 2022). To improve the performance of the culture, the management should place more emphasis on its employees and encourage them to do so. Undoubtedly, any company's culture is evolving, but sustained organizational performance is necessary to raise the standard of work (Hang et al., 2022).

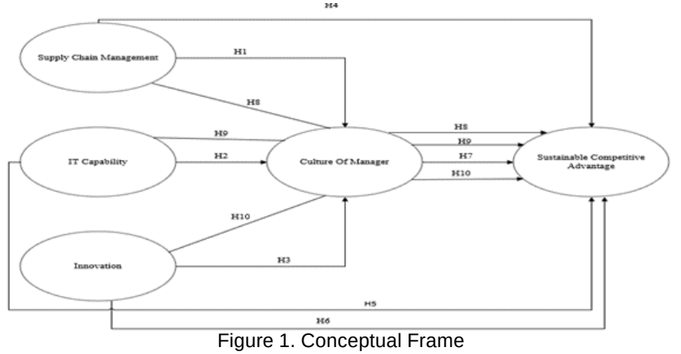

Figure 1. Conceptual Frame

On the grounding of earlier literature (see Figure 1 for conceptual framework), the developed hypotheses are:

H1. SCM significantly affects COM
H2. ITC significantly impacts COM
H3. Innovation greatly influences COM
H4. SCM significantly affects SCA
H5.ITC significantly affects SCA
H6. Innovation significantly affects SCA
H7. COM significantly affects SCA
H8. COM mediates the influence of SCM on SCA
H9. COM mediates the effect of ITC on SCA
H10. COM mediates innovation's impact on SCA

3. Research Methodology

The goal is to examine and analyze the function of COM in balancing the effects of SCM, ITC, and I on SCA. In 2020, Surakarta's 1,211 restaurants registered with the Cooperatives and SMSE Office. The study's independent factors are supply chain management, information technology capability, and innovation. Sustainable competitive advantage is the study's dependent variable (Culture of the Manager). Measurement of SCM refers to the Li et al. (2006) study, specifically: 1) supplier partnership strategy, 2) buyer relations, 3) the degree of data distribution, and 4) the quality of information sharing. According to Cepeda and Arias-Pérez (2019), ITC indicators include the following: 1) IT infrastructure capabilities; 2) ability to align IT and business; and 3) proactive IT capabilities.

The innovations include those in products, processes, and marketing. Utilizing Alghanmi's (2020) indicators, which include making items that are innovative for customer happiness, offering products that are different from the market, and developing products that are superior to competitors, all three are evaluated. The effectiveness of the production process, the precision of the delivery, and the development of delivery-related logistical operations are indicators of process innovation. Product design changes, packaging innovations, price strategy updates, pricing strategy updates for new and existing items, and promotion strategy updates are all marketing innovation indicators. (1) Control, (2) Commitment; (3) Sustainability; and (4) Enrichment are the metrics used to assess COM (Ahmad, Siddiqui, & AboAlsamh, 2020). Three criteria assess SCA: cost leadership, differentiation, and flexibility (Alghanmi, 2020). The researcher then included an additional metric, efficiency. The Likert scale measures the respondents' responses (1: strongly disagree to 5: strongly agree).

Data were gathered through interviews with Surakarta Cooperatives and MSME officials, the Chairperson of the SEJAHTERA Culinary Solo, and culinary businesses in Surakarta, in addition to the direct distribution of Google forms and questionnaires to respondents. The Slovin formula determines the sample size, which is 301 SMEs. Each type of business employed proportional random sampling (food 149, drinks 25, and snacks 127). 19 of the 301 respondents were unable to be used. Therefore, 282 of the final responders can be examined. The data were broken down into measurement model analysis, structural model analysis, and hypothesis testing by the researchers using AMOS 26.

4. Research Results

4.1 Measurement Model Analysis Results

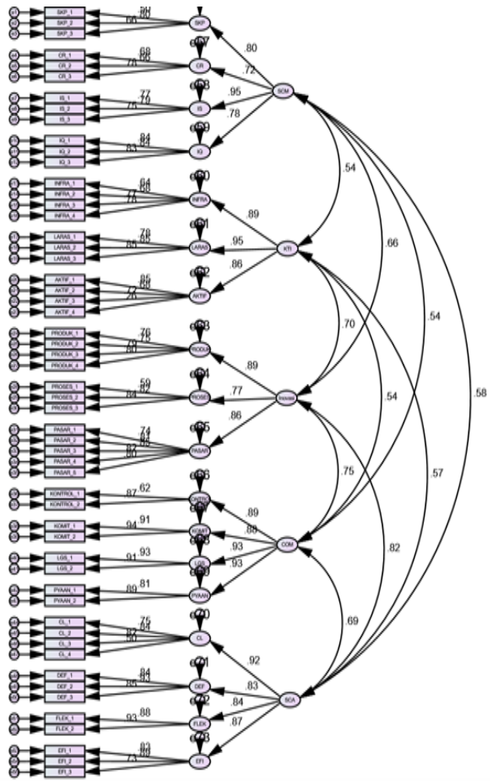

Figure 2. Measurement Model Analysis Results (CFA)

Concurrent validity analysis reveals that each indicator's factor loading value has complied with the minimum standard value set of 0.50. (Hair et al., 2014). The AVE values of 0.670, 0.817, 0.710, 0.821, and 0.726 for the SCM, ITC, I, COM, and SCA construct have met the above 0.50.

Table 1. Discriminant Validity

	CR	AVE	1	2	3	4	5
1. SCM	0.889	0.67	0.818				
2. ITC	0.93	0.817	0.539***	0.904			
3. Innovation	0.88	0.71	0.663***	0.697***	0.842		
4. COM	0.948	0.821	0.541***	0.545***	0.754***	0.906	
5. SCA	0.921	0.746	0.580***	0.575***	0.823***	0.690***	0.864

Source: AMOS 26 Graphics Processed Data

*Note: the diagonal line (bold) is the square root of the AVE of each construct. *** the correlation value between constructs is smaller than the square root of the AVE of each construct. Table 1 proves the discriminant validity test where the value of the square root of AVE for each construct is greater than the correlation value between constructs (Hair et al., 2014). The value of SCM, ITC, Innovation, COM, and SCA is 0.818, 0.904, 0.842, 0.906, and 0.864.*

4.2 Results of Structural Model Analysis and Hypothesis Testing

The structural model analysis determines the relationship between constructs based on the theoretical model. Hypothesis testing is done by looking at the goodness of fit (GOF) value of the structural model, the path coefficient value (β), and the significance value (p-value).

Table 2. Model fit results

GOF Index	Expected Value			Result	Evaluation
	Bad	Good	Very Good		
RMSEA	>0.08	>0.06	<0.06	0.074	Good
SRMR	>0.10	>0.08	<0.08	0.0691	Very Good
CMIN/DF	>5	>3	>1	2.522	Very Good
TLI	<0.90	<0.95	>0.95	0.81	Bad
CFI	<0.90	<0.95	>0.95	0.821	Bad

Source: Amos 26 Processed Data, 2021

Note: N=300; χ^2 (CMIN)=chi-square discrepancy; DF=Degrees of Freedom; CFI=Comparative Fit Index; TLI=Tucker-Lewis Index; RMSEA=Root Mean Square Error of Approximation; SRMR=Standardized Root Mean Square Residual. Table 2 shows the RMSEA value of 0.0674, SRMR 0.0891, CMIN/DF 2.522, TLI 0.81, and CFI 0.821. Evaluation is done by comparing the value of the analysis results with the expected value. So, RMSEA is in a good category, and SRMR and CMIN/DF are in the excellent category. The model is said to be feasible if at least two GOF indices of model testing are met (Hair et al., 2014). The evaluation results indicate that it has met the GOF index.

Next, model analysis and hypothesis testing are done by looking at the path coefficient value (β) dan significance value *(p-value).*

Table 3. Structural Model Analysis Results

Construct	Structural Path *(β & p-value)*	
	COM	SCA
Basic Model		
SCM	0.183***	0.109**
ITC	0.198***	0.066 †
Innovation	0.469***	0.277***
COM		0.539***
R^2 (R-square)	0.565	0.781

Source: AMOS 26 Processed Data, 2021

*Note: ***p < 0,001, **p < 0,01, *p < 0,05. † p > 0,1*

Table 3 shows that SCM has a positive and significant effect on COM (β=0.183 and p-value < 0.001); H1 is accepted. ITC has a positive and great impact on COM (β=0.198 and p-value < 0.001); H2 is accepted. Innovation has a positive and major influence on COM (β=0.469 and p-value < 0.001); H3 is accepted.

Table 4 also proves the results of the influence of the independent on the dependent variable; SCM has a positive and significant effect on SCA (β=0.109 and p-value < 0.01); H4 is accepted. ITC has no significant positive impact on SCA (β=0.066 and p-value > 0.1); H5 is rejected. Innovation has a positive and great impact on SCA (β=0.277 and p-value < 0.001); H6 is accepted. COM has a positive and significant effect on SCA (β=0.539 and p-value < 0.001); H7 is accepted.

Table 4. Mediation Test Results

Jalur Mediasi	*Estimate (ab)*	BC 95% CI		P-Value	Koefisien Jalur *(β)*
		Lower	Upper		
SCM --> COM --> SCA	0.194	0.097	0.332	0.002	0.099**
KTI --> COM --> SCA	0.117	0.059	0.194	0.001	0.107**
Inovasi --> COM --> SCA	0.316	0.223	0.435	0.000	0.253***

Source: AMOS 26 Processed Data Graphics.

*Note: ab= estimated mediation effect, BC= bias corrected, CI= confidence interval, ***p < 0,001, **p < 0,01, *p < 0,05.*

Table 4 shows that COM is statistically proven to intercede with the influence of SCM on SCA. It is evidenced by the estimated mediation effect of 0.194 with a path coefficient (β) of 0.099, which is significant at a p-value < 0.01. The 95% CI value is in the range of the lower limit of 0.097 to the upper limit of 0.332. The mediating effect is significant because the bias-corrected confidence intervals for the indirect impact do not contain a zero value (Baron & Kenny, 1986). Thus H8 is accepted.

The results of the mediation test stated that COM was statistically proven to mediate the effect of ITC on the Sustainability of Competitive Advantage. It is evident from the estimated mediation effect of 0.117 with a path value coefficient of 0.107, which is significant at p < 0.01. The 95% CI value is in the range of the lower limit of 0.059 to the upper limit of 0.194. The mediating effect is significant because the bias-corrected confidence intervals for the indirect impact do not contain zero values. Thus H9 is accepted.

The results of the mediation test stated that COM was statistically proven to mediate the effect of Innovation on SCA. It is evident from the estimated mediation effect of 0.316 with a path value coefficient of 0.253, which is significant at p < 0.001. The 95% CI value is in the range of the lower limit of 0.223 to the upper limit of 0.435. The mediating effect is significant because the bias-corrected confidence intervals for the indirect impact do not contain zero values; H10 is accepted.

Table 5. Summary of Hypothesis Testing Results 1 – Hypothesis 10

Hyp		β	P Value	Note
H1	SCM has a significant effect on COM	0.183	< 0.001	H1 accepted
H2	ITC has a significant effect on COM	0.198	< 0.001	H2 accepted
H3	Innovation has a significant effect on COM	0.469	< 0.001	H3 accepted
H4	SCM has a significant effect on SCA	0.109	< 0.01	H4 accepted
H5	ITC has a significant effect on SCA	0.066	> 0.1	H5 rejected
H6	Innovation has a significant impact on SCA	0.277	< 0.001	H6 accepted
H7	COM has a significant effect on SCA	0.539	< 0.001	H7 accepted
H8	COM mediates the influence of SCM on SCA	0.099	0.002	H8 accepted
H9	COM mediates the effect of ITC on SCA	0.107	0.001	H9 accepted
H10	COM mediates the effect of Innovation on SCA	0.253	0.000	H10 accepted
Source: Processed Primary Data				

5. Discussion and Conclusion

This study used AMOS 26 to analyze the results of its hypothesis. All of the hypotheses were significant, except H5, which was not. The conclusions of these hypotheses agreed with those of past research. For the advancement of resources and their effective use with the proper plan to produce higher input outcomes, planned management is crucial (Anderson et al., 2018). The staff in strategic management departments of large organizations is dedicated to creating goal-oriented strategies that can be quickly implemented to improve results (Prihartono & Asandimitra, 2018). Undoubtedly, previous studies have shown how crucial strategic planning is to the effectiveness of a business. It's crucial to recognize the connection between performance and strategic management (Dwiastanti, 2017). Previous research concluded that corporate strategy is crucial for business success.

First, operations management encompasses the entire process of turning raw materials into finished goods ready for delivery (Xu et al., 2022). Each country's operation management is distinct due to the variations in market characteristics. The organizations supporting the use of sustainability in operation management seek to increase the effectiveness of operation managers by classifying them effectively in their areas of expertise (Choong & Islam, 2020). Supply chains are important in modern business because of increasing competition and customers who frequently monitor transit times (A Ali & AlSondos, 2020). However, the ability of the supply chain unit to make the products appealing will have a direct impact on the global expansion of businesses. In reality, establishing a supply chain can help companies perform better and acquire a competitive advantage. Similar to this, the supply chain division in modern businesses has a direct relationship with sustainability (Ferrer et al., 2022). As a result, supply chain management needs to be enhanced in the modern business environment.

Second, modern businesses strive for sustainable growth because management wants a competitive advantage. Because without it, consumers will find products and services less desirable, business must be sustainable. Management needs to focus more on its personnel and support them if it wants the culture to perform better (Na, Kang, & Jeong, 2019). Any company's culture will undoubtedly change over time, yet sustainability is necessary for organizational performance to increase and work quality to improve. Additionally, managers' cultures are strongly tied to those of enterprises because they directly impact how successfully they run (Abdelaziz, 2021). The corporate culture is not greatly influenced by the managers who any firm politely engages. However, when a manager is actively working to boost company performance, the impact of that manager's culture on the work environment is enormous. Enterprises do not benefit from negative management. On the other hand, a positive culture is appropriate for the productivity of modern corporations.

The study aims to examine how COM mediates the impact of SCM, ITC, and innovation on SCA. Respondents were given questionnaires, and Google forms to collect data. In Surakarta in 2020, there were 1,211 restaurants listed with the Cooperatives and UMKM Service. The Slovin approach calculated the sample size, which was 301 participants. A proportionate random sampling technique was utilized in the sampling procedure (food, beverage, and snack) to determine the amount of samples for each type of business. The choice must satisfy the following conditions: A microbusiness in the culinary industry must meet the following criteria: 1) it must be registered with the Surakarta Cooperative and MSME Service; 2) it must use information technology to operate, and 3) it must have been in operation for at least three years.

Between the second week of October and the third week of November 2021, the questionnaire was distributed to 301 responders. 19 of the total respondents failed to meet the requirements, leaving 282 (93.69%) eligible for analysis. The Amos 26 application was used to analyze hypothesis testing. According to the study's findings, 1) SCM, Innovation, and ITC significantly COM. They have a big effect on SCA. ITC has no discernible influence on sustainable competitive advantage, although COM mediates the impact of SCM, innovation, and ITC.

6. Research Implications

This research has updated the framework for sustained competitive advantage to include new variables. In past studies, the topic of sustained competitive advantage was not covered concerning manager culture. This study has stressed how management culture affects the ability to preserve competitive advantage. This research has also highlighted the relationship between supply chain management and sustainable consumer behavior. This relationship is significant because it improves the model of sustained competitive advantage. The study also discusses the connection between innovation and long-term competitive advantage. Without sure, past research on the supply chain and sustainable competitive advantage was instructive, but this field of study was ignored. As a result, based on these theoretical conclusions, this research has added new relationships to the body of knowledge essential for future research and understanding the relationships between various aspects.

Overall, this study's findings are helpful to the management of MSMEs, especially those in the food industry. To accomplish SCA, managers must have good SCM, ITC, innovation, and COM that support business operations. This study advances economics since the only organization with a long-term competitive edge is one that can survive. It offers suggestions on how to do so, particularly on business managers' capacity to manage the supply chain, from acquiring raw materials to customer satisfaction. Managers must also expand IT capacity, including infrastructure capabilities, capabilities that fit with the business, and the capacity to respond proactively to IT changes. Business managers must also innovate their products, processes, and marketing. Lastly, the manager's culture also affects Sustainable Competitive Advantage.

7. Future Directions

This study covered the relationship between supply chains, innovation, and long-term competitive advantage for SMEs. However, this study has several shortcomings that need to be addressed in subsequent investigations. First, while this research has explored innovation for SMEs, it has not addressed the employees' attitudes about adopting new technologies. Therefore, in future studies, this model must examine innovation adoption. Second, while supply chain management has been covered in this research, neither the cost nor the efficiency of the supply chain has been addressed. Therefore, given the efficacy of the supply chain, future research may concentrate on this area. To validate the findings of this research, another research should collect

data using a seven-point Likert scale questionnaire. The data for this study was obtained on a five-point Likert scale.

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