

**REPUBLIC OF TURKEY**  
**ISTANBUL GELISIM UNIVERSITY**  
**INSTITUTE OF GRADUATE STUDIES**

Department of Business Administration

**THE IMPACT OF COVID 19 PANDEMIC ON SMALL  
AND MEDIUM SCALE ENTERPRISES (SMES) IN  
ISTANBUL, TURKEY**

Master Thesis

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Supervisor

Prof. Dr. ANTON ABDULBASA H KAMIL

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## THESIS INTRODUCTION FORM

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**Turkish Abstract**

Bu çalışma, COVID-19 pandemisinin Türkiye'deki küçük ve orta ölçekli işletmeler üzerindeki etkisini analiz etmek amacıyla yapılmıştır. Özel hedefler, covid-19 pandemisinin Türkiye, İstanbul'daki küçük ve orta ölçekli işletmelerin performansı üzerindeki etkisini incelemek, Covid-19'un yayılmasını önlemek için hükümet

yönergelerinin KOBİ'lerin Performansı üzerindeki etkisini değerlendirmek ve stratejileri belirlemektir. KOBİ'ler tarafından İstanbul, Türkiye'deki Covid -19 pandemisinin ardından çaba sarf etmek için alındı. Araştırma, İstanbul, Türkiye'de bir anket tasarımı kullanılarak yürütülmüştür ve geçerli yapılandırılmış anket kullanılarak 100 küçük ve orta ölçekli işletmeden veri toplanması için örnekleme prosedürü olarak çok aşamalı bir örnekleme tekniği kullanılmıştır. Elde edilen veriler hem tanımlayıcı hem de çıkarımsal istatistik kullanılarak analiz edildi. Sonuç, küçük ve orta ölçekli işletme yöneticilerinin çoğunluğunun 'inin ise erkekler tarafından yönetildiğini gösterdi. Ankete katılan işletmelerin yüzde 61'i küçük ölçekli, yüzde 39'u orta ölçeklidir. Diğer sonuçlar, sosyal mesafenin işletme karını -82068.456tl azalttığını ve covid 19'un yayılmasını önlemek için müşterilere el dezenfektanı satın alan işletmelerin karlarını 5.617 tl azalttığını, işletmelerin covid 19'un yayılmasını önlemek için işlerini kapattığını gösterdi. 2686.039 tl ile. Azalan satışlar (3.46), girdileri değerlendirmede zorluk (3.44), personel ödeme güçlüğü (3.11), kayıp sözleşmeler (tedarik ve/veya satışlar için) (3.12), operasyonel maliyetleri azaltmak için personel küçültülmesi (3.49), yetersiz personel (3.22) ve artan satışlar (3.46) covid 19 pandemisinden oldukça etkilendi. Hükümetin Covid-19 virüsünün yayılmasını kontrol altına alma konusundaki yönergeleri, müşterileri diğer şeylerin yanı sıra küçük ve orta ölçekli işletmeleri (3.34) himaye etme konusunda kısıtladı. Oysa işi değiştirmek (3.58), çevrimiçi pazarlamayı benimsemek (3.56), çalışanların maaşlarını azaltmak (3.07) ve kredi oranlarını düşürmek (3.10) KOVI-19 pandemisi

sonrasında KOBİ'ler tarafından alınan stratejilerdi. Bu nedenle, KOBİ'lerin hareket kısıtlamaları sırasında veya gelecekte benzer bir durum olması durumunda ticari faaliyetlerini sürdürebilmeleri için çevrimiçi tabanlı platformlara ve görsel hizmetlere katılmaları önerilir.

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## **DECLARATION**

I hereby declare that in the preparation of this thesis, scientific ethical rules have been followed, the works of other persons have been referenced in accordance with the scientific norms if used, there is no falsification in the used data, any part of the thesis has not been submitted to this university or any other university as another thesis.

Nchedochukwu Chinenye UZOIGWE

8<sup>th</sup> July, 2022



**TO ISTANBUL GELISIM UNIVERSITY**  
**THE DIRECTORATE OF SOCIAL SCIENCES INSTITUTE**

The thesis study of Nchedochukwu Chinenye UZOIGWE titled The Impact of COVID 19 Pandemic on Small and Medium Scale Enterprises (SMEs) in Turkey has been accepted as MASTERS THESIS in the department of Business Administration by our jury.

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**APPROVAL**

I approve that the signatures above signatures belong to the aforementioned faculty members.

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Director of the Institute



## SUMMARY

The purpose of this study was to examine the consequences of the COVID-19 epidemic on small and medium-sized enterprises in Turkey. The specific goals were to investigate the impact of the COVID-19 pandemic on the performance of small and medium-sized enterprises (SMEs) in Istanbul, Turkey, to assess the impact of government guidelines to reduce the spread of COVID-19 on the performance of SMEs, and to identify the strategies used by SMEs to thrive in the aftermath of the COVID-19 pandemic in Istanbul, Turkey. In Istanbul, Turkey, the research was done utilizing a survey design, and a multi-stage sampling approach was employed as the sampling strategy for data collection from 100 small and medium firms using a validated structured questionnaire. The collected data was examined by applying both descriptive and inferential statistics. According to the findings, the majority (62.5 percent) of small and medium-sized business managers were female, while 37.5 percent were male. Sixty-one percent of the businesses polled were a small size, while 39 percent were on a medium scale. Further results revealed that sales, cost of hand sanitizers, and water affected enterprises' profit. The profit after the pandemic was higher than profit earnings before the pandemic. Although the profit of medium scale enterprises was higher than those of small-scale enterprises by 269,780 TL, the result of these findings indicated that this difference was not significant. The government's rules for preventing the spread of the COVID-19 virus, among other things, have prevented customers from visiting small and medium-sized businesses. SMEs used tactics such as changing businesses adopting online marketing reducing staff wages, and lowering lending rates to thrive in the aftermath of the COVID-19 epidemic. As a result, it is advised that SMEs participate in online-based portals and visible services in order to preserve their company operations during mobility limitations or in the case of a future related incident.

**Key Words:** COVID-19 SMEs, Economy, Government, Population, Pandemic, Business, Istanbul

## ÖZET

Bu çalışma, COVID-19 pandemisinin Türkiye'deki küçük ve orta ölçekli işletmeler üzerindeki etkisini analiz etmek amacıyla yapılmıştır. Özel hedefler, covid-19 pandemisinin Türkiye, İstanbul'daki küçük ve orta ölçekli işletmelerin performansı üzerindeki etkisini incelemek, Covid-19'un yayılmasını önlemek için hükümet kararlarının KOBİ'lerin Performansı üzerindeki etkisini değerlendirmek ve stratejileri belirlemektir. Bu kararlar KOBİ'ler tarafından İstanbul, Türkiye'deki Covid -19 pandemisinin ardından Covid -19 etkilerini azaltmak için alındı. Araştırma, İstanbul, Türkiye'de bir anket yapılarak yürütülmüştür ve geçerli yapılandırılmış anket kullanılarak 100 küçük ve orta ölçekli işletmeden veri toplanması için örnekleme prosedürü olarak çok aşamalı bir örnekleme tekniği kullanılmıştır. Elde edilen veriler hem tanımlayıcı hem de çıkarımsal istatistik kullanılarak analiz edildi. Sonuç, küçük ve orta ölçekli işletme yöneticilerinin çoğunluğunun kadın, 'inin ise erkekler tarafından yönetildiğini gösterdi. Ankete katılan işletmelerin yüzde 61'i küçük ölçekli, yüzde 39'u orta ölçeklidir. Diğer sonuçlar, sosyal mesafenin işletme karını -82068.456 TL azalttığını ve covid 19'un yayılmasını önlemek için müşterilere el dezenfektanı satın alan işletmelerin karlarını 5.617 tl azalttığını, işletmelerin covid 19'un yayılmasını önlemek için işlerini kapattığını gösterdi. 2686.039 tl ile azalan satışlar (3.46), girdileri değerlendirmede zorluk (3.44), personele ödeme gücü (3.11), kayıp sözleşmeler (tedarik ve/veya satışlar için) (3.12), operasyonel maliyetleri azaltmak için personel sayısında dusus(3.49), yetersiz personel (3.22) ve satışlar (3.46) covid 19 pandemisinden oldukça etkilendi. Hükümetin Covid-19 virüsünün yayılmasını kontrol altına alma konusundaki kararları, müşterileri diğer şeylerin yanı sıra küçük ve orta ölçekli işletmeleri (3.34) tercih etme konusunda kısıtladı. Oysa iş stilini değiştirmek (3.58), çevrimiçi pazarlamayı benimsemek (3.56), çalışanların maaşlarını azaltmak (3.07) ve kredi oranlarını düşürmek (3.10) KOVID-19 pandemisi sonrasında KOBİ'ler tarafından alınan stratejilerdi. Bu nedenle, KOBİ'lerin hareket kısıtlamaları sırasında veya gelecekte benzer bir durum olması durumunda ticari faaliyetlerini sürdürebilmeleri için çevrimiçi tabanlı platformlara ve görsel hizmetlere katılmaları önerilir.

**Anahtar Kelimeler:** COVID-19, KOBİ, Ekonomi, Devlet, Nüfus, Pandemi, İş, İstanbul.



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## ABBREVIATIONS

<b>SMEs</b>	:	Small Medium Enterprise Scale
<b>COVID-19</b>	:	Corona Virus Infectious Disease 2019
<b>MBA</b>	:	Master's in Business Administration
<b>WHO</b>	:	World Health Organization
<b>GDP</b>	:	Gross Domestic Products
<b>SAP</b>	:	System Applications and Products
<b>IATA</b>	:	International Air Transport Association
<b>NBER</b>	:	National Bureau of Economic Research
<b>R&amp;D</b>	:	Research and Development
<b>UNCTAD</b>	:	United Nations Conference on Trade and Development.
<b>OECD</b>	:	Organization for Economic Cooperation and Development
<b>OLX</b>	:	On Line Exchange
<b>ER</b>	:	Euro
<b>USD</b>	:	United States Dollar
<b>BIST</b>	:	BORSA Istanbul.
<b>GARCH</b>	:	Generalized Auto-Regressive Conditional Heteroscedasticity
<b>GAIN</b>	:	Global Alliance for Improved Nutrition
<b>SA</b>	:	Strongly agree
<b>A</b>	:	Agree
<b>D</b>	:	Disagree
<b>SD</b>	:	Strongly disagree

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## **PREFACE**

This thesis THE IMPACT OF COVID 19 PANDEMIC ON SMALL AND MEDIUM SCALE ENTERPRISES (SMEs) IN TURKEY .it has been written to fulfill the graduation requirements of the Business administration program at Istanbul GELİŞİM University. I was engaged in writing this thesis from September 2021 to July 2022.

My research question was formulated together with my supervisor Prof. Dr. ANTON ABDULBASA H KAMIL. The research was daunting but conducting extensive studies and research has allowed me to answer the question that we identified, fortunately, my supervisor was always supportive and willing to answer my questions. I would like to thank my supervisor for his excellent guidance and the respondents without whose cooperation I would not have been able to carry out this research.

To my colleagues at Istanbul GELİŞİM thank you for always battling ideas and constantly giving your contribution. If I ever lost interest, you kept me motivated.

To my family Amara, Sonia, the Wemimo's this is for you.

I hope you enjoy your reading.

## INTRODUCTION

Many epidemic diseases have been witnessed in the world throughout history. Today, the world is faced with an unprecedented COVID–19 Pandemic. The virus which first appeared in China in December 2019, has spread around the world and has become a pandemic. As of April 11, 2020 total confirmed cases were more than 1.6 million and total deaths were about a hundred thousand worldwide (WHO, 2020). Turkey has not been left out, as of 11th April (2020), Turkey has registered more than 52,000 cases of COVID 19, with more than 1.1 thousand deaths (T.R. Ministry of Health, 2020) COVID-19 is not only a global pandemic and public health crises, it has also serially affected the global economy and financial markets. In May 2020 the Asian development bank announced that COVID-19 could cost the global economy between 5.8 to 8.8 trillion dollars.

The Pandemic has had an inscrutable impact on, amongst other things, business life in Turkey with SMEs being dealt the major blow. According to OECD (Organization for Economic Cooperation and Development) Turkey policy brief (2016), SMEs account for 73.5% of employment in turkey and more than half of the value added to exports. They are thus essential for creating jobs for a growing labor force for boosting productivity, growth, and competitiveness. They are also relevant for helping to absorb and integrate the influx of refugees that Turkey is currently facing. Hence, the impact of the pandemic and its corresponding effect on SMEs will gravely reflect on the GDP of Turkey's economy.

# CHAPTER ONE

## 1.1 Background of the Study

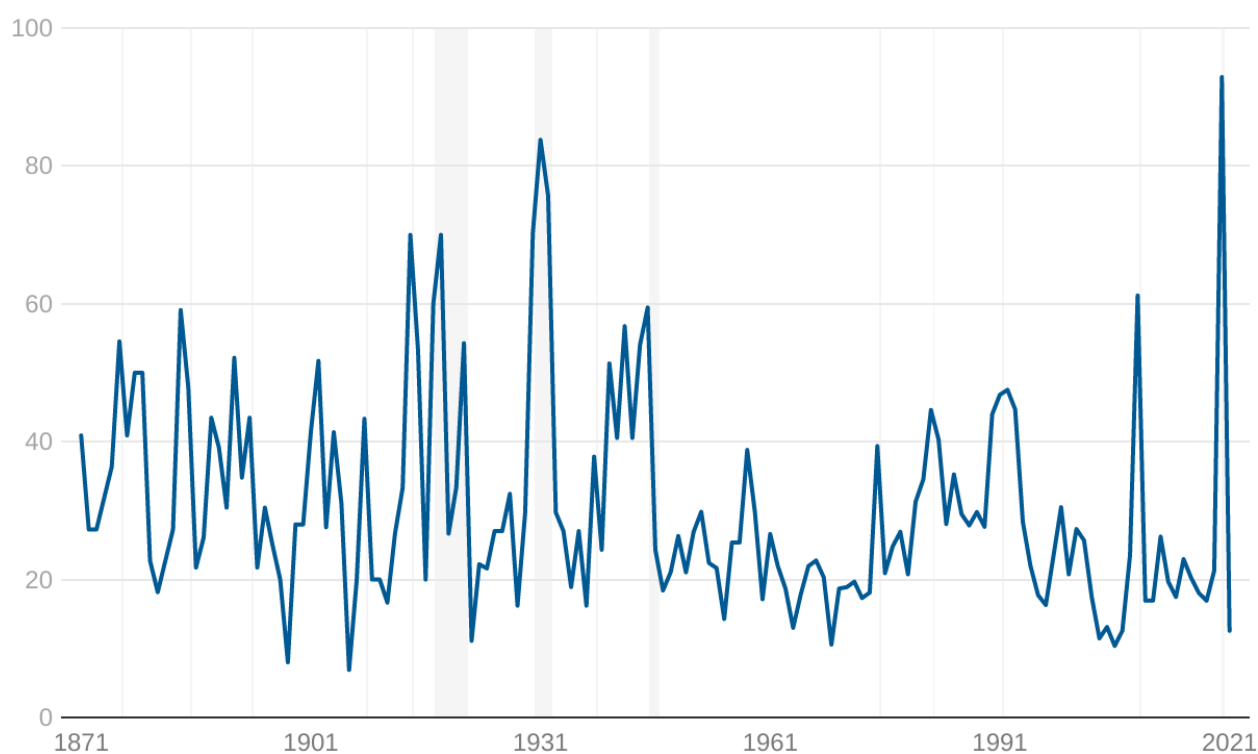
Four worldwide pandemics (1819, 1918, 1957, and, 1968 pandemics) have been reported since industrialization began. The cholera epidemic of 1817 in India, which became a worldwide pandemic, and the influenza pandemic of 1918–1919, in addition to its effect on health which killed an estimated 40 million people in approximately a year globally, shook the international economy and impacted the world's demographics (Johnson and Mueller, 2020). There are realistic worst-case scenarios for global disease outbreaks like COVID-19 in the influenza pandemic. When applied to the world's population of around 7.5 billion in 2020, the 1918-1920 flu death rate of 2.1 percent out of the entire population would result in 150 million fatalities globally. As a result, not only may there be an unprecedented number of deaths, but the economy could also see a significant recession.

Following the industrial transition, the globe has seen four worldwide pandemics, including the pandemics of 1819, 1918, 1957, and 1968. The cholera epidemic in India in 1817, which later expanded across many nations, upset the global economy, as did the influenza pandemic of 1918–1919, which was one of the world's most catastrophic short-term demographic disasters, killing an estimated 40 million people in just over a year (Johnson and Mueller, 2020). The influenza pandemic is a potential worst-case scenario for a worldwide illness epidemic such as COVID-19. When extrapolated to the world's population of around 7.5 billion people in 2020, a flu death rate of 2.1 percent of the entire population in 1918-1920 would result in 150 million fatalities globally. As a result, not only is there the risk of an unparalleled number of deaths, but also of a significant economic recession. In December 2019, the first coronavirus case was recorded in China (Forster et al.2020; World Health Organization) (WHO, 2020). COVID-19 had reached 3,726,292 confirmed cases, 257, 405 confirmed fatalities, and 215 impacted nations as of May 8, 2020. The WHO labeled the epidemic sickness a pandemic scenario in January 2020. This is the fifth worldwide pandemic to be recorded. The economic harm is already visible as the health and human toll rises, and it constitutes one of the world's greatest economic shocks. Using market exchange rate weights, the June 2020

Global Economic Prospects forecast a 5.2 percent drop in global GDP in 2020, the biggest global recession in decades. Despite governments' extraordinary efforts to combat the downturn with fiscal and monetary policy support, advanced economies are expected to contract by at least 7%. This weakness is expected to spill over to emerging markets and developing economies, which are expected to contract by 2.5 percent as they deal with their own domestic outbreaks of the virus. This would be the closest for at least sixty years, as shown in the graph below by this group of economists (World Bank, 2020)

## Most countries are expected to face recessions in 2020

Share of economies in recession, 1871-2021



*The proportion of economies with an annual contraction in per capita GDP. Shaded areas refer to global recessions. Data for 2020-21 are forecasts.*

Source: World Bank

In January 2020, financial markets in Asia, particularly in China, saw a fall, although this was rapidly compensated for in China, despite the rigorous controls in place, it was impossible to prevent the virus from spreading to other nations,

resulting in the collapse of global stock markets. During this time, some stock markets, such as Belgium, the Netherlands, Sweden, the United States, Germany, Portugal, and Switzerland, have experienced significant declines, while others, such as Taiwan, Hong Kong, Singapore, Israel, China, and South Korea, have seen significant increases in their stock markets (Wang et al, 2020). The epidemic, particularly the quarantine imposed in Wuhan, has had an economic impact on China and, as a result, the global economy. There are more than 300 factories in Wuhan, making it one of China's most important commercial cities. A considerable percentage of the world's top corporations, such as SAP, PSA, and Microsoft, are located in these factories. China accounts for 16.3% of global GDP and is undoubtedly the primary source of global growth (Ayittey et al, 2020). As a result, the epidemic has had far-reaching consequences for the global economy. Due to their reliance on established nations, the worldwide trade business, national health care systems, food industry, events industry, education, and global commerce have all experienced system downturns, with projections of spillover effects to emerging and developing countries (Ozili and Arun, 2020).

The original impression was that the COVID-19 pandemic would be limited to China. However, the pandemic's spread across the globe was unavoidable, as was the economic pain that has been felt across various economic sectors, including travel bans that have impacted the aviation industry, sporting event cancellations, and prohibitions on mass gatherings that have impacted the event and entertainment industrial sectors (Horowitz, 2020; Elliot, 2020). According to IATA, travel restrictions alone cost the tourist business more than 200 billion dollars, excluding additional lost income from tourism trips, and were expected to cost the aviation industry a total of 113 billion dollars (2020).

Maritime port activity, which accounts for 80 percent of global trade in products transported by sea, has kept up with the pandemic's advance. Port visits by all ship types were down by more than 10% in the first 31 weeks of 2020 compared to the same time in 2019. (UNCTAD, 2019). With increased unemployment as a result of reduced working hours and temporary layoffs in not just the marine industry but across all sectors, the jobless rate has risen by an estimated 14%. This reduction equates to the loss of 400 million full-time employees, with small and medium-sized

businesses suffering the brunt of the loss (ILO, 2020). The results of a study of over 5800 small enterprises in the United States are presented in a recent NBER (National Bureau of Economic Research) paper. According to the poll, 43 percent of responding SMEs have already closed for the time being. Businesses cut their workforce by 40% on average, and three-quarters of respondents said they only have two months' worth of cash on hand (Bartik et al, 2020).

COVID-19 has had a huge global impact not only on the wealth and health and well-being of people and also on the economy. SMEs are a vital part of the economy in Turkey and hence are more vulnerable to the economic effect of COVID-19. The government enforced lockdown measures across the country forced many businesses to stop operations causing severe disruption to supply chains, domestic demand, and international trade. In this regard, the Turkish economy has encountered a relatively high budget deficit in its public sector (2.9% as a ratio to the GDP) and a stagnant fixed capital investment performance. (Ebru & Yeldan, 2020)

The importance of small and medium-sized enterprises, particularly in the Turkish economy, has gotten a lot of attention in recent years, owing to two factors. The first is the emergence of new technologies and the restructuring of production processes in the world since the late 1970s, which favor SMEs over larger corporations. SMEs 'creative nature, flexibility in adjusting to unstable and unpredictable conditions, and capacity to integrate into global supply chains are all being increasingly recognized in this environment. The European Union approved a revised guideline 2003/361/EC on the definition of SMEs on May 6, 2003, which replaced suggestion 96/280/EC.

Only firms experiencing the special handicaps of SMEs would be deemed SMEs, notably in reference to state aid, structural financing, or research and development (R&D) programs, as a result of the modification, which strengthened legal clarity while eliminating opportunities for circumvention. The following is a definition of small and medium-sized businesses from the recommendation:

- Small businesses employ less than 50 people and have a total yearly balance sheet of less than EUR 10 million.
- Medium-sized businesses employ fewer than 250 people and have a total annual balance sheet of less than EUR 50 million.

SMEs are considered engines of economic growth, as well as a major source of jobs, business dynamism, and innovation by the EU. In a climate of rising unemployment and expanding economic disparities, the second perspective highlights the potential of SMEs in creating jobs and alleviating poverty.

However, in Turkey, the true degree of understanding regarding SMEs is shockingly low (TURKSTAT 2020) even though they contribute about 92% of the GDP of the Turkish economy. Then again, they instituted 72.4% of employment, 51.8% of personnel costs, 50.4% of revenue, 44.1% of production value, and 44% of added value at factor costs. According to the statistical grouping of economic activities (NACE Rev.2), in 2019, SMEs; while 36.3% were operating in the wholesale and retail trade, repair of motor vehicles, and motorcycles sector, 14.4% worked in the transportation and storage sector, and 12.4% in the manufacturing industry. While the middling value added per employee for SME initiatives was 15 thousand TL in 2009, this value was 54 thousand TL in 2019. Among SME groups, the uppermost value-added per employee for 2009 and 2019 was in medium-sized enterprises with 29 thousand TL and 108 thousand TL, respectively, while for the similar years, these values were correspondingly 19 thousand TL and 66 thousand TL for small-scale enterprises, 8 thousand TL and 22 thousand TL for micro-scale enterprises.

## **1.2 Problem Statement**

COVID-19, according to the Asian Development Bank, may cost the world economy between 5.8 and 8.8 trillion dollars by 2020. The epidemic has had an unavoidable influence on Turkish business, with SMEs suffering the most severe consequences. SMEs account for 73.5 percent of employment in Turkey and more than half of the value-added on exports, according to an OECD (Organization for Economic Cooperation and Development) Turkey policy brief (2010). As a result, they are critical in terms of producing employment for a rising labor force as well as increasing productivity, growth, and competitiveness. They're also important for helping Turkey absorb and integrate the inflow of migrants it's presently dealing with; as a result, the pandemic's impact on SMEs will have a significant influence on the country's GDP.

### **1.3 Purpose of Study**

An empirical examination of the impact of the COVID–19 Pandemic on small and medium-sized enterprises in Turkey will be conducted, as well as the measures put in place to mitigate these consequences.

### **1.4 The Study's Importance**

Despite being a novel concern, research such as Fernandez, N. (2020), Baker, S. R. Bloom, N. Davis, S.J. et al (2020), and Acikgoz, O., & Guncey, A. have already been done in the short time since the epidemic began (2020). However, the impact of the epidemic on Turkey's small and medium-sized businesses, which account for 91.9 percent of all businesses and 55 percent of GDP, has received little or no attention. As a result, the goal of this research is to fill up the gaps in that understanding.

Turkey also bears the burden of overcoming the epidemic without jeopardizing its already poor economic state, having faced a tough economic crisis in 2018. Similarly, knowing the effects would aid policymakers in developing successful economic recovery programs.

### **1.5 Hypothesis for Research**

The following is how the null hypothesis will be tested:

**H<sub>0</sub>:** In Istanbul, the COVID-19 epidemic has had no substantial impact on small and medium-sized businesses.

### **1.6 Limitations**

Certain biases exist in the study, such as poor presentation, particularly of smaller, less internet-savvy enterprises in the sectors analyzed, and the possibility of question misunderstanding due to the online survey technique.

Similarly, because the situation is expected to change quickly, the information presented here can only be regarded as current for the time being.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1. Global effect of the Covid-19 Pandemic**

The global economy is currently being ravaged by the covid-19 pandemic, its aftermath effect on both human and material resources in the world is undeniable evidence that good health is the driving force behind the growth of an economy (Meer et al, 2003; Bloom & canning, 2000).

A comparative analysis carried out by Barro et al (2020) on “the coronavirus and the great influenza pandemic: Lessons from the Spanish flu for the coronavirus’s potential effects on mortality and economic activity” submitted that the flu recorded a 2.1 percent death rate out of the 1918-1920 total population which would translate to about 150 million deaths worldwide when applied to the world’s population of about 7.5 billion in 2020. Regression & percent in GDP and private consumption respectively as a result of the covid-19 pandemic corresponding to those seen during the great global recession of 2008-2009. The study, therefore, concludes that given the advances in public health care and measures being taken to mitigate the propagation of the coronavirus, the probability of the COVID- 19 reaching anything close to the global pandemic seems remote. The COVID-19 pandemic has so far been generic, universal, intercontinental, and inter-sectorial.

The novel virus which emanated from China has had an immense effect on China’s economy. Pan et al, 2020 in their review of the influence of covid-19 on the agricultural economy in China and emergency mitigation measures show that the impact of Covid-19 on the agricultural economy of China which happens to be a key economic sector is reflected in 8 aspects. They are; decreased crop production (31.63%), agricultural product supply (27.93%), Livestock production (17.98%), farmer income and employment (8.41%), Economic crop development, and agricultural product trade (0.94%). These were obtained via news reports, public opinions, official documents, and academic review analysis from two major social media platforms WeChat and Sina Weibo using web crawler technology and text mining. This study is however limited because the impact of Covid-19 was examined

only from a macro perspective and hence lacks in-depth microanalysis's using questionnaire-based investigation and economic model analysis.

As a result of the current globalization era, no country has been exempted in the spread and impact of the pandemic Rama Kumar (2020) analyzed the impact of the Covid-19 pandemic on agriculture with special reference to India. The result revealed that liquid milk procurement/demand in India diminished from 534.2 Lakh per day to 506.31 Lakh per day and consequently sales declined from 368.31 Lpd per day to 324.1 Lpd. The study further reports a decline in functional markets in India from 2,081 in February 2020 to 1,776 in March 2020, to 1,727 in April 2020, and 1,901 in May 2020.

A deplorable situation was recorded in African countries like Nigeria. Research carried out by Andam et al (2020) estimating the economic costs of covid-19 in Nigeria using a multiplier model based on the 2018 social accounting matrix for 284 goods and services reported that the agricultural sector in Nigeria which serves as a primary means of livelihood for most Nigerians suffered a 13.1 percent loss in output (USD 1.2 billion) during the COVID-19 lockdown. Although primary agricultural activities were excluded from direct restrictions on economic activities imposed in lockdown zones, the broader Agri-food system was indirectly affected because of its linkages with the rest of the economy leading to food insecurity and insecurity and an increase in the unemployment rate.

The Turkish agricultural sector didn't find it easier. A study on "The implication of the COVID-19 pandemic on the agricultural sector in Turkey carried out by Uysal & Veziroglu (2020) showed that although the agricultural sector in Turkey was identified as a critical sector and allowed to continue its activities without interruption, agricultural production and sales experienced inconsistent deficit gap in which production couldn't meet up sales and vice-versa at various periods. This result was obtained through various literature reviews and hence doesn't give any scientific evidence to back-up claims.

Correspondingly the shock to the global economy from COVID-19 has left the Asian market volatile. Hinging on the evidence in the literature that aggregate stock market volatility explains sectoral level volatility (Sharma et al., 2014), Sharma (2020) developed a hypothesis to measure the Asian market volatility during the

covid-19 pandemic. The study uses a standard GARCH model by considering four sample periods to draw conclusions on the effects of covid-19 economics. Results show that the 5 countries sampled (Japan, Singapore, South Korea, Russia, and Hing Sing) have the highest regional market volatility during the COVID-19 pandemic. The COVID-19 epidemic is presently ravaging the global economy, and its consequences on both physical and human resources around the globe are incontrovertible proof that great health is the propelling force behind economic progress (Meer et al, 2003; Bloom & canning, 2000).

According to a comparative analysis conducted by Barro et al (2020) on "the coronavirus and the great influenza pandemic: Lessons from the Spanish flu for the coronavirus's potential effects on mortality and economic activity," the flu had a 2.1% death rate out of the 1918-1920 total population, which would translate to about 150 million deaths worldwide when applied to the world's population of about 7 billion people. As a result of the covid-19 epidemic, there was a regression and contraction in GDP and private consumption, which were similar to those witnessed following the Great Global Recession of 2008-2009. As a result, the study concludes that, given developments in public health care and efforts to prevent the spread of the coronavirus, the likelihood of the Covid -19 trying to reach anything near a worldwide pandemic is improbable. So far, the covid-19 epidemic has been ubiquitous, transcontinental, and cross-sectorial.

The unique virus that originated in China has had a huge impact on the Chinese economy. In their evaluation of the impact of Covid-19 on China's agricultural economy and emergency mitigation measures, Pan et al., 2020 found that the impact of Covid-19 on China's agricultural economy, which is a significant economic sector, is represented in eight dimensions. Crop production has decreased by 31.63%, the farm production supply has decreased by 27.93%, cattle farming has decreased by 17.98%, farmer income and employment have decreased by 8.41%, and Economic crop advancement and farm products trade have both decreased by 0.94 percent. These were gathered from two main social media platforms, WeChat and Sina Weibo, employing web crawler technology and text mining to extract news headlines, popular comments, government documents, and academic review analyses

from two key social media platforms, WeChat and Sina Weibo. The influence of Covid-19 was only investigated from a macro perspective in this study; therefore, it lacks in-depth micro analysis employing questionnaire-based investigation and economic model assessment.

As a result of the contemporary globalization period, hardly a country has been spared from the pandemic's spread and impact. Rama Kumar (2020) looked at the effect of the Covid-19 epidemic on agriculture, with a focus on India. As a result, liquid milk purchasing in India fell from 534.2 Lakh per day to 506.31 Lakh per day, while sales fell from 368.31 Lpd per day to 324.1 Lpd per day. In India, functional markets fell from 2,081 in February 2020 to 1,776 in March 2020, 1,727 in April 2020, and 1,901 in May 2020, according to the study.

In African nations such as Nigeria, the situation is appalling. According to a study conducted by Andam et al (2020) estimating the economic costs of covid-19 in Nigeria using a cumulative model based on the 2018 social accounting structure for 284 goods and services, the agricultural sector in Nigeria, which is the primary source of income for the majority of Nigerians, lost 13.1% of its output (USD 1.2 billion) during the covid-19 lockdown. Despite the fact that primary agricultural activities were exempt from the straightforward limitations on economic activities levied in lockdown regions, the wider agri-food system was indirectly impacted due to its interconnections with the rest of the economy, resulting in food insecurity and insecurity, as well as an increase in the unemployment rate.

It was not easy for the Turkish agriculture industry. According to a study by Uysal & Veziroglu (2020) titled "The Impact of the Covi-19 Pandemic on the Turkish Agricultural Sector," despite the fact that the agricultural sector in Turkey was recognized as a crucial area and permitted to proceed with operations without disruptions, agricultural production and sales experienced an inaccurate shortfall gap in which production couldn't meet sales and vice versa at various times. This conclusion was derived from a number of literature reviews and hence does not provide any scientific proof to support the assertions.

As a result of the worldwide economic shock caused the Covid-19, the Asian market has been erratic. Sharma (2020) established a theory to assess Asian market volatility during the covid-19 epidemic based on data in the literature that aggregate

stock market instability predicts sectoral level instability (Sharma et al., 2014). To make conclusions on the impacts of covid-19 economics, the study used a typical GARCH model with four sample periods. The results suggest that during the covid-19 epidemic, Japan, Singapore, South Korea, Russia, and Hong Kong had the most regional market volatility among the five nations studied (Japan, Singapore, South Korea, Russia, and Hong Kong).

The research, on the other hand, was unable to explain or even provide answers to the "why" issue for the reported conclusion.

In addition, because China's economy was the first to be hit by the covid-19 epidemic, it was given a major blow because it is worldwide connected through commerce, investment, and tourism. Vasier et al (2020) used publicly accessible input-output data published by the China National Bureau of Statistics to run an OLS regression on "How covid-19 pandemic influences Chinese Economic Sustainability." The results show that the pandemic caused a decline in economic activities in all provinces and sectors, primarily due to economic ties with other countries and population flow.

Gabriel et al 2020 conducted a multi-sectoral analysis of "the impact of the covid-19 pandemic epidemic on organizational capabilities in Nigeria" to answer research questions such as: what essential features of organizations are impacted by the covid-19 pandemic, how do the repercussions of the covid-19 pandemic vary throughout industries, and what techniques have organizations adopted to address the covid-19 pandemic? A qualitative phenomenological design was used, and a purposive sampling strategy was used to choose a sample size of 25 firms from five distinct sectors in Nigeria. While some industries ceased operations, most businesses were able to prosper as a result of their embrace of online portals and social media use, according to the findings of this study.

Turkey, a rapidly expanding and urbanizing country around the globe, has faced significant economic risks. Ozturk et al (2020) conducted a sectoral-level analysis on "the impacts of covid-19 outbreak on the Turkish stock market," and concluded that the Turkey's economic sectors would be influenced not only by the number of covid-19 cases in the country, but also by the number of cases in other countries around the world, particularly countries with which Turkey has extensive

trade. The price indexes for the sectors whose stocks are traded on the Istanbul Stock Exchange, known as Borsa Istanbul, are used in the research (BIST). With 1,554 data, the regression findings for the impact of coronavirus infections on 21 Turkish sectors listed in the Borsa Istanbul demonstrate that the metal product and machinery sector was the most affected, since industrial output was interrupted owing to the pandemic. The sports, insurance, and banking industries are among the most severely impacted by the coronavirus pandemic. The epidemic has had the least impact on the food and beverage, wholesale and retail commerce, real estate, investment, and trust industries. The study, on the other hand, demonstrated that the epidemic in Europe and the rest of the globe had no statistically significant influence on the majority of industries in Turkey, and so has no substantial impact on the Turkish market.

The situation with the coronavirus pandemic is still developing. According to the study World Economic Situation and Prospects 2021, the global economy shrunk by 4.3 percent, more than twice as much as during the global financial crises of 2009. The minor rebound of 4.7 percent predicted in 2021 would hardly balance the losses of 2020, given the mortality rates reported as a consequence of the covid-19 epidemic.

## **2.2. In Pre-Covid-19 Turkey, the state and impact of small and medium scale enterprises (SME's)**

Small and medium-sized businesses constitute the core of the Turkish economy, according to several research. In 2004, the Organization for Economic Cooperation and Development examined the difficulties and policies affecting Turkey's small and medium-sized businesses. Due to their substantial percentage of the total number of firms and overall employment, SMEs are said to play a critical role in the Turkish economy. They also fall behind in terms of knowledge, skill levels, capital investment to promote their operations, and access to and capacity to use new technology, particularly in the realm of information and communication. Inflationary economic conditions and rising public debt have led to a loss of trust, a succession of financial crises, a dramatic increase in nominal interest rates, and a significant devaluation of the Turkish Lira, making the business environment for SMEs particularly dangerous in recent years. The Turkish government, on the other

hand, is dedicated to both regulating the business sector and implementing fundamental changes. It has implemented a variety of economic policies, as well as medium- and long-term economic goals, that directly or indirectly influence SMEs. Ozar et al (2008) conducted a significant analytical study on micro and small enterprise and expansion in Turkey, using the expansion rate of the number of people employed/engaged by SMEs in Turkey as a growth measure. A sample size of 4,776 SMEs was used, with 92 percent of them becoming micro and small-sized enterprises. According to the findings, in 2001, the 52 percent of people who were employed in 2000 decreased by 9%. 92.5 percent of SMEs in Turkey employed a size category of 1-9 people, which is commensurate with the demographic of SMEs in Turkey. 93.6 percent of them did not beyond their current size. Only 6.4 percent of SMEs grew to employ 10-49 people, indicating an extremely poor pace of expansion.

However, Sefner (2014) used descriptive statistics to investigate the structure of small and medium-sized enterprises in Turkey with a concentration on global competitive methods. While SMEs Turkey play important roles and contributions to the gross domestic product, employment, and dynamism of the economic and social framework in Turkey, the business environment is becoming more difficult as a result of globalization, though this is not a bad thing. Despite the fact that SME's make up 99.9% of Turkey's industry, just 55% of SME's operate in value-added industries, according to his findings. The primary obstacles that SMEs in Turkey face are these and numerous financial concerns. Wright et al. (2012) conducted an empirical study among SMEs in Istanbul to assess the use of competitive intelligence techniques or tools, which appears to be a key ingredient for SME success and growth in today's uncertain business environment, particularly for a country like Turkey, which heavily relies on SMEs for fiscal, trade, and employment success. The article includes themes such as strengthening intelligence collecting, methods, and attitudes toward competitive intelligence, increasing technology assistance, and efficient use of competitive intelligence in decision-making processes, among others.

Turkey's SMEs have endless opportunities to engage in international commerce and become significant exporters to European nations as a member of the European Union. However, the Turkish economy's sensitivity to SME expansion remains a concern (Nurrachmi et al, 2012). Nurrachmi et al. (2012) used Kobayachi's

micro and macro model to assess the condition and contribution of SMEs to Turkey's economic development, as well as their restrictions, issues, and problems. The findings suggest that Turkey's SMEs are dealing with significant concerns such as bottlenecks, a lack of marketing, and creative activities.

As a result, various policies and strategic initiatives are in the works in Turkey to assist the future of SMEs.

Sarp Kaya and Lufihak Alpkın (2012) listed the many challenges encountered by SMEs in Turkey in their article "problems and solution recommendations for SMEs in Turkey," which included:

- i. Managerial issues arise as a result of the fact that the majority of SMEs in Turkey are single proprietorships or family firms, which lack competent specialist managers.
- ii. Inadequate financial information, inadequate study of the financial system, poor record-keeping, credit volume, and marketing problems encountered in the domestic and foreign markets, such as failure to search for sales development, advertisement, and promotional effort, as well as planning them, are all major challenges for SMEs in Turkey.

### **2.3. The Impact of the Covid-19 Pandemic on Small and Medium-Sized Businesses (Smes) throughout the world**

Because SMEs have variable configurations and greatly contribute to nation-building the development of small and medium-size firms has been a focal point of numerous governments throughout the world (Aderemi et al, 2011; Tehseen & Ramayah, 2015; Kayadibi et al; 2013; Khalique et al, 2011). The global covid-19 epidemic has had a significant impact on the hectic world of activities. The crisis has already morphed into an economic and labor market shock that affects all enterprises, regardless of size (Garba, 2020). This is unmistakably applicable to the operations of SMEs all around the world. According to an online study undertaken by the Global Alliance for Improved Nutrition (GAIN) in 2019 on the impact of covid-19 on small and medium-sized enterprises in the food system, 84 percent of the 363 SME's randomly selected from 17 low- and middle-income countries in the food system reported being impacted by the pandemic and its associated control measures. The



main impacts cited were decreased sales (82 percent), difficulty accessing inputs (49 percent), and diversion of resources (48 percent). Aderemi et al. (2020) investigated the "impact of the coronavirus pandemic on Small and Medium Scale Enterprises in Nigeria" by conducting a review of the impact of the lockdown on SMEs engaged in three essential industries: food and consumables, pharmaceuticals, and oil and gas in the Sangoota industrial area of Ogun state, Nigeria. 100 SMEs were randomly selected and given structured questionnaires. According to the findings of the study, 10 percent of SMEs said the lockdown had no effect on their production, 31 percent said it had a minor effect, 43 percent said it had a moderate effect, 5 percent said it had a significant impact, 8 percent said it had a significant impact, and 3 percent said it had an extreme impact. This suggests that the covid-19 epidemic has had a modest impact on the operations of SMEs in the research region.

According to Garba (2020) using a simple linear regression model, the covid-19 epidemic has had a detrimental influence on the profit optimality and sales ratio of small and medium firms in Markurdi city, Benue state, Nigeria. The epidemic, it was found, has produced a difficult business climate for enterprises, since profit and sales have both decreased. As a result, we may deduce that the covid-19 pandemic has had a negative impact on SMEs in Nigeria, in-depth's analysis of literature on the "effects of a covid-19 pandemic on Small and Medium Scale Enterprises in Nigeria" Adiyoh et al (2020). The study suggests that the covid-19 epidemic has had a detrimental impact on Nigerian SMEs because to a stop in mobility, a drop in consumer purchasing power, and a decrease in imports. Ratnasingam et al. (2020) used descriptive statistics and a simple linear regression model to assess the impact of the covid-19 epidemic and following movement control order on the different business elements of SMEs in Malaysia.

Analytical results suggest that factors such as raw materials supply to SMEs, the effectiveness of personnel, and used production capacity were important and negatively influenced the production and sales of SMEs in the Malaysia furniture sector. "The influence of covid-19 on small and medium firms in Sri Lanka," Robinson and Kingatharan (2020) investigated. The data was gathered through qualitative interviews with 14 conveniently selected SMEs in the research region, as well as Nvivo-10, transcripts, and inductive coding. The bulk of the individuals

interviewed stated that their company activities were temporarily or partially operational. Despite this, no one has reported a permanent company shutdown. SMEs reported a decline in global and local consumption for their products and services, as well as challenges repaying loans and interest, a shortage of production material, an increase in order cancellations, severe cash deficits (inflows) and a lack of savings, difficulty recalling employees back to work, and a high cost of implementing workplace covid-19 preventative measures. "The Impact of Covid-19 Cases on Medium-Sized Enterprises in Serbia" Beraha & Duricin (2020) found that 44 percent of the 50 medium-sized businesses investigated were extremely concerned about the health of their workers during and after the epidemic. Unpaid receivables and a lack of cash flow to pay operational expenditures were cited as major issues by 33% of surveyed businesses, while unpaid receivables and a shortage of cash flow to cover operational costs were cited by 45 percent of businesses. Small and Medium Scale Enterprises in Zimbabwe have not had it easy in the Covid-19 era, as evidenced by Nyanga & Zirima's (2020) qualitative study on "Reactions of small to medium enterprises in Masvingo, Zimbabwe to Covid-19 Repercussions of Productivity," which used a descriptive case study approach as a research methodology. The study included ten volunteers that were conveniently chosen from Masvingo, Zimbabwe. SMEs were badly affected by the pandemic, according to the results of in-depth interviews. The majority of SMEs in the study region ceased operations, and many people were laid off. From January 3rd, 2020 to October 18th, 2021, a total of 7,630,163 confirmed cases were reported in Turkey, with 67,437 fatalities documented. Despite the fact that 112,360,409 vaccine doses have been delivered in Turkey (EHO, 2021), many firms, particularly small and medium-sized businesses, have yet to recover from the pandemic's impact. As a result, this research tries to accomplish three particular goals:

- i. Examine the impact of the covid-19 epidemic on small and medium-sized businesses in Istanbul, Turkey,
- ii. Compare SME's profit before and after the Covid- 19 pandemic,
- iii. Examine the impact of government rules aimed at preventing the spread of Covid-19 on the growth of small and medium businesses,

- iv. Identify the tactics used by SMEs in Istanbul, Turkey, to succeed in the aftermath of the Covid -19 outbreaks.



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Outline of the Research Field**

The research will take place in Istanbul, Turkey. With a demographic of over 15 million people, the city is located in both Europe and Asia, accounting for 19% of Turkey's total population. (2021, TSI). Istanbul is Europe's most populated metropolis and the world's fifteenth-most populous city. It is located between 41000 49" N and 280 57' 18" E longitudes.

Istanbul has the eleventh biggest economy in the world in 2018, accounting for 30 percent of Turkey's industrial production, 31 percent of GDP, and 47 percent of tax revenues. Istanbul's economy relies heavily on trade, accounting for 30% of the city's total production (OECD, 2020).

#### **3.2 The Study's Population**

The participants in this study were small and medium-sized businesses based in Istanbul, Turkey. Travel and tours advising, cosmetics, exporting of commodities overseas, health care services, boutiques, manicures, real estate consultancy, automobile rental service, cargo service, and bakery were among the 497, 023 small and medium scale firms studied (INVEZONE, 2015).

#### **3.3 Sample size and sampling process**

This study was carried out in Istanbul, Turkey, using a survey approach. Data was collected from the defined population of firms in Istanbul, Turkey, using a multi-stage sampling approach. The first stage entailed the deliberate selection of two categories of businesses: small and medium-sized businesses. This decision was made considering the fact that the businesses chosen are the most well-known in Istanbul, Turkey. The second stage is a deliberate selection of small and medium businesses from among Istanbul's many registered businesses. A total of 100 SMEs were chosen as respondents for the study using the Taro Yamane sample size calculator, based on the total number of registered businesses in Istanbul.

$$n = \frac{N}{K + N(e)^2}$$

Where N = population of study

K = constant

e = degree of error expected

n = sample size

### 3.4 Data Collection Method

The study's information came from both primary and secondary sources. The primary data was collected using a survey methodology and a well-structured questionnaire, which provided information on the impact of covid-19 on SMEs in the research region. Secondary data was gathered through journals, bulletins, and other publications, among other sources.

### 3.5 Data Analysis Method

Data were analyzed using descriptive and inferential statistics to capture the unique aims of this investigation. To achieve objectives 2 and 3, descriptive statistics such as frequency distribution and percentages were employed.

To achieve objective 1, a Logistic regression model was utilized.

#### 3.5.1 Model Description

##### 3.5.1.1 Binary logistic regression model

A Logistic model is a univariate binary model. We use a binary logistic regression model given that the dependent variable is dichotomous: 1, when an enterprises' make profit and 0 when they run at loss. Predictor variables are a set of socioeconomic indicators and dwelling endowment of the respondents. They contain both dichotomous and continuous variables. According to Gujarati, (2013), the logistic (logit) probability function is given as:

$$P_i = \frac{1}{1 + e^{-(\alpha + \beta X)}} = f(Z_i) \dots\dots\dots (1)$$

Where,  $P_i$  denotes the probability that the  $i^{\text{th}}$  enterprise making profit.

Index  $Z_i$  is a random variable which predicts the probability of an enterprise making profit or running at a lost.

Let the  $(1 - P_i)$  be the probability of enterprise making profit given as

$$1 - P_i = \frac{1}{1 + e^{-(\alpha + \beta X)}} \dots \dots \dots (2)$$

Then equation 2 can be re-expressed as:

$$\frac{P_i}{1 - P_i} = \frac{1 + e^{\alpha + \beta X_i}}{1 + e^{-(\alpha + \beta X_i)}} = e^{\alpha + \beta X_i} \dots \dots \dots (3)$$

Taking the natural log of equation 3 we obtain the following:

$$L_i = \ln \frac{P_i}{1 - P_i} = Z_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + U_i \dots \dots \dots (4)$$

Where;

$L$  = the log of the odds ratio.

$P_i$  = the probability of an enterprise making profit, where  $Y = 1$ .

$1 - P_i$  = the probability of enterprise not making profit, where  $Y = 0$ .

$X_i$  = is a vector representing explanatory variables.

$U_i$  = is the random error term.

The logit variable  $\ln \frac{P_i}{1 - P_i}$  is the natural log of the odds in favor of an enterprise making profit

Equation (4) is estimated by maximum likelihood method and the procedure does not require assumptions of normality or homoscedasticity of errors in predictor variables.

Implicitly, the model is empirically estimated as:

$$\ln Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e \dots \dots \dots (5)$$

Where;

$\ln Y$  = Profit (Dummy; 1 when an enterprise makes profit and 0 if otherwise)

$X_1$  = Sales volume

$X_2$  = Social distance

X3 = Cost of nose mask  
 X4 = Cost of hand sanitizers  
 X5 = Market closure  
 X6 = Cost of water  
 X7 = Movement restriction  
 e = error term.

The explicit forms of the functions are:

$$\ln Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + e_i \dots \dots \dots (6)$$

Where:

$\beta_1 - \beta_7$  = Regression coefficients

$\beta_0$  = Regression constant

Other terms are as defined in equation (5)

### 3.6 Result and Discussion

#### Profile of Respondents.

The demographic profile of the respondents is presented in Table 1. Table 1 shows that women led the majority of small and medium firm managers (62.5%), while men led 37.5 percent. This data revealed that females dominated the majority of SMEs in the studied region. Sixty-one percent of the businesses polled were small, while 39 percent were medium. Further analysis of the services supplied by SMEs revealed that the bulk of businesses (23 percent) provided travel and tour consulting, 19 percent provided cosmetics, 12 percent provided export services, 11 percent provided health care services, and just 3% provided real estate consultancy.

**Table 1:** Demographic Profile SME's

Variable		Frequency	Percentage
Gender	Male	36	37.5
	Female	64	62.5
	Total	100	100
Nature of enterprise	Small	61	61
	Medium	39	39

	Total	100	100
Services provided	Travel and Tours Consulting	23	23
	Cosmetics	19	19
	Exportation of goods abroad	12	12
	Health care services	11	11
	Boutique	7	7
	Pedicure	4	4
	Real Estate Consultant	3	3
	Car rental service	7	7
	Cargo service	9	9
	Bakery	5	5
	Total	100	100

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### **Covid-19 Pandemic effect on Small Scale Enterprises' Profit**

This section presents the result of the covid-19 pandemic's effect on small-scale enterprises' performance in Turkey. The logit model was employed to identify the factors influencing small and medium scale enterprises' profit. Table 2 summarizes the result of the logit model. In estimating the factors influencing small and medium scale enterprises' profit, a logit regression model made of 6 regressors was specified. The result shows that, in terms of explanatory power, the estimated logit regression model gave the pseudo-R-square of 0.63, which implies that, all the explanatory variables included in the model were able to explain about 63 % of the factors influencing small-scale enterprises' profit during the pandemic. Table 2 shows sales as having a positive and significant effect on enterprises' profit while the cost of hand sanitizers and the cost of water had a negative and significant effect on enterprises' profit. Similarly, social distance, movement restriction, and cost of nose mask had negative coefficients that are significant in the analysis. The result obtain herein implies that a positive sign on a parameter indicated that higher values of variables tend to increase the likelihood of enterprises making a profit. Similarly, a negative value of the coefficient implied that higher values of the variables would reduce the probability of enterprises making a profit.



The coefficient and the log odd coefficients of sales were statistically significant at 5 % and had a positive effect on enterprises' profit in the study area. This agrees with the *a priori* expectation. The odd interpretation means that for every unit increase in sales, the odd in favor of enterprises' profit increases by 0.3613 times or 36.13 %. The results imply that enterprises with higher sales are more likely to make more profit than enterprises with lower sales. The coefficient of cost of nose masks, hand sanitizers, and cost of water was statistically significant at 5% and had a negative effect on the enterprises' profit in the study area. This agrees with the *a priori* expectation. The odd interpretation means that for every unit increase in the cost of hand sanitizers, the odd in favor of enterprises' profit decreases by 0.9998 times or 99.98 %. This further means that a company that buys more hand sanitizers for consumers to prevent the spread of COVID-19 had higher probability of lower profit earnings. The coefficient and the log odd coefficients of cost of water were statistically significant at 5 % and had a negative effect on the enterprises' profit in the study area. This agrees with the *a priori* expectation. The odd interpretation means that for every unit increase in the cost of water, the odd in favor of enterprises' profit decreases by 0.1649 times or 16.49%. This means that the more a company buys water for consumers to wash their hands to avoid the spread of COVID-19, the higher the probability of making lower profit.

The Turkish authorities implemented COVID-19 containment measures in Istanbul, including mobility restrictions, social distancing, market closures, the usage of nasal masks, hand washing with hand sanitizers, and water. The findings of this study, which estimated the effects of these factors on firm profit, showed that the cost of nose hand sanitizers and cost of water had a considerable negative influence on the profit of small and medium businesses in the studied region. This means that the economic impact of COVID-19 in the situation of poor sales is more pronounced and larger among sales and service businesses. This study's findings are similar to those of Seth et al., (2020), who found that COVID-19 has a detrimental impact on over 90% of Pakistan's small and medium-sized businesses. The negative impact of movement restriction on profit is projected, since investments are likely to decline when there is movement restriction as a result of the COVID-19 epidemic, and there will be significant difficulties in importing and exporting products and services due

to total lockdown, which restricts movement in all channels (road, water, rail, and air).

### **COVID-19's impact on Medium-Scaled Enterprises Profit**

Covid-19's impact on medium-sized businesses in Turkey are presented in Table 3. The logit model was employed to identify the factors influencing small enterprises' profit. Table 3 summarizes the result of the logit model. In estimating the factors influencing medium scale enterprises' profit, logit regression model made of 6 repressors were specified. The result shows that, in terms of explanatory power, the estimated logit regression model gave the pseudo R-square of 0.71 for medium scale enterprise, which implies that, all the explanatory variables included in the model were able to explain about 71 % of the factors influencing the medium scale enterprises' profit during the pandemic. Table 4 shows that sales positively and directly affected profit of small scaled enterprises. Likewise, social distancing, cost of nose mask, cost of hand sanitizers and cost of water to negatively affect medium scale enterprises' profit. However, movement restriction did not have any significant effect on medium scale enterprises' profit in the study area.

The coefficient and the log odd coefficients of social distancing was statistically significant at 5 % and had a negative effect on small scale enterprises' profit in the study area. This agrees with the *a priori* expectation. The odd interpretation means that the more social distance is implemented, the odd in favor of enterprises' profit decreases by 0.1521 times or 15.21 %. This means that putting social distancing in place reduces corporate profit significantly. The coefficient and the log odd coefficients of cost of nose mask was statistically significant at 5% and had a negative effect on the small scale enterprises' profit in the study area. This agrees with the *a priori* expectation. The odd interpretation means that for every unit increase in cost of nose mask, the odd in favor of enterprises' profit decreases by 0.9984 times or 99.84 %. This further means that a company that buys more nose mask for their staff and /or consumers to prevent the spread of COVID-19 had higher probability of lower profit earnings. The coefficient and the log odd coefficients of cost of water was statistically significant at 5 % and had a negative effect on the small scale enterprises' profit in the study area. This agrees with the *a priori* expectation. The odd interpretation means that for every unit increase in cost of

water, the odd in favor of enterprises' profit decreases by 0.1649 times or 16.49 %. This means that the more a company buys water for consumers to wash their hands to avoid the spread of COVID-19, the higher the probability of making lower profit.

**Table 2: Covid-19 Pandemic effect on Small Scale Enterprises' Performance**

Variables	Coefficient	Std error	Z-value	Odd ratio
C	8.855	3.5598	2.49**	7010.745
Sales	1.017	0.7706	-1.32	0.3613
Social distance	-1.883	0.9964	-1.89**	0.1521
Cost of nose mask	-0.00151	0.000722	-2.09**	0.9984
Cost of hand sanitizers	-.00016	0.000287	-0.57	0.99983
Cost of water	-1.8024	0.7765	-2.32**	0.1649
Movement restriction	0.6241	0.7790	0.80	1.866
Log-likelihood	-25.454			
LR chi2 (6)	18.09			
Pseudo R <sup>2</sup>	0.63			

\*\* Significant at 5% probability level

**Table 3: Covid-19 Pandemic effect on Medium Scale Enterprises' Performance**

Variables	Coefficient	Std error	Z-value	Odd ratio
C	0.3969	0.9199	-0.40	0.3969
Sales	0.3234	0.250	-1.46	0.323
Social distance	-1.0351	0.751	0.05	1.0351
Cost of nose mask	-0.99986	0.00030	-0.45	0.999
Cost of hand sanitizers	-1.000713	0.000357	2.00**	1.00713
Cost of water	-0.79215	0.517	-0.36	0.792
Movement restriction	2.1458	1.4489	1.13	2.145
Log-likelihood	-28.756			
LR chi2 (6)	11.08			
Pseudo R <sup>2</sup>	0.71			

\*\* Significant at 5% probability level

### Comparative result on SME's Profit before and after the Covid 19 Pandemic

The result as shown in Table 4 below indicates that there was no significant difference in small and medium-sized businesses profit before and after the first wave of the pandemic ( $t = 0.057$ ,  $df = 99$ ,  $p = 0.955$ ) (Table 3). However, from the results it was observed that the profit after the pandemic was higher than profit earnings before the pandemic, and the mean difference being 5,920 TL. This does not agree with a priori expectation as shown by several studies on the 2007 influenza pandemic (Hayward et al, 2014; Leung et al, 2015 and Horby et al 2012).

However, this could be as a result of many factors such as the increased rate of online marketing and purchase as shown by the insignificant effect of movement restriction on SME's profit in the study area.

**Table 4: Profit Earnings Before and After Covid 19**

Mean±SD		Mean difference	t- test	Df	Sig.(2-tail)
Profit before	Profit after				
235,530±349464.59	241,450±1026422.58	-5,920.0	-0.057	99	0.955 <sup>NS</sup>

Further results also showed that there was no significant difference in small and medium-sized businesses profit ( $t = 1.336$ ,  $df = 49$ ,  $p = 0.188$ ) (Table 6). However, from the results it was observed the profit of medium scale enterprises were higher than those of small-scale enterprises, and the mean difference was 269,780 TL.

**Table 5: Profit Earnings of Small and Medium Scale Enterprises**

Mean±SD		Mean difference	t- test	Df	Sig.(2-tail)
Medium scale	Small scale				
376,340±1409994.230	106,560±321512.82	269,780	1.336	49	0.188

## The Impact of Government Rules Aimed at Preventing the Spread of Covid-19 on the Performance of Small and Medium-Sized Businesses

Table 3 demonstrates the effects of government rules aimed at preventing the expansion of Covid-19 on the success of small and medium businesses. To assess which government guidelines on covid-19 had an impact on SME performance, a weighted mean value of 2.83 was utilized as a baseline. A mean score of 2.83 and above indicates places where government COVID-19 guidelines impacted SMEs' performance, while a mean score of less than 2.83 indicates regions where government COVID-19 guidelines had no impact on SMEs' performance.

As a result of the government's guidelines for containing the spread of the COVID-19 virus, customers are less likely to patronize my business (3.34), and the government's guidelines for containing the spread of the COVID-19 virus have slowed the mobility and distribution of goods and services needed for my business (3.56), and customer demand for products and services has decreased as a result of the government's guidelines for containing the spread of the COVID-19 virus. However, my daily average returns/income have decreased due to government guidelines on helping prevent the spread the of COVID-19 virus, access to credit facilities/loans in financial institutions to enhance business performance during COVID-19 has been difficult due to government guidelines on containing the spread of COVID-19 virus, prices of products and services have risen due to government guidelines on containing the spread of COVID-19 virus, and many other factors.

**Table 6: Demonstrates the effects of Government Rules Aimed at Preventing the Spread of Covid-19 on the Performance of Small and Medium-Sized Businesses**

S/ N	Statement	SA	A	D	S	Cum	Mean	Decision
1	Customers have been prevented from patronizing my business due to government recommendations aimed at controlling the spread of the Covid-19 virus.	66	1	10	11	334	3.34	Accepted

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2	The government's rules for preventing the spread of the Covid-19 virus, which are based on mobility limitations, have hindered the mobility and supply of materials essential for my firm.	74	1	10	4	356	3.56	Accepted
3	Customers' demand for products and services has decreased as a result of government rules aimed at preventing the spread of the Covid-19 virus.	36	2	17	18	283	2.83	Accepted
4	The government's rules on preventing the spread of the Covid-19 virus have lowered my daily average returns/income.	32	2	20	21	255	2.55	Rejected
5	Due to government instructions on preventing the spread of the Covid-19 virus, access to credit facilities/loans in financial institutions to increase company performance during Covid-19 has been challenging.	23	3	21	26	250	2.50	Rejected
6	Prices of goods and services have risen as a result of government rules aimed at preventing the spread of the Covid-19 virus.	21	2	38	18	247	2.47	Rejected
7	Because of government restrictions aimed at controlling the spread of the Covid-19 virus, the majority of my employees have been laid off.	27	2	37	14	262	2.62	Rejected

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Source: field survey data, (2021)

The baseline mean 2.83 was obtained using mean of means from Table 6, such that  $X \geq 2.83$  = Areas where government guidelines on covid 19 affected performance of SMEs,  $X < 2.83$  = Areas where government guidelines on covid 19 did not affect

performance of SMEs), \*= ranking based of severity of challenges, Cum = cumulative frequency.

### SMEs' strategies for Success in the face of Covid-19 Pandemic

Table 5 shows the outcome of COVID-19's impact on small and medium-sized businesses. To rank elements that COVID-19 influenced among small and medium firms, a weighted mean value of 2.95 was utilized as a baseline. A mean score of 2.95 or above indicates that COVID-19 had an impact, whilst a mean score of less than 2.95 indicates that COVID-19 had no effect. As a result, sales have fallen.

**Table 7: Strategies taken by SME's to strive in the wake of Covid-19 Pandemic**

SN	Statement	SA	A	D	SD	Cum	Mean	Decision
1	Change business	74	13	10	3	358	3.58	Accepted
2	Adopt online marketing	74	12	10	4	356	3.56	Accepted
3	Cut employees' salaries	42	32	17	9	307	3.07	Accepted
4	Disengage some employees	34	30	20	16	282	2.82	Rejected
5	Operate skeletal amidst lockdown	28	35	21	16	275	2.75	Rejected
6	Increase the price of goods and services	20	25	38	17	248	2.48	Rejected
7	Reduce production/large purchase of goods for sale	26	22	37	15	259	2.59	Rejected
8	Reduce services	41	20	27	12	290	2.90	Rejected
9	Deferred tax payment	36	15	39	10	277	2.77	Rejected
10	Reduced loan rate	57	9	21	13	310	3.10	Accepted
11	Seek for Palliatives from NGOs	46	17	20	17	292	2.92	Rejected
12	Seek for NGO/ government intervention	53	13	17	17	285	2.85	Rejected

Source: field survey data, (2021)

The weighted mean of 2.95 was obtained using the mean of means from Table 7, such that  $X \geq 2.95$  = Most effective strategies taken by SMEs to strive in the wake of the COVID-19 pandemic;  $X < 2.95$  = strategies not effective, taken by SMEs to strive in the wake of COVID-19 pandemic, cum = cumulative frequency

## CONCLUSION, AND RECOMMENDATIONS

### Summary

From January 3rd, 2020 to October 18th, 2021, a total of 7,630,163 verified cases were reported in Turkey, with 67,437 fatalities documented. Despite the fact that 112,360,409 vaccine shots have been delivered in Turkey (EHO, 2021), many firms, particularly small and medium-sized businesses, have yet to recover from the pandemic's impact. This study was done against this context to objectively examine the impact of the COVID-19 epidemic on small and medium-sized enterprises in Turkey. The specific objectives were to investigate the impact of the COVID-19 pandemic on the performance of small and medium-sized enterprises in Istanbul, Turkey, to evaluate the impact of government guidelines to prevent the spread of COVID-19 on the performance of SMEs, and to identify the strategies used by SMEs in Istanbul to thrive in the aftermath of the COVID-19 pandemic. In Istanbul, Turkey, the study was done utilizing a survey design, with a multi-stage sampling approach utilized as the sampling strategy for data collection from 100 small and medium businesses using a validated structured questionnaire. The information gathered was examined using descriptive and inferential statistics.

The majority of small and medium firm managers (62.5 percent) were female, while 37.5 percent were male, according to the findings. Sixty-one percent of the businesses polled were small-scale, while 39 percent were medium-scale. The findings also found that the bulk of the services offered by SMEs were travel and tours consulting (23%), cosmetics (19%), exporting of commodities overseas (12%), and health care services (11%) with just 3% providing real estate consultancy. Sales, cost of hand sanitizers and cost of water had a considerable impact on profit, according to the findings. The COVID-19 pandemic had a significant impact on sales (3.46), difficulties assessing inputs (3.44), problems paying employees (3.11), lost contracts (for supply and/or sales) (3.12), shrunk personnel to cut operating expenses (3.49), insufficient staff (3.22), and boosted sales (3.46). Customers are prevented from supporting small and medium enterprise businesses (3.34) as part of the government's rules for preventing the spread of the Covid-19 virus. SMEs, on the other hand, used methods such as changing business (3.58), adopting internet



marketing (3.56), reducing staff wages (3.07), and lowering lending rates (3.10) to succeed in the aftermath of the COVID-19 epidemic. Most importantly, social distancing, cost of nose mask and cost of water to negatively and significantly affected small scale enterprises' profit, while for medium scale enterprises it was negatively affected by cost of hand sanitizers. The results further showed that there was no significant difference in small and medium-sized businesses profit before and after the first wave of the pandemic. However, the profit after the pandemic was higher than profit earnings before the pandemic. Similarly, there was no significant difference in small and medium-sized businesses profit, although the profit of medium scale enterprises were higher than those of small scale enterprises by 269,780 TL.

### **Conclusion**

The COVID-19 epidemic, which began in the Chinese city of Wuhan in December 2019, has impacted several international economies, notably Istanbul, Turkey, resulting in deaths, increased poverty, malnutrition, unemployment, and the closure of vital economic sectors, among other things. From January 3rd, 2020 to October 18th, 2021, a total of 7,630,163 proven cases were reported in Turkey, with 67,437 fatalities documented. According to the findings, Istanbul, Turkey's COVID-19 has had a negative impact on the economy, particularly in the more dynamic sectors such as small and medium-sized businesses (SMEs). According to the findings of this study, the COVID-19 pandemic had reduced enterprise profit by imposing additional on purchasing hand sanitizers and water to prevent its spread. The profit after the pandemic was higher than profit earnings before the pandemic. Although the profit of medium scale enterprises were higher than those of small scale enterprises by 269,780 TL, the result of this findings indicated that this difference was not significant.

### **Recommendations**

The following suggestions are made based on the findings of this research:

- i. The government should also construct an emergency policy framework that includes lending resources and support for SMEs at a reduced interest rate, as well as tax reductions or waivers.

ii. In order to maintain their commercial activities amid mobility limitations or in the case of a similar future occurrence, SMEs should engage in online-based forums and visual services.



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APPENDIX

Appendix 1: QUESTIONNAIRE

Dear Sir/Ma,

My name is Nchedochukwu C. Uzoigwe an MBA student of the Istanbul Gelism University. This is a study carried out by me on the effect of covid-19 on small and medium scale enterprises in Istanbul, Turkey. Kindly assist me by providing the following information to enable me analyzed, conclude and draw recommendations to help the authorities better manage the impact of this novel pandemic.

Name of business .....

Respondents position in the organization a) owner [ ] b). director [ ] c). manager [ ]

d). assistant Manager [ ] e). Others (specify).....

Sex: a) male [ ] b). female [ ]

**TICK AMONG THE PRODUCT/SERVICES RENDER BY YOUR ENTERPRISE**

Travel and Tours Consulting [ ]

Cosmetics [ ]

Exportation of goods abroad [ ]

Health care services [ ]

Boutique [ ]

Pedicure [ ]

Real Estate Consultant [ ]

Car rental service [ ]

Cargo service [ ]

Bakery [ ]

What is the scale of your enterprise? a). Small scale [ ] b). Medium scale [ ]

How many employee do you employ in your enterprise before covid 19 ? -----  
-----



How many employee do you employ in your enterprise during covid 19? -----  
-----

Did covid-19 affect your business? a) yes[ ] b). no [ ]

If yes, how?

S/N	Statements	SA	A	D	SD
A	Decreased sales				
B	Difficulty in assessing inputs				
C	Difficulty paying staff				
D	Limited Financial reserves				
E	Difficulty accessing financing				
F	Closed retail or sales outlets				
G	Difficulty with staff getting to work				
H	Lost contracts (for supply and/or sales)				
I	Difficulty accessing equipment's and services				
J	Downsized staff in order to reduce operational costs				
K	Inadequate staff				
L	Increased sales				

What was your profit per month during the first wave of COVID-19 .....

What was your sales per month during the first wave of COVID-19  
.....

What was your profit per month before the first wave of COVID-19  
.....

Rate the Impact of government guidelines to prevent the spread of Covid-19 on the performance of SMEs

S/N	Items	SA	A	D	SD
A	The guidelines by the Government on containing the spread of Covid-19 virus have restricted customers on patronizing my business				

B	The guidelines based on movement restrictions by the Government on containing the spread of Covid-19 virus have slowed down the movement and supply of products needed for my business				
C	The demand of products and services by customers have reduced due guidelines by the Government on containing the spread of Covid-19 virus				
D	My daily average returns/ income has reduced guidelines by the Government on containing the spread of Covid-19 virus				
E	Access to credit facilities/loans in financial institutions to boost the performance of business during Covid-19 have been difficult due to guidelines by the Government on containing the spread of Covid-19 virus				
F	Prices of products and services have increased due to guidelines by the Government on containing the spread of Covid-19 virus				
G	Most of my workers have been laid off due to guidelines by the Government on containing the spread of Covid-19 virus				

Does the implementation of social distance affect your profit a) yes [ ] b). no [ ]

Does the cost of providing effective face masks to your staff and some customers affect your profit

a) yes [ ] b). no [ ]

If yes, what was the cost of providing effective face masks  
 .....

Does the cost of providing hand sanitizers and installation of hand washer affect your profit

a) yes [ ] b). no [ ]

What was the cost of water for hand washing .....

If yes, what was the cost of providing hand sanitizers and installation of hand washer  
 .....

Was there lockdown in in Istanbul, Turkey? a) yes [ ] b). no [ ]

If yes, did it restrict movement a) yes [ ] b). no [ ]

Did the lockdown in in Istanbul, Turkey leads to market closure a) yes [ ] b). no [ ]

**RECOGNIZE THE TECHNIQUES USED BY SMES IN ISTANBUL, TURKEY, TO STRIVE IN THE FACE OF COVID-19 PANDEMIC.**

S/N	Items	SA	A	D	SD
A	Change business				
B	Adopt online marketing				
C	Cut employees' salaries				
D	Disengage some employees				
E	Operate skeletal amidst lockdown				
F	Increase the price of goods and services				
G	Reduce production/large purchase of goods for sale				
H	Reduce services				
I	Deferred tax payment				
J	Reduced loan rate				
K	Seek for Palliatives from NGOs				
L	Seek for NGO/ government intervention				

**HOW WOULD YOU AGREE OR DISAGREE TO THE IMPACT OF COVID-19 ON YOUR ENTERPRISE?**

S/N	Low income	SA	A	D	SD
A	Low turnout of customers				
B	Reduction in the cost/price of goods and services				
C	Increase in the cost of goods and services				
D	Sales fluctuations				
E	Insufficient supply of goods				
F	High demand of goods and services				
G	Cost of sanitizers and hand washer affect profit				

