Navigating the Digital Shift: Exploring the Impact of Technology on Management Practices in Small and Medium Enterprises (SMEs) in Nepal

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Abstract

Background and Objective:

This study investigates the impact of digital technology on management practices in small and medium enterprises (SMEs) in Nepal. The main objective is to understand how digitalization influences decision-making, customer support, and collaboration and communication within these organizations. Utilizing a mixed-methods approach, data were collected from 300 management members and employees across seven SMEs in various sectors. The study combined quantitative surveys and qualitative interviews to provide a comprehensive view of the digital shift. The findings reveal that digitalization significantly enhances decision-making, customer support, collaboration, and communication. Improved access to data and advanced analytical tools enables managers to make more informed and timely decisions, fostering agility and responsiveness in business operations. Digital tools such as customer relationship management (CRM) systems and support software have greatly improved customer support by enabling faster response times, personalized service, and better issue tracking. Furthermore, communication platforms and collaboration tools like project management software and team messaging apps enhance collaboration and communication among employees, facilitating better information sharing, coordination, and teamwork. These tools streamline workflows, reduce manual errors, and increase overall productivity. These insights underscore the essential role of digitalization in modernizing management practices in Nepalese SMEs, helping them remain competitive in a digital global market. The study also addresses the challenges of digital transformation, including the need for ongoing training and adaptation to new technologies. It concludes with recommendations for SMEs to effectively leverage digital technologies to optimize management functions, enhance customer support, and improve collaboration and communication, ensuring sustainable growth in the digital era.

Keywords : *Technology, management practices, Small and Medium Enterprises (SMEs), digital shift*

Background

The term "digital shift" describes the transformation within organizations as they increasingly integrate digital technologies into their operations, processes, and business models. This transition fundamentally alters how businesses function, manage resources, engage with customers, and create value, driven by technological advancements and evolving market needs. Management practices encompass the methods, strategies, and techniques used by individuals or groups within an organization to effectively plan, organize, lead, and control activities to achieve organizational goals. These practices include decision-making, resource allocation, communication, delegation, performance evaluation, and problem-solving. While management practices can vary depending on organizational culture, industry, and external factors, their general aim is to optimize processes, boost productivity, and ensure organizational success.

In recent years, Nepal has made significant strides in embracing digital technologies across various economic sectors (Adhikari, 2019; Bhatta, 2020; Gautam, 2021; Joshi, 2018; Lama, 2020). This transformation, driven by globalization, technological advancements, and changing consumer preferences, has prompted Nepalese businesses to reevaluate their traditional operational and management approaches. Consequently, a growing body of research explores the challenges and opportunities of digital transformation in Nepalese SMEs.

Adhikari's influential study, "Digital Transformation in Nepalese SMEs: Challenges and Opportunities" (2019), highlights the urgent need for Nepalese businesses to integrate digital technologies into their operations. Adhikari stresses that adopting digital tools and adapting management strategies is essential for SMEs to remain competitive in today's dynamic business environment (Adhikari, 2019).

Similarly, Bhatta's research, "Technological Innovation and Management Practices in Nepalese SMEs" (2020), examines the transformative impact of technology on Nepalese organizations. Bhatta finds that digital innovations can reshape management approaches, streamline processes, and foster innovation, thereby enhancing the global competitiveness of Nepalese businesses (Bhatta, 2020). Gautam's study, "Digital Leadership: A Key Driver for Successful Digital Transformation" (2021), emphasizes the crucial role of digital literacy among leaders in guiding organizations through digital transformations. Gautam argues that leaders must have a deep understanding of digital technologies and foster a culture of innovation to drive successful digital initiatives, especially in Nepalese SMEs (Gautam, 2021).

Joshi's research, "Nepalese Management Practices in the Digital Era" (2018), provides insights into the challenges and opportunities facing Nepalese SMEs in the digital landscape. Joshi highlights the importance of adaptive management strategies that combine traditional Nepalese values with modern digital practices to navigate the complexities of the digital era effectively (Joshi, 2018). Lama's study, "Digital Literacy and Skill Development in Nepalese SMEs" (2020),

highlights the importance of investing in employee training and development to build digital capabilities within Nepalese organizations. Lama underscores the need to equip the workforce with the necessary skills to thrive in an increasingly digitalized business environment (Lama, 2020).

Literature Review

Navigating the Digital Shift: Examining the Impact of Technology on Management Practices in Nepalese SMEs involves a thorough analysis of how digital technology adoption is transforming the management landscape in Nepalese businesses. This investigation includes assessing how digital transformation affects various management areas, such as leadership, decision-making, collaboration, talent management, and customer focus.

In Nepalese SMEs, the digital shift marks a significant change from traditional management practices, driven by increased integration of digital technologies into business operations. Factors such as globalization, technological advancements, evolving consumer preferences, and market dynamics propel this shift. As Nepalese businesses undergo this digital transition, they must adjust their management practices to capitalize on opportunities and address the challenges posed by the evolving digital environment.

The impact of technology on management practices in Nepalese SMEs is multifaceted. Digital transformation requires a reassessment of leadership styles and strategies to effectively navigate the complexities of the digital era. Leaders must be digitally literate and foster an innovative culture to drive successful digital initiatives. Furthermore, decision-making processes are transformed by the availability of data-driven insights, facilitating more informed and timely decisions.

Collaboration strategies within Nepalese SMEs are also significantly changing due to digital technologies. Virtual communication tools and collaboration platforms enable seamless interaction and cooperation among teams, regardless of their geographical locations. This enhances productivity, fosters innovation, and allows organizations to leverage diverse talent pools effectively. Additionally, talent management and workforce development practices are evolving to align with digital goals and competencies. SMEs must invest in employee training and development programs to build digital capabilities within their workforce. Customer-centricity is also crucial in the digital era, with organizations focusing on improving user experiences and leveraging customer data for personalized interactions.

Overall, navigating the digital shift requires Nepalese SMEs to embrace digital technologies and adapt their management practices accordingly. By leveraging the opportunities presented by digital transformation and proactively addressing its challenges, Nepalese businesses can drive sustainable growth, foster innovation, and remain competitive in the global market.

The digital shift in Nepalese SMEs is a complex phenomenon with multifaceted implications for management practices. Research findings illuminate various aspects of this transformation and its impact on Nepalese businesses.

Decision-Making

Studies by Adhikari (2019) and Gautam (2021) reveal that effective digital leadership is critical for navigating the digital shift in Nepalese SME's. Leaders who possess digital literacy and foster a culture of innovation are better equipped to guide organizations through digital transformation. Moreover, the availability of data-driven insights enhances decision-making processes, enabling Nepalese businesses to make informed and strategic decisions (Bhatta, 2020).

Collaboration and Communication. Research by Lama (2020) highlights the importance of collaboration strategies in Nepalese SME's undergoing digital transformation. Digital tools and platforms facilitate seamless communication and collaboration among teams, leading to increased productivity and innovation. Furthermore, virtual collaboration enables Nepalese businesses to leverage diverse talent pools effectively, irrespective of geographical constraints.

Customer Support and talent management. Studies by Joshi (2018) and Lama (2020) emphasize the significance of talent management and workforce development in Nepalese SME's adapting to the digital shift. Investing in employee training and skill development programs is essential for building digital capabilities within the workforce. Additionally, Nepalese businesses are increasingly prioritizing customer-centricity, leveraging digital technologies to enhance user experiences and personalize interactions.

The digital shift presents both challenges and opportunities for management practices in Nepalese SME's. By embracing digital technologies and fostering a culture of innovation, Nepalese businesses can navigate this transformation effectively. Moreover, addressing talent management, collaboration, and customer-centricity is crucial for driving sustainable growth and competitiveness in the digital era.

Small and Medium Enterprises (SMEs) in Nepal. Technology has enabled SMEs in Nepal to streamline their operations and improve efficiency. For example, the adoption of point-of-sale (POS) systems and inventory management software has helped SME retailers to track sales, manage inventory levels, and analyze customer preferences more effectively.

Digital communication tools such as email, messaging apps, and video conferencing platforms have facilitated collaboration and communication among SME teams, even across different locations, enabling better coordination and decision-making.

Tourism and Hospitality. Guesthouses, trekking agencies, travel agencies, homestays, and adventure tourism operators.

Agriculture and Agro-based Industries. Small farms, food processing units, dairy farms, tea estates, and agricultural cooperatives.

Handicrafts and Cottage Industries. Handloom products, traditional crafts, pottery, carpet weaving, and artisanal goods.

Retail and Trading. Small retail shops, grocery stores, convenience stores, wholesale traders, and local market vendors.

Information Technology (IT) and Software Development. Software development firms, IT consulting services, web design companies, and digital marketing agencies.

Manufacturing. Small-scale manufacturing units producing textiles, garments, metal products, furniture, handicrafts, and consumer goods.

Education and Training. Private schools, coaching centers, vocational training institutes, language schools, and educational consultancies.

Research Questions

A research question is what a study or research work tries to answer. It usually deals with a problem or issue that the study aims to solve by looking at data and concluding. Main research questions is "How does digitalization impact on the management practices in Nepalese SMEs? ". This main research question is divided into three research questions.

- How does digitalization impact on decision making in Nepalese SME's?
- What is the impact of digital transformation on collaboration and communication among different departments or teams within Nepalese SMEs?
- To what extent does digitalization enhance customer support services within Nepalese SMEs?

Objectives

Main objective is to investigate the impacts of digital technology on various management practices within Nepalese SME's. Specific objectives are:

- To investigate how digitalization affects decision-making processes in Nepalese SMEs?
- To explore the impact of digital transformation on collaboration and communication among different departments or teams within Nepalese SMEs?
- To determine the extent to which digitalization enhances customer support services within Nepalese SMEs?

Hypotheses

Main hypothesis is: Digitalization has no impact on the management practices in Nepalese SMEs.

Management practices, defined in terms of decision-making, communication and collaboration,

and customer support, are positively impacted by the adoption of digital technologies as stated in the following hypothesis.

Null Hypothesis (H_{01}): Digitalization does not positively affect decision-making processes in Nepalese SMEs.

Alternative Hypothesis (H_{11}): Digitalization positively affects decision-making processes in Nepalese SMEs.

H_{02}: Digital transformation does not impact collaboration and communication among different departments or teams within Nepalese SMEs.

H_{12}: Digital transformation impacts collaboration and communication among different departments or teams within Nepalese SMEs.

H_{03}: Digitalization does not significantly affect customer support services within Nepalese SMEs.

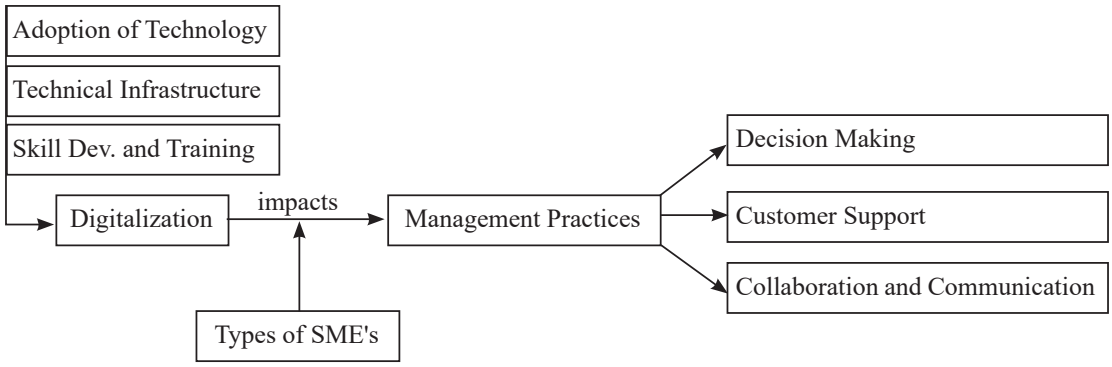
H_{13}: Digitalization significantly affects customer support services within Nepalese SMEs.

Conceptual Framework

A conceptual framework is a structured outline or model that depicts the relationships between different concepts, variables, or elements in a research study. It serves as a visual representation of the theoretical foundation guiding the research and provides a structured framework for organizing ideas, understanding complex phenomena, and conducting analysis. Conceptual frameworks help researchers develop hypotheses, design research methodologies, and interpret findings within a coherent theoretical framework.

Figure 1

Conceptual Framework Developed by the Researcher



Research Methods

Research Design

Research design includes different procedures and techniques used for research. It describes the sources of data, data collection methods, sampling technique, types of respondents, nature of

data, data presentation, and analysis tools and techniques. In this research researcher will use the descriptive and exploratory research design including the following process, methods, tools, and techniques for the research study.

Nature of Data

In this research researcher used different tools to convert the data from qualitative to quantitative or vice versa. Data generated from the interpretative approach will be mostly qualitative data and from the survey researcher has ranked data from the Likert scale and nominal data like demographic data.

Population, Sampling period, Sampling Plan and Sample Size

The population of the study consists of all SMEs, which are operating in Kathmandu, Nepal as of February 2024. The present study relates to the period of February 2024 onwards as Nepalese SMEs sector adopted the digital system mainly during this period. Researcher has used the convenience non-probabilistic sampling technique. The researcher has included all 7 Nepalese SMEs for the research. It also described the characteristics of employees and management of Nepalese SMEs. The researcher has chosen the Kathmandu Valley, the Capital City of Nepal as the research area. It covers an area of about 500 sq. KM and is situated at a height of 1,350 Meters above sea level. Employees and management from different Nepalese SMEs were considered as the participants for this study.

Research Instrument

A pre-tested and well-structured questionnaire was designed and filled in by the employees of 7 Nepalese SMEs. The data required for conducting this study was collected using a self-administered questionnaire specially designed to achieve the said objective, which was drawn from seven SMEs in Kathmandu. Together 325 employees were approached from 7 Nepalese SMEs and 300 of them filled the questionnaire comprising 45 from each SMEs.

Demographic Data Analysis

Descriptive analysis and cross tabulation were carried out to present the profile of the employees. Before formulating any effective research about the SMEs in Nepal, it is required to maintain up-to-date profile information of the employees in the form of employee-based data. The last section of the questionnaire relates to the employees' profiles covering their age, experience, education, and various positions held by them in their respective SMEs.

Table 1

Socio-demographical Characteristics of Respondents

Characteristics	Frequency	Percent
Gender		
Male	165	55
Female	135	45
Marital Status		
Married	175	58.33
Unmarried	125	41.67
Education		
SEE	25	8.33
Undergraduate	45	15
Graduate	200	66.67
Post Graduate	30	10
Working Experiences		
Below 1 Years	20	6.67
1 - 4 years	105	35
5 - 8 years	75	25
9 - 12 years	67	22.33
More than 12 Years	33	11
Knowledge of ICT		
Few	30	10
Operational	173	57.67
High	70	23.33
Expert	27	9
Types of SMEs		
Tourism and Hospitality	42	14
Agriculture and Agro. Industries	44	14.67
Handicraft and Cottage Industries	42	14
Retail Trading	44	14.67
IT and Software Industries	44	14.67
Manufacturing Industries	42	14
Education and Training	42	14

Table 1 describes that the male percentage (55 percent) for the sample is higher than the female percentage (45 percent) under study. 58.33% are married and 41.67% are unmarried. Most of the respondents, i.e., 66.67 % are graduates, 15 % are undergraduates,8.33% are SEE level and 10% are postgraduate. An analysis of the table reveals that the maximum number of respondents belong to the graduate category. For working experiences, 6.67% are below 1 year, 35% are 1-4

years, 25% are 5-8 Years, 22.33% are from 9-12 years and 11% are more than 12 years.

For types of SMEs tourism and hospitality 14%, 14.67% is agriculture and agro. industries, 14% are handicraft and cottage industries, 14.67% are Retail Trading. 14.67% are in the IT and Software industries. 14% are manufacturing Industries and 14% are Education and training industries.

The Satisfaction Level of Using Technology in SMEs

The satisfaction level of using technology in SMEs in Nepal can be assessed in terms of technology adoption, digital infrastructure, and communication and collaboration:

Technology Adoption. SMEs in Nepal generally express high satisfaction with technology adoption, particularly with tools that enhance efficiency and productivity, such as accounting software, online interactive software and inventory management systems etc.

Digital Infrastructure. Satisfaction with digital infrastructure varies significantly. Some SMEs typically report higher satisfaction due to better internet connectivity and access to technological resources. In contrast, some SMEs often face lower satisfaction levels because of poor infrastructure, limited internet access, and inadequate technical support, which hamper effective technology use.

Communication and Collaboration. There is a high level of satisfaction with technologies that improve communication and collaboration. These technologies enable better customer interaction, internal communication, and collaborative work, contributing positively to business operations. However, the satisfaction is contingent on reliable internet connectivity and the ability to train staff to use these tools effectively.

Overall, while technology adoption and communication tools are generally well-received, the variability in digital infrastructure quality significantly impacts the overall satisfaction levels among SMEs in Nepal.

Table 2

Level of Satisfaction

SMEs	Level of Satisfaction			
	Technology Adoption	**Digital Infrastructure**	**Communication and Collaboration**	**Investment on IT**
Tourism and Hospitality	72.50%	87.10%	72.03%	73.06%
Agriculture and Argo-based Industries	43.12%	34.70%	56.21%	32.01%
Handicrafts and Cottage Industries	67.90%	67.34%	68.09%	65.67%
Retail and Trading	56.23%	59.08%	67.23%	52.9%

Information Technology (IT) and Software Development	99%	98%	99%	98.97%
Manufacturing	46.34%	56.12%	64.05%	47.89%
Education and Training	70.89%	68.34%	71.01%	66.89%

Table 2 describe the level of satisfaction towards use of technology on SMEs of Nepal. In tourism and hospitality industries, satisfaction level of technology adoption is 72.5%. digital infrastructure is 87.10%, communication and collaboration are 72.03% and investment of IT is 73.06%. Among them the satisfaction level of the digital infrastructure is high. In agriculture and agro. based industries, satisfaction level of technology adoption is 43.12%. digital infrastructure is 34.70%, communication and collaboration are 56.21% and investment on It is 32.01%. Among them the satisfaction level of communication and collaboration is high.

Handicrafts and Cottage Industries, satisfaction level of technology adoption is 67.90%, digital infrastructure is 67.34%, communication and collaboration are 68.09% and investment on IT is 65.67%. Among them the satisfaction level of communication and collaboration is high. In Retail and Trading, satisfaction level of technology adoption is 56.23%, digital infrastructure is 59.08%, communication and collaboration are 67.23% and investment on IT is 52.9%. Among them the satisfaction level of the digital infrastructure is high. In Information Technology (IT) and Software Development, satisfaction level of technology adoption is 99%, digital infrastructure is 98%, communication and collaboration are 99.8% and investment on IT is 98.97%. Among them the satisfaction level of communication and collaborations is high. In manufacturing, satisfaction level of technology adoption is 46.34%, digital infrastructure is 56.12%, communication and collaboration are 64.05% and investment on IT is 47.89%. Among them the satisfaction level of communication and collaborations is high. In education and training, satisfaction level of technology adoption is 70.89%, digital infrastructure is 68.34%, communication and collaboration are 71.01% and investment on IT is 66.89%. Among them the satisfaction level of communication and collaborations is high.

Measuring the Impact of digitalization on management practices. A set of questionnaires developed in this study was based on the comprehensive literature review to set a measurement standard to construct a structural model fitted. Every one of the items developed used a unique code namely DM1, DM2 and DM3 as used for decision making, CC1, CC2 and CC3 as use for communication and collaboration, CS1, CS2 and CS3 as use for customer support, DS, AL, T D and IT (Digital Structure, Adoptability Level, Training and Development and Investment on IT) as used for Digitalization or Digital Shift. These unique codes were designed in the process of structural model design at the CFA level. Each of these items (observed variables) is attached to a latent variable.

Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis is a Structural Equation Modeling (SEM) and factor analysis method used to find out if observed variables contribute to latent or unobserved variables. This study aims to estimate the extent to which each of these factors impacts on management practices in Nepalese SMEs. Through this research, it was found that the use of digitalization facilitates the management practices determined in the form of decision making, communication and collaborations and customer support in Nepalese SMEs.

To achieve the aim of the study, 300 individuals were surveyed. The questionnaire consisted of questions regarding all the factors. Factor analysis is commonly used as a data reduction technique that trims down many variables into a set of factors for further analysis. Before running EFA, all the prerequisites are examined (that is, multivariate normality, multi-collinearity, and sample size).

Reliability and Validity Analysis

Construct Reliability was assessed using Cronbach's Alpha and Composite Reliability. Cronbach Alpha for each construct in the study was found over the required limit of .070 (Nunnally and Bernstein, 1994). The convergent validity of scale items was estimated using the Average Variance extracted (Fornell & Larcker, 1981). The average variance-extracted values should be above the threshold value of 0.50 (Fornell & Larcker, 1981) for all the constructs.

Table 3

Reliability and Convergent Validity

Items	Alpha	Composite Reliability	AVE
Decision Making	.812	0.950	0.762
Communication and Collaboration	.902	0.908	0.717
Customer Support	.899	0.851	0.709
Digitalization / Digital Shift	.967	0.966	0.877

Average Variance Extracted (AVE). It is used to measure the convergent validity i.e. construct's ability to share items or statements used to depict it. Herein, the value of AVE for all the variables is more than 0.5 i.e. Decision Making – 0.762, Communication and Collaboration– 0.717, Customer Support – 0.709 and Digitalization is 0.877. Thus, the model has convergent validity.

Composite Reliability (CR). It is the method for assessing the contribution or significance of an item by examining the factor's loading. Herein, the value of CR is also more than 0.7 for all the constructs i.e. Decision Making – 0.950, Communication and Collaboration– 0.908, Customer Support – 0.851 and Digitalization - 0.966. Thus, composite reliability is derived for the model.

Internal Consistency. It is the reliability method for depicting the factor's linkage with other factors. Cronbach alpha is the method to measure internal consistency. Herein the

value is more than 0.7 for all the variables i.e. Decision Making – 0.812, Communication and Collaboration– 0.902, Customer Support – 0.899 and Digitalization is 0.967. Thus, there is the presence of internal consistency in the model.

The discriminant validity of the constructs was evaluated using two criteria: Fornell-Larcker and HTMT criteria. Discriminant validity is the degree to which items differentiate among constructs and measure distinct concepts Fornell and Larcker (1981). Table 6.9 shows the discriminant validity of the instruments examined by following Fornell and Larcker (1981). The square root of the AVE shown in bold values on the diagonals was greater than the corresponding row and column values that indicate the discriminant validity of the constructs.

Table 4

Validity Analysis

	CR	AVE	MSV	MaxR(H)	F4	F5	F9	F10
F4	0.959	0.887	0.229	0.962	0.942			
F5	0.893	0.680	0.125	0.924	0.338***	0.824		
F9	0.929	0.815	0.455	0.947	0.479***	0.354***	0.903	
F10	0.970	0.916	0.455	0.983	0.426***	0.324***	0.675***	0.957

No validity concerns here.

Table 5

HTMT Analysis

	F4	F5	F9	F10
F4				
F5	0.365			
F9	0.478	0.392		

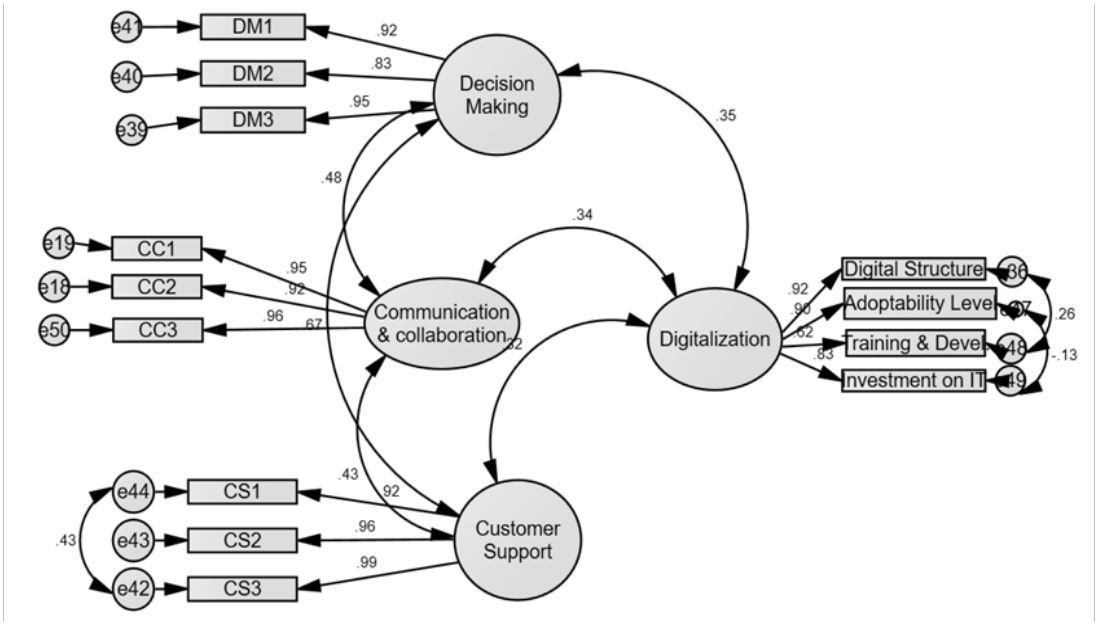
Table 5 shows the discriminant validity of the instruments was examined by using HTMT analysis. All the values are less than 0.9. So, there was no issue of discriminant validity.

CFA Model Fit

After running AMOS, several fit statistics, which justified the measurement model fit and the goodness of fit statistics, were accepted. The result is summarized in Table 6.

Figure 2

CFA Model



Source: Generated by AMOS

Variables and their Dimensions

TA: Technology Adoption Level
DI : Digital Infrastructure
TD: Training and Development
IN: Investment on IT
DM1: Digital technologies facilitate faster and more informed decision-making.
DM2: Decision-making processes are aligned with the objectives of digital transformation.
DM3: Decision-making processes are transparent and inclusive.
CC1: Digital collaboration tools facilitate communication and collaboration among teams.
CC2: Digital collaboration tools support remote work and virtual meetings effectively.
CC3: Digital collaboration tools support remote work and virtual meetings effectively.
CS1: Digital channels enable personalized interactions and experiences for customers.
CS2: Digital initiatives enhance customer satisfaction and loyalty within our organization.
CS3: Our organization uses digital technologies to gather and analyze customer feedback.

Table 6

Result of Model Fit

Model	CMIN	DF	P	CMIN/DF	GFI	AGFI	NFI	TLI	CFI	RMSEA
Default model	315.492	119	.000	2.91	.915	.902	.912	.983	.978	.057
Saturated model	000	0			1.000		1.000		1.000	
Independence model	32322.050	325	.000	99.452	325	.000	99.452	.000	.000	.356

Source : Data Generated by AMOS

The fit statistics referring to this measurement model showed adequate fit represented by values of 0.9 or above for NFI, TLI, and CFI and less than 0.8 for RMSEA (Bagozzi &Yi, 1998). The chai square of this model was 315.492, at a DF of 119 (p=0.00), also indicative of data fit. Chi-square/degrees of freedom are represented by the value 2.91, which is less than 5.0. Other less favorable indicators were GFI=.915 and AGFI= .902, which were greater than 0.9. Therefore, the goodness of fit statistics illustrated that the measurement model fitted well with the data.

Must Likelihood Estimations (MLE) Result for Linkage Analysis

It describes the linkage examination of the contribution of factors to digitalization determined in the form of decision making, communication and collaborations, and customer support in Nepalese SMEs. The Maximum Likelihood Estimation (MLE) in the below table shows that digitalization has significant influence and support in management practices determined in the form of decision making, communication and collaborations, customer support in Nepalese SMEs. To identify the factors contributing to management practices determined in the form of decision. Level measurement, all the sub-factors were assessed separately. The results are shown in the table below:

Table 7

Examining the Linkage and Estimation for Confirmatory factor Analysis

			Estimate	S.E.	C.R.	P	Label
Decision Making	<---	Digitalization	.397	.038	10.528	***	Significance
Communication	<---	Digitalization	.444	.045	9.902	***	Significance
Customer Support	<---	Digitalization	.375	.038	9.866	***	Significance
CC1	<---	Communication	.990	.020	49.490	***	Significance
CC2	<---	Communication	1.000				
Digital Stru	<---	Digitalization	1.000				
DM1	<---	Decision Making	1.000				
DM2	<---	Decision Making	.962	.028	34.657	***	Significance
DM3	<---	Decision Making	.942	.021	44.395	***	Significance
CS1	<---	Customer Support	1.000				
CS2	<---	Customer Support	.975	.035	28.168	***	Significance
CS3	<---	Customer Support	.968	.014	70.887	***	Significance

			Estimate	S.E.	C.R.	P	Label
Adoptability	<---	Digitalization	1.036	.041	25.186	***	Significance
Training	<---	Digitalization	.737	.034	21.676	***	Significance
Investment	<---	Digitalization	1.015	.044	23.123	***	Significance
CC3	<---	Communication	.983	.017	57.237	***	Significance

Firstly, the 'p-value' is relevant to assess whether there is a significant relationship between the sub-factors and SMEs practices or not. This 'p-value' must be less than 0.05 for the relationship to exist (Kock, 2016). In this case, all the sub-factors or aspects have a 'p-value' of 0.00, therefore there is a significant relationship.

Next, the 'Estimate' value of the variables is relevant. In the case of many sub-factors such as DM1, DM2, Dm3, CC1, CC2, CC3, CS1, CS2 and CS3 are high. This shows high factor loading. Similarly for other constructs, the factor loading is above 0.5. Thus, this shows that the use of digitalization and management practices determined in the form of decision making, communication and collaboration and customer support factors have an important and positive contribution in measuring the impact of digitalization on the management practices determined in the form of decision making, communication and collaborations and customer support in Nepalese SMEs.

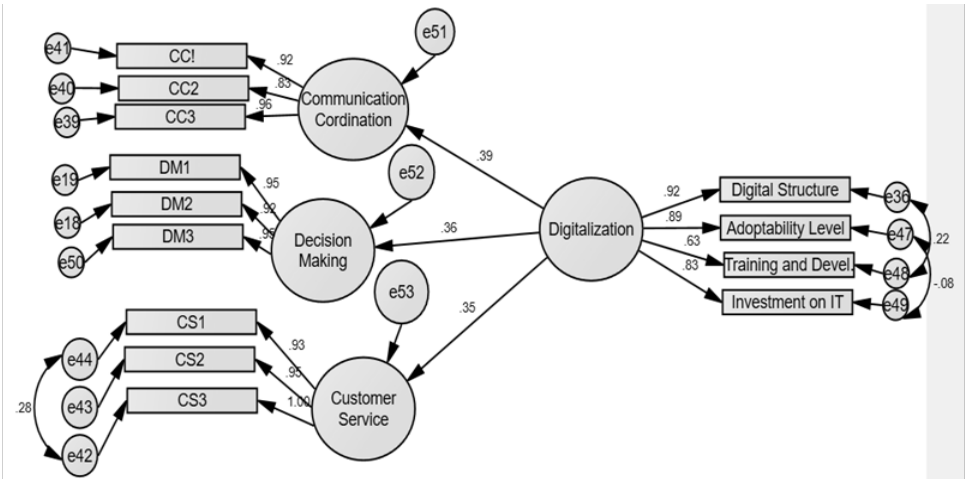
Confirmatory factor analysis helps to determine the efficiency of the construct. It is a key step and analysis in an SEM model. Since the model is proven to be effective, each of the selected factors has a positive contribution in measuring the main construct i.e. the impact of digitalization on the management practices determined in the form of decision making, communication and collaborations and customer support in Nepalese SMEs.

Significance Testing Using Analysis of Moment Structures Using AMOS

The structural model is the second stage in the SEM approach. This model integrates and correlates all factors to management practices determined in the form of determined in the form of decision making, communication and collaborations and customer support constructs. It also provides a structural link between digitalization and management practice determine in the form of decision making, communication and collaborations and customer support in Nepalese SMEs in the figure below.

Figure 3

Structural Model of the impact of digitalization on the management practices determined in the form of decision making, communication and collaborations and customer support in Nepalese SMEs.



Source: Generated by AMOS

Structural Model Fit

Table 8

Structural Model Fit

Model	CMIN	DF	P	CMIN/ DF	GFI	AGFI	NFI	TLI	CFI	RMSEA
Default model	315.492	119	.000	2.878	.971	.952	.912	.985	.989	.103
Saturated model	000	0			1.000		1.000		1.000	
Independence model	34065.501	351	.000	97.053	325	.000	.000	.000	.000	.351

Source : Data Generated by AMOS

The fit statistics referring to this measurement model showed adequate fit represented by values of 0.9 or above for NFI = 0.912, TLI = 0.985, CFI=0.989, and less than 0.8 for RMSEA =.103 (Bagozzi &Yi, 1998). The chai square of this model was 315.492, at a DF of 119 (p = 0.00), also indicative of data fit. Chi-square/degrees of freedom are represented by the value 2.878, which is less than 5.0. Other less favorable indicators were GFI=.971 and AGFI= .952, which were greater than 0.9. Therefore, the goodness of fit statistics illustrated that the structural model fitted well with the data.

Measuring the of the impact of digitalization on the management practices determined in the form of decision making, communication and collaborations and customer support in Nepalese SMEs Using Regression Analysis Using AMOS

The impact of digitalization on management practices refers to the effects that digital shift technologies and platforms have on the overall management practices. The following table describes the impact of digitalization and management practices.

Table 9

Regression

			Estimate
Decision making	<---	Digitalization	.325
Communication and Collaborations	<---	Digitalization	.930
Customer Support	<---	Digitalization	.898

The results of the regression analysis using AMOS indicated a significant positive relationship between the use of digitalization and decision making ($\beta = 0.710$, $p < 0.01$). The coefficient of determination (R^2) was 0.325, indicating that 32.5 % of the variance in decision making can be explained using digitalization.

The results of the regression analysis using AMOS indicated a significant positive relationship between the use of digitalization and communication and collaboration ($\beta = 0.720$, $p < 0.01$). The coefficient of determination (R^2) was 0.93, indicating that 93 % of the variance in communication and collaborations can be explained using digitalization.

The results of the regression analysis using AMOS indicated a significant positive relationship between the use of digitalization and customer Support ($\beta = 0.690$, $p < 0.01$). The coefficient of determination (R^2) was 0.898, indicating that 89.8 % of the variance in customer support can be explained using digitalization.

These findings support the hypothesis that digitalization significantly predicts management practices (decision making, communication and collaboration and customer support) in Nepalese SMEs.

Hypothesis Testing Using Analysis of a Moment Structures Using AMOS

The Hypothesis for studying the impact of digitalization on the management practices in Nepalese SMEs.

Null Hypothesis (H_{01}): Digitalization does not positively affect decision-making processes in Nepalese SMEs.

Alternative Hypothesis (H_{11}): Digitalization positively affects decision-making processes in Nepalese SMEs.

H_{02}: Digital transformation does not impact collaboration and communication among different departments or teams within Nepalese SMEs.

H_{12}: Digital transformation impacts collaboration and communication among different departments or teams within Nepalese SMEs.

H_{03}: Digitalization does not significantly affect customer support services within Nepalese SMEs.

H13: Digitalization significantly affects customer support services within Nepalese SMEs.

The results of the estimates are shown below:

Table 10

The Results of Estimates

			Estimate	S.E.	C.R.	P	Label
H1 – Decision Making	<---	Digitalization	.332	.036	8.386	***	Significance
H2 – Communication and collaborations	<---	Digitalization	.413	.028	6.122	***	Significance
H3 – Customer Support	<---	Digitalization	.552	.033	5.826	***	Significance

The P-value shows that for each variable the significance value is less than the significance level of the study i.e. 0.01. Thus, the first null hypothesis of having no significant impact of digitalization on decision making has been rejected. A second null hypothesis of having no significant impact of digitalization on communication and collaboration has been rejected has been rejected. The third null hypothesis of having no significant impact of digitalization on customer support has been rejected.

This result is further verified by the z-score value i.e. 8.536 for decision making, 6.122 for communication and collaboration and 5.823 for customer support which is more than the tabulated Z-value of 1.96. Hence, for the present study, the analysis of the perception of the people shows that there is a significant impact of digitalization on management practices measured with the dimensions of decision making, communication and collaboration and customer support.

Justification of the Result

The research on the impact of technology on management practices in SMEs in Nepal underscores the critical role of digital adoption and innovation in enhancing business resilience and performance, particularly during crises like the COVID-19 pandemic. Studies show that digital tools and innovative business models significantly improve operational continuity and efficiency, with digital marketing and e-commerce being pivotal for business survival (Al-Kurdi, O., El-Haddadeh, R., & Eldabi, T. (2021)). However, SMEs face challenges such as limited digital literacy and financial constraints, necessitating external support and targeted government policies to foster innovation and ensure sustainability Priyono. (A., Moin, A., & Putri, V. N. A. O. (2021). Insights from European SMEs further highlight that digital transformation reshapes business models and enhances competitiveness, emphasizing the need for continued investment in technology for long-term success (Kraus, S., Palmer, C., Kailer, N., Kallinger, F. L., & Spitzer, J. (2021)).

Conclusion

The primary aim of this study was to outline the research objectives and the procedure in Structural Equation Modeling (SEM) followed by developing questionnaire scales to measure the impact of digitalization on management practices (decision making, communication and collaboration and customer support) in Nepalese SMEs. . To measure the impacts using Confirmatory Factor Analysis (CFA), it is revealed that digitalization practices have a significant impact with a higher cut-off Goodness-of-Fit Index (GFI) >.95 and RMSEA (spec. < 0.08). Moreover, the results prove that the structural model of digitalization applications has a strong relationship on management practices measured with the dimensions of decision making, communication and collaboration and customer support. . All three hypotheses discussed earlier indicate a significant relationship.

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