# Impact of Digital Transformation on SME's Marketing Performance: Role of Social Media and Market Turbulence

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# ABSTRACT

Despite the rising relevance of digital transformation, there is still a knowledge vacuum since empirical research on Digital Transformation (DT) related topics is still scarce. This study aims to examine the impact of digital transformation on the marketing performance of small and medium, enterprises (SMEs). This research seeks to fill this void by adopting the Technology Adoption Model (TAM) in order to explore how in a fast-changing technological environment, digital transformation plays its role in firm specific capabilities that are imperative for a firm to adopt, and how they impact firm's marketing performance. Combination of Convenience sampling as well as snowball sampling was used to collect the data. Reliability analysis, Normality analysis and multiple Regression Analysis approach was used to assess the conceptual framework utilizing survey data from 316 small to medium-sized enterprises in the twin cities (Islamabad & Rawalpindi), Pakistan. The results indicate that digital transformation has a positive impact on SMEs' marketing performance and encourage businesses to take advantage of the opportunity presented by new digital technologies and industry-wide digitalization trends by committing to adopting new technologies and improving their digital capabilities in order to increase their productivity, efficiency, and innovation as well as their marketing performance. Hence this study is a practical demonstration of how developing digital transformation may be used to develop novel digital products and services, and thereby improve marketing performance that leads to the overall corporate performance. Finally, the study adds to the body of knowledge by evaluating the proposed model that describes the relationships between digital transformation, social media marketing, market turbulence and marketing performance concurrently. This study is important as it helps managers to validate the allocation of resources towards technical infrastructure development in their firm operations. Ultimately, the policymakers will find it accommodating in order to develop suitable strategies for evolving human capital and to boost their absorptive.



**Keywords:** Digital Transformation; Social Media Marketing, Market Turbulence, Market Performance, SMEs, TAM

# TABLE OF CONTENTS

**Table of Contents**

# LIST OF TABLES

**Page No.**

# LIST OF FIGURES

# CHAPTER 1: INTRODUCTION

Technology has altered business operations and consumer behavior since its inception (Matarazzo et al., 2021; Sestino et al., 2020). For instance, technology has completely changed how businesses market their goods and services, do business, share information, and manage resources. Not only this but also the technology has significantly altered consumer behavior in terms of consumption patterns and given them the ability to participate in the purchasing process (Cham et al., 2022; Cheah et al., 2022). Businesses must adopt structured and organized management control systems in a world that is always changing due to technology advancement (Brem & Voigt, 2009). These technologies encourage company growth by giving top management information that would not otherwise be possible through informal communication in such organizations. In fact, businesses employ new technologies often and base their judgments on the information at hand (Fryges & Wright, 2014; Lee-Kelley & Sankey, 2008; Mosey et al., 2017). Long-term organizational objectives must align with the requirement to embrace new digital tools, or instruments for digital transformation to be effective. A new paradigm has been established in every facet of business as a result of the development of new technologies including block chain, artificial intelligence, virtual reality, big data, and robotics (Grewal & Roggeveen, 2020; Lim et al., 2020). Such transformation has evolved into a marketing catalyst, sustaining new marketing fads and archetypes, in marketing analytics and digital marketing. Social media's original function as a medium for social networking has been superseded in recent years by the advancement of digital, marketing. Instead, it has developed into a platform that allows companies to interact with their clients practically immediately and to actively participate in the creation of marketing plans (Cham et al., 2021; Iankova et al., 2019). Customers may work with businesses as co-creators, in practically every element of the company process, including, developing products and services, creating value, and developing marketing strategies, particularly in digital marketing. Consumers can play the role of "broadcasters" and stop listening to marketers by adding user-generated content into digital marketing, exactly as in the past (Cham et al., 2022).

Today's businesses place a strong emphasis, on digitization, and data-driven, practices, which has shifted marketing toward a science-based approach and given marketers unrestricted access to insightful data about their business's performance, customers, and opportunities (Ritter & Pedersen, 2020). Today, regardless of a company's size or industry, digital transformation is an inescapable decision, according to (Cortellazzo et al., 2019). However, small and medium-sized businesses may find that this change is far more pertinent to them (SME). SMEs are a crucial industry since they may contribute the most to GDP. SMEs nowadays must deal with the impacts of globalisation and technological advancement. As a result, developing additional competencies and having an entrepreneurial mindset are essential for success. SMEs with a strong online presence, are more, lucrative, survive, longer, and develop faster. An economy supported by SMEs, might be perfect to fully utilise the potential of new technology, since the business climate is now being altered by digital technology. SMEs should effectively adapt to the shift in consumer expectations, the regulatory environment, and dealing with the competition by utilizing technology advancements. This kind of business demands entrepreneurial skills. The presence of digital technologies is not only helping established organization but also benefitting small, medium enterprises and new ventures. It has not

only played a key role in the advent of new business models like sharing economy and platform businesses but also helped enterprises to gain competitive advantage over rival firms and introduced disruptive technologies (Fauzi & Sheng, 2020).

Small and medium-sized businesses (SMEs) are important economic players in every country's economy. They are the seeds for future huge enterprises, while talking about the economic growth and development it would be unfair to overlook the importance of SME sector in any country. Same is the case of Pakistan. SMEs in Pakistan lie in the number of employees, up to 250 individuals, while the paid-up capital of up to 25 million rupees, as well as the yearly turnover of up to 250 million rupees,(Mubarak et al., 2019; Qureshi & Herani, 2011). According to an estimate SMEs constitute around 90% of all other enterprises in Pakistan. They make 80% of the non-agricultural labor force and their share in the yearly production of the GDP is roughly 40%.

In evolving economies , policymakers at all levels have been thinking about the crucial role of SMEs in producing employment and prosperity and boosting creativity (Nyoni & Bonga, 2018). The vibrant role of small and medium enterprises (SMEs) in developing economies, through which their aims of growth and wealth generation can be acquired, have hardly been recognized. Hence studying SMEs can improve our understanding regarding their needs for growth, development, etc. Furthermore, Scientists, experts, and policymakers would be able to create effective support plans for SMEs with the use of these types of information (Nyoni & Bonga, 2018).

SMEs make up the majority of the economy. In Pakistan, roughly 90% of all businesses are owned by foreigners. They employ 80% of the workforce. Non-agricultural work force and their yearly wage that share the gross domestic product (GDP) is about 40%. Small and medium enterprises are constrained by available resources, unlike large firms in the formal sector. Due to this inherent characteristic of a SME, a structure must be established through which it may get support for a variety of business operations, including marketing, financial management, technical progress, and training and development of human resources, (Mubarak et al., 2019). Despite, their economic, importance, Pakistan's SMEs have a number of flaws, that substantially hinder, their functioning. The inadequate company, information structure, lack of strategy and planning, and lack of human, capital necessary in current age business, are among, primary flaws (Dar et al., 2017). These kind of inefficiencies may be eliminated, and the existing situation of SMEs can be improved, by bringing in new ideas hence this way the current state of SMEs can be lifted by permeating the advanced digital technologies in their daily operations (Homburg et al., 2019).

The phrase "digital transformation" (DT) has resulted from the widespread usage of digital technology, perceived effect, and new digital business models. Up until this moment, academic literature has surprisingly paid little attention to these changes; talks of digitization, digitalization, and digital transformation have just recently started (Venkatraman, 2017). In developing nations like Pakistan, digital transformation has so far mainly been disregarded outside of specialized business disciplines. For instance, attribution model advancements, multi- and omni-channel innovations, and the influence of digital advertising, and social media have not received the majority of attention from marketing

academics (Kannan, 2017; Lamberton & Stephen, 2016).

Three major external causes are driving the demand for digital transformation. To start, the World Wide Web's creation and widespread use have spawned an expanding number of related technologies, such as broadband internet, smartphones, Web 2.0, SEO, and many more. Online payment methods, cloud computing, speech recognition, and crypto currency have all gained popularity recently, supporting the development. E-commerce is a sort of company that enables online product buying and selling. Global e-commerce sales reached $2.3 trillion in 2017. By 2021, it is anticipated that e-commerce will generate $4.88 trillion in revenue (*Statista (2019)*, 2019) The advent of new digital technologies including artificial intelligence (AI), block chain, internet of things (IOT), and robotics. Wedel & Kannan (2016) are projected to have profound effects on the economy due to the pervasiveness of big data. The growing use of new digital technologies clearly underlines the necessity for organizations to undergo digital transformation, even though some of these technologies may not be as robust as they are expected to be. Additionally, these new digital technologies could change the firm's cost structure by replacing more costly humans with robots or virtual agents for service delivery or by optimizing logistical processes and reducing supply chain costs by utilizing AI and block chain.

Secondly, these new digital technologies have a significant impact on competitiveness. Technology has caused the competitive climate in retail to transfer revenues to relatively young online businesses. Not only has competition increased globally, but it has also intensified as big, data-rich American and Chinese firms like Alibaba and JD start to dominate a number of industries. Examples of these firms include Amazon, Alphabet, Apple, and Facebook. Particularly, changes in corporate ideals are a clear sign of this transformation.

Thirdly, customer behavior is changing as a result of the digital revolution. According to industry statistics, customers are shifting their business to online retailers, and digital contact points have a big impact on consumer satisfaction and both online and offline sales (Kannan, 2017). As a result of new search and social media technologies, consumers have become more connected, knowledgeable, in control, and engaged (Lamberton & Stephen, 2016; Verhoef et al., 2017). Using digital technologies, consumers may co-create value by creating and customizing products, performing last-mile delivery, and supporting other customers by sharing product reviews (Beckers et al., 2018; Grönroos & Voima, 2013). Today's consumer behavior is increasingly influenced by mobile devices because they allow show rooming, or the practice of physically inspecting products before making an online purchase (Gensler et al., 2017). Additionally, consumers place a high value on applications and new AI-based technologies that are influencing their lives, such Google Home and Amazon's Echo. These new digital tools are anticipated to have a significant impact on consumer behaviour (Hoffman & Novak, 2017; Verhoef et al., 2017), and as a result, their use may soon challenge established corporate norms. Companies that struggle to adapt lose clients and are more likely to be replaced by those who succeed in doing so.

In order, to understand, Digital, transformation (DT), it’s important to understand, the process of digital transformation first. The three stages of digitization, digitalization, and digital transformation are the

primary steps of how it operates. The majority of the literature claims that in order to achieve the most commonplace level of digital transformation, the first two incremental stages are necessary (Strønen, 2020). The primary function of digitization is to transform analogue data into a digital format (i.e., zeros and ones) so that computers can store, process, and transmit it (Loebbecke & Picot, 2015). The conversion of research tasks from analogue to digital is another definition of digitization (Sebastian et al., 2020). Therefore, digitization may be understood in its most basic form as the conversion of analogue work to digital. As a result, we define digitization as the process of turning analogue data into digital data based on the information provided above. Digital forms in ordering procedures, digital surveys, and digital applications for internal financial disclosures are only a few examples.

The word "digitalization" refers to the modification of current business processes via the use of information technology (IT) or digital technologies. For instance, the creation of new internet or mobile communication platforms that allow all consumers to easily contact businesses and change the norm for businesses and their clients (Ramaswamy & Ozcan, 2016). Such a change usually calls for new sociotechnical structures to be built utilising digital artifacts that are not possible without the usage of digital technology. By changing current business processes including communication, distribution, and commercial relationships, information technology (IT) is a crucial facilitator for exploiting new business prospects hence making it possible for more effective coordination across activities, businesses use digital technology to improve their present business processes and to increase customer value by enhancing user experiences (Pagani & Pardo, 2017). As a result, digitalization includes both cost savings and process improvements that could lead to better customer experiences. Finally, the most prevalent step is digital transformation (DT), which represents a company-wide change that results in the introduction of new business models, some of which are specific to the firm's focus or industry (Iansiti & Lakhani, 2014; Kane et al., 2015; Pagani & Pardo, 2017). Business models, which are defined as "how the firm generates and provides value to consumers, and then transforms payment received to profits" (Pagani & Pardo, 2017), are used by companies to compete and gain a competitive edge. For instance, companies can create a new business model by using new business logic to create and capture value.

Digital, transformation (DT) is not as straight as often people confuse it and organizations are yet to understand what behaviors, attitudes and techniques are required to be adopted to be innovate digitally and gain competitive advantage, improve operational efficiency and venture performance in a complex and volatile digital atmosphere. Digital, transformation (DT) is the introduction, and use, of technology, with the aim to highly improvise the performance and outreach of any organization (Schallmo et al., 2019). Teece (2017), regarded the process of digitalization and digital transformation a factor that can be more important in building competences more than strategizing. A business setting that is going through digital and technological change can help nurture new competencies that can further help to gain competitive advantage, thus enhance enterprise performance. Ali et al. (2016) highlights the importance of technology alignment and how it is important to allocate more resources to technology development and manage uncertainty. It has also been observed that the computer supported design models boost the performance of the products and service with the help of advanced simulation and other techniques. Hence, higher technological proficiency leads to the higher the performance of the

enterprise.

Digital transformation has not only improvised product development which was slow and costly previously in industrial era but also has led to reinvention of sales and distribution channels. Now we can see every business is promoting their products and services using social media channels as surviving without social media marketing has become almost absolute for businesses, which has led to the requirement of new skills, techniques, methods and behaviors (Nylén & Holmström, 2015). Digital transformation has really been empowered because of the social media dependence of customers and it's extremely important for any organization to engage in its social media activities to attract the clients and bigger the firm size is more important is the use of technology to get more insights of the customer behavior, interests etc.

Market turbulence is a term used frequently to describe the unexpected business circumstances that exist in the technology sector nowadays. Authors agree that market turbulence is a instability in the market that may be due to several factors like a country's economic, political, legal or perhaps social policies (Wang et al., 2015). Hence market turbulence increases the ambiguity and risk of a company's business process. (Andersson & Pathirana, 2022). Market volatility is a key component that increases the level of uncertainty and risk in the environment for business operations and the fundamental link between a company's marketing strategy and its effectiveness. Uncertainties and difficult-to-predict developments characterise the chaotic corporate environment (Andersson & Pathirana, 2022).

This increase in environmental concerns creates both possibilities and challenges at the same time, which has an impact on the business strategies used by firms. According to Wang et al. (2015), market instability is a crucial environmental factor that affects how well the lively skills operate in terms of organizational marketing. In keeping with this, Maletic et al. (2018) go into further detail on how an unpredictable business climate affects the relationship between sustainable practices and organizational marketing success. Hence, studying and determining the performance of SMEs is essential given the significance of these businesses to regional economies. Such research aids in the development of commercial and governmental SME assistance initiatives. As a result, it's critical that the performance evaluation techniques employed can offer a complete insight of SME effectiveness.

### 1.1. Problem Statement

Digital, transformation (DT) has transformed from a technical opportunity, to a strict need in this age (Kraus et al., 2022). With dynamic and fast changing environment organizations are really surrounded by the questions whether digital transformation help organizations to increase performance or not and if so to what extent, what are the capital, asset and technological requirements and what are the risks involved etc. DT research is frequently highly specialized and restricted to specific fields. The number of publications that yearly provide findings from many fields and points of view is now fast increasing. As a result, it is now exceedingly challenging to understand the greater field of DT (Hanelt et al., 2021; Hausberg et al., 2019).

Pakistan's government is taking initiatives towards a digital economy however, because of the costs, technology, training, and other factors, organizations are keen to know if they should opt digital technologies and proceed towards digital transformation. It is yet unknown what approaches, behaviors, attitudes, and actions people working in SMEs must adopt in order to succeed in the digital environment. There are several organizational and individual factors that may support the uptake of digital transformation in firms. Only few studies have been directed to comprehend these factors (Quinton et al., 2018). Furthermore, digital transformation is the need of time as world is converting digital and no business can survive without this. Although digital transformation helps SMEs improve their performance but to what extent it really depends upon their marketing approach, especially social media marketing, while researching the importance of market turbulence in the overall process is critical. Organizations now days are paying huge attention to understand if digital transformation will lead to a higher marketing performance and what are possible factors that can help to elaborate this relationship. Hence studying SMEs, would improve, our understanding, regarding their needs in admiration towards growth, and development, etc. These kinds of understandings-would enable specialists, and policy, makers to frame sound support, strategies for SMEs (Nyoni & Bonga, 2018).

### 1.2. Research Gap

Although it's clear that implementing new technology is a difficult process, it becomes even more important to consider each individual component that influences the process when upgrading current resources and technology in order to achieve greater economies of scale and higher performance. Pakistan is a growing nation that is undergoing a digital transition right now. Hence this is high time to produce studies on the topic of digital transformation and it’s impact of the marketing performance of SMEs as there is still a vibrant deficiency of studies on this topic (Grégoire & Shepherd, 2012; Hsieh & Wu, 2019).

Zhang et al, (2022) asserts that the digital, transformation (DT) improves the performance, of small, and medium, enterprises; however, a thorough study has not yet been done to determine the real impact of digital transformation on marketing performance. Even though it is obvious that digital transformation improves performance, however the impact of digital transformation on SMEs' marketing performance has not yet been well understood and investigated. Also it is interesting to see the role of marketing performance as a mediator and market turbulence as a moderator in the whole process.

### 1.3. Research Objectives

This research proposes following three research objectives,

1. To examine the impact, of digital, transformation, on the marketing, performance of SMEs
2. To investigate the role of social media marketing as a mediator between the digital transformation and the marketing performance of SMEs

3. To figure out the role, of market-turbulence being a moderator, between the digital transformation and the marketing performance of SMEs

### 1.4. Research Questions

This research is based upon following three questions that are as under

1. What's the impact, of digital-transformation on the marketing-performance of SMEs in Pakistan?
2. How digital transformation does influences the performance, of SMEs, with the mediation of social media marketing?
3. How does market turbulence play its role as a moderator to facilitate the process of digital transformation and firm's marketing performance?

In order to measure the performance of any organization or sector it's important to look at the level of efficiency and effectiveness of its operations, strategies and actions. When we talk about efficiency and effectiveness it's important to discuss the operational efficiency as operational efficiency is one of the most prominent outcomes of digital-transformation. An advantage of digital transformation that was emphasized by 36 research was operational efficiency, which mostly entails automation (Andriole, 2017), the creation of business processes (Gust et al., 2017), and cost savings (Pagani, 2013). One of the finest examples is how cloud computing offers flexible resources that are available when needed and do not typically need to be delivered, managed, or maintained by IT employees. Another crucial point to remember is that big data and analytics are expected to speed up decision-making overall (Bharadwaj et al., 2013), which will ultimately enable quicker response. The result would be smart products and services, where artificial intelligence would be incorporated and would use (big) data to enable automated and algorithmic decision-making processes (Loebbecke & Picot, 2015; Newell & Marabelli, 2015).

### 1.5. Scope of the Study

Different studies have highlighted the importance of technology to the business sector of the country. Success of the business is directly dependent on the technology as it is cost saving and a tool to competitive edge. Pakistani entrepreneurs are somehow contented about the technology they are using but it is because they have less information about the new emerging technology. It is also because these people are less prone to change. Hafeez et al. (2013) have highlighted that lack of technological innovation and other factors that have caused small and medium industry to perform low. They are struggling for longer life and sustainability. 19% of SMEs are less than five years old and only 4% manage 24 to survive more than twenty five years. This reiterates the need for more. Yousaf, et al. (2020) in their study related to technology orientation in software sector of Pakistan acknowledges that Pakistani software-firms require not only a strategic, but also a proactive response,, in order to deal with the dynamic changes taking place in the market. But they should also be ready to face disappointments while dealing with high technological obsolescence. For this, it is important for these firms to acquire more knowledge about the technology. Hence this is high time to study the impact, of

digital, transformation, on the marketing, performance, of SMEs in Pakistan as it will not only help to address the misunderstandings prevailing in the market but also would guide through the challenges and resources required to adopt this change. Furthermore it will help us to deal with the prevailing disappointment related to technology adoption and upgrade. Also the firs will become more prone and proactive to the change and new technology adoption.

This study is relevant and tremendously significant in the current situation as it is going to read through the effects of digital, transformation, on the marketing, performance, of SMEs. While existing in a digital era and with introduction of new technologies every single day, new ventures opting for digital transformation would really benefit from this study as this will help them improve capabilities of the firms to understand problems, behaviors of the individuals that will help boast performance, consequently improving the marketing performance, and overall venture performance, there have been limited studies based on digital transformation and its effects that needs to be studied (Quinton et al., 2018).

### 1.5.1 Theatrical Contribution

The purpose of this study is to explore how SMEs' marketing performance is affected by digital transformation. The need for SMEs to comprehend not only how new technology is embraced and utilized but also how present and upcoming expansions will effect management, sustainability, and the development of company has in fact become a necessity of the moment(Zhang et al., 2022). The Technology Acceptance Model (TAM), which has been extensively used and verified in commercial and industrial contexts to explain or anticipate how users would react to new technology has served as the theoretical foundation for this study(Tam et al., 2022). Furthermore, this study is focused on the impact of digital transformation and marketing performance of SME as well as its importance for these SMEs growth and future directions. This study draws attention of SME managers towards the measures to effectively implementing digital transformation in their organizations.

### 1.5.2 Structure of Thesis

The thesis is divided into 5 chapters. Literature review is provided in chapter 2 which includes separate literature on each variable i.e. digital transformation, social media marketing, marketing turbulence and marketing performance. Methodology is discussed in chapter 3. This chapter includes settings of the methodology i.e. the reason to choose the sample size, population and sampling etc. Moreover this chapter also provides the discussion on the procedures of data collection and sampling. A detailed discussion on pre testing, pilot study, sample characteristics, demographics and measures of constructs is also a part of this chapter. The discussion on data analysis and findings are presented in chapter 4, which includes data analysis techniques, normality analysis, reliability analysis and descriptive and results of regression analysis. Finally, discussion, conclusion and future directions are given in chapter 5.

# CHAPTER 2: LITERATURE REVIEW

## 2.1. Introduction

In order to keep up with their competition and satisfy consumers, SMEs are currently starting to explore for simple solutions to apply digitalization procedures(Müller et al., 2018). It is clear that thinking of the digitization of SMEs as an organizational process that entails both gradual and dramatic changes made possible by digital technology is a good idea. One element of digital transformation is the capacity to change a business model in response to new technologies and socio-technical breakthroughs that affect operations and the customer experience (Gray & Rumpe, 2017; Ismail, 2017; Schallmo et al., 2019). To lead SMEs and help them profit from these digital transitions, managers may need to develop a number of skills, such as digital media communication, worldwide networking, swift information interchange, etc. As a result of having to deal with rapid change, competition, and technology, the environment will become considerably more competitive and unstable (Horner-Long & Schoenberg, 2002).

Small and Medium Enterprises (SMEs) play a vital role in the economics of countries as economic artists (Wolff & Pett, 2006). They are the seeds for future large organizations and are often a significant source of employment growth (Clark & Moutray, 2004). Due to their flexibility and capacity for swift and effective integration of discoveries resulting from the business' expansion operations, SMEs typically exhibit higher levels of innovation than bigger corporations (Verhees & Meulenberg, 2004). According to research, SMEs that participate in innovative activities outperform their competitors. Studying SMEs can improve our comprehension of their requirements for growth, development, etc. Scientists, experts, and policymakers would be able to create effective support plans for SMEs with the use of these types of information (Müller et al., 2018)

There is no accepted definition of small and medium-sized enterprises (SMEs) in Pakistani literature. In the US, SMEs are classified as businesses with less than 500 employees. In the European Union, small and medium-sized businesses are those with less than 250 employees. According to Pakistan's Small and Medium Enterprise Development Authority, SMEs are defined as companies with less than 250 employees (SMEDA). It's also beneficial to consider the workforce, paid-up capital up to Rs. 250 million, and yearly revenue of Rs. 250 million. As a result, no one, universally accepted definition of SMEs that is accepted by all business sectors exists. Every criterion is based on the convenience and objective of the study.(Ahmad et al., 2021). On the other hand, current authors concur that the SME is the organisation. with no more than 250 workers. SMEs are said to as serious firms in Pakistan since they provide the majority of the country's gross domestic product. A unit that has at least 25 million rupees in paid-up capital, at least 25 million rupees in annual revenues, and at most 250 million rupees in annual revenues is considered a small or medium-sized enterprise (SME). (Ahmad et al., 2021) There is no one definition of SMEs that all industry sectors concur upon. Every criterion depends on the feasibility and goal of the investigation. (Ahmad et al., 2021). On the other hand, all of the writers writing at the moment concur that the SME is the company with a potential workforce of 250 employees. Businesses are categorised as SMEs in Pakistan.

SME growth is crucial for every nation, but it is especially important for developing nations. To boast about their exports and revive their economy, several nations rely on SMEs (Chege & Wang, 2020). Over the past twenty years, SMEs have been crucial to growing economies. Pakistan must thus acknowledge the crucial part the SME sector has played in the country's overall economic progress. (Arshad et al., 2020). SMEs in Pakistan contribute to all business sectors, and they employ 78% of the industrial workers. (Arshad et al., 2020) . In Pakistan, SMEs play a significant role in every sector of the economy, and their contribution to improving the situation of the economy as a whole cannot be understated. Because SMEs are crucial to regional economies, it is essential to analyses and evaluate their performance.(Ahmad et al., 2021). Such research aids in the development of commercial and governmental SME assistance initiatives. As a result, it's critical that the performance evaluation techniques employed can offer a complete insight of SME effectiveness.

### 2.2. Digital Transformation

The digital era has accelerated organizational environment evolution, making them more chaotic, unpredictable, and complex than in the past. Businesses need to react and adapt to their environment more than ever due to the quick changes in competition, demand, technology, and legislation. (Teichert, 2019). The pressure on businesses to adapt their business strategies to environmental technological changes has significantly increased with the emergence and growing importance of new digital technologies like Social Media, Cloud Computing, Big Data and Analytics, Embedded Devices, 3D-Printing, the Internet of Things, and Artificial Intelligence (Teichert, 2019). They are profoundly changing how businesses operate, the nature of competition, customer behavior, and expectations, as well as how business is conducted, goods are produced and delivered, how people are employed, and eventually, the nature of whole sectors (Fichman et al., 2014). Therefore, in recent years, practitioners and academics have been closely observing the phenomenon of digital transformation, notably the levers that are essential to success and the obstacles that must be addressed.

The term "digital transformation" presently has no accepted definition (Schallmo et al., 2019). A substantial change in an organization's strategy, structure, or power dynamics is referred to as a "transformation" (Gray & Rumpe, 2017). Digital transformation is the process of adjusting to a quickly evolving digital environment in order to meet the digital expectations of clients, employees, and business partners. This adoption procedure needs to be deliberately thought out, started, and completed (Kane et al., 2015). According to McKinsey, digital is more about how companies run their operations than it is about any particular procedure (Wedel & Kannan, 2016). Three categories may be made out of what they mean by "digital": creating value at the cutting edge of business, enhancing processes that directly impact the customer experience, and creating foundational capabilities that underpin the overall company plan. The digital transformation of a corporation involves many different aspects, with technology integration being only one of them. Digital technology must also create value for customers, the business, and other important stakeholders (Schallmo et al., 2019). Companies must focus on two complimentary activities for a successful digital transformation: redesigning consumer value offerings and reforming business processes. Digital technologies are being used in business operations to

improve consumer interaction and cooperation(Setia et al., 2013).

Another way of looking at the definition of "digital transformation" can be that it is a disruptive or progressive change process (Kane et al., 2015). It starts with the adoption and use of digital technology and moves on to the implied fundamental transformation of an organization. Many definitions of digital transformation were analyzed and contrasted (Bharadwaj et al. 2013) . Another thought on the topic emphasizes that, in order to produce value, a complete change of a company is essential when employing and embracing digital technology. (Henriette et al., 2016)

Digital transformation is defined in different way. There are several basic considerations that businesses must make before embarking on a digital-transformation; customer experiences, operational processes, and business-models that enable data reprogram ability and homogeneity, as well as the process autonomy and decentralization(Andriole et al., 2017) Individuals drive this normally, which is rooted in organizational and social sectors. This attribute makes digital transformation a risky process that necessitates the development of digitalization strategies to assist firms in assessing their resources and skills as well as the need for the digital-transformation, process, and assessing, the impact, of digital-technology, on the structure and procedures of the organization. This method provides managers with a comprehensive perspective of the situation. to guide this new trip in the long run manner, with magnitudes that should be, addressed, in terms, of business, value generating speed, breadth, size, and sources (Chege & Wang, 2020). We may sum up digital transformation as "the most comprehensive and fast change for firm activities, processes, competencies, and models to utilize the advancements of digital technology and their influence in a planned and prioritized method" (Gray & Rumpe, 2017). Three of its main objectives are cost savings, flexibility, and customer-centric processes. Some of the technologies that make it possible include Internet of Things (IOT), cloud computing, mobile computing, fog computing, big data, data science, business analytics, social computing, block chain, and machine learning.(Sestino et al., 2020)

Some authors relate the idea of Industry 4.0 to digital transformation. To manage complex systems in this way, Industry 4.0 is the intelligent networking of people, things, machines, and communications. (de Bem Machado et al., 2022). Cyber-Physical Systems (CPS) or Information and Communications Technology (ICT), which integrate the physical and digital worlds and transmit data in real time along the whole value chain, are at the center of Industry 4.0. In contrast to previous industrial revolutions, the Internet of Things (IOT) is a new paradigm that aims to create intelligent, digitalized, and decentralized value networks (Tamvada et al., 2022). Using the fourth industrial revolution as an analogy, Cerezo-Narváez et al. (2018) created Industry 4.0, also known as Strategy 4.0, which emphasizes collaboration between research and industry by fusing skills and knowledge through online services (Cerezo-Narváez et al., 2018). The development of the digital organization, whose most volatile asset is the asset of artificial intelligence and computer capital, is the result of digital transformation, as evidenced by the continuous rise in automated information and the creation of digital commodities (Stoianova et al., 2022)

Hence this way we come across the definition of Digital- transformation (DT), defined, as the use of

digital--technologies to improve, enable, and transform corporate operations and processes, as well as the creation of an environment where digital technologies and information are at the core (Gong & Ribiere, 2021). It's not so much about changing how we do business as it is about changing the behaviors and capacities that are required to carry out business activities (Parviainen et al., 2017). It has also transformed the way businesses and organizations now think strategically about their operations (Zentner & Spremić, 2021). Another way of looking at the definition could be, Digital transformation is an endeavor to speed up a firm via the use of technical tools and equipment, as well as looking at alternative approaches and chances to enhance business processes and expand the target market. In general, digital transformation refers to a significant and thorough change or upgrade in the usage of technology with the goal of bettering performance. Another definition of digital transformation, according to Kaplan, (2017), is "a shift or improvisation generated by the employment of digital technology in every area of our life." In contrast to (Schallmo et al., 2019) DT is defined as the adoption and use of technology with the goal of greatly improving an organization's performance and outreach.

In the twenty-first century, the significance of digital technologies has become clearer. The use of digital technology by businesses has played a critical role in improving management, service, and production characteristics, as well as performance and productivity (Mubarak et al., 2019). Some of the key areas where digital technologies are having an expanding influence on businesses include supply chain organizations, the robotics sector, responsive manufacturing processes, greater customization, and an enhanced procurement and production sector. (Guo & Lv, 2022). As a result, businesses see digital technology expenditures as a method to stay ahead of the competition by increasing productivity, profitability, and operational efficiency (Nambisan, 2022).

Businesses now days, have been driven to accelerate their Digital-Transformation (DT) (Baycur et al., 2022). One of the primary difficulties and priorities for today's businesses is to take use of the potential provided by DT. Recent business media have seen a rise in the use of the term "digital transformation" (DT) to describe the disruptive or transformative effects of digital technology on businesses as well as how existing businesses may need to fundamentally reinvent themselves to succeed in the new digital environment (Venkatraman, 2017). Recent studies have shown that both theory and practice of DT still need improvement (Nasiri et al., 2022). It's still unclear how to create a digital transformation plan for firms. The creation and modification of a digital transformation plan across organizational levels is explained by a well-defined DT framework (Nasiri et al., 2022). Additionally, the emergence of a wide variety of innovative and potent digital platforms, infrastructures, and technologies has profoundly changed innovation, with implications for organizational structure and public policy (Nambisan, 2022). Innovation processes have been significantly impacted by digital technology, changing how goods and services are created (Nambisan, 2022).

Innovations that are changing business models and reinvesting in how firms run their operations are being driven by analytics, cloud computing, social media, mobile platforms, big data, and intelligent solutions (Markus & Loebbecke, 2013; Pagani, 2013; Westerman et al., 2014). Digital transformations are changes and changes that are propelled by and based on the basis of digital technology. A business's

organizational transition to big data, analytics, cloud, mobile and social media platforms is known as a "digital transformation." Digital transformation refers to changes enabled by digital technology, which lead to significant changes in corporate operations, procedures, and value production. Organizations constantly alter and evolve in response to the shifting business landscape (Libert et al., 2016).

For instance, Libert et al. (2016) made a distinction between digital upgrade, which involves using digital technologies to enhance a firm's business processes' efficiency and effectiveness, and digital transformation, which entails using digital technologies to fundamentally alter a company's overall business operations, value creation, and occasionally new product offerings. Through digital transformation, businesses may incorporate digital technology into many elements of their operations and include customers in the creation of new digital products (Aral & Weill, 2007). Even if you have traditional IT abilities, you might not be able to transition to the future digital revolution. Businesses that have effectively adopted digital transformation are better at making money with their present resources, according to anecdotal evidence (Westerman et al., 2014). Because of the widespread use of digital connections and interactions across important partners in the value chain, businesses that have implemented digital transformation are better equipped to benefit from them.

Digital Transformation (DT) has become a crucial topic for practitioners as well as researchers (Bharadwaj et al., 2013; Fitzgerald et al., 2014). At a high level, digital technologies are causing substantial changes in society and industry that are happening quickly (Agarwal et al., 2010; Majchrzak et al., 2016). Developing "strategies that embrace the consequences, such in the form of digital transformation and bring in improved operational outcomes" has been said to be crucial for firms looking to innovate with these new technologies (Hess et al., 2016). The research has shown that technology is a piece of the complicated jigsaw that has to be solved for companies in order to remain competitive in the digital era, if we look at the prior work and discoveries from the past(Bharadwaj et al., 2013). Along with structural, procedural, and cultural changes inside businesses (Karimi & Walter, 2015; Selander & Jarvenpaa, 2016), it is crucial to develop this competence in order to develop new avenues for value generation (Svahn et al., 2017). We now lack a thorough understanding of both this occurrence and its repercussions (Gray & Rumpe, 2017; Kane et al., 2015).

### 2.3. Marketing Performance

The companies need to pay great attention to their marketing operations because it is the key to survival in the current competitive climate. There is only one real definition of a company's mission, in Peter Drucker's words: "to build a customer." There are just two essential functions for a company: marketing and innovation, as the purpose of business is to create a customer. Everything else is a cost; only marketing and innovation provide results (Drucker & Maciariello, 2008). Performance may be measured in terms of effectiveness, efficiency, and flexibility. The view of performance may also be found in marketing, which is the result of a company's marketing activity. According to Ghauri et al. (2016) marketing performance is a term that is used to evaluate a company's performance as a reflection of its success in the market. In order to adapt to market competition, Knight (2017) asserted that, in addition to the Human Resources element, organizations must recognize that strategy plays a critical

part in achieving the company's success. Without the correct plan in place, the firm will struggle to stay afloat in the face of Knight's (2017) competition, hence if a firm is not engaging it in adopting latest trends of innovation and strategies like digital innovation would struggle at producing better marketing performance in comparison to those who are actually following it in the market.

The marketing performance review is discussed by Franco-Santos & Otley (2018), who explains that it is a clarification of the ideas of performance management and performance measurement. Performance management may be conceptualized broadly as a process that includes sub-processes like performance planning, measurement, reporting, and decision-making in order to improve marketing performance more fully and effectively to encourage higher sales. The efficacy of value creation, which is the consequence of a combination of enhanced inventive abilities and in-depth knowledge of market dynamics, is assessed using marketing performance as a barometer. Different professionals use various criteria to assess the efficacy of their marketing strategies. Vorhies & Morgan (2003) claims that one factor usually used to gauge a company's strategy's efficacy is marketing performance. Being digital has had a significant impact on marketing, according to (*Digital Marketing Institute*, 2019). New marketing possibilities are now available because to features of digital media including engagement and more accurate measurements. The contact that may occur on social media and even directly on adverts changes everything. Similar to live broadcasts, influencers can talk about a product while employing live advertisements on social media. Viewers may now take part in the live stream by submitting comments, making recommendations, and even getting answers rather than just watching a social influencer. The breadth and nature of how marketers may approach their audiences are altered by the amount of participation and connection that is now possible in 2019 and was just not possible before the advent of digital transformation.

Unbundling, the first wave of digital disruption, started about 1995. Readers of newspapers have migrated to Google, Craigslist, and Yelp from where they once relied on them for news, classified advertisements, and restaurant reviews. Teixeira said that "startups at the time chose to unbundle the newspaper." The start-ups were only offering their customers a single component of the product since it was unbundled. The second wave, known as disintermediation, started in the early 2000s and harmed both physical and digital goods. Instead of using a travel agency to arrange hotels, flights, and tour activities, customers took charge of the process. He said, "You, the consumer of travel services, started approaching the suppliers directly. It looks that the third wave of disruption has come after 10 years. According to Teixeira, decoupling is crucial because it affects every step of the consumer's purchasing process, including evaluating, choosing, buying, and consuming.

The "third wave" of digital disruption has been said to have slammed our economy with this most recent one, and many experts worry the effects will be considerably worse than they were before. Few organizations have had their fundamental operations disrupted, according to Moeller et al. (2018), despite the evolution of numerous behaviors, goods, and services. However, this is about to alter. The third wave of digital disruption is expected to connect new technologies to a greater degree than previous waves, which will result in a far more fundamental impact. The third wave of disruption is presently in motion, changing businesses' marketing and go-to-market plans and having a variety of

negative economic effects. The primary force behind innovation and change in all facets of our economy will be digitization, or the growing fusion of the real and virtual worlds (Kagermann, 2015).

Some of the often used marketing performance indicators are customer satisfaction, product or service quality, customer memory, customer loyalty, temporary costs, sales volumes, profitability, and market share (Boso et al., 2019; Narastika & Yasa, 2017). Customer happiness, product or service quality, customer memory, customer loyalty, temporary retention, and uniqueness of offering are marketing performance indicators that are frequently used by businesses to measure their success in satisfying market demand. Marketing performance is a gauge of a company's marketing efficacy(Sukaatmadja et al., 2021). Therefore, a company that leans more toward creative techniques and is committed to upgrading its resources is more likely to have greater marketing results.

The marketing department's role and authority is to generate, cultivate, and manage customer connections. Measuring the success of marketing performance is measured over a time set by the organization, and the outcomes of these measures represent the total value of all actions completed. It's really important for SMEs to stay updated and pay close attention towards market trends that can help them succeed in the long run by reducing time and effort while staying cost effective in order to ensure better marketing performance.

The effectiveness of a company's marketing efforts is one of the main measures of success. Simply said, marketing performance is an organization's success as a consequence of its whole marketing process operations,(Pramuki & Kusumawati, 2021). The value of activities that have been compiled and put into practice is measured over a predetermined period of time to determine whether the strategy that has been developed and put into practise is correct or not. Marketing performance is a measure of a company's success. that different tactics may be used and resources can be managed inside the company to increase marketing performance and get a competitive edge (Pramuki & Kusumawati, 2021). Marketing performance is normally measured by looking at the overall performance of any organization and seeing how it's performing in comparison to its competitors. So mainly it's taken into consideration that a firm is getting more customers or is improving its market share in comparison to its competitors or not. As having more customers and growth in the market share is the epicenter of the activities of any organization.

According to, Lamberton & Stephen (2016), marketing performance is a measure of a company's marketing program's success. Marketing is done online, or so-called, in today's globalized period. Face-to-face communication is no longer used in e-commerce. Ecommerce marketing may help with product promotion both online and offline. Both on a national and international scale E-commerce have come a long way. Indicators: digital purchasing viewpoint, online purchasing perspective from the standpoints of communication, service, and business from the standpoint of the process. Practices in e-commerce will be able to SMEs' marketing reach should be expanded, and demand should be increased. maintain and build distributor relationships customers and suppliers in a timely and efficient manner (Respatiningsih, 2021). Better marketing performance is influenced by ecommerce which is the outcome of digital transformation. Hence Online marketing or e-commerce

will be able to improve the situation of firms marketing performance as more the organizations will spend on their online marketing activities like social media marketing they are more likely to achieve a higher reach to customers and better marketing performance (Respatiningsih, 2021). That brings us to our hypothesis:

***H1: Digital-transformation (DT) has positive, impact on the marketing performance of SMEs.***

### 2.4. Role of Social Media

Social media has a significant impact on how we create, consume, connect, and cooperate. They stand for one of the most revolutionary effects of information technology on the industry. Social media have changed how businesses interact with the public and the marketplace by opening up a whole new universe of opportunities and difficulties for every part of the business, from operations and marketing to finance and human resources. Social media is crucial to recent developments that have significantly altered customer preferences (Trusov et al., 2010), peer-to-peer marketing, focused marketing strategies, and demand prediction (Aral & Walker, 2011, 2012; Asur & Huberman, 2010; Bollen et al., 2011).

Social media's power to change customer behavior extends beyond its impact on sales and marketing. Social media are also changing how businesses interact with their workforces, enabling them to forge flexible relationships with the available remote talent (Archak et al., 2010), crowd source innovative ideas (Di Gangi & Wasko, 2009), or even engage in micro-outsourcing. Social media has the ability to revolutionize how information, knowledge, and expertise are shared inside enterprises (Benbya & Van-Alstyne, 2010), which would speed up the creation of new goods and services (Zwass, 2010). According to Dellarocas et al. (2013) and Kwak et al. (2010), social media has completely changed certain businesses while also redefining others. What we have seen thus far is really the tip of the iceberg in terms of what is possible and what is yet to come. This particular worry was primarily created to encourage creative analyses of the connection between social media and the digital transformation of businesses. The effects of social media spur study in a wide range of fields, such as economics, marketing, computer science, sociology, and strategy, among others. Given the long-standing heritage of the information systems (IS) discipline to pursue these problems, the cross-functional and cross-disciplinary character of the study points to a crucial role for the IS academics in the social media domains.

The collection of strategic resources that help organizations achieve better organizational performance and seize global opportunities is represented by social networks that promote information exchange and content development (Kim & Johnson, 2016). Businesses may increase their performance, reputation, and survival rate by using social networks into their export marketing strategies (Rapp et al., 2013; Tajvidi & Karami, 2017). The academic literature has mostly concentrated on the influence of firms' social media usage and its activities on the psychology and behavior of consumers, despite the fact that prior research has showed interest in studying the impact of social media on business performance. In fact, the literature currently in use treats firm performance as the performance resulting

from individuals' social networking activities, using metrics like awareness, satisfaction, engagement, and intention to use that are only loosely related to economic performance or more overt and well-known metrics like the quantity of likes, posts, or shares. Other studies that follow this line of inquiry have examined the effects of social media on firm performance, customer relationship performance, brand performance, retailer performance, and the value of publicly traded companies rather than on overall economic-financial firm performance metrics or social media conversion rates (Foltean et al., 2019; Paniagua & Sapena, 2014).

The term "social media" is used when referring to social media marketing since it stands for "Collaborative online applications and technology that enable participation, connection, user-generated content, information sharing, and collaboration within a community of users"(Henderson & Bowley, 2010). Social media is frequently linked to involvement, engagement, teamwork, and information sharing on websites like Facebook, Twitter, Instagram, and Snap Chat, among others. Recent definitions of social media usage include "the capacity to utilize social media to experiment with and find new ideas, as well as to apply and utilize new ideas" by (Griful-Freixenet et al., 2020). According to Freixanet et al. (2020), business owners and managers must engage in creative, pro-active, and risk-taking behaviors as a result of the growth and adoption of social media. Additionally, Tajudeen et al. (2018) assert that because social media is a freshly developed interactive technology that allows for two-way and open communication, businesses must act entrepreneurially and be prepared to accept both the good and bad effects of it. SME managers also use social media to keep an eye out for opportunities, employ original thinking, and comprehend stakeholder needs (Dutot & Bergeron, 2016). A few corporate activities that could benefit from social media platforms include brand management, supply chain management, customer relationship management, innovation management, and new product management.

Many SMEs are struggling to build long-term relationships with consumers, as they are not able to utilize the proper potential of Social Media Marketing to improve the performance of the customer relationship management process in order to achieve loyal and returning customers that helps in improved marketing performance (Trainor et al., 2014). The success and long-term health of a firm are impacted by the critical marketing strategy of customer relationship management. It has been asserted that as a strategic decision-making methodology, it attempts to improve stakeholder value through the creation, establishment, and maintenance of win-win relationships with significant stakeholders and potential consumers (Foltean et al., 2019). In a research of 149 Romanian companies, Foltean et al. (2019) found a significant link between the usage of social media and company performance. To analyse and validate these findings, however, only a small number of studies have been conducted in the context of SMEs in developing nations.

Businesses utilize social media for a range of purposes, including as communications, shareholder engagement, customer service, public relations, marketing, problem-solving, branding, visibility, and advertising (Ali Qalati et al., 2020; Nisar & Whitehead, 2016). Schniederjans et al. (2013) claim that SMA improves communication, fosters collaboration, and raises social involvement among businesses and their partners, all of which improve corporate success. The effectiveness of any organization's

marketing has also been proven to be significantly impacted by social media marketing, according to several studies. Social media has helped SMEs operate better in a number of areas, including customer service and connections, accessibility and information sharing, and brand visibility (Parveen et al., 2015). Additionally, it has helped SMEs save marketing expenses and increase customer-based operations. Additionally, Tajudeen et al. (2018) found that social media use has a significant influence on the marketing performance of SMEs in terms of marketing activities and customer interactions. Similar to this, Qalati et al. (2020) have shown that SME environments in developing countries benefit greatly from social media marketing activities in terms of improved interaction, reputation, connections, visibility, and customer service. Investigation revealed, however, that social media use had a non-negligible effect on business marketing operations and performance.

Few academic studies have adopted a firm-level approach to quantitatively examine the usefulness of social media in improving organizational performance (Foltean et al., 2019; Galati et al., 2017; Garrido-Moreno et al., 2018). As noted by Galati et al. (2017), very little research has been done that examines managers' perspectives of the usefulness of social networking sites for the aim of enhancing corporate performance. In particular, many studies in the past have followed a theoretical viewpoint. Furthermore, there aren't many empirical studies that have looked at how utilizing Facebook for marketing and business might affect an organization's performance. Previous research has demonstrated that businesses can benefit from using social networks, particularly Facebook, in a number of ways, including increased brand value (Hudson et al., 2016), increased sales, social commerce, innovation and new product development processes (Palacios-Marqués et al., 2015), knowledge sharing (Munar & Jacobsen, 2014), and customer relations management (Trainor et al., 2014). In addition to what was stated above, thanks to cutting-edge transactional features, Facebook is no longer just a marketing and communication tool. Instead, by foraying into advertising and e-commerce, Facebook is now able to serve as a new and alternative method of engaging with customers not just locally but globally and directly selling goods. A new phenomena known as "social commerce," often known as Facebook commerce, has emerged from this new perspective (Gibreel et al., 2018). These studies show that Facebook may assist businesses in achieving a range of marketing goals, including branding, advertising, customer relationship management, marketing analysis, and sales, among others. Therefore, we suggest the following:

***H2: Social Media Marketing mediates, the relationship, between, digital-transformation, and firm's marketing performance.***

### 2.5. Role of Market Turbulence

Market turbulence is a term used frequently to describe the unheard-of business circumstances that exist in the technology sector nowadays. Market turbulence is defined as contingent elements, which include uncertainties and variances that are typically challenging to forecast. Market turbulence is another term for the rate of change in consumer preferences within a sector (Olson et al., 2005). Market volatility is a key component that increases the level of uncertainty and risk in the environment for business operations and the fundamental link between a company's marketing strategy and its

effectiveness. Uncertainties and difficult-to-predict developments characterize the chaotic corporate environment. This increase in environmental concerns creates both possibilities and challenges at the same time, which has an impact on the business strategies used by firms. According to Wang et al. (2015), market instability is a crucial environmental factor that affects how well the lively skills operate in terms of organizational marketing. In keeping with this, Maletic et al. (2018) go into further detail on how an unpredictable business climate affects the relationship between sustainable practices and organizational marketing success.

Market instability is a crucial factor because it exacerbates the uncertainty and risk in business operations and the causal link between business strategy and performance. The turbulent business environment is characterized by uncertainties and difficult-to-predict changes. Environmental issues present both possibilities and difficulties, which affects the business tactics employed by organizations. According to Wang et al.,(2015) market volatility is a crucial environmental factor that affects how dynamic skills affect organizational performance.

A frequent and unexpected external factor known as "market turbulence" has an impact on an industry's products, services, technology, competitors, and customer demand. Markets in turmoil are frequently more unpredictable, volatile, and unstable (Zehir & Balak, 2018). Market volatility increases how difficult it is for managers to make decisions. Complexity and turbulence increase the chances of crises, but they also raise the likelihood of success if businesses are well-prepared and take the necessary steps when they become necessary. To prevent any unintended issues, businesses must be well informed and ready for the challenges of market volatility.

A turbulent environment is characterized by quick changes and a high degree of uncertainty, which enables enterprises to break through established industry barriers. In a chaotic environment, leaders innovate with information while taking changing client expectations into consideration. Sustainable leaders inspire their team members to be innovative and to share their knowledge and ideas. Due to market instability, typical industrial edges must be constantly modified, and customer tastes for products must also alter (Ebrahimi & Mirbargkar, 2017). Increased consumer awareness of green products and environmental problems has altered consumer choices. The creation of sustainable products and services is necessary as consumer concern about environmental damage and energy usage of the items they use on a daily basis grows. A competitive market creates opportunities for sustainable practices; otherwise, a company's market share may suffer (Ebrahimi & Mirbargkar, 2017). Because of this, businesses must innovate on a budget and cater to customers' shifting preferences. Technology turbulence causes technologies to become outmoded, and new disruptive technologies replace them. With the use of such technologies, leaders may adjust their company strategy, improve their products, and increase their market share. Simply said, when market and technological volatility exists, the effects of sustainable leadership on frugal innovation are exacerbated.

While turbulence and complexity raise the possibility of a disaster, they also provide smart firms the chance to outwit their rivals. Uncertainties that are frequently associated with choppy markets can make managers anxious. As a result, a suitable plan of action needs to be prepared to deal with such incidents

in order to prevent losses or unwelcome crises within the company. At some points, market turmoil encourages innovation and strong corporate performance (Antoncic & Hisrich, 2001; Ruiz-Ortega et al., 2017).

However, there are few empirical researches, particularly in the context of technology businesses, on the moderating influence of market volatility on a separate aspect of eco-innovation practices and sustainable corporate performance. Different authors have given different definitions of market turmoil. Accordingly, market turbulence is defined by Hult et al. (2007) as rapidly changing buyer preferences, a wide range of needs and wants, ongoing buyer entry and exit from the market, and a constant focus on offering new products. Greenley (1995) Kohli and Jaworski (1990), Slater and Narver (1994), and Greenley (1995) also include changes in marketing operations.

According to three theoretical perspectives, market volatility may restrict the effect of company innovation on performance. First, according to the law of required variety, successful businesses would adjust to new circumstances in order to properly react to environmental changes. Because customer needs are always changing, businesses must constantly adapt their goods and services as well as their procedures. Innovative businesses are more likely to develop unique tactics in order to take advantage of clients' rapidly shifting expectations (Atuahene-Gima et al., 2006) and to snare new product-market niches (Lumpkin & Dess, 2001). A company's capacity for innovation is increasingly essential during periods of extreme market instability in order to fulfill the evolving wants of customers (Santos-Vijande & Álvarez-González, 2007).

Second, a firm with a strong, open-minded culture will be able to develop creative, timely responses to market developments in terms of sense-making as a strategic skill. Because they are open-minded, innovative firms are more likely to establish open channels of communication between departments, enabling them to synthesize and apply new information to develop creative solutions to customer demands and issues. Third, innovativeness enables businesses to combine and reconfigure their tangible and intangible assets in unique ways, enabling them to generate dynamic capabilities that may be utilized to counter threats and seize opportunities in uncertain markets (Teece, 2017).

The ability of a corporation to innovate is likely to be the strategic mechanism by which it responds to changes in the markets it serves, as noted by Rhee, Park, and Lee (2010). Companies need to be more inventive in order to engage in new activities and function well when there is a lot of market volatility (Hult et al., 2007).

With a few notable exceptions, the majority of research on company innovation has not examined the market's moderating impact. Regardless of the level of market volatility, corporate innovation increases company success, claim (Hult et al., 2007). This result, however, seems ambiguous because this subject hasn't been extensively studied in different research scenarios. As a result, the possible moderating effect of market instability on this link merits further exploration in a variety of scenarios. While scholars have been interested in market turbulence and it’s role, its impact has been regarded as ambiguous, and further research into its genuine impact is needed (Calantone et al., 2003). As a result,

market turbulence was only confirmed as a moderator on a case-by-case basis. That brings us to our third hypothesis:

***H3: Market turbulence moderates the relationship, between, digital-transformation, and firm's marketing-performance.***

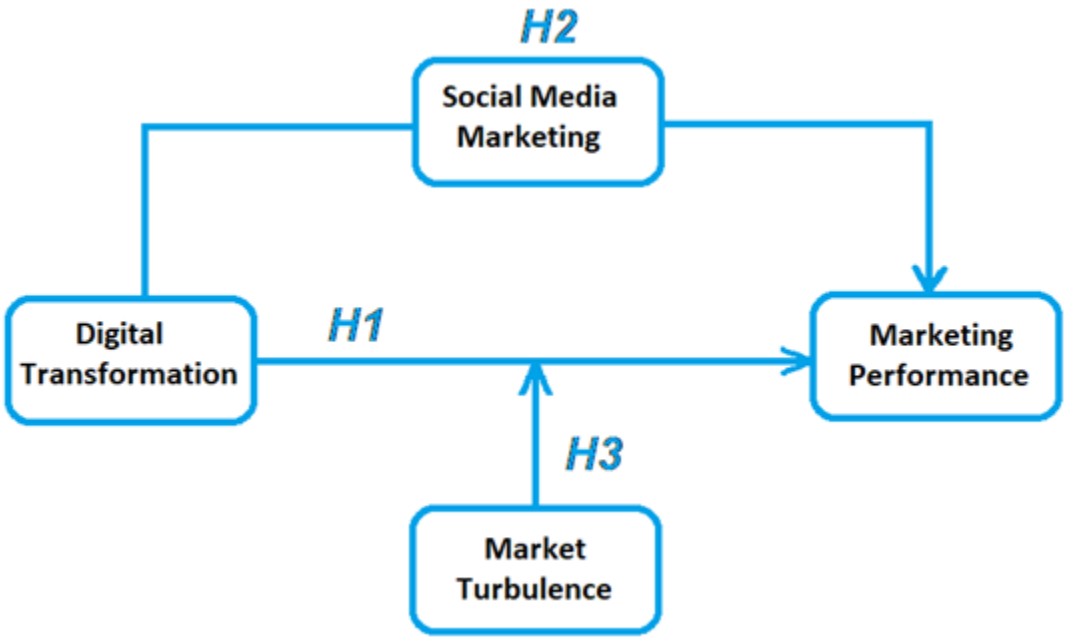


Figure1. Hypothesized Research Model

## 2.6. Theoretical Model

We are living in the age of technology where the inception of emerging technologies is at a high pace. New technologies are being introduced every single day, hence a new challenge i.e. what technologies should be accepted and what not to. One of the best models in this situation that often the researchers use is the technology acceptance model (TAM) that has recently gained a very significant spot in teaching and learning both areas (Rad et al., 2022). Researchers have emphasized a lot up the necessity of inclusion of TAM in the latest research models as it will enhance our understanding of how the new technologies are making an impact in the literature (Scherer et al., 2022).

The TAM was originally originated from the Theory of Reasoned Action (TRA) (Ekawarna, 2022). As well as the Theory of Planned Behavior (Hagger et al., 2022). In order to come up with a reliable model, Fred Davis went ahead and he picked the TRA and came up with the new model as the TAM (Davis, 1985). He proposed that the main use of a system is infect a behavior that's why TRA would fit in the situation to explain the situation better. According to TAM (Davis, 1985) user's motivation is mainly based upon three factors i.e. the use, the perceived usefulness and the attitude towards using a specific model or technology. Davis hypothesized that the attitude of a user towards the system was a major determinant of whether the user will actually use or reject the system. He defined perceived usefulness as the degree to which the person believes that using the particular system would enhance her/his job

performance, whereas the perceived ease of use was defined as the degree to which the person believes that using the particular system would be free of effort (Davis, 1985). During later experimental stages, the Model was refined to include other variables and at the same time modifying the relationships that were initially formulated. Similarly, other researchers have applied and proposed several additions to TAM. New factors with significant influence on the core variables of the Model are continuously revealed. Over time TAM has evolved to become the key model in understanding predictors of human behavior towards potential acceptance or rejection of the technology

In order to conduct this study we have used Technology Adoption Model (TAM), introduced by Davis (Davis, 1985). However if we review the previous literature on digital transformation, we will discover that the resource-based theory has been the most frequently used theoretical framework in studies on digitalization and information technologies. This is primarily due to the fact that it enables evaluation of the relationship between information technologies and the strategy adopted by businesses and how their performance improves with the use of these technologies (Van de Wetering, 2019). Although connected with and related to information technology, there are other theories that offer a better framework for analyzing digital transformation, (Davis, 1985), for instance the Theory of Reasoned Action (TRA) by Ajzen & Fishbein (2000) which primarily emphasizes volitional behavior and further excludes non-volitional i.e. those requiring special skills and resources, or cooperation from others, or may be a unique opportunity are excepted, is one such theory. However, the advantages or benefits of the digital transformation, particularly its level of execution, are associated with the degree to which the human capital of the organization, even SMEs, adopts information and communication technology (Venkatesh et al., 2003).

Davis created the Technology Acceptance Model (TAM) (Davis, 1985). In this model the major emphasis on two dimensions is used to define TAM as the usage and behavior of information systems. Firstly, the perceived utility, which translates into how much a person, thinks using a particular system would increase their performance; second, the perceived ease of using the system, which largely refers to how much a person, thinks utilizing a certain system won't need any effort. As a result, TAM evaluates the following factors: perceived utility (PU), perceived ease of use (E), perceived attitude (A), and perceived behavioural intention (BI) (Parreira et al., 1987). The attitude dimension (A) and the behavioural intention (BI) are influenced by the sense of utility (U) and the perception of ease of use (E) (Venkatesh et al., 2003). Although the U and E are distinct variables in this model, they are interconnected, which means that a person's perception of the usability of the information system is impacted by how readily it can be utilized.

Furthermore, Davis et al. (1985) come to the conclusion that the U affects usage behavior more so than the E. The U is also commonly mentioned as the best measure of technology acceptance and use (Mojtahed et al., 2011). It should be stressed that the U assesses how much a person believes that employing technology will improve their performance, whereas the E gauges how much they feel that the information system is easy to use (Chau & Hu, 2002). The BI of utilizing this technology is positively impacted by this user's perception.

Additionally, contended that a technology will eventually be embraced if it is thought to be valuable. Last but not least, this strategy considers how mindsets impact BI (A). Attitudes are influenced by the user's assessment of the technology's usefulness as well as the U. (E). In other words, attitudes are created based on usefulness and operationalization, which then influences action (Davis, 1985). Therefore, ideally, this model would assist how digital transformation impacts Pakistani SMEs' marketing effectiveness.

# CHAPTER 3: METHODOLOGY

## 3.1. Introduction

This research was done on the Pakistani SMEs based in Rawalpindi and Islamabad in order to assess the effect of digital transformation on SME performance. SMEs that had just gone digital served as the study's unit of analysis. Data were gathered from the top management, including supervising managers and CEOs as appropriate since they are more concerned with the use of digital transformation strategies and innovation practices thus they are more knowledgeable about these topics inside their firm. Data were gathered for the study using a questionnaire survey methodology. The sample size of 316 SMEs was selected using the general rule of thumb (Baeza-Delgado et al., 2022). Through the use of a standardized questionnaire, the data was gathered. The purpose of the survey was to learn how managers view the digital revolution and how it affects SMEs' marketing capabilities. The questionnaire's layout was quite straightforward because it was designed to be completed quickly and easily. To make sure all the safety precautions were in place prior to data collection, we conducted common method bias, pre-testing, and pilot studies. The 5-point Likert scale, from strongly disagree to strongly agree, was used to gather the data. There were two main sections to the questionnaire. The first section covered demographic information, and the second section focused on the main research factors.

## 3.2. Setting

To test the hypotheses proposed, SMEs of twin cities i.e. Rawalpindi and Islamabad were chosen. Through the use of a structured questionnaire, the data was gathered. The study employed quantitative approaches to evaluate the relationship between variables by collecting and analyzing survey data as well as to provide the answers to the research questions(Ahmadin, 2022). The unit of analysis was the digital technology-focused SMEs that have recently adopted digital technology to measure the impact of digital transformation on the marketing performance of these firms. The main emphasis of this research was the SMEs as they are a very crucial industry actor since they may contribute the most to the GDP (Laila et al., 2022). The researchers, economists, and academics have demonstrated that SMEs uplift economies' levels of scarcity, employment, growth, and R&D. SMEs support economies through boosting access to money, fostering social strength, and creating jobs (Saka et al., 2022). It is also well known that SME development and growth are essential for the expansion, prosperity, and sustainability of the industry in Pakistan. Focusing on the growth of SMEs in Pakistan is vital. As a result, it is essential to concentrate on SME establishment and to lessen the phenomena of their failure (Hannan et al., 2022). SMEs that have a strong online presence normally tend to be more lucrative, survive longer, and develop faster. In order to swiftly adapt to the changing surroundings, SMEs should consider it vital to integrate, produce, manage, arrange and rearrange internal and external resources continuously (Aftab et al., 2022). In order to stay competitive and deal with the challenges of emerging technologies SMEs must revise their business models for the new digital era, the greatest SMEs are always continuously looking for the new fresh ideas.

Digital SMEs from the twin cities were chosen because Pakistan is transitioning to a digital economy,

therefore, digital SMEs and their creative digital solutions are playing an increasingly crucial role in development and economic growth of Pakistan. Hence, It is crucial to concentrate on SMEs' expansion in Pakistan (Abbas et al., 2022). Furthermore, there is a compelling need to look into how digital transformation may assist SMEs in improving their marketing performance and, as a result, contributing to the GDP. The reason for selecting Pakistan specifically is because Pakistan is going through the transition of digital transformation as a result we can see numbers of firms have turned digital and the rest are seriously thinking about it. For instance, Easy Paisa was launched by a leading telecommunication company which allowed users to deposit money and transfer it to others. Support is being provided at the governmental level where government has also launched several projects to support digital era and address the need of digitization leading to digital transformation. (Abbas et al., 2022). For example, Digi-skills and E-Rozgaar are one of the few projects that offer training to people to train them for the freelancing. Besides that, increase in the number of technology incubators in the major cities of Pakistan is a sign that digital transformation is on the rise in the country.

### 3.3 Sampling and Data Collection Procedure

We collected primary data from the employees of SMEs, including managers, CEO's Managing Directors and Supervisors located in Rawalpindi and Islamabad. To examine the relationship of variables in an appropriate manner the data was collected by using a quantitative research approach. The population for this research was digital SMEs operating in the Rawalpindi and Islamabad region. The sample size was decided by adopting the rule of thumb of 10 % (Baeza-Delgado et al., 2022). Using convenience sampling and snowball sampling the responses were collected. Snowball sampling really helps while gathering data through the respondent referral network (Raifman et al., 2022). While convenience sampling provides us with the flexibility to gather the data through firms that are comfortable to share it at their own convenience (Lines et al., 2022). In order to know the nature and impact of independent and dependent variables, a structured questionnaire was used to collect the primary data from the SMEs of Rawalpindi and Islamabad, Pakistan. The data collection process took roughly two months. Respondents were also requested to share the questionnaire with other potential respondents. In order to avoid the possibility of social desirability bias, the format of the email and cover letter offered the respondents to respond once they are comfortable. A cross-sectional data was obtained from 316 SMEs in the twin cities to evaluate the relationship between the variables by testing hypotheses.

The criteria for enterprises that were included in the sample were supposed to be local SMEs based in Rawalpindi and Islamabad. Numbers of employees were supposed to be over 10 and lower than 250 while the annual turnover was supposed to be over 20 million. The information was gathered through the acquisition of the firms' contacts. Islamabad and Rawalpindi chamber of commerce, SECP as well as Google directory were used to gather the contact details of the respondents. The potential responders were then sent emails with a cover letter and a link to the poll online, also the respondents were contacted through telephone calls, Whatsapp messages, LinkedIn messages and in person visits where required.

SPSS was utilized in this study for data screening, analysis and respondent firm profiling. Regression analysis, reliability analysis, descriptive analysis, and normality tests were used to assess the hypothesis. This research relied upon the quantitative method so a structured questionnaire was formed and distributed in the SMEs of Rawalpindi and Islamabad, Pakistan. The questionnaire had main six sections including a cover letter, demographics, digital transformation, market turbulence, social media marketing and marketing performance. There were ten different questions in the demographics section while digital transformation and market turbulence had 8 and social media marketing and marketing performance had 4 different questions each.

### 3.4. Common Method Bias

The self-report survey design and the fact that all the data was gathered from a single source prompted concerns about common method bias (Kaltsonoudi et al., 2022). Therefore, procedural and statistical strategies were established in order to address this issue of common method bias effect. (Bozionelos & Simmering, 2022). During the data collection procedure, participants were given clear instructions and their confidentiality and anonymity was guaranteed. Furthermore, the survey was created such that all replies required almost the same amount of effort and time to complete the questionnaire, hence no confusing or ambiguous phrases were used (Bozionelos & Simmering, 2022)

### 3.5. Pretesting

The questionnaire was distributed to industry professionals so they may offer their opinions. In order to guarantee that we don't run into any problems in the future, they were asked to examine the questionnaire by completing the structured questionnaire and providing comments. The specialists gave their insight and input, which was promptly considered and critically considered.

### 3.6. Pilot Study

We carried out a pilot study to verify the research's validity and dependability. A pilot research helped to clarify any potential ambiguities, ensuring that respondents would not be perplexed when responding and that there would be no perplexing questions (Becker et al., 2022). Additionally, the 37 questionnaire results that were checked using the pilot test were examined for logic and consistency. This showed that the scales were accurate and that the data supported our theory. It also helped to determine that there were no further data problems beyond a few small adjustments. As a result, we were prepared to start gathering data.

### 3.7. Characteristics of Sample

This study included the total of 316 SMEs based in Rawalpindi and Islamabad regions of Pakistan. Included in the sample, 9 percent of the respondents were female while 91 percent of the respondents were male. 10 percent of the responses of the data were received from the CEO’s of the SMEs while 16 percent of the respondents were HOD’s, 42 percent were the managers while the rest of the 21

percent were the supervisors. 20 percent of the data received was from the SMEs having up to 10 employees, 52 percent of the SMEs who responded were in the range of 11 to 50 employees, while 15 percent of them were in the range of 51 to 100 employees however the rest of the SMEs who responded with over 100 employees were 12 percent. Similarly the experience of the employees who responded was, 41 percent of the respondents had experience in the current organization from 1 to 5 years, 28 percent had 6 to 10 years of experience, 24 percent of them had an experience of 11 to 15 years while 3 percent of them had experience between 16 to 20 years and the left over 3 percent had the experience of over 21 years. Finally taking about the age of the firms, responses received included 23 percent were in the age group of 1 to 5 years, again 23 percent of them were in the age range of 6 to 10 years, then 28 percent of the firms were in the age range between 11 to 15 years, while 12 percent of the firms were in the age range of 16 to 20 years and finally the left over 14 percent of the responding firms were in the age range of over 21 years. We can see the detailed summary of the respondent profile in the table below.

Table 1: Respondent's Profile Summary

| **Designation** | **No of respondents** | **%age** | **No of employees** | **No of respondents** | **%age** |
|---|---|---|---|---|---|
| CEO's | 32 | 10.13 | 1-10 | 64 | 20.25 |
| HOD's | 52 | 16.46 | 11-50 | 163 | 51.58 |
| Managers | 131 | 41.46 | 51-100 | 49 | 15.51 |
| Supervisors | 66 | 20.89 | 101 and Above | 40 | 12.66 |
| Team Leads | 35 | 11.08 | Total | 316 | 100.00 |
| Total | 316 | 100.00 | | | |
| Male Respondents | 288 | 91 | Female Respondents | 28 | 9 |
| Experience (Years) | | | Age of Firm (Years) | | |
| 1-5 | 131 | 41.46 | 1-5 | 74 | 23.42 |
| 6-10 | 89 | 28.16 | 6-10 | 72 | 22.78 |
| 11-15 | 77 | 24.37 | 11-15 | 88 | 27.85 |
| 16-20 | 10 | 3.16 | 16-20 | 37 | 11.71 |
| 21 and Above | 9 | 2.85 | 21 and Above | 45 | 14.24 |
| Total | 316 | 100.00 | Total | 316 | 100.00 |

Table 1: Detailed description of respondent's profile

### 3.8. Demographics

We utilized seven different questions in the demographics section to assess the effect of digital

transformation on the marketing performance of SMEs in Pakistan. The questions included whether respondents believed their company to be a small to medium-sized enterprise (SME), gender, and work experience in the present organization, industry type, respondent qualifications, firm age, and the current designation of the respondents. To ensure that we don't receive any replies from non-SME respondents, the questionnaire began with the question of whether they considered themselves a SME. The remaining questions, such as those on gender, experience, qualifications, and age of the company and industry type, helped us understand the profiles of the respondents and the industries in which they operate. Demographics thus proved to be a very useful component in ensuring that the research was conducted on the appropriate basis. Later on in the data analysis, in order to understand the impact of independent variable on the dependent variable, we employed the age and size of the company as control variables.

### 3.9. Measurement Constructs

For this study, we adopted measurement scales from previously established and validated research. The mode of the communication was English as it is the most used language in offices especially in digital ventures. The questionnaire was sent to the employees and managers of the enterprises. Data was collected through emails, telephone, LinkedIn messages, Whatsapp messages and in-person where required.

This study adapted scales from (Khin & Ho, 2018), to measure digital transformation,(Tsou & Chen, 2021) to examine the marketing performance (Foltean et al., 2019). for social media marketing and (Santos-Vijande & Álvarez-González, 2007) for market turbulence. (see appendix 1) A five-point Likert-like scale was used in case of digital transformation, marketing performance and market turbulence, ranging from 1 indicating "strongly disagree" to 5 indicating "strongly agree.”. While the impact of social media marketing was measured using 1= always use social media and 5= never use social media in order to share content, engage with customers and manage communities via social media.

# CHAPTER 4: DATA ANALYSIS AND FINDINGS

## 4.1. Data Analysis

The data analysis was performed on the total set of 316 responses. After the collection of data, data was analyzed on SPSS Version 23. The hypothesized model was analyzed using multiple linear regressions. Total numbers of distributed questionnaires were over 1000 leading to 316 responses as a result that is 3 percent response rate is approximately. The data collection process took around three months' time. The responses received were filtered out through the process of data screening and after taking irrelevant responses the remaining responses acquired were 270 that were further used for testing in SPSS. We tested the reliability of data first using SPSS and discovered the data was reliable.

The data was analyzed in two stages mainly. Replies with greater missing values and outliers were manually deleted in the first phase, leaving 270 responses. Descriptive statistics and Cronbach's alpha was used to determine the data's trustworthiness. Cronbach's alpha, mean, and standard deviation values are shown in Table 1.3. All items have Cronbach's alpha values within acceptable desired range which is over 0.07. Digital Transformation, Social Media Marketing and Market Turbulence were regressed against Marketing.

## 4.2. Normality Analysis

The purpose of the normality test is to determine if the residual or invader variable regression model follows a normal distribution. Good data has a pattern that resembles the bell shape on the histogram graphic. The Kolmogorov-Smirnov and Shapiro-Wilk test is the data normality test employed in this investigation. If a significant value or probability is less than or equal to 0.05, then the distribution of data is normal, according to the criteria for testing one sample using a one-sided test. Table1. 2. given below provides a statistical evaluation of this distribution and its summary.

**Table 1.1: Results of Normality Analysis**

| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| Variables | Statistic | df | Sig | Statistic | df | Sig |
| MP1 | 0.284 | 270 | 0.000 | 0.811 | 270 | 0.000 |
| MP2 | 0.250 | 270 | 0.000 | 0.796 | 270 | 0.000 |
| MP3 | 0.298 | 270 | 0.000 | 0.808 | 270 | 0.000 |
| MP4 | 0.256 | 270 | 0.000 | 0.790 | 270 | 0.000 |

Table 1.1: a. Lilliefors Significance Correction, where MP is dependent variable, MP = Marketing Performance

The results indicate that the data is skewed. The visual presentation of data can also be seen in Figure

1.1 & 1.2 below.

**Figure 1.1 Histogram Chart**

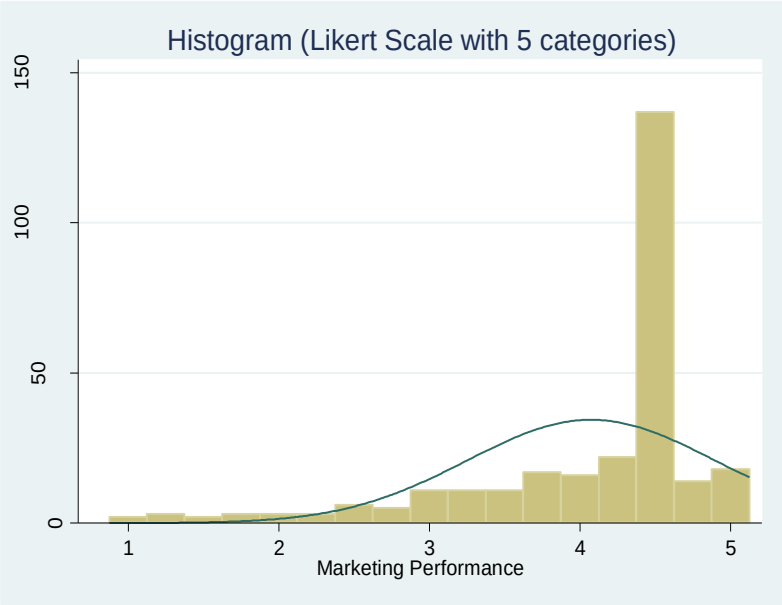


Figure1.1. Detailed presentation of data in the form of normal distribution, histogram chart

Figure 1.1, shows that the distribution of the residual data results in a bell-shaped histogram graph; in this instance, the residual data may be characterized as regularly distributed. To more clearly assess this condition, P-P graphs in Figure 1.2 below.

**Figure 1.2: Normal P-P Plot**

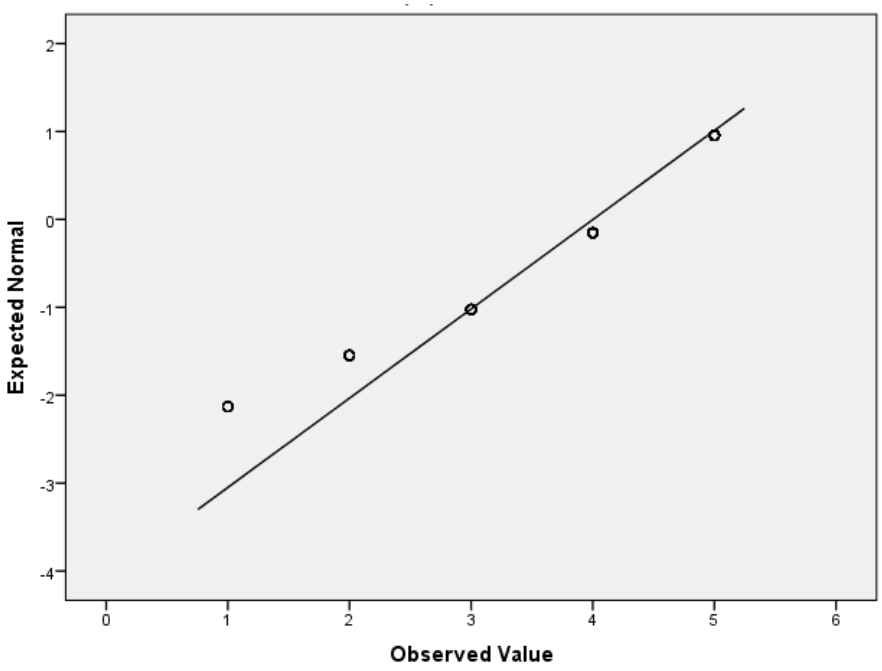


Figure 1.2: Normal P-P Plot

### 4.3. Reliability Analysis & Descriptive

In order to assess the internal consistency of the data, we conducted the reliability analysis as to assess the data's internal consistency: Cronbach's alpha and composite reliability(Fornell & Larcker, 1981). The minimum threshold value of should be above 0.7 specified (Nunnally, 1978). Results of the reliability analysis exceeded all latent variables' Cronbach's alpha values, indicating excellent internal consistency. All composite reliability values are more than the minimal threshold value of 0.7, which indicates that composite reliability is more dependent on the actual loading score of a construct (Nunnally, 1978)Following table provides the detailed demonstration of descriptive and reliability analysis data.

**Table 1.2: Results of Reliability analysis & Descriptive Statistics**

| Indicator | Construct | Mean | Std. Deviation | N | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|---|
| DT1 | Digital Transformation (DT) | 4.24074074 | .807381954 | 270 | .927 |
| DT2 | | 4.23703704 | .893657182 | 270 | .925 |
| DT3 | | 4.22962963 | .857425391 | 270 | .926 |
| DT4 | | 4.32222222 | .842563504 | 270 | .925 |
| DT5 | | 4.07407407 | .871947183 | 270 | .925 |
| DT6 | | 3.96666667 | 1.131994982 | 270 | .923 |
| DT7 | | 3.84814815 | 1.115577557 | 270 | .924 |
| DT8 | | 3.97407407 | 1.167748952 | 270 | .924 |
| MP1 | Marketing Performance (MP) | 4.00370370 | .985010891 | 270 | .925 |
| MP2 | | 4.11481481 | .989612858 | 270 | .924 |
| MP3 | | 4.00370370 | .914558614 | 270 | .924 |
| MP4 | | 4.09259259 | .995688074 | 270 | .924 |
| SMM1 | Social Media Marketing (SMM) | 4.14814815 | .892084302 | 270 | .928 |
| SMM2 | | 4.27407407 | .928120214 | 270 | .927 |
| SMM3 | | 4.26666667 | 1.025329759 | 270 | .925 |
| SMM4 | | 4.15925926 | 1.042145078 | 270 | .926 |
| MT1 | Marketing Turbulence (MT) | 4.03333333 | .837548201 | 270 | .926 |
| MT2 | | 3.98148148 | 1.039923159 | 270 | .925 |
| MT3 | | 3.98888889 | 1.018356915 | 270 | .925 |
| MT4 | | 4.10740741 | .982911965 | 270 | .925 |
| MT5 | | 4.05555556 | .916934173 | 270 | .925 |
| MT6 | | 4.23703704 | .885298407 | 270 | .925 |
| MT7 | | 4.21481481 | .803201634 | 270 | .926 |
| MT8 | | 4.10000000 | .994968756 | 270 | .924 |

Table 1.2: Reliability analysis & Descriptive Statistics

### 4.4. Regression Analysis

In order to validate the proposed research hypotheses a multiple linear regression was performed. This study used three independent variables i.e. Digital Transformation (DT), Social Media Marketing (SMM) and Marketing Turbulence (MT) and one dependent variable i.e. Marketing Performance (MP). In order to understand the level of significance of all different variables and the impact of independent variable on the dependent variable the regression analysis was conducted. The results prove that all three independent variable i.e. Digital Transformation, Market Turbulence and Social Media Marketing have a positive impact on the dependent variable, i.e. Marketing Performance and the significance level achieved in all three cases is below 0.05 (P<0.05) while it's also important to note that the level of significance achieved in case of Digital Transformation was 0.025, for Market Turbulence was 0.011, and for Social Media Marketing was 0.000. Furthermore we also regressed digital marketing along with social media marketing and marketing turbulence against the dependent variable i.e. Marketing Performance, to see the combined effect. The results received were significant in case of digital transformation and social marketing (0.000) while in case of digital transformation and marketing turbulence the results received were non-significant. (0.857). Hence this way the regression analysis gives us a clear indication that if a firm has digitally transformed and is using social media marketing as a marketing tool it's more likely to perform better in terms of its marketing performance. While in case of market turbulence we can say that if the market turbulence is increased the firms might perform low in terms of their marketing performance as more market turbulence means more volatility and more un-predictable situations. Table 1.3 below summarizes the results of regression analysis.

**Table 1.3: Results of Regression Analysis**

| | Regression Cofficients | | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|
| Variables | B | SE | T | P | Tolerance | VIF |
| Constant | 1.3** | 0.64 | 2.07 | 0.046 | | |
| DT | 0.34** | 0.17 | 1.10 | 0.025 | 0.04 | 21.90 |
| SMM | 0.41*** | 0.11 | 3.85 | 0.000 | 0.13 | 7.70 |
| MT | 0.422** | 0.161 | 2.56 | 0.011 | 0.05 | 17.90 |
| DT x SMM | 0.09*** | 0.026 | 3.61 | 0.000 | 0.04 | 20.25 |
| DT x MT | -0.09 | 0.05 | -0.19 | 0.857 | 0.01 | 55.49 |

Table 1.3: Regression Analysis: Dependent Variable: MP(avg), Adjusted R square = 0.727

a. Dependent Variable: MP , 95% CI, Where ***, ** represent level of significance at 1% & 5% respectively.
b. MP stands for Marketing Performance, DT stands for Digital Transformation, SMM stands for Social marketing, MT stands for Marketing Turbulence,

We can see that the R square value is 0.727 which reveals that the predictor variables explained 72.7 percent variance in outcome variable i.e. independent variables cause 72.7 percent change on the dependent variable with $F(5, 264)=140.74$, $P<0.001$.

# CHAPTER 5: DISCUSSION, CONCLUSION AND FUTURE DIRECTIONS

## 5.1. Discussion

According to an examination of the marketing literature, new technologies and new marketers adopting cutting-edge marketing methods are disrupting established company models and customer behaviors in the marketing industry. For instance, according to “The World Economic Forum 2017”, the use of digital technologies over the next ten years may unleash approximately three trillion dollars in value for retailers owing to increasing customer advantages and corporate cost reductions. The impact on consumers is predicted to account for around 68% of the overall benefits, with the remaining 32% going to industry. Over the next ten years, customers will reportedly get benefits totaling more than two trillion dollars.
These consumer advantages, nevertheless, are probably distributed unevenly. Greater income disparity has been connected to market digitalization. According to research, digitalization may lead to a decline in wage income and a narrower distribution of advantages among highly trained workers and investors. The highest rungs of the pyramid are now home to a rising share of the world's wealth and income. According to a study, rising income disparity has slowed the rate of economic development (Stiglitz, 2016)

In addition to creating winners and losers, marketing and business practices that result in the development of integrated "platform networks" may also increase the concentration and power held by a small number of extremely big businesses. For instance, China's two top platform networks that have networks which offer a wide variety of digital services, control the majority of the country's digital economic activity. Customers have opted to focus their use due to ease and the advantages of services that are connected. These platform networks gain strength as they expand in size by giving users additional connections, mining massive amounts of data for valuable information, and raising the switching costs for consumers. These potent digital-platform and ecosystems might encourage monopolistic effects that restrict choice, innovation, and consumer bargaining power. Companies that cross product categories and client groups, e.g. Tencent, Apple, and Google, are obscuring conventional industry classifications. Due to algorithms, process automation, and network effects, owners of these hyper scale platforms benefit from significant operating leverage. Algorithms, process automation, and network effects produced by the interactions of hundreds of millions and billions, or even more users, customers, and devices provide owners of such hyper scale platforms enormous operating power. As with the information barrier imposed by GE Healthcare's Centricity 360 platform, which enables cloud collaboration between patients and outside parties, hyper scale platforms also erect new entrance hurdles(Chui et al., 2015). "Companies invested $21.3 billion in AI-related mergers and acquisitions in 2017, a 26-fold increase from 2015. The enormous infrastructure footprints shared by all the main platforms provide another significant barrier to entry for rivals.

New revolutionary business models that use new technology and processes to provide customers more value in their lives while also lowering retail prices are exploding in the marketing and entrepreneurial worlds. Which firms succeed and which disappear from the competitive environment will be greatly

impacted by the integration of technology employing Omni-channel and other creative business models with online and offline retail formats. By employing digital technologies and shopping applications that challenge the established retail players' business models and improve the shopping experience for consumers, businesses are increasingly attempting to decouple the consumer value chains.

For instance, Swiss watchmakers have been updating their distribution systems as more people shop for and purchase items online. Three categories of retail were identified by the World Economic Forum study (2017) as being particularly affected by more instances of the digital transformation in business. The customer experience will be prioritized more in-store and as a showroom, while technologies like AI and AR will offer a higher level of customization. A new age of customer-facing people and technology, such as the use of AI and significantly more robot use, will be the second trend. One car dealer with whom we have worked has switched their customer service operations to automated AI phone assistance and has seen a marked improvement in customer satisfaction compared to using a human contact center.

Large-scale internet platforms may potentially cause tax issues for governments. For instance, the majority of the money made by these providers is reported by subsidiaries in low-tax regions due to the intangible character of the services and the hazy nature of market boundaries. Taxes are not usually paid locally and by the people who made the money. Developing nations are particularly heavily struck by MNE tax evasion methods, which cost an estimated $100 billion.

### 5.2. Conclusion

This study evaluates the literature on SMEs' marketing performance and digital transformation. A wide range of implications on competitiveness, consumer welfare, and public policy decision-making are being caused by changes in how businesses evaluate demand and implement new marketing methods. Digital disruption has had game-changing effects on marketing. Modern digital media's characteristics, such as its interaction and ability to provide more precise analytics, have given rise to whole new marketing options. Predicting the changing tastes and needs of customers is a significant issue for marketers, technology suppliers, investors, and government policy makers. The odds are high. There are several examples of businesses that have failed to change with the times as a result of new business models, technology, and demand fluctuations. The rapid adoption of digitization will be accelerated by the marketing industry's use of digital tools, products, and tactics, with implications for labor markets, consumer welfare, and the competitiveness of both enterprises and nations. Consumers, organizations, and governments are all projected to experience different advantages and costs as a result of the technological transformation of marketing. Digital markets have altered the globe, and traditional marketing techniques used to analyze consumer behavior have shown to be less successful. Consumer buying and purchasing behavior is evolving quickly, and a number of preferences are changing as a result. These preferences include a growing preference for experiences over material goods, the use of mobile technology, consumer co-creation of value, online shopping, and shared consumption over ownership. New models, such as the Consumer Decision Journal and Consumer Value Chain models, have been developed to better understand the nature of consumer demand. According to Moeller et al.

(2018), "The technology will not be the constraint for your organization. It will depend on your capacity to leverage the three drivers—decreased expenses, more client engagement, and improved asset utilization. If you can properly use digital technology to do it, you will be one of the beneficiaries of the age of digital disruption. Organizations and decision-makers must consider how the digitalization of marketing will impact customer welfare and economic competitiveness. To acquire insights on how to effectively adapt company tactics and governmental laws to function in this new digital economy, businesses and public policy makers must "follow the customer."

### 5.3. Theoretical Contributions

This study advances the field of literature in a few different directions as it serves as a baseline to understand the impact of digital transformation on the marketing performance of SMEs in Pakistan First off, this study contributes to the body of information on the use of digital technology by providing a broader notion of its use (Nambisan et al. 2017, Leonardi 2013, Warner and Wäger 2019, Usai et al. 2021). We thought of using digital technology as a second-order hierarchical architecture that is forming. In light of this, we added to the body of research by highlighting the fact that distributed ledgers, shared infrastructure, and information exchange and transactions can all be used by businesses as a reference point for extending, improving, and evaluating research into the use of digital technology. Additionally, we discussed the direct- indirect effects of technology on organizations, emphasizing the characteristics and consequences of digital technology (Hanelt et al., 2021). This explanation results in a more complete understanding of how digital technology is used.

Secondly, based on the digital transformation framework introduced by (Matt et al., 2015; Vial, 2021). Our research contributes to the recent pleas for digital transformation literature (e.g. Hanelt et al. 2021; Verhoef et al. 2021; Wessel et al. 2021; Gong and Ribiere 2021; Vaska et al. 2021). Precisely, consistent with the Hanelt et al.'s (2021) multidimensional digital transformation framework, as Hanelt et al. identified that there are three primary aspects that expand the digital transformation research agenda: contextual conditions (for instance, emergence and diffusion of digital technologies and applications), mechanisms (e.g. creating digital innovation and developing digital transformation strategy), and finally the outcomes (improved firm performance and new forms of value). We returned to and applied these aspects in three domains; specifically, TECHNOLOGY ANALYSIS & STRATEGIC MANAGEMENT 9 contextual conditions serve as 'digital technology usage,' mechanisms serve as the 'organizational innovation and digital transformation strategy,' and outcomes serve as 'firm performance'.

Third, we contributed to the study of the link between digital technology performance and social media marketing initiatives and strategies. Research has previously focused on digital supply chain platforms or digital innovation (Matt et al., 2015; Vial, 2021)(Li, Dai, and Cui 2020; Khin and Ho 2019). Existing research does not (1) provide conclusive findings on the relationship between organizational innovation, the use of digital technology, and those strategies, nor does it (2) analyses the effects of digital technology use, digital transformation strategy, and organizational innovation on firm performance.

Furthermore, although earlier studies have looked at organizational innovation and digital transformation strategy as potential antecedents to firm performance as well as predictors of firm performance (Chege & Wang, 2020). These studies have not simultaneously examined these relationships the way the current our work therefore advances this field of study by investigating the effects of digital transformation on the marketing performance of SMEs in the presence of social media marketing as a mediator and market volatility as a moderator. This research adds to the body of knowledge by evaluating a viable model that simultaneously describes the linkages between digital transformation, social media marketing, market turbulence, and the firm's marketing performance. This research is significant because it assists managers in validating resource allocations for technological infrastructure growth in their businesses. Finally, policymakers will find it supportable in order to build appropriate policies for evolving human capital and increasing their absorptive capacity.

### 5.4. Managerial Implications

The empirical findings of this study show that managers may leverage these uses of digital technology to capitalize on their comparative advantage over rivals. To promote digital transformation and organizational innovation, the use of digital technology calls for a flexible and dynamic architecture, centralized data processing, shared knowledge, smart activity redesign, and quick decision-making. The technological methods or architecture that managers supply should enhance how people view distributed ledgers, shared infrastructure, and information sharing and transactions. In conclusion, managers must be aware of the rapid growth of digital technology components and the ways in which they are intertwined with features relating to the relevant market and client characteristics (Hanelt et al., 2021). Additionally, managers must be knowledgeable and upbeat to lead a digital transformation plan that will bring the organization financial and market rewards. Managers should recognize five main digital transformation strategies, including new product strategy, new value-added service strategy, customized strategy, product embedded in the platform, and platform service/product strategy, and prioritize work in line with their objectives (Jin, Ma, and Ye 2020). A corporation should consider its primary value proposition when selecting a digital transformation strategy, as well as who owns the data it plans to use. Managers who are knowledgeable of the many digital strategies will be better able to decide (and change their minds) as to how to proceed with their digital transformation (Danuso et al., 2022). Therefore, we advise managers to take into account the company's position, available resources, and market dynamics when navigating the digital transformation process. This study increases managerial understanding of organizational innovation, which is crucial for firm performance, especially since a variety of marketing performance factors (including the application of information, the quality of goods and services, and workflow efficiency) should be implemented (Chege & Wang, 2020). The three organizational innovation ideas knowledge management, new product/service management, and process innovation are fully implemented as part of the design of an innovative company, together with rigorous work on change management. In other words, organizational change is necessary to promote innovation. As a result, managers should emphasize on the deployment of cutting-edge management approaches or ongoing organizational structure enhancement to support innovation activities.

In conclusion, this research helps manager to determine that managers should carefully analyze whether digital technology is being utilized to define the concept of value that the firm produces or to enhance existing value offerings. Managers need to carefully consider how digital technology fits into both social media marketing strategy and digital transformation plan. Hence understanding the function of digital technology would assist managers contextualize its use within their chosen digital transformation plan and the success of their organizations

### 5.5. Limitations and Future Directions

This research study, just like earlier studies, has limitations, but the authors believe that these limitations will open up new avenues for future researchers in the subject. There are certain limitations that we may solve in future research as a direction of the new research, despite the fact that this study has added to the literature on digital transformation and its impact on the marketing performance of SMEs in Pakistan. First off, this current study is constrained by geography; for example, the current study is geographically focused. The research focused mainly on SMEs in the city of Rawalpindi and Islamabad. Hence if the study is done on different cities we might get different results. As that will allow us to have comparable data from different areas which will provide better understanding of progress and faith in the outcomes. Future researchers should be encouraged as a consequence to broaden the scope of the research to include SMEs from other cities such as Karachi, Faisalabad, and Lahore. Take, for example, Sialkot. The current study's second flaw is its small sample size of 316 observations, to represent the Pakistani SME sector. The writers feel that a greater sample size will aid authors and other readers in better understanding the topic. It's also important to incorporate data with a special focus on service industries like healthcare, insurance, and education. It’s also an interesting point to add more variables like firm size, firm age, and skilled employees etc. in the study to have more controlled and superior understanding of the topic.

Secondly, because this study only considers three aspects of SME marketing performance and technological influences on the use of digital technology, it will be possible for future researchers to dive deeper into other potential technological factors that may be driving other aspects of the use of digital technology. We might remark that the study's time frame is limited since it takes time and money to create or acquire organizational marketing performance and digital transformation, which can occasionally outweigh their good effects. To further investigate the efficacy of digital transformation and its impact on the performance of the firm, a longitudinal design is thus required, as well as perhaps gathering real-time big data from the SaaS platform for a lengthy period of time. Third, since we only tested our model on the marketing performance which is only one way or a single aspect of business performance, examining other aspects would be a valuable addition to the literature. However, we think that the relationship between digital transformation strategy and organizational performance may be examined with the help of additional mediating and moderating forces. This relationship should be further examined and explored with more samples and different sectors. Fourth, study results are based on perceptual information. As a result, managers might be unable to choose management actions based on the outcomes. The outcomes of further research may also enhance the suggested metrics. Future

researchers are urged to improve our work by gathering data from many sources or planning multilevel studies to further broaden and validate our findings.

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**Appendix 1**

| Items and Constructs | |
|---|---|
| Digital Transformation | |
| DT1 | We are committed to use digital technologies in developing our new solutions |
| DT2 | Our solutions have superior digital technology |
| DT3 | New digital technology is readily accepted in our organization |
| DT4 | We always look out for opportunities to use digital technology in our organization |
| DT5 | We systematically scan for new technologies inside and outside the industry. |
| DT6 | Significant portions of profit are reinvested in R&D for digital tech adoption |
| DT7 | We have a great Incentive system for R&D personnel for new patents. |
| DT8 | Regular R&D meetings are attended by all top executives. |
| Marketing Performance | Our company has performed better than competitors in last three years in terms of … |
| MP1 | Entering new markets quickly than competitors. |
| MP2 | Introducing new product/services faster than competitors. |
| MP3 | Success rate of new product/services. |
| MP4 | Market share as compared to the competitors. |
| Social Media Marketing | |
| SMM1 | Our company uses social media to share content |
| SMM2 | Our company uses social media to create conversations with customers. |
| SMM3 | Our company uses social media to create social relationships with customers |
| SMM4 | Our company uses social media to manage communities. |
| Market Turbulence | Our company has performed better than competitors in last three years in terms of … |
| MT1 | Our customer's preferences are constantly changing. |
| MT2 | Our set of client changes on a regular basis. |
| MT3 | Our firm experiments a high rate of change of its competitors. |
| MT4 | New competitors enter the market place on a regular basis. |
| MT5 | We can accurately predict the future characteristics of our competitive environment |
| MT6 | We can anticipate how to satisfy our customer's future preferences |
| MT7 | We are secure about how to presently deal with our clients to keep them in the future |
| MT8 | We can predict the evolution of the environmental forces |