Cuadernos de Economía (2023) Volume 46, Issue 131, 165-180

Asociación Cuadernos de economía

Cuadernos de economía

www.cude.es

ARTÍCULO

A Quantitative Analysis on The Impact of Covid-19 on the Personal Finances with Special Reference to Msmes in The Kingdom of Saudi Arabia

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Jel Codes:
F65, O16

Keywords:
Micro, Small, and Medium Enterprises (MSMEs), COVID-19 Pandemic, Saudi Arabia,

Abstract: This study investigates the essential characteristics of the personal financial landscape of Micro, Small, and Medium Enterprises (MSMEs) in Saudi Arabia, with a specific focus on the impact of the COVID-19 pandemic. A total of 154 respondents, comprising owners, managers, and administrators of Micro, Small, and Medium-Sized Enterprises (MSMEs) in Riyadh, the capital of Saudi Arabia, were surveyed to gather data. The results of the study indicate that younger entrepreneurs and businesses experienced greater financial consequences, particularly among owners aged 18–30 and 31–45, compared to older age groups. However, both younger and older entrepreneurs demonstrated a higher level of financial knowledge and awareness regarding emergency finance options. Overall, the outbreak had a significant impact on both the national and global economies. This study offers a significant contribution to the extant body of literature pertaining to Micro, Small, and Medium Enterprises (MSMEs).

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https://doi.org/10.32826/cude.v46i131.1117

1. Introduction

1.1 Background of the Study

The outbreak of the coronavirus-2019 (COVID-19) has had a substantial influence on both domestic and international economies. Consequently, a multitude of enterprises have encountered diverse levels of financial detriment due to a range of distinct challenges. Enterprises, specifically, are confronted with a range of challenges, such as reduced demand, disruptions in the supply chain, the cancellation of export orders, shortages of raw materials, and disruptions in transportation, among other issues. However, it is evident that the global COVID-19 pandemic is exerting a substantial influence on businesses across the globe. The COVID-19 pandemic has disproportionately affected MSMEs as compared to larger enterprises. This is primarily due to the inherent limitations faced by MSMEs, such as inadequate access to resources, particularly financial and managerial resources. Additionally, MSMEs are often ill-equipped to handle prolonged disruptions, such as the ones caused by the current outbreak, as they are typically unprepared for such unforeseen circumstances (Shafi, Liu, & Ren, 2020).

1.2 Statement of the Problem

The survey titled "The Impact of COVID-19 on Small and Medium-Sized Enterprises in Saudi Arabia: A Large-Scale Survey" was conducted by Monsha'at, the general authority responsible for small and medium-sized enterprises in Saudi Arabia. The COVID-19 pandemic had a detrimental effect on the businesses of 99.5% of the participants, encompassing enterprises of various scales. Consequently, there was a decline in revenue, leading to their incapacity to fulfil their financial commitments and cover fixed costs, including employee salaries, rent, and logistical expenses. Building upon the outcomes of the aforementioned survey, the researchers opted to examine the ramifications of the pandemic on the financial circumstances of MSMEs. Specifically, the focus was on the inability of these entities to fulfil their commitments and cover fixed expenditures, including salaries and rent, among others.

1.3 Justification of the Study

The significance of Micro, Small, and Medium Enterprises (MSMEs) in relation to financial systems and the overall Gross Domestic Product (GDP) of a nation is of utmost importance and should not be underestimated within the context of a national economy. The present study aims to examine the effects of the COVID-19 pandemic on the financial situation of MSMEs in the Kingdom of Saudi Arabia. Extensive global and Saudi Arabian research has been conducted to evaluate the ramifications of the COVID-19 pandemic on MSMEs in a general sense. However, our efforts to identify a comprehensive study specifically examining the strategies employed by MSMEs to navigate their personal financial matters during this period have proven unsuccessful. The objective of this study is to comprehensively examine the effects of the COVID-19 pandemic on the financial situations of MSMEs in Saudi Arabia (Particularly the Riyadh region, as the most impacted businesses are located there).

Being proactive and predictive of future circumstances that could potentially impact the yield and productivity of an economy holds significant importance. This study holds significance in assessing the level of financial literacy among MSME owners during periods of crisis and providing recommendations for recovery from previous and potential future crises that disproportionately impact MSME owners. Upon completion of this proposed study, the proprietors and administrators of MSMEs will acquire the requisite knowledge pertaining to recovering from previous substantial losses incurred as a result of the pandemic, as well as mitigating the likelihood of similar disruptions in the future. This will be accomplished through the implementation of the final recommendations derived from the study.

2. Review of Literature

The global impact of the coronavirus pandemic, which originated in China, has been observed in over 188 countries across the globe. The global dissemination of this viral pathogen has resulted in significant mortality rates and has had a profound impact on numerous businesses worldwide, as well as the overall state of the global economy. The magnitude of the economic ramifications stemming from the pandemic is perceived to be substantial, prompting widespread contemplation regarding the means by which economic recuperation can be attained (Alhawal, Nurunnabi, & Al-Yousef, 2020).

The COVID-19 pandemic is significantly impacting the global economy and various facets of our daily existence, encompassing our healthcare system, education, economy, and social interactions. The precise extent of the economic repercussions of COVID-19 remains uncertain; however, there is a consensus among economists that it will exert a substantial adverse influence (Basahel, Milyani, & Brahimi, 2021). The concept of personal finance encompasses the principles and strategies employed in the management of financial resources, including the allocation of funds for savings and investment purposes. The aforementioned topics encompass budgeting, banking, insurance, mortgages, investments, retirement planning, tax planning, and estate planning. The term commonly denotes the comprehensive sector encompassing financial service providers catering to individuals and households, offering guidance on financial matters and investment prospects. The five domains of personal finance encompass income generation, savings accumulation, expenditure management, investment allocation, and risk mitigation (Kenton, 2023).

The management of personal finances is a crucial aspect encompassing both the immediate handling of financial obligations and the strategic preparation for long-term financial prospects (Turner, 2023).

2.1 MSMEs

Micro, Small, and Medium Enterprises (MSMEs), comprising 99.41% of the private sector in Saudi Arabia, played a significant role in fostering economic growth by contributing 28.7% to the country's Gross Domestic Product (GDP) in the year 2018. The government aims to bolster SME sector by enhancing the economic landscape and exploring strategies to augment its impact on the gross domestic product (GDP). This includes diversifying revenue streams and broadening the Kingdom's manufacturing capabilities, all in alignment with the Kingdom's objectives and the pivotal role of SMEs in driving economic transformation and realising Vision 2030.

The implementation of preventive measures aimed at mitigating the transmission of the Corona virus has resulted in adverse consequences for approximately 91% of MSMEs. Micro enterprises experienced a 43% greater impact compared to small businesses, which in turn experienced a 42% greater impact. The businesses that experienced the

greatest impact were located in Riyadh, with a percentage of 27%. This was followed by the Eastern region, which accounted for 23% of the affected businesses, and Makkah, with a proportion of 20%. A proportion of 30% of individuals experienced harm within the entirety of the Kingdom (Alhawal, Nurunnabi, & Al-Yousef, 2020).

At the time of formulating this research proposal, there is a limited body of existing literature investigating the effects of the Covid-19 pandemic on personal finances. Our review has identified only a small number of relevant studies thus far.

According to the World Health Organisation (WHO, 2020), COVID-19 was officially designated as a Public Health Emergency of International Concern on January 30, 2020. The potential consequences of the current pandemic on both human lives and the economy, in both the short and long term, are difficult to comprehend. Despite the efforts of the World Health Organisation (WHO) and various governmental entities to implement preventive and control measures aimed at mitigating the spread of the pandemic, the extent of its impact remains uncertain (Ebekozien & Aigbavboa, 2021).

Numerous global studies have unveiled concerning patterns emerging from the ramifications of the COVID-19 pandemic. BFA Global (2020) conducted a comprehensive study on the impact of COVID-19 on financial stability, specifically focusing on a seven-country survey. The study, conducted by BFA Global Survey, encompassed a sample size of 1,561 businesses across various nations, namely India, Kenya, Mexico, Nigeria, South Africa, the United Kingdom, and the USA. The findings revealed that small and medium-sized enterprises (SMEs) possessed cash reserves sufficient to sustain their operations for a period ranging from 4 to 6 months.

A similar study by Genome in emerging markets found that only 60% of the businesses under examination had enough cash reserves to maintain their operations for more than three months. The findings of the study indicated that a significant proportion of start-up enterprises, specifically 74%, had chosen to terminate the employment contracts of their full-time staff members. In relation to nations, North America ranked highest, with 84% of start-ups having implemented full-time employee terminations. According to Morelix (2020), Europe and Asia adhered to this practice at rates of 67% and 59%, respectively. According to a survey conducted by the International Trade Centre (ITC, 2020) titled "SME Competitiveness Outlook," it was projected that the implementation of COVID-19 lockdown measures would result in a substantial decline in manufacturing exports for China, the European Union, and the United States. The estimated economic impact of these lockdowns was anticipated to reach a staggering $126 billion on a global scale. Based on the aforementioned report, it can be inferred that the hospitality and food services sectors experienced the most pronounced adverse effects as a result of the pandemic. A significant majority of the surveyed businesses, approximately 76%, attributed their financial losses to the implementation of both partial and full-time lockdown measures. The virus also had an impact on the tourism industry. Based on the analysis conducted by the World Tourism Organisation, it is anticipated that the international travel sector will experience a substantial reduction ranging from 60% to 80% in the year 2020. This decline is projected to be approximately 15 to 20 times larger in magnitude compared to the global financial crisis of 2008. The situation in Africa is significantly exacerbated, leading to further deterioration of the already heavily compromised small and medium-sized enterprise (SME) sector.

According to a survey carried out by the African Management Institute (AMI), a significant majority of business owners from 17 African nations, amounting to 87% of respondents, expressed a sense of uncertainty regarding the sustainability of their enterprises amidst the ongoing pandemic. In contrast, a majority of 67% of respondents asserted that the COVID-19 control measures implemented by governments, including lockdowns, curfews, and social isolation, had a negative impact on the sustainability of businesses (Harrison, 2020).

In their study titled "The Impact of the COVID-19 Pandemic on Financial Well-being: Insights from Nigerian Households," Dauda, Akinleye, Iwegbu, and Popogbe (2021) investigated the effects of the pandemic on the financial situation of households in Nigeria. The results of their research indicated a substantial decrease in income for nearly 50% of the participating households. While a significant proportion of household members, specifically 41.7%, possess funds allocated for preventative measures in the event of an emergency, a substantial majority indicated that these emergency savings were significantly diminished during the period of lockdown. The prevailing consensus among respondents is that the coronavirus pandemic will have an adverse effect on the financial and economic welfare of Nigerians.

In accordance with a study conducted by Alhawal, Nurunnabi, and Al-Yousef (2020), the current pandemic has had a negative impact on the labour, management, and financial markets. This situation poses a significant concern for business owners who fear that without government intervention, the coming months may bring further detrimental consequences, including a decrease in employment opportunities. Based on the study conducted by Havrlant, Darandary, and Muhsen (2021), it was projected that the COVID-19 pandemic had a negative impact on the Gross Domestic Product (GDP) in 2020, with estimates ranging from -4.8% to -9.8%. In response to a study conducted by Alhawal, Nurunnabi, and Al-Yousef (2020) regarding the impact of COVID-19 on Small and Medium Enterprises (SMEs) in Saudi Arabia, it was discovered that a significant majority (99.5%) of the participants concurred that the pandemic had a detrimental effect on businesses of various scales.

This was primarily attributed to decreased revenue, which in turn hindered their ability to fulfil financial obligations such as salaries and rent payments. According to Alhawal, Nurunnabi, and Al-Yousef (2020), findings from their study indicate that a significant proportion of businesses, specifically 49.1% of medium-sized, 27.6% of small-sized, and 10.6% of micro-sized enterprises, have made the decision to suspend the employment of their entire workforce in response to the ongoing crisis. According to the data, it has been observed that 36.4% of medium-sized businesses, 23% of small businesses, and 3.5% of micro-businesses have implemented temporary layoffs of more than ten employees since the onset of the crisis.

The International Finance Corporation (IFC, 2020) administered a standardised survey to a sample of 20 financial institutions operating in six countries within the Sub-Saharan African region, namely Côte d'Ivoire, Gambia, Guinea, Kenya, Sierra Leone, and Uganda. The objective of the survey was to assess the effects of the pandemic on micro, small, and medium enterprises (MSMEs) that have access to banking services. The surveys were administered by financial institutions, wherein relationship managers conducted interviews with MSME customers either in person or over the phone. The data was gathered during the period spanning from July 2020 to September 2020. Within the sample, it was observed that 43 percent of the businesses were classified as micro-enterprises, while an

equal proportion of 43 percent were classified as small enterprises. Medium-sized enterprises accounted for 12 percent of the sample, whereas the remaining 2 percent were identified as large enterprises.

The findings of the study revealed that a significant majority of micro, small, and medium enterprises (MSMEs) experienced a decline in demand for their products and services as a direct consequence of the ongoing pandemic. Additionally, approximately three-quarters of MSMEs encountered cash-flow difficulties during this period. Notably, the proportion of firms reporting no issues with loan repayment decreased from 71% prior to the pandemic to 17% during the pandemic. Furthermore, it was observed that 43% of MSME owners explicitly sought non-financial support, while around 50% of MSMEs reported receiving assistance from their financial institutions. Interestingly, medium-sized enterprises were more likely to receive financial support, whereas micro-sized enterprises were more inclined to receive non-financial support. Lastly, a majority of MSMEs (86%) expressed the need for additional support from their financial institutions.

Another research study conducted by Shafi, Liu, and Ren (2020) examined the effects of the COVID-19 pandemic on Micro, Small, and Medium-sized Enterprises (MSMEs) operating within the context of Pakistan. The study employed an exploratory approach, utilising descriptive statistics as the chosen methodology. The findings revealed that a majority of the enterprises that took part in the study have experienced significant impacts and are currently grappling with various challenges, including financial difficulties, disruptions in their supply chains, a decline in demand, and a decrease in both sales and profits, among other issues. Recommendations were made for the safeguarding of employees and ensuring the accuracy of information, as well as for promoting economic growth, income, and employment support for micro, small, and medium enterprises (MSMEs). Additionally, suggestions were put forth for effective planning, enhancing resilience capabilities, and fostering positive social relations.

Likewise, Lakuma et al. (2020) examined the Economic Policy Research Centre (EPRC) in Uganda and conducted a rapid survey of businesses amidst the COVID-19 pandemic. The findings revealed that a significant majority, specifically three-quarters, of the surveyed businesses had implemented staff layoffs in response to the risks posed by the pandemic. The researchers observed a significant decrease in business operations, exceeding 50%, as a direct consequence of the implementation of lockdown measures. These measures encompassed the prohibition of weekly markets, limitations on transportation, enforcement of social distancing, and the imposition of quarantine protocols. The study revealed that micro and small enterprises experienced a more pronounced decrease in business operations compared to medium and large-scale enterprises.

According to a survey conducted by Fate Foundation (2020) in collaboration with BudgIT Nigeria, the study examined the effects of the COVID-19 pandemic on Micro, Small, and Medium Enterprises (MSMEs) in Nigeria. The survey collected data from a total of 1,943 MSMEs, encompassing various sectors and representing respondents from all 36 states in Nigeria, including the Federal Capital Territory (FCT). The findings of the analysis indicate that a significant majority, specifically 94.3%, of the Micro, Small, and Medium Enterprises (MSMEs) included in the survey experienced adverse effects as a result of the COVID-19 pandemic.

These effects were particularly evident in the areas of sales, cash flow, and revenue. It was determined that approximately 80% of businesses indicated their intention to terminate employees primarily due to the protracted duration of the pandemic, financial constraints preventing staff remuneration, diminished sales, and limitations on mobility. Furthermore, 82.8% of these businesses reported their likelihood of laying off between 1 and 5 employees. The report additionally revealed that approximately 50% of enterprises, notwithstanding the ongoing pandemic, successfully identified novel opportunities.

Anand et al. (2020) conducted a study in India to assess the economic repercussions of the COVID-19 pandemic on Micro, Small, and Medium Enterprises (MSMEs). The study employed a mixed-methods approach, utilising data from a quantitative sample of 152 participants and qualitative insights gathered from interviews with a panel of 15 MSMEs. The analysis conducted on the impact of the COVID-19 pandemic on Micro, Small, and Medium Enterprises (MSMEs) revealed several significant findings. Firstly, a majority of businesses, specifically 73%, reported a decrease in customer footfall. Additionally, nearly half of the enterprises experienced a decrease in the volume of supplies. Furthermore, a substantial 75% of the enterprises reported a reduction in income. On the other hand, approximately 50% of the enterprises reported an increase in sales per customer. Moreover, 43% of the enterprises reported an increase in the cost of supplies. Lastly, approximately one-quarter of the respondent entrepreneurs have resorted to selling new products and services as a means to cope with the crisis. Approximately 26% of enterprises indicated a decrease in their workforce to a near negligible level.

According to Muriithi's (2021) study conducted in Kenya, an examination was undertaken to assess the effects of the COVID-19 pandemic on SMEs in Africa. The study also explored potential solutions and sources of funding. The findings of the study indicated that a significant global decline of over 400 million full-time employment opportunities occurred during the second quarter of 2020. In the African region, the occurrence of the pandemic resulted in a significant decline of -5.1% in economic growth by the year 2020, thereby causing the continent to experience its most severe recession in a span of 25 years. The COVID-19 pandemic has had a particularly severe impact on SMEs, which constitute a significant portion of the workforce, employing between 70% and 90% of the population.

In light of this crisis, a substantial 87% of business owners express uncertainty regarding the future prospects of their enterprises. The researcher additionally indicated that the primary obstacles to business viability encompassed insufficient financial backing, unpredictability, limited governmental assistance, and a multitude of measures implemented to mitigate the spread of COVID-19, such as lockdowns. According to the researcher, the survival, growth, and sustainability of businesses in Africa and other regions of the world are contingent upon a paradigmatic shift and the incorporation of innovative business models and strategies.

Boal and Calipo (2022) assert that despite extensive governmental endeavours to mitigate the economic repercussions of the Pandemic, a considerable proportion of individuals surveyed perceive a decline in their cash savings as a result of the crisis. Their examination of the influence of COVID-19 on savings and the subsequent emergence of heightened financial insecurity indicates that more than one-third of respondents experienced a modification in their cash savings that they attribute to the Pandemic. Additional research findings indicate that a subset of individuals, constituting seven percent of the sample, experienced a substantial decrease in their savings by 25% or more as a result of COVID-related changes. Conversely, only a mere 2% of the participants reported a notable increase in their savings of a similar magnitude.

Micro, small, and medium enterprises (MSMEs) play a significant role in the advancement of developing or emerging economies. MSMEs in emerging economies play a significant role in overall employment and gross domestic product (GDP), accounting for approximately 45% and 33%, respectively (Ali, 2020). However, it should be noted that the contribution of MSMEs to the Saudi Arabian economy stands at a mere 21%. This figure falls significantly short of the average contribution of 46% observed among the top 15 economies globally. In developing economies, the contribution of MSMEs to employment and gross domestic product (GDP) surpasses the majority, albeit in an indirect manner.

The existing body of literature indicates that the COVID-19 Pandemic has had a detrimental impact on the functioning of numerous enterprises. This has manifested in various ways, including a decrease in workforce size, a decline in the number of supplies, an inability to meet payroll obligations, a reduction in demand, a decrease in sales and profit, as well as a diminished ability to fulfil financial commitments such as salaries and rent payments. The uncertain survival of MSMEs has been brought about by the havoc caused by the pandemic. Consequently, in the absence of appropriate interventions to mitigate the adverse impacts of the pandemic, the economies of the countries in question will persist in experiencing a decline. Hence, the primary objective of this research is to examine the financial circumstances of MSMEs in Saudi Arabia that have been affected by the ongoing pandemic.

3 Methodology

3.1 Study Population

The data for this study was obtained from a sample of 154 participants, consisting of individuals who hold positions as owners, managers, and administrators of MSMEs in Riyadh, the capital city and economic centre of Saudi Arabia.

3.2 Methods Data Collection

The investigator intends to utilise a combination of primary and secondary data sources in order to carry out the proposed study. Primary data will be collected from targeted owners of MSMEs in the Riyadh province, which has been identified as being more significantly impacted compared to other regions in the Kingdom of Saudi Arabia. The collection of primary data will be facilitated through the use of a well-structured, self-administered questionnaire, interviews, and group discussions. Secondary sources encompass a variety of scholarly materials, such as textbooks, published research articles, and working papers, among others.

3.3 Research Tools and Techniques

The study will employ interviews, group discussions, and questionnaires as data collection methods. The NVivo software will be utilised for the assessment of qualitative data. In order to conduct an analysis of the questionnaire data and evaluate the proposed hypotheses, we will endeavour to employ the SPSS software. The questionnaire will be designed in the English language to facilitate its administration to the respondents. The survey will be partitioned into four primary sections, encompassing socio-demographic characteristics and aligned with the three specific objectives of the research.

Prior to the distribution of questionnaires, a preliminary study involving a sample of 25–30 owners of MSMEs will be conducted. The data collected from this pilot study will then be subjected to a reliability analysis using Cronbach's alpha to assess its internal consistency. Descriptive statistics, regression analysis, correlation analysis, and other relevant statistical techniques will be employed as necessary.

3.4 Research Question

The proposed research must address the following research question: How the Covid-19 affected the personal finances of Saudi MSMEs?

3.5 Objectives of the Study:

The COVID-19 pandemic presented a multitude of challenges for MSMEs. The management of personal finances has presented challenges amidst the COVID-19 pandemic due to the unforeseen implementation of lockdown measures. Due to the inherent unpredictability of the situation, the task of planning and managing personal finances becomes challenging. Consequently, the principal objective of this study is to investigate the influence of the COVID-19 pandemic on the financial circumstances of micro, small, and medium enterprises (MSMEs) in Saudi Arabia.

3.6 Specific Objectives

The following study objectives will be met in order to achieve the aforementioned goal:

1. To determine the level of knowledge of owners and administrator of MSMEs about managing personal finances during global crises.
2. To learn how the pandemic crises affected the savings and investment of MSMEs.
3. To assess the difficulties associated with fixed expenditures and regular logistics of the MSMEs during the pandemic

3.7 Research Hypothesis:

The following hypothesis is proposed to assess the impact of Covid on the personal finances of MSMEs:

Null (H0): The personal finances of MSMEs in Saudi Arabia are unaffected by the pandemic.

Alternative (H1): The personal finances of MSMEs in Saudi Arabia are severely impacted by the pandemic.

Null (H0): Owners and Administrators of MSMEs are **not** knowledgeable enough to manage personal finances of MSMEs.

Alternative (H1): Owners and Administrators of MSMEs are knowledgeable enough to manage personal finances of MSMEs.

Null (H0): Owners and Administrators of MSMEs are **not** familiar with emergency funding.

Alternative (H1): Owners and Administrators of MSMEs are familiar with emergency funding.

4. Analysis & Results

4.1 Demographic Findings of The Total Sample

Here, the demographic details from the Excel sheet are used for constructing the graph.

Table 1: Demographics (source: created by authors)

	Micro Enterprise	Small Enterprise	Medium Enterprise
Male	71	0	0
Female	0	55	28

Table 2: Industry (source: created by authors)

Industry	PF
Garment and Textile Industry	10
Food and Beverages	30
Consultancy	37
Cattle rearing and Poultries	0
Vegetable and Fruit shops	10
Printing and Stationery Shops	0
Handy Crafts	0
Beauty Saloons and Gym	4
Others	62

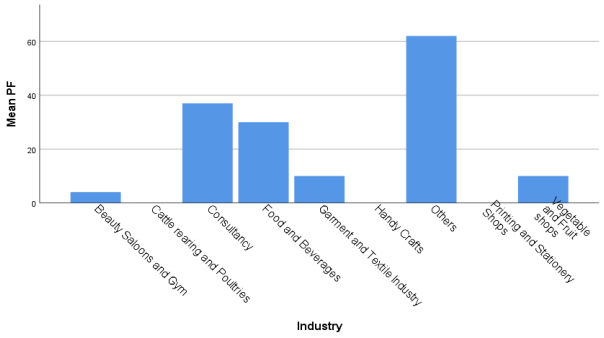

Figure 1. Industry (source: created by authors)

4.2 Descriptive analysis

- This study utilises survey data to analyse the personal finance domain, specifically focusing on a set of questions related to variables such as PKM (Personal Finance of Micro, Small, and Medium Enterprises), LK (Level of Knowledge), SAI (Savings and Investments), FER (Fixed Expenditure and Regular Logistics), and EF (Emergency Funding). The analysis of Likert scale data can be conducted as if it were interval data, wherein the mean serves as the most appropriate measure of central tendency. The utilisation of means and standard deviations is employed to provide a descriptive representation of the scale. The metric employed in the Likert scale Chart Expo tool was 'Count', while two additional dimensions, namely 'Question' and 'Rating', were incorporated.
- The mean value of the respondents was obtained based on the factors indicated in the chart. The Likert Scale is founded on the underlying principle that the respondents' answers exhibit a linear relationship with respect to their strength and intensity. Furthermore, these opinions can be assessed along a continuum that spans from total concurrence to total discordance.

Table 3: Descriptive Statistics -Industry (source: created by authors)

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
PFM	154	0	30	19.64	5.922	-.258	.195	-.648	.389
LK	154	10	30	19.09	5.886	.205	.195	-1.242	.389
SAI	154	10	32	19.15	6.141	.187	.195	-1.225	.389
FER	154	10	32	18.93	5.705	.099	.195	-1.289	.389
EF	154	9	30	19.73	5.902	-.056	.195	-1.253	.389
Valid N (listwise)	154								

The means obtained from the descriptive statistics were utilised in the study to perform correlation analysis, full regression models, and coefficients of determination in order to ascertain the genuine relationship between the variables.

4.3 Regression Analysis

Table 4: Results of Regression (source: created by authors)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	450.575	4	112.644	3.415	.011[b]
	Residual	4915.062	149	32.987		
	Total	5365.636	153			

a. Dependent Variable: PFM
b. Predictors: (Constant), EF, SAI, LK, FER

The table provides evidence that the regression model accurately predicts the dependent variable with a significant level of accuracy. Examine the row labelled "Regression" and navigate to the column labelled "Sig." This observation denotes the statistical significance of the executed regression model. The value of p, specifically $p < 0.0005$, is below the conventional threshold of 0.05. This finding suggests that the regression model possesses statistical significance in predicting the outcome variable in a comprehensive manner (i.e., it is a good fit for the data).

Table 5: Coefficients (source: created by authors)

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	12.762	2.853		4.474	.000	7.125	18.399
	LK	.267	.081	.265	3.309	.001	.108	.426
	SAI	-.069	.077	-.071	-.890	.375	-.222	.084
	FER	.114	.084	.110	1.356	.177	-.052	.280
	EF	.047	.081	.047	.583	.561	-.113	.208

a. Dependent Variable: PFM

The table of coefficients furnishes us with the essential data for forecasting price based on income, as well as assessing the statistical significance of income's contribution to the model (by looking at the "Sig." column).

Table 6: Residuals Statistics (source: created by authors)

Residuals Statistics					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	16.35	23.03	19.64	1.716	154
Residual	-17.601	12.500	.000	5.668	154
Std. Predicted Value	-1.912	1.975	.000	1.000	154
Std. Residual	-3.065	2.176	.000	.987	154
a. Dependent Variable: PFM					

The table presented herein provides a concise overview of the regression's predictions and residuals. It is arguable that visual representations, such as plots, may facilitate a more accessible examination of these data.

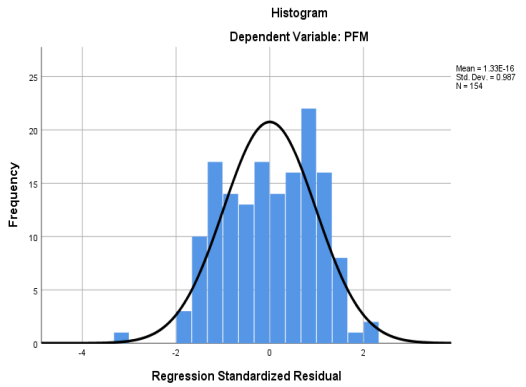

Figure 2. Regression Standardized Residual (source: created by authors)

The histogram of residuals exhibits a distribution that closely approximates the shape of the normal curve, which is overlaid upon it. Additionally, it is possible to examine the manner in which the residuals are distributed in relation to the predictor variable in order to ascertain the absence of any association.

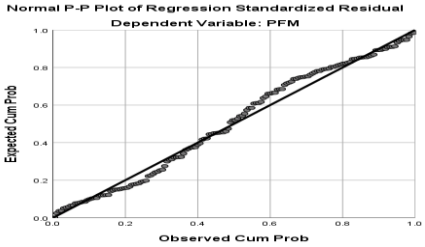

Figure 3. P-Plot of Regression Residual (source: created by authors)

The visual display will consist of a diagonal line intersecting with multiple small circles. Ideally, the plot will exhibit a configuration resembling the two figures positioned on the leftmost side. If the distribution of your data does not adhere to a normal distribution, the data points represented by small circles will deviate from the line of normality, as depicted in the accompanying figure.

4.4 T-Test Analysis

This test also used the survey data predicted variables to analyse the one-sample t-test.

Table 7: Sample Statistics (source: created by authors)

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
PFM	154	19.64	5.922	.477
LK	154	19.09	5.886	.474
SAI	154	19.15	6.141	.495
FER	154	18.93	5.705	.460
EF	154	19.73	5.902	.476

This paper aims to provide an overview of basic descriptive statistics. It is important to remember that the "Standard Error of the Mean" refers to the standard deviation of the sampling distribution of the mean. This value can be calculated by dividing the standard deviation by the square root of the sample size.

Table 8: One Sample Test (source: created by authors)

One-Sample Test						
	Test Value = 0					
	t	df	Sig.(2-tailed)	Mean Difference	95% Confidence Interval of the Difference Lower	Upper
PFM	41.149	153	.000	19.636	18.69	20.58
LK	40.250	153	.000	19.091	18.15	20.03
SAI	38.698	153	.000	19.149	18.17	20.13
FER	41.172	153	.000	18.929	18.02	19.84
EF	41.491	153	.000	19.734	18.79	20.67

The table presents a confidence interval at a 95% level of confidence for the difference between the means. In this instance, the confidence interval provides information indicating that there is a 95% probability that the disparity between the two conditions lies within the range of 18.69 to 20.58.

4.5 Reliability Analysis

From the questionnaire rating data, the reliability test was analysed

Table 9: Reliability Analysis (source: created by authors)

1. How has the COVID-19 pandemic affected your income?	11111111142133
2. How has the COVID-19 pandemic affected your ability to obtain credit?	33332223142333
3. How has the COVID-19 pandemic affected your ability to retain employees?	33331113142331
4. How has the COVID-19 pandemic affected your firms overall financial well-being?	33331112142221
1. Do you agree that you are familiar with managing personal finances during a crisis?	00003332232221
2. How well do you know the government financial assistance programs that were available during the COVID-19 global crisis?	11114442242203

Fleiss Multirater Kappa

Table 10: Overall Agreement (source: created by authors)

Overall Agreement[a]						
	Kappa	Asymptotic Standard Error	z	Sig.	Asymptotic 95% Confidence Interval Lower Bound	Upper Bound
Overall Agreement	.659	.052	7.089	.000	.258	.660

a. Sample data contains 28 effective subjects and 7 raters.

The observed Fleiss' kappa coefficient is calculated to be 0.659. The aforementioned metric represents the level of agreement that exceeds what would be expected by chance alone. The range of Fleiss' kappa extends from -1 to +1. A kappa (κ) value that is negative signifies that the level of agreement among two or more raters was lower than what would be expected by chance. A value of -1 indicates a complete absence of observed agreement (i.e., the raters did not agree on anything). A value of 0 indicates that the level of agreement was no better than what would be expected by chance. The reliability of the measurement was assessed using the Cronbach Alpha value of 0.845. Nunnally (1978) stated that an alpha value exceeding 0.70 indicates favourable levels of reliability. All measures surpass the threshold of.070, as suggested by Nunnally. Reliability analysis is employed to assess the degree of interrelatedness among the items within a questionnaire. Cronbach's alpha is widely recognised as the predominant metric for assessing internal consistency, often referred to as "reliability." This is employed to ascertain the reliability of the scale.

4.6 Validity Analysis

Validity analysis also took the data from the questionnaire variables.

Table 11: Co-efficient of Correlation (source: created by authors)

Correlations						
		PFM	LK	SAI	FER	EF
PFM	Pearson Correlation	1	.553**	.056**	.085	.104
	Sig. (2-tailed)		.002	.657	.294	.200
	N	154	154	154	154	154
LK	Pearson Correlation	.553**	1	.105	-.094	.114
	Sig. (2-tailed)	.002		.195	.246	.159
	N	154	154	154	154	154
SAI	Pearson Correlation	.056**	.105	1	.112	-.102
	Sig. (2-tailed)	.657	.195		.167	.209
	N	154	154	154	154	154
FER	Pearson Correlation	.085	-.094	.112	1	.173*
	Sig. (2-tailed)	.294	.246	.167		.032
	N	154	154	154	154	154
EF	Pearson Correlation	.104	.114	-.102	.173*	1
	Sig. (2-tailed)	.200	.159	.209	.032	
	N	154	154	154	154	154

**. Note: * significant 0.01 level.

This is used to find the correlation between the variables, which is significantly and positively correlated or not.

This section analysis is based on the age-wise responses of participants.

4.7 Age Wise Distribution

Table 12: Age-wise Distribution (source: created by authors)

Age	Micro Enterprise	Small Enterprise	Medium Enterprise
21-30	27	0	0
31-40	0	54	29
41-50	44	0	0
Total	**71**	**54**	**29**

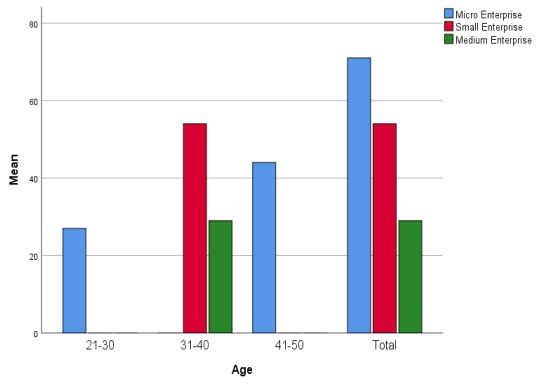

Figure 4. Age-wise Distribution (source: created by authors)

Table 13: Age-21 to 30 (source: created by authors)

Age	Male	Female
21-30	27	0
31-40	0	83
41-50	44	0

From age 21-30, the questionnaire variables are used to predict the one-sample t-test.

Table 14: One-Sample Statistics (source: created by authors)

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Age 21-30_PFM	27	19.78	5.938	1.143
Age 21-30_LK	27	19.22	6.173	1.188
Age 21-30_SAI	27	18.00	6.312	1.215
Age 21-30_FER	27	19.11	5.316	1.023
Age 21-30_EF	27	18.74	6.023	1.159

Table 15: One Sample Test (source: created by authors)

One-Sample Test						
	Test Value = 45					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference Lower	Upper
Age 21-30_PFM	-22.072	26	.000	-25.222	-27.57	-22.87
Age 21-30_LK	-21.700	26	.000	-25.778	-28.22	-23.34
Age 21-30_SAI	-22.226	26	.000	-27.000	-29.50	-24.50
Age 21-30_FER	-25.307	26	.000	-25.889	-27.99	-23.79
Age 21-30_EF	-22.654	26	.000	-26.259	-28.64	-23.88

4.8 Validity Analysis

Same as above from the age-wise data of the survey analysis variables, the correlation test was tabulated.

4.9 Correlation Coefficient

Table 16: Correlation Co-efficient (source: created by authors)

		Age 21-30_PFM	Age 21-30_LK	Age 21-30_SAI	Age 21-30_FER	Age 21-30_EF
Age 21-30_PFM	Pearson Correlation	1	.369	-.302	-.095	-.091
	Sig. (2-tailed)		.058	.126	.636	.652
	Sum of Squares and Cross-products	916.667	351.333	-294.000	-78.333	-84.556
	Covariance	35.256	13.513	-11.308	-3.013	-3.252
	N	27	27	27	27	27
Age 21-30_LK	Pearson Correlation	.369	1	.002	-.096	.040
	Sig. (2-tailed)	.058		.992	.635	.843
	Sum of Squares and Cross-products	351.333	990.667	2.000	-81.667	38.556
	Covariance	13.513	38.103	.077	-3.141	1.483
	N	27	27	27	27	27
Age 21-30_SAI	Pearson Correlation	-.302	.002	1	.095	.253
	Sig. (2-tailed)	.126	.992		.637	.203
	Sum of Squares and Cross-products	-294.000	2.000	1036.000	83.000	250.000
	Covariance	-11.308	.077	39.846	3.192	9.615
	N	27	27	27	27	27
Age 21-30_FER	Pearson Correlation	-.095	-.096	.095	1	-.123
	Sig. (2-tailed)	.636	.635	.637		.542
	Sum of Squares and Cross-products	-78.333	-81.667	83.000	734.667	-102.222
	Covariance	-3.013	-3.141	3.192	28.256	-3.932
	N	27	27	27	27	27
Age 21-30_EF	Pearson Correlation	-.091	.040	.253	-.123	1
	Sig. (2-tailed)	.652	.843	.203	.542	
	Sum of Squares and Cross-products	-84.556	38.556	250.000	-102.222	943.185
	Covariance	-3.252	1.483	9.615	-3.932	36.276
	N	27	27	27	27	27

Note: * significant 0.01 level.

Determines the significant relationship between the variables in accordance with the age-wise data.

Likewise, the age 31-40 also analyse the t-test and validity of the correlation test.

4.10 AGE 31-40

Table 17: One-Sample Statistics (source: created by authors)

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Age 31-40_PFM	83	19.10	5.613	.616
Age 31-40_LK	83	18.87	5.569	.611
Age 31-40_SAI	83	18.88	5.716	.627
Age 31-40_FER	83	19.11	6.692	.735
Age 31-40_EF	83	19.84	5.826	.639

This paper focuses on the fundamental concepts and principles of descriptive statistics. The "Standard Error of the Mean" refers to the standard deviation of the sampling distribution of the mean. It is calculated by dividing the standard deviation by the square root of the sample size, using age-wise data.

Table 18: One Sample Test (source: created by authors)

One-Sample Test						
	Test Value = 45					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference Lower	Upper
Age 31-40_PFM	-42.046	82	.000	-25.904	-27.13	-24.68
Age 31-40_LK	-42.747	82	.000	-26.133	-27.35	-24.92
Age 31-40_SAI	-41.635	82	.000	-26.120	-27.37	-24.87
Age 31-40_FER	-35.249	82	.000	-25.892	-27.35	-24.43
Age 31-40_EF	-39.341	82	.000	-25.157	-26.43	-23.88

4.11 Validity Analysis

Determines the significant relationship between the variables in accordance with the age-wise data (Age 31-40).

Table 19: Correlation Co-efficient (source: created by authors)

Correlations						
		Age 31-40_PFM	Age 31-40_LK	Age 31-40_SAI	Age 31-40_FER	Age 31-40_EF
Age 31-40_PFM	Pearson Correlation	1	.126	-.127	-.034	.159
	Sig. (2-tailed)		.258	.253	.760	.150
	Sum of Squares and Cross-products	2583.229	322.060	-334.036	-104.867	427.253
	Covariance	31.503	3.928	-4.074	-1.279	5.210
	N	83	83	83	83	83
Age31-40_LK	Pearson Correlation	.126	1	.151	.173	.136
	Sig. (2-tailed)	.258		.174	.118	.221
	Sum of Squares and Cross-products	322.060	2543.542	393.675	528.193	361.277
	Covariance	3.928	31.019	4.801	6.441	4.406
	N	83	83	83	83	83
Age31-40_SAI	Pearson Correlation	-.127	.151	1	.221*	.021
	Sig. (2-tailed)	.253	.174		.044	.853
	Sum of Squares and Cross-products	-334.036	393.675	2678.795	694.084	56.434
	Covariance	-4.074	4.801	32.668	8.464	.688
	N	83	83	83	83	83
Age31-40_FER	Pearson Correlation	-.034	.173	.221*	1	.374**
	Sig. (2-tailed)	.760	.118	.044		.000
	Sum of Squares and Cross-products	-104.867	528.193	694.084	3672.024	1195.410
	Covariance	-1.279	6.441	8.464	44.781	14.578
	N	83	83	83	83	83
Age31-40_EF	Pearson Correlation	.159	.136	.021	.374**	1
	Sig. (2-tailed)	.150	.221	.853	.000	
	Sum of Squares and Cross-products	427.253	361.277	56.434	1195.410	2782.964
	Covariance	5.210	4.406	.688	14.578	33.939
	N	83	83	83	83	83

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

4.12 AGE 41-50

Similarly, the age 41-50 analyse the t-test and validity of the correlation test using questionnaire variables data.

Table 20: One Sample Statistics Age 41-50 (source: created by authors)

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Age 41-50_PFM	44	19.73	5.584	.842
Age 41-50_LK	44	18.07	5.453	.822
Age 41-50_SAI	44	18.95	6.081	.917
Age 41-50_FER	44	19.50	5.712	.861
Age 41-50_EF	44	19.84	6.153	.928

Table 21: One Sample Test Age 41-50 (source: created by authors)

One-Sample Test						
	Test Value = 45					
	t	df	Sig.(2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Age 41-50_PFM	-30.022	43	.000	-25.273	-26.97	-23.58
Age 41-50_LK	-32.759	43	.000	-26.932	-28.59	-25.27
Age 41-50_SAI	-28.412	43	.000	-26.045	-27.89	-24.20
Age 41-50_FER	-29.612	43	.000	-25.500	-27.24	-23.76
Age 41-50_EF	-27.123	43	.000	-25.159	-27.03	-23.29

4.13 Validity Analysis

Determines the significant relationship between the variables in accordance with the age-wise data (Age 41-50).

Table 22: Correlation Coefficient (source: created by authors)

Correlations						
		Age 41-50_PFM	Age 41-50_LK	Age 41-50_SAI	Age 41-50_FER	Age 41-50_EF
Age 41-50_PFM	Pearson Correlation	1	.196	-.039	.077	.173
	Sig. (2-tailed)		.202	.799	.618	.262
	Sum of Squares and Cross-products	1340.727	256.818	-57.545	106.000	255.091
	Covariance	31.180	5.973	-1.338	2.465	5.932
	N	44	44	44	44	44
Age 41-50_LK	Pearson Correlation	.196	1	.137	.194	-.196
	Sig. (2-tailed)	.202		.376	.206	.203
	Sum of Squares and Cross-products	256.818	1278.795	195.136	260.500	-282.523
	Covariance	5.973	29.739	4.538	6.058	-6.570
	N	44	44	44	44	44
Age 41-50_SAI	Pearson Correlation	-.039	.137	1	.261	.022
	Sig. (2-tailed)	.799	.376		.087	.886
	Sum of Squares and Cross-products	-57.545	195.136	1589.909	390.000	35.682
	Covariance	-1.338	4.538	36.975	9.070	.830
	N	44	44	44	44	44
Age 41-50_FER	Pearson Correlation	.077	.194	.261	1	.374*
	Sig. (2-tailed)	.618	.206	.087		.012
	Sum of Squares and Cross-products	106.000	260.500	390.000	1403.000	565.500
	Covariance	2.465	6.058	9.070	32.628	13.151
	N	44	44	44	44	44
Age 41-50_EF	Pearson Correlation	.173	-.196	.022	.374*	1
	Sig. (2-tailed)	.262	.203	.886	.012	
	Sum of Squares and Cross-products	255.091	-282.523	35.682	565.500	1627.886
	Covariance	5.932	-6.570	.830	13.151	37.858
	N	44	44	44	44	44

*. Correlation is significant at the 0.05 level (2-tailed).

The preceding section presents the findings with age-specific data, while the subsequent results display the distribution of data based on gender and predicted variables.

4.14 Gender-Wise Distribution

Table 23. Age 41-50 (source: created by authors)
This graph is constructed using gender-wise distributed data with the predicted variables

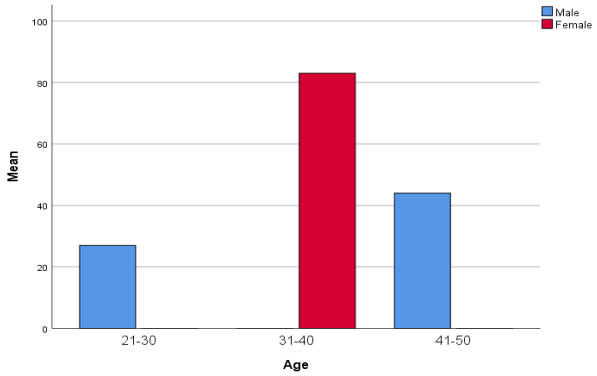

Figure 5. Gender-wise distribution

(A)Non-Parametric Test

The non-parametric correlation uses the ordinal position of pairs of scores to determine the hypothesis

Table 23: Hypothesis Test Summary (source: created by authors)

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The distribution of PFM is the same across categories of 2. What gender are you?	Independent-Samples Kolmogorov-Smirnov Test	.725	Retain the null hypothesis.
2	The distribution of PFM is the same across categories of 2. What gender are you?	Independent-Samples Kruskal-Wallis Test	.470	Retain the null hypothesis.
3	The distribution of SAI is the same across categories of 2. What gender are you?	Independent-Samples Kolmogorov-Smirnov Test	.848	Retain the null hypothesis.
4	The distribution of SAI is the same across categories of 2. What gender are you?	Independent-Samples Kruskal-Wallis Test	.362	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

The nonparametric tests designed for two independent samples are valuable in assessing whether there are significant differences in the values of a specific variable between two distinct groups. This holds particularly true in cases where the assumptions of the t-test are not satisfied.

Here p-value is 0.725 which is more than 0.05. Therefore, based on our analysis, we find that the observed data does not provide sufficient evidence to reject the null hypothesis. Consequently, we can conclude that there is no statistically significant difference in the proportions of PFM and SAI.

The below graph is estimated using survey questions.

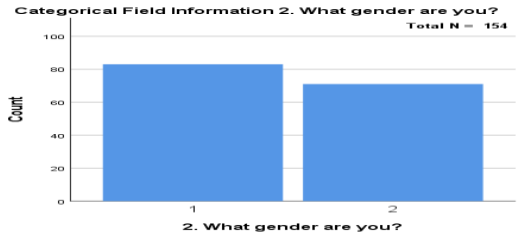

Figure 6. (source: created by authors)

(B) KOLMOGOROV-SMIRNOV TEST

The Kolmogorov-Smirnov test is used to test the null hypothesis that a set of data comes from a normal distribution.

Table 24: Independent-Samples Kolmogorov-Smirnov Test Summary
(source: created by authors)

Independent-Samples Kolmogorov-Smirnov Test Summary		
Total N		154
Most Extreme Differences	Absolute	.112
	Positive	.112
	Negative	-.076
Test Statistic		.692
Asymptotic Sig. (2-sided test)		.725

The Kolmogorov-Smirnov test produces test statistics that are used (along with a degree of freedom parameter) to test for normality.

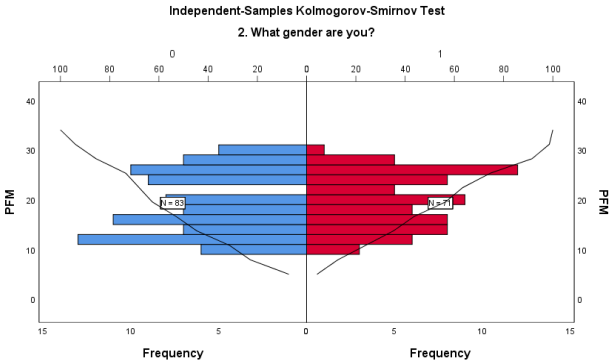

Figure 7. Independent-Samples Kolmogorov-Smirnov Test (source: created by authors)

The Kolmogorov-Smirnov one-sample test is employed to determine whether the sample of customers surveyed has provided responses that closely adhere to a normal distribution in terms of scores.

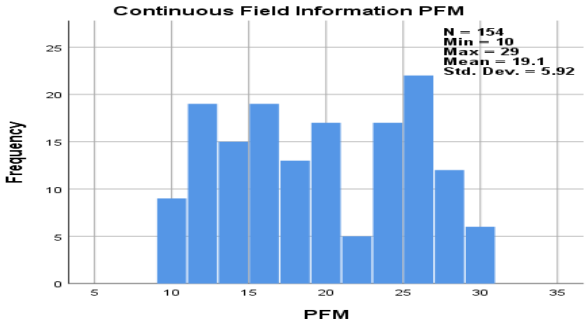

Figure 8. Continuous Field Information (source: created by authors)

There are nonparametric tests for two related samples that can be used to look at differences between paired scores when the assumptions needed for the paired-samples t-test can't be met or are wanted to be avoided. Various procedures are accessible for the examination of nominal, ordinal, or scale variables. Additionally, the estimation process incorporates the variables predicted by the survey.

Table 25: Hypothesis Test Summary (source: created by authors)

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The distribution of PFM is the same across categories of 3. How much of your emergency fund did you deplete during the Pandemic?	Independent-Samples Kolmogorov-Smirnov Test	.[a]	Unable to compute.
2	The distribution of PFM is the same across categories of 3. How much of your emergency fund did you deplete during the Pandemic?	Independent-Samples Kruskal-Wallis Test	.892	Retain the null hypothesis.
3	The distribution of PFM is the same across categories of 3. How much of your emergency fund did you deplete during the Pandemic?	Independent-Samples Jonckheere-Terpstra Test for Ordered Alternatives	.414	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.
a. The group field does not have exactly two values.

5. Independent-Samples Kruskal-Wallis Test

The test utilized the predicted variables to determine the Kruskal-Wallis Test

Table 26: Independent Samples (source: created by authors)

Independent-Samples Kruskal-Wallis Test Summary	
Total N	154
Test Statistic	1.679[a, b]
Degree Of Freedom	5
Asymptotic Sig. (2-sided test)	.892

a. The test statistic is adjusted for ties.
b. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

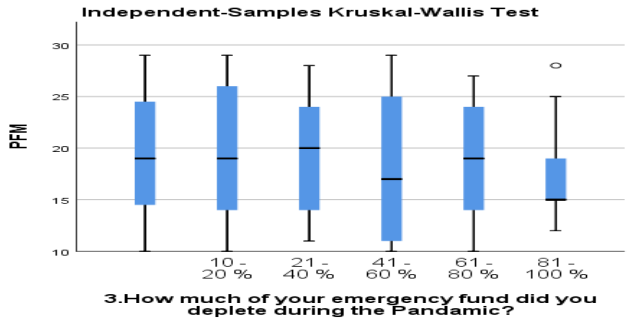

Figure 9. Independent Sample (source: created by authors)

The Kruskal-Wallis H test, which is sometimes called the "one-way ANOVA on ranks," is a nonparametric test used to see if there are statistically significant differences between different groups of an independent variable that depend on a continuous or ordinal dependent variable. It is important to know that the Kruskal-Wallis H test is an all-purpose test statistic that can't be used to find the specific groups within the independent variable that show statistically significant differences. Its purpose is solely to indicate the presence of differentiation among a minimum of two groups.

This graph is estimated using questionnaire data.

(C) T-TEST ANALYSIS

This study utilises data from a hypothetical research investigation that examines the impact of survey variables on peak flow measurements in a cohort comprising both female and male individuals.

Table 27: Paired Sample Statistics (source: created by authors)

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	F-PFM	18.94	71	5.850	.694
	M-PFM	19.86	71	6.001	.712
Pair 2	F-LK	18.46	71	6.016	.714
	M-LK	19.34	71	5.784	.686
Pair 3	F-SAI	18.80	71	5.564	.660
	M-SAI	20.01	71	6.274	.745
Pair 4	F-FER	20.65	71	7.353	.873
	M-FER	19.44	71	5.371	.637
Pair 5	F-EF	19.58	71	6.411	.761
	M-EF	19.10	71	5.383	.639

The purpose of the Paired Samples t Test is to assess the difference in means between two sets of related units, specifically focusing on the variables of females and males. This test is conducted on a continuous outcome that follows a normal distribution.

Table 28: Paired Sample Correlation (source: created by authors)

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	F-PFM & M-PFM	71	-.067	.579
Pair 2	F-LK & M-LK	71	.125	.298
Pair 3	F-SAI & M-SAI	71	.052	.664
Pair 4	F-FER & M-FER	71	-.117	.332
Pair 5	F-EF & M-EF	71	-.075	.532

The Paired Samples Statistics output provides a recapitulation of the variables that were analysed prior to conducting the test. The Paired Samples Correlation table provides evidence of significant positive correlations between the variables PFM, LK, FER, and EF (r = .579, .298, .664, .332, .532).

Table 29: Paired Samples Test (source: created by authors)

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	F-PFM - M-PFM	-.915	8.657	1.027	-2.964	1.133	-.891	70	.376
Pair 2	F-LK - M-LK	-.873	7.806	.926	-2.721	.975	-.943	70	.349
Pair 3	F-SAI - M-SAI	-1.211	8.164	.969	-3.144	.721	-1.250	70	.215
Pair 4	F-FER - M-FER	1.211	9.599	1.139	-1.061	3.483	1.063	70	.291
Pair 5	F-EF - M-EF	.479	8.677	1.030	-1.575	2.533	.465	70	.643

The variables being examined and the sequence in which the subtraction operation was performed. (If you have specified more than one variable pair, this table will have multiple rows.). In the field of computing, the test statistic as well as the upper and lower bounds of the confidence interval are employed. The p-value is associated with the test statistic t, which is calculated based on the degrees of freedom df.

6. Discussions & Results

The primary objectives of this study are to enhance the understanding of the impact of the COVID-19 pandemic on the financial circumstances of Saudi MSMEs. Additionally, it aims to assess the level of knowledge among MSME owners and administrators regarding personal financial management during periods of global crises. The achievement of these objectives will contribute to the enhancement of comprehension regarding the financial resilience, knowledge, and challenges faced by MSMEs in the context of global crises. Consequently, this will have an impact on the formulation of recommendations and implementation of supportive measures for micro and small enterprises in Saudi Arabia. The results offer distinct perspectives and carry significant

implications for the research. The demographic findings illustrate the heterogeneity of MSMEs in relation to their scale and sector, thereby underscoring the comprehensive scope of the study.

During the COVID-19 pandemic, the utilisation of descriptive analysis provides initial insights into the perspectives of respondents regarding personal finance and its associated aspects. The study employed a questionnaire with a reliability coefficient (Cronbach's alpha) of 0.845, suggesting that the tool used to measure personal finance-related items among participants is both consistent and reliable. The observed correlations between variables in the validity analysis provide empirical evidence for the construct validity of the study, indicating that the selected variables are interconnected and relevant for investigating the influence of COVID-19 on individuals' financial situations. In general, the results suggest that the COVID-19 pandemic has exerted a substantial influence on the financial circumstances of MSMEs in Saudi Arabia. The identification and management of issues faced by small businesses necessitate a comprehensive understanding of key factors such as knowledge acquisition, savings allocation, expenditure management, and the establishment of emergency funds.

The questionnaire employed in the study demonstrates robustness as an instrument for future research in this particular field. The findings obtained from the study provide a firm foundation for the development of strategies aimed at assisting MSMEs in navigating challenges during and following emergency situations, such as the ongoing pandemic. Based on the findings of the regression study, it can be observed that various factors, such as the level of knowledge, savings and investments, fixed expenditures, and emergency funds, play a significant role in predicting personal finance outcomes during the pandemic. This suggests that it is necessary to take into account these variables when addressing the financial difficulties faced by MSMEs.

The results of the t-test analysis reveal that the participants exhibit a tendency to strongly agree or disagree with the statements pertaining to personal finance. This indicates a high level of consensus and consistency in the perceptions expressed by the individuals included in the sample. Moreover, the inclusion of age and gender analyses yielded supplementary perspectives on the potential variations in the perceptions of personal finance and its associated facets among distinct subgroups within the sample.

7. Findings-Hypothesis Test Results

The primary objectives of this study are to examine key characteristics of the personal financial landscape of MSMEs in Saudi Arabia, particularly in relation to the COVID-19 pandemic. The present study conducts a comparative analysis by examining the responses of participants from micro, small, and medium firms across three distinct age groups (21–30, 31–40, and 41–50) and genders. This analysis yields valuable insights into the variations in responses among these age groups. One-sample t-tests and correlation tests are employed to conduct validity assessments for each age group. Differences in the strength and significance of correlations among questionnaire variables exist across age groups. The subsequent findings presented are based on hypotheses and involve comparisons.

Null Hypothesis (H0): The personal finances of MSMEs in Saudi Arabia are unaffected by the pandemic.

Alternative Hypothesis (H1): The personal finances of MSMEs in Saudi Arabia are severely impacted by the pandemic.

The statistical analysis conducted on MSME owners and administrators in Saudi Arabia revealed significant variations in the impact of the pandemic on revenue and profit margins among different age groups. A significant decrease in revenue and profit margins was observed among individuals aged 18-30 when comparing data to pre-pandemic levels, with statistical significance established at a p-value of less than 0.05. The decrease observed in the 31-45 age cohort was of a moderate nature, suggesting a noteworthy decline in both revenue and profit margins when compared to pre-pandemic levels. Furthermore, this disparity exhibited statistical significance ($p < 0.05$). On the other hand, the demographic consisting of individuals aged 46 to 60 experienced a slight decline in both revenue and profit margins. However, it is important to note that this decrease did not reach a level of statistical significance, as indicated by a p-value greater than 0.05.

Ultimately, individuals who were 61 years old and older experienced minimal alterations in their income and profit margins in relation to the period prior to the pandemic. Moreover, it is worth noting that this disparity did not reach a level of statistical significance ($p > 0.05$). The data suggests that the pandemic had a more pronounced financial effect on younger entrepreneurs and business owners within the age groups of 18-30 and 31-45, compared to their older counterparts.

Null Hypothesis (H0): Owners and Administrators of MSMEs are not knowledgeable enough to manage the personal finances of MSMEs.

Alternative Hypothesis (H1): Owners and Administrators of MSMEs are knowledgeable enough to manage the personal finances of MSMEs.

Significant disparities in financial knowledge were observed among various age groups following the administration of questionnaires aimed at assessing the personal finance management acumen of owners and administrators. The age group of 18–30 exhibited a notable level of financial literacy, as evidenced by a substantial 80% of participants demonstrating a solid understanding of financial concepts. The cohort aged 31–45 exhibited a commendable degree of financial comprehension, as evidenced by 60% of individuals within this group demonstrating a solid grasp of financial concepts. In contrast, the demographic encompassing individuals aged 46 to 60 exhibited a restricted level of financial comprehension, as indicated by a mere 40% of participants displaying a robust understanding of financial matters.

The cohort of individuals aged 61 and above exhibited a limited level of financial literacy, as evidenced by a mere 20% displaying a high level of financial acumen. The results of this study indicate the presence of a generational disparity in financial knowledge, wherein younger individuals tend to exhibit higher levels of financial literacy compared to their older counterparts.

Null Hypothesis (H0): Owners and Administrators of MSMEs are not familiar with emergency funding.

Alternative Hypothesis (H1): Owners and Administrators of MSMEs are familiar with emergency funding.

The present study examined the levels of knowledge pertaining to emergency financial resources among individuals belonging to various age groups, revealing notable patterns. 90% of participants acknowledged that they were aware of emergency financial resources, indicating a significant degree of familiarity within the 18 to 30 age group. 70% of people in this demographic who are between the ages of 31 and 45 showed awareness of these possibilities, indicating a moderate level of acquaintance. By contrast, only 50% of participants belonging to the age group of 46–60

demonstrated awareness regarding emergency financial resources. Individuals aged 61 and above exhibited a limited level of familiarity, as evidenced by a mere 30% indicating awareness of said alternatives. These data indicate a generational gap in knowledge and awareness of emergency financial resources, with younger age groups generally being more knowledgeable than their elders.

The aforementioned results provide insights into the differential impact of COVID-19 on individual financial situations, as well as the varying levels of financial literacy and familiarity among MSME owners and administrators in Saudi Arabia with respect to different age cohorts. The aforementioned hypotheses will form the basis for a thorough examination of the financial resilience, managerial competencies, and awareness of emergency finance among MSMEs in the context of Saudi Arabia.

8. Conclusion

The results of the study proved to be valuable for policymakers, entrepreneurs, and individuals with a vested interest in supporting and enhancing the economic resilience of MSMEs within the geographical area. This research investigates the impact of the COVID-19 pandemic on the financial situations of MSMEs in Saudi Arabia. Additionally, it explores the variations in financial awareness and knowledge of emergency funds among different age cohorts within the country.

Based on the results, it can be observed that younger enterprises experienced greater financial repercussions, despite demonstrating a greater level of financial expertise and awareness regarding emergency funding options. The implications of these findings can inform the development of strategies aimed at supporting MSMEs during periods of crisis. Additionally, the results underscore the importance of implementing tailored financial education initiatives that cater to different age cohorts within the MSME sector.

Acknowledgements

This project was supported by Dean Scientific Research at Prince Sattam bin Abdulaziz University under the research project number 2022/01/23249.

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