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# The Assessment of Social Media Utilization on Total Quality Management Practices in Information and Communication Technology Companies in Palestine

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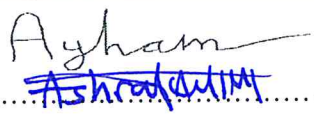
| 2. Co-Supervisor: Dr. Ayham Jaroun |  |
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## Declaration

I declare that I have developed and written this Master thesis completely, and the work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

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# Abstract

This study aims to evaluate the assessment of using Social Media (SM) on Total Quality Management Practices (TQM) in Information and Communication Technology (ICT) Companies in Palestine (WB & Gaza Strip). The quantitative hypothesis-testing research approach is adopted. Primary data are obtained through distributing online questionnaires amongst 120 ICT companies.

The developed questionnaire principally comprises of three parts. The first one aims to collect demographic data about the participating companies. The second part endeavors to collect data about utilizing SM in ICT companies, which includes seven items. Last but not least, the third part, which is about TQM practices, has seven parts; namely: customer focus, relationship management, leadership, continuous improvement, employee involvement, process management, quality planning. A five-point Likert scale is used in the second and third parts of the questionnaire. Data are analyzed using descriptive analysis as well as inferential statistical techniques including means, standard deviations and regression. The SPSS software is utilized in data analysis.

The results reveal that SM have strong positive assessment on TQM practices (customer focus, relationship management, leadership, continuous improvement, quality planning) and moderate positive assessment on (employee involvement and process management). In addition, there are no correlations significance between demographic characteristics with TQM practices and using SM.

The findings indicate that the ICT companies need to improve the use of SM due to the strong positive relationship with TQM practices. As this study is one of a kind, it

remarkably highlights the important role of using SM. This paper, thereby, furnishes results that can guide the ICT management of how to deal with SM and how to improve it. Moreover, SM boosts continuous improvement, customer satisfaction by taking precise decisions and improving the quality of products collecting and taking reviews and feedback from SM. Also, SM assist in expanding the business processes, increase the communications with external parties, which result in better performance.

This study recommended PITA management to raise awareness about the importance of utilizing SM and keeping up with development in SM arena, planning and organizing training courses for employees in field of communication. In addition, reviewing the current use of SM and TQM practices by top management, due to the positive effect of using SM on TQM practices. The companies recommended to allocate part of the material and human resources to create jobs related to SM.

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# List of Abbreviations

| Abbreviation | Description |
|---|---|
| **SM** | Social Media |
| **TQM** | Total Quality Management |
| **ICT** | Information and Communication Technology |
| **PITA** | Palestinian Information Technology Association of Companies |
| **IT** | Information Technology |
| **TAM** | Technology Acceptance Model |
| **PU** | Perceived Usefulness |
| **EU** | Ease of Use |
| **GDP** | Gross Domestic Product |
| **PCBS** | Palestinian Central Bureau of Statistics |
| **SPSS** | Statistical Package for the Social Sciences |

# Chapter One: Introduction

## 1.1 General Background

Innovation and Total Quality Management (TQM) are counted the paramount foundation in the companies' pursuits to gain competitive advantages (Bagur-Femenías et al., 2016), which indubitably encounter head-to-head competition (Kadam and Ayarekar, 2014). Quintessentially, companies have to take extraordinary measures to cope with all current changes, and withstand all assorted challenges to bust hump success, sustainability, dynamism and growth in such fluctuating and ever-changing, yet unforeseeable market. It strikes us as necessary to point out one of the prime challenges companies do currently encounter; it is the capability and aptitude to build online communities, and define the constant and vibrant demands of their prospective customers. Ditto taking into account their feedback (Algahtani, 2016). In view of the fact that customers are the cash cow of each single company, and pivotal determinants of its success or failure, every company should spare no efforts to cater their needs and live up to their expectations (Dubey and Gunasekaran, 2015). For the fulfillment of the aforementioned goal, and preserving their position in the center circle, companies must be attuned to the unprecedented competitive business environment so that they can act in compliance with the unceasingly mutable market requirements. Having said that, this requires companies to deliver top-notch, best-of-breed, state-of-the-art and cost-effective products and services. (Jiang et al., 2017).

When it comes to tip-top high-standard products and services as competitive advantages, the high intensity of market competition triggers companies to continually elevate the quality of products and services via-enhancing the utilized programs in such a way to realize customer's satisfaction. Consequently, stakeholders and decision-

makers will collaborate to tackle all the business hiccups and threats by keeping an eye on the quality of services, production control, cost & marketing (Ferdousi et al., 2018). Such control is attained in the world of business through endorsing best practices in delivering products and services to customers to enhance the company's performance. Pimentel and Major (2014) states that financial performance does not measure customer quality and the changing demand, new demands required companies to adapt to the technological and companies changes that have arisen from companies (Algahtani, 2016). One of such business practices is to make use of Social Media (SM) technologies in the field of business (Abrahams et al., 2012).

In a nutshell, companies have started to use SM due to the penetration of these media in societies; therefore, they employ it as a fundamental means in marketing and brand promoting activities (Tsimonis and Dimitriadis, 2014). SM has become the facilitator for every business (Chen et al., 2011). In other words, it provides a very serviceable tool for the sake of improving companies' performance (Smits and Mogos, 2013) and enhancing interactive communication (Singh and Sinha, 2017). Companies invest in SM with the aim of communicating with worldwide customers and suppliers, and encouraging employees' collaboration (Bharati et al., 2015). It has a deep impact on businesses as a result of the heavy use of SM applications and the rapid evolution of companies that learned to manage SM in their domains (Mount and Martinez, 2014). It has remarkably remodeled the levels of availability, delivery, and the structure of information, where customers have been shifted from passive recipients to active creators of content (Kadam and Ayarekar, 2014).

SM provides customers with platforms to express their opinions, feedback and usage experiences **(**Li et al., 2014). This plays a substantial role in determining customers'

choices and preferences (Chanthinok et al., 2015), without derogating from the fact that these opinions have become the power source in enabling companies to dissect and derive-new strategies in order to create new products (Chen et al., 2011) and take more meticulous decisions (Jiang et al., 2017).

Currently, the concept of SM is taking a place at the top of many marketing strategies in companies (Kaplan and Haenlein, 2010). The main advantage of SM is cost-related; the financial obstacles to SM marketing are razor-thin compared to other tools (Weinberg, 2009). Moreover, the ability of these media to connect with customers is in cost-efficient and time-effective (Algahtani, 2016). A-part from that, TQM practices are running their course in advanced businesses, which TQM practices target to realize customers' satisfaction and ameliorate performance. The practices harnessed in this study are customer focus, relationship management, leadership, continuous improvement, employee involvement, process management and quality planning.

In accordance with the benefits of SM, this research aims to tackle the assessment of SM on TQM practices in Information and Communication Technology (ICT) companies working in Palestine. The ICT companies listed in Palestinian Information Technology Association of Companies (PITA) comprises 180 companies in total. One hundred and twenty three of these companies are located in West Bank (WB) while fifty six companies are in Gaza. The ICT sector in Palestine truly has considerable contributions on the economic growth owing to the ever-lasting, expeditious and constant developments.

### 1.2 Problem Statement

The problem of this study is multi-folded. It is understood that increasing competition is a substantial component that leads companies to adopt tactical initiatives as a means

to persist, thrive and develop in the market and to enable them to better serve customers through producing high quality products and services. It highly affects companies to spot a light on customers' preferences, and enhancing customers' satisfaction in this way which undeniably necessitates keeping up with the ongoing rapid development (Ferdousi et al., 2018). Engaging in SM makes it possible for quality managers to deduce prompt, effective and efficient decision as an intervention tool for improving products and services, ameliorate the image of companies, and then realizing customer's satisfaction.

In Palestine and as stated in the aforementioned section, ICT sector has lately had a remarkably influencing factor on the advancement of Palestine's infrastructure. In a nutshell, it is an ever-increasingly thriving sector in terms of volume and value. There are 122 ICT companies in West Bank and 56 ICT companies in Gaza, distributed among unique domains such as communication, management, insurance, internet providers, to name but a few. It comprises +8% to overall Palestinian GDP, +3% employment of the Palestinian workforce.

Notwithstanding the aforesaid, the ICT sector as yet encounters hiccups within the context TQM, as mentioned in the final report in Palestinian ICT Market Penetration study (2013). In concrete terms, it is pointed out in the report that lack of quality is one of the biggest pressing issues; the work that was done by Palestinian ICT firms is of poor quality and does not live up to the international standards. Among other things, and in addition to skill set availability, the reduction of right skill set is a major issue, which deters buyers from purchasing services/products from local ICT providers. Furthermore, and apart from the lack of the experience both in marketing and in service

delivery, local ICT providers lack domain expertise and timeline adherence while working with local ICT firms.

These challenges and problems within the context of TQM lead companies to embrace new strategies to respond more effectively to customers and solve problems, particularly in light of rapid development and neck-and-neck competition. Hence, SM is deemed as a strategic tool in these companies by dint of their immense benefits. Emanating from this, the aim of this study is to explore the assessment of applying SM on TQM practices in ICT companies in Palestine.

### 1.3 Significance of the Study

In Palestine, the studies which shed the light on these kinds of issues, and emphasize on the field of development by assessment utilizing SM tools on TQM practices in the ICT companies as a significant factor to improve their businesses is slightly rare. Thereby, this study calls the attention of ICT companies to the fact that the utilization of SM can function as a viable tool at our disposal to boost the economic and social development in TQM field. That being said, valuable recommendations are given to enhance the rudimentary knowledge companies already have to frame the assessment of utilization of SM on TQM practices within the entire internal system of each firm.

This research proposes a tool aiming at the empowerment of the ICT companies in Palestine to be competitive worldwide. On top of that, the research provides unique and detailed information, which guides other researchers and scholars while thoroughly studying this field. More notably, this research is among the very first one of a kind projects in Palestine which profoundly investigate and analyze this critical topic.

### 1.4 Research Questions and Objectives

This study addresses and seeks to answer the following questions:

1. What are the TQM practices that are affected by the utilization of SM in ICT companies in Palestine?
2. Which managerial framework is directly related to SM and TQM in ICT companies in Palestine?

This research aims at achieving the following paramount objectives:

1. Identifying the TQM practices that are affected by the utilization of SM in ICT companies in Palestine.
2. Developing a managerial framework that is related to SM and TQM practices in ICT companies in Palestine.

### 1.5 Research Hypotheses

In accordance with the principles of TQM, this research aims at testing the following research hypotheses. Moreover, the researcher developed the managerial framework based on the formulated hypotheses as shown in Figure 1:

**Hypothesis One**: there is a statistical evidence confirming that there is a correlation between SM and *TQM practices* in Palestinian ICT companies.

**Hypothesis Two**: there is a statistical evidence confirming that there is a correlation between SM and *customer focus* in Palestinian ICT companies.

**Hypothesis Three:** there is a statistical evidence confirming that there is a correlation between SM and *relationship management* in Palestinian ICT companies.

**Hypothesis Four**: there is a statistical evidence confirming that there is a correlation between SM and *leadership* in Palestinian ICT companies.

**Hypothesis Five**: there is a statistical evidence confirming that there is a correlation between SM and *continuous improvement* in Palestinian ICT companies.

**Hypothesis Six**: there is a statistical evidence confirming that there is a correlation between SM and *employee involvement* in Palestinian ICT companies.

**Hypothesis Seven:** there is a statistical evidence confirming that there is a correlation between SM and *process management* in Palestinian ICT companies.

**Hypothesis Eight**: there is a statistical evidence confirming that there is a correlation between SM and *quality planning* in Palestinian ICT companies.

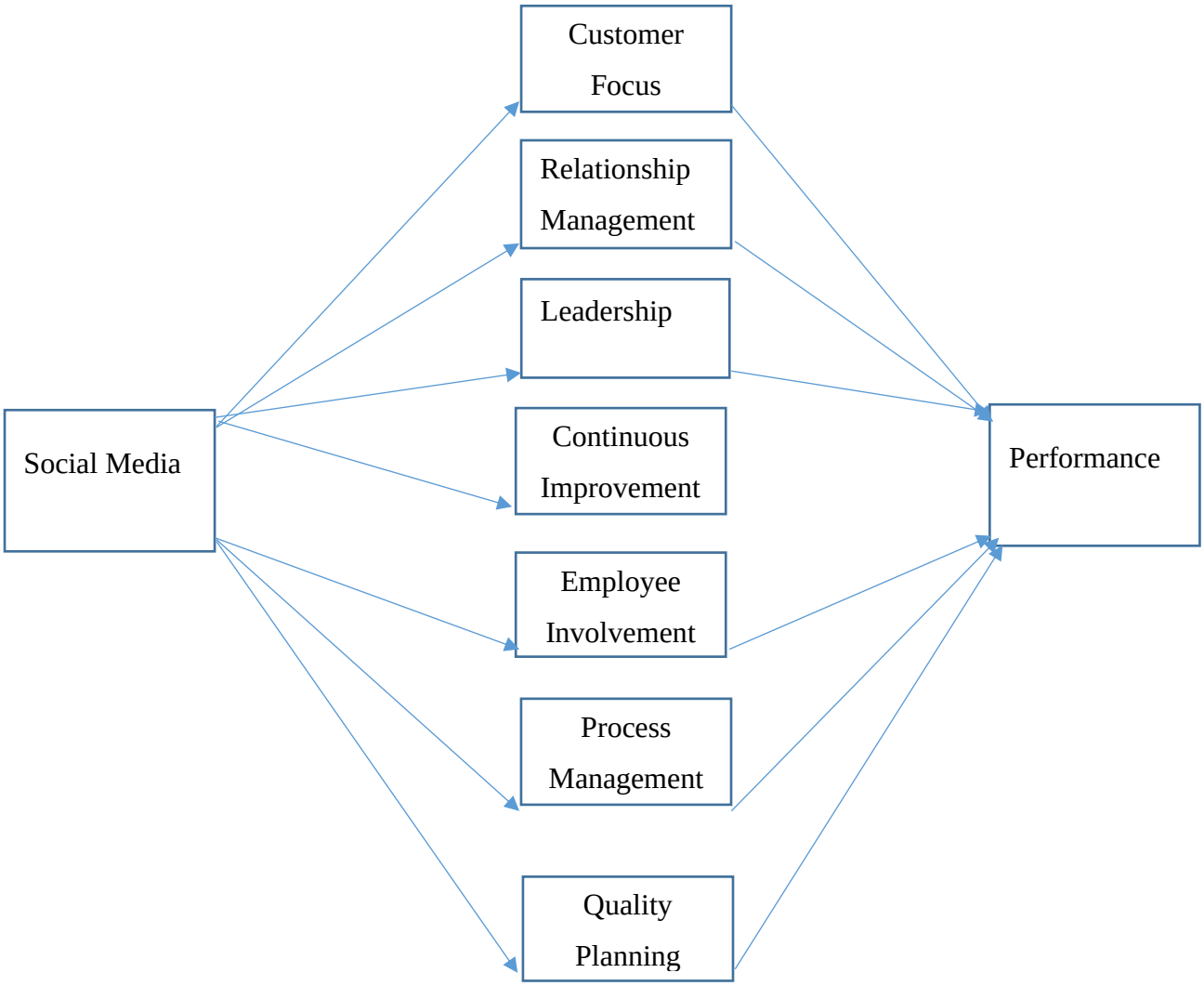


Figure 1: Managerial Framework

### 1.6 Thesis Structure

This thesis consists of six chapters. Chapter one is an introductory chapter, which comprises the problem statement, research objectives, questions, hypotheses and the structure of the thesis. Chapter two covers the literature review about the SM, its definition and benefits, TQM and its origins, the relationship between them, and the importance of Information Technology (IT), and last but not least the ICT sector in Palestine. Chapter three elucidates the research methodology, the tools utilized for data collection, survey, survey design, reliability, validity, research population, and sample

size and data analysis procedures. Chapter four screens the analysis of data collected from survey, the results of hypotheses testing, and answering research questions whereas chapter five covers the findings and discussion. As importantly, chapter six covers the conclusions and recommendations of the research, limitations of the study and future research work.

# Chapter Two: Literature Review

## 2.1 Overview

As a matter of fact, SM are gaining popularity and are increasingly used in companies. This section elucidates the various definitions of SM, the very types, characteristics, evolution, SM network and their benefits. On the other hand, the second section tackles TQM concept whilst the third section is designated to address the relationship between SM and TQM. Finally, yet importantly, the last section describes the ICT sector in Palestine.

## 2.2 Characterizing Social Media (SM)

SM refers to a combination of online tools open for public membership that support creating and sharing ideas, editing content and building relationships through collaboration and interaction (Mount and Martinez, 2014). Russo et al., (2008) defines SM as platforms that facilitate online communication, interaction, collaboration and networking. Per Kaplan and Haenlein (2010), SM are classified aa a group of internet-based applications that allow creation and exchange of User Generated Content that build on the technological and ideological foundations of Web 2.0. It is a Web 2.0 technologies that enable users to exchange and generate user-created content (Bharati et al., 2015). Similarly, they have been transcended into an amphitheater-like platform where members have become familiar and socially interactive with each other through providing a reliable source of trust (Mount and Martinez, 2014). These platforms have been falling under the scope of rapid and massive change and development. They provide an innovative means of obtaining customer feedback such as opinions and experiences in their usage of products and services (Jiang et al., 2017). It merely

performs the function of a label for digital technologies that authorize people to connect, interact, share and produce content (Lewis, 2010). SM paves a way of communication between consumers and brand (Wang et al., 2016).

The idea behind SM is unidentified as of yet; by the same token, there seems to be no consensus among researchers, academics and managers to what exactly should be incorporated under SM umbrella (Kaplan and Haenlein, 2010). It, thereby, makes sense to take a step back and provide insights with respect to the very origin of SM, what it includes and also where it comes from.

Back in the day, SM was supremely exclusive to television, radio, and newspaper. Communication between individuals was restricted to primitive means such like personal letters and telephone calls. Predictably enough, feedback was delayed and indirect (Manning, 2014). Internet was officially kicked-off when individuals or users could post or read messages through newsgroups, as Usenet which was developed in 1979 and published in 1980 (Kaplan and Haenlein, 2010).

Over the past few years, SM has been subject to rapid development (Jiang et al., 2017). As specified by Edosomwan et al., (2011), the history of SM can be traced to the 1950's; at that time, phone phreaking began, which is basically searching of the telephone network. This process was completed through the use of homemade electronic devices that supported access to the telephone system in order to make free calls. During 1960's, the idea of E-mail came officially to light. This method was dependent on exchanging messages from one computer to another, but the two computers had to be online since the idea of the internet was not available till 1991. Then by 1972, the use of telegraph was set in motion; it primarily specialized in transferring and receiving messages. Later in 1800's, the radio and telephone were used. In 2000, SM witnessed great change, when

development of networking sites highly boosted the interaction between individuals and companies who share same interests. Afterwards, popular names were launched in the beginning of 2001 to 2004, like MySpace, LinkedIn, lastFM, tribe.net, Hi5, Facebook. During 2005, Yahoo!360, Black planet, YouTube, and cyword were emerged.

As stated by Kaplan and Haenlein (2010), SM has been inaugurated 20 years earlier. In point of fact, this is owing to the technical advances, which have been established throughout the years to enable the virtual content to be much more viral and powerful than the late of 1970s', when researchers founded "Open Diary". Open Diary is an early social networking site that brought together online diary writers into one consolidated community. Then the creation of social networking sites such as Facebook in 2004. This, in turn, collaborated to coin the term "Social Media" and accomplished the prominence it has today. Today, with the advancement in Technology, SM is seen as applications in the form of YouTube, Facebook, SnapChat, Twitter and others that form interactive communications (Kadam and Ayarekar, 2014).

### 2.2.1 Types of SM

SM is referred to as "communication of ideas, personal messages, through social networks, to share information" (Edosomwan et al., 2011). SM network forms are utilized to connect customer and suppliers with companies. Some SM platforms are designed to promote knowledge sharing such as online communities and blogs, and what have you to create knowledge such as social content, and are meant some to keep people connected such as Facebook and LinkedIn (Bharati et al., 2015).

The main types of SM networks are explicated as follows:

- Collaborative projects: users work with others for a specific purpose in a shared work area (McGee and Diaz, 2007).

- Blogs: blogs are as online personal diaries and are open to the public to leave comments and tags. It is a practical way to publish content online without the need to have technical skills (Al Tawara and Gide, 2017).

- Social Networking Sites: is a tool for engagement and connecting with people who share common interest, and build relationship within a community. It is also a two - way communication, in which the relationships are developed. Otherwise stated as direct communication between users and the people (Edosomwan et al., 2011). It is defined as applications that enables users to create profiles and invite friends to connect with them on these profiles, and sending messages between others (Kaplan and Haenlein, 2010).

- Micro blogs: "The concept of micro-blogging is commonly represented by Twitter, which is an application allowing users to communicate status updates (tweets) using a maximum of 140 characters and then sharing those with their followers" (Al Tawara and Gide, 2017). Also this type of SM helps users to spread the information rather than extended articles (Dodokh, 2017).

- Online rating sites: this type of SM allow users to leave comment or rate about the location they visit or the product they purchase, so others could expect the service or the price before purchasing (Dodokh, 2017).

Al Tawara and Gide, (2017) define SM platforms as: "Web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2)

articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system".

There are two genres of SM platforms, internal and external SM, and they are further elucidated as follows:

- Internal platforms:

SM has been employed in two different primary ways. The first one, which is less commonly used and less discussed, is the internal communication between employees and management within the companies (Leonardi et al., 2013). Internal SM have significantly collaborated to improve the relationships between employees by motivating them to share their workload. The expected outcome of this process is believed to have fruitful consequences in working as teams rather than working as alienated individuals (Kadam and Ayarekar 2014). Therewith, SM serve as a robust influential venue for employees, where they express their opinions, communicate and share projects. Broadly speaking, the following is a summary of the benefits that can be reaped from the utilization of internal SM in companies (Edosomwan et al., 2011).

- Supporting and boosting open communication between employees and their management.

- Enabling employees share knowledge and ideas, which help working in teams much more efficiently.

- Promoting better content; it is no longer limited on simple text, but on videos and webcast.

- External platforms:

This genre of SM is more widespread, familiar and conventional (Leonardi et al., 2013). It is public environment where most social networking sites are used to attract advertisers, for it is accessible by all users, whatsoever. A good example of this type is Facebook and Twitter (Al Tawara and Gide, 2017). Furthermore, external SM qualify companies to connect and communicate with their customers and suppliers innovatively and conveniently through the use of these platforms (Bharati et al., 2015). Employees use it to broadcast messages and write blogs on these websites (Leonardi et al., 2013).

Al Tawara and Gide (2017) illustrated the different platforms of SM, and the key purpose related to this type is explained in Table 1.

Table 1: Social Media Types

| Social Media Types | Principle Objective | Advantage of Social Media Type |
|---|---|---|
| **Facebook** | Social networking sites | "SMEs retailors Facebook fan page enable the testing of attitudes and opinions of online consumer, also promotes and sell their products and services". |
| **Twitter** | Microblogging service | "SMEs retailors can promote their product and service, but also provide sufficient information as interaction and conversation". |
| **Blogs** | Share and exchange contents | "SMEs retailors can share product and service features, open discussions, and review". |
| **Google+** | Social networking sites | "SMEs retailors can share exclusive offers and discounts to its special customer group". |
| **YouTube** | Video-sharing sites | "SMEs retailors can share content, make product and service presentation, bookmarking, rating, follower, and commenting in all collaboration of Social Media networks". |
| **Flickr** | Business networking sites | "SMEs retailors can store and share photos online to a strong loyal social networks". |

| | | |
|---|---|---|
| **LinkedIn** | Business networking sites | "SMEs retailors or company can create a profile in order to present their work to the audience. In the same vein, it enables a company to seek new employees or many experts to join work together". |
| **Instagram** | Photos and video sharing | "The firms can share activity photos or videos of what's happening to promote the brand and company". |

There are many efficacious networking venues as depicted in the preceding table. These means are harnessed to exchange and share information in the companies, and could use in their online business Worldwide. There are over 1B Facebook active users; more than 303M active users are registered on Twitter as well. On the flip side, there are more than 1B unique users of YouTube per month while LinkedIn has more than 450M global users **(**Chanthinok et al., 2015).

### 2.2.2 Beneficial Impact of Social Media in Companies

The concept of SM has prolifically influenced business **(**Bagur-Femenías et al., 2016) because recognizing the importance of social media by top managements of companies is indispensable for sustainable competitive advantages (Bharati et al., 2015). More accurately, SM provide great-value opportunity for companies to run successful businesses through promoting their image and brand (Busscher, 2013) as well as remaining in direct contact with their suppliers and customers (Kadam and Ayarekar, 2014). It’s worthwhile stating that continuous contact with customers is of tremendously beneficial value for companies (Sit et al., 2009). This includes but not limited to: building and maintaining strong relationships (Mount and Martinez, 2014), reaching out more customers, asking for customers’ feedback, and communicating effectively with customers (Smits and Mogos, 2013); continuous contact with

customers, makes them feel more valued by the company, and it will eventually lead to increasing customer satisfaction and realizing customer loyalty (Bagur-Femenías et al., 2016). This, in turn, leads to improving the company's image (Busscher, 2013) by boosting and increasing speed of services and products distribution, increasing productivity and reducing cost (Delić et al., 2014). Brand engagement on SM unquestionably impacts the financial performance (Wang et al., 2016) through increasing sales, enhancing brand popularity, facilitating word of mouth and sharing information (Hajli, 2014).

Through the use of SM, there are two intertwined promotional roles emerged, external and internal (Leonardi et al., 2013). On one hand, the external facet enables companies to talk to their customers through platforms such as Facebook, and allows customers to talk to companies. On the other hand, the internal facet enables customers to talk to each other (Mangold and Faults, 2009), as well as enabling companies to connect and communicate with their customers and suppliers efficiently and conveniently. Consequently, it improves inter-company communications and interactions (Bharati et al., 2015). SM have become a venue for customer to share their experiences and opinions (Jiang et al., 2017), through which they influence other customers' preferences, choices, views, attitudes, knowledge and purchase behavior (Zheng et al., 2013). For this reason, customers can easily share experiences, and become creators of content (Hajli, 2014).

In a broad sense, SM have managed to transform customers from passive receipts to active creators of content (Kadam and Ayarekar 2014). SM do not only benefit companies, but it is also considered a learning tool for managers on how to react to such a rapid changing and competitive environment through the platforms of SM **(**Bagur-

Femenías et al., 2016**).** Per contra, it is proven that 40% of consumers search for products and services through SM, 77% of consumers read online reviews, and 75% of consumers trust online reviews (Li et al., 2014). Likewise, a survey of 351 American companies shows that 9% of marketing budget is spent on SM (Wang et al., 2016). Beyond that, SM have become a major source of hiring through applications like LinkedIn, which is about 80% of companies use it for the recruiting process (Kadam and Ayarekar 2014).

Table 2: Benefits of Social Media

| **Name of author(s):** | **Benefits:** |
|---|---|
| Kadam and Ayarekar (2014) | Promoting the image and the brand of the company, and in staying connected with their suppliers and customers. |
| Bagur-Femenías et al., (2016) | Increasing customer satisfaction. |
| Delić et al., (2014) | Increasing speed of services, products distribution and productivity and reducing costs. |
| Wang et al., (2016) | Increasing the financial performance positively. |
| Hajli (2014) | Continuous contact with suppliers and customers, increasing sales, enhancing brand popularity, facilitating word of mouth and sharing information. |
| Bharati et al., (2015) | Improving inter-company communications and interactions through continuous contact with suppliers and customers. |
| Zheng et al., (2013). | Customers share their experiences and opinions. |

SM furnish window of opportunities for companies to become more recognized on a global scale (Hajli, 2014). During the last few years, SM have progressively received attention, and a rapid convergence of online content sharing (Sun et al., 2015). Thereby,

companies, who adopt SM, have begun to witness an exponential growth with technologies such as Facebook and LinkedIn (Bharati et al., 2015).

### 2.3 Total Quality Management Concept (TQM)

SM data have provided different signs and insights about customers' behavior and opinions. It has the capacity to improve communication and collaboration within and among companies. Similarly, it has the potential to reach out to more people whether they are customers or suppliers, and it also has the capacity to make better application development by integrating existing technologies into new businesses. For the foregoing reasons, SM are deemed as a new technology adopted by business, where innumerable companies take advantage of the latest, innovative and most common means SM to perform much more professionally and diligently-than their competitors so as to report better benefits (Smits and Mogos, 2013) and improve their overall performance level. TQM, in essence, has been described as a way of thinking about company management, and a way to improve company performance. In short, SM and TQM go hand in hand with the mutual goals of improving company performance. From here onwards, the importance and definition of TQM is tackled and thoroughly discussed.

According to Kaynak (2003), TQM can be defined as: "a holistic management philosophy that strives for continuous improvement in all functions of a company, and it can be achieved". It focuses on improving quality of services and goods, it includes other elements as well such as employee involvement, continuous improvement, communication, recognition and leadership (Ferdousi et al., 2018).

TQM targets to improve the quality of products and processes to live up to customers' expectations (Fok et al., 2001). It is worthwhile mentioning that better understanding

of customers facilitates the process of developing new tools to better understand their demands (Urban, 2005), which in turn results in skyrocketing sales (Zhu and Zhang, 2010).

On one hand, TQM is a philosophy that focuses on customers and aims to ceaselessly improving the processes in companies through human resource management, procedures and policies. On the other hand, TQM thrives to equally target all the staff in the company so as to promote durable and persistent progress in quality and productivity (Au and Choi, 1999). Per TQM, employees are empowered and supported not only in decision making but in participating in decision making (Fok et al., 2001). Therefore, TQM is a source for creating things right first time, attaining excellence, delighting customers and suppliers, and acquiring efficient business solutions (Anil and Satish, 2016).

According to Tari et al., (2007), many authors such as Anil and Sadikoglu have concluded eight quality practices that are rootedly correlated to impact performance eventually. The practices are namely: leadership, quality planning, employee management, supplier management, customer focus, process management, continuous improvement, and learning (Conca et al., 2004).

Leadership: the role of management in leadership should ascertain a prosperous climate to practice leadership, which is one of the key factors to apply quality management. Quality planning: management of companies and its employees should plan and improve quality management in all aspects and evaluate them along with customer requirement and company capabilities.

Employee management: companies should create a system to monitor, measure, evaluate, and reward the employees on their high performance. Rewarding the

contribution from employees demonstrates companies' respect and appreciation of their efforts.

Learning: companies should train employees and exchange knowledge between them, which on its part promoting reducing the gap between employees themselves, and between employees and their supervisors.

Supplier management: companies should have well-defined requirements and specifications for purchase since the quality of purchased products highly impacts the efficiency of the workflow inside companies, without derogating from the fact that companies better provide technical support to enhance their performance.

Customer focus: companies have got to take into their account the opinions and expectations of customers in the interest of enhancing processes and relations so as to realize customers' satisfaction.

Process management: companies need to conduct internal audits, take corrective actions if any nonconformance emerges. As long as companies persevere to gain effective process, they are strongly recommended defining performance indicators and evaluating their values.

Continuous improvement: Continuous improvement shorten the production cycle process and reduce the occurrence of incompliances. This leads ultimately to improving productivity and companies' performance.

Table 3: Definitions of TQM (Talib et al., 2012)

| **Name of author(s):** | **The definition** |
|---|---|

| | |
|---|---|
| **Deming (1986)** | A management philosophy which develops all management principles and practices from the belief that continual improvement of quality is the key to success. |
| **Oakland (1989)** | An approach for improving the competitiveness, effectiveness and flexibility of any company. |
| **Berry (1991)** | A total corporate focus on meeting and exceeding customers' expectations and significantly reducing costs resulting from poor quality by adopting a new management system and corporate culture. |
| **Oakland (1993)** | A new way of management to improve effectiveness, flexibility and competitiveness of a business to meet customers' requirements. |
| **Zairi et al., (1994)** | A positive attempt by the companies concerned to improve structural, infrastructural, attitudinal, behavioral and methodological ways of delivering to the end customer, with emphasis on consistency, improvements in quality, competitive enhancements, all with the aim of satisfying or delighting the end customer. |
| **Roosevelt (1995)** | A strategic architecture requiring evaluation and refinement of continuous improvement practices in all areas of business. |
| **Dahlgaard et al., (1998)** | A management process which any company can implement through long-term planning, by using continuous quality management plans which lead the company towards the fulfilment of its vision. |
| **Mohanty and Lakhe (2002)** | An approach for continuously improving the quality of goods and services delivered through the participation of 'all' levels and functions of the companies. |
| **Palo and Padhi (2005)** | An integrated approach to bring continuous improvement in products and services using proper tools, technology and training to meet customer's expectations on a continuous basis. |

| | |
|---|---|
| **Lee et al., (2010)** | A business management strategy seeking to improve the quality of companies management, competitiveness and providing value to customers. |

The preceding table illustrates the numerous definitions of TQM concept as stated by different authors. TQM has attracted authors because of its growing and acceptance in the business world. TQM is one of the most durable and popular concepts (Zehir et al., 2012). Thus, many definitions have been exposed. The following section explains the origins and the evolution of TQM.

### 2.3.1 The Origins of Total Quality Management (TQM)

The origins of TQM can be traced back to when the Union of Japanese Scientists formed a committee of scholars and engineers to improve the productivity of Japanese products (Martínez-Lorente et al., 1998). This section sheds the light on the exquisite work of the five pioneers of TQM field; namely: Deming, Juran, Crosby, Ishkawa and Feigenbaum.

**1. The Work of Deming**

According to KruÈger (2001), Deming's ideas are quite well-established. The main idea is that improving quality will eventually lead to increasing productivity, and that for its part reinforces the competitiveness of the company. Nevertheless, low quality means high costs and that negatively affects the competitiveness of the company. The improvement in any company results in less waste of resources, material used and the number of errors as well. Then, the company's output will be achieved with zero effort. The investments in reworking and defective parts could be mitigated, and that will save

costs. Hence, the lower costs will enable the enterprise to have a stronger competitive position in the market.

In order to achieve this aim, Deming developed an approach which is summarized in his 14-point program (Neave, 1987).

1. Creating constancy of purpose for improving products and services, allocating resources with a plan to compete in the market, and providing jobs, within long term plan to ensure profitability.
2. Adopting new philosophy for economic stability: As we are in a new economic era, transformation is indispensable to halt the decline of industry. We can no longer live with the frequently orthodox levels of delay and defective and unsatisfactory material.
3. Ceasing dependence on inspection: It is required to eliminate the need for mass inspection as a way to achieve quality.
4. Ending 'lowest tender' contract: It is much needed to possess meaningful measures of quality alongside with price rather than awarding business on price tag alone.
5. Seeking out problems continually: Companies have to search out for problems so as to improve the systems and production constantly. This action will result in decreasing cost.
6. Instituting training on jobs: Modern methods of training on the job including management to better invest on employees' capacities.
7. Instituting modern methods of supervision: Modern methods of supervision and leadership are vital to help machines and people do their jobs to a T.

8. Driving out fear: Encouraging and supporting the-two way communication to increase effectiveness so that every employee will do their job efficiently and fearlessly.
9. Breaking down barriers between staff areas: All employees from different department must work together to tackle all challenges.
10. Eradicating numerical goals for the workforce: Eliminating the use of slogans, posters, and exhortations for the workforce, demanding zero defects and new levels of productivity, without providing methods.
11. Eliminating targets: Substituting work standards and numerical quotas with helpful supervision and statistical methods for interminable improvement of quality
12. Permitting pride of workmanship: Removing obstacles that hinder the hourly worker to pride their workmanship
13. Instituting education: Institute a vigorous program of education and re-training. Because new skills are required to keep up with changes in materials, methods, product design, machinery, techniques, and service.
14. Top management's commitment: Create a structure in top management that will push every day on the above 13 points to keep improvement and accomplish transformation.

**2. The Work of Juran**

The doctrine of Juran officially saw the light when he was in charge of searching for the very causes of the intermittent decline in the performance of the departments in Western Electric Company, and he has got to innovate solutions. Afterwards, a new department was created called "Inspection Statistical Department" and Juran became one of its main team players. Juran, thereafter, adjudge the inception of a new post of freelancing in the area of management and consulting (KruÈger, 2001).

As stated by Juran and Godfrey (1999), the main contribution for Juran is that quality control must be conducted as an inseparable part of the management function. Juran's perception about quality is manifested through his definition to it as meeting customers' needs and realizing customers' satisfaction, ditto quality becomes oriented to income. One the flip side, quality means that products and services are error-free. By the same token, Juran states that when quality issue is delegated to the subordinates, the role of top management will gradually decrease, and that will subsequently lead to adverse consequences on quality. On the other hand, the top management has to be fully acquainted with the quality polices. The involvement of top management can be witnessed in a variety of ways through the training courses and TQM awareness activities. Juran argues that quality goals should be expressed in numbers and should be included in a timeframe. We need hardly say that the management is responsible for achieving goals, providing the necessary resources as well as the necessary fund and training courses for the staff.

### 3. The Work of Crosby

According to Crosby (2005), "Quality is free" – what costs money is the incompatible deficient products. In simple terms, the starting point for Crosby in quality is "Zero defects'‘, “Do it right the first time" and "The only performance standard is zero

defects". He reassures that his ideas are the merely accepted while the rest will be rolled out. In addition, Crosby has an idea of the "quality vaccine" which can be used to prevent the problem of nonconformance. There are 4 main ideas that Crosby argued: First off, for Crosby quality means "conformance to requirement", so the root-meaning for quality is conformance not elegance. Customer must define their expectations and requirements, and companies must thrive to reach out to them. If any nonconformity is detected, then quality will be gone with the wind. Second, quality can be measured quantitatively, which is identical with the cost producing nonconformities or incompliances. "There is no such thing as the economics of quality; it is always cheaper to do the job right the first time". Thirdly, Crosby believes that the employees are the main cause for poor quality. Last but not least, Crosby stresses out that quality is in charge of every department in the company, and not the quality department only "there is no such thing as a quality problem".

### 4. The Work of Ishikawa

Ishikawa did a quantum leap in the field of management; he represents a new way of thinking. His approach shows that quality should be inclusive to every single department in the company, and not to be exclusive to the quality department per se. Every member should share their ideas, and participate in the in the improvement process through the "Fishbone" which is innovated by Ishikawa. The "Fishbone" is a quality tool which helps employees to the challenges systematically. The prime goal of this approach is to realize customers' satisfaction through developing, designing, and producing the most efficient, best-of-breed yet feasible products. Ishikawa has become widely known in four aspects: Ishkawa diagram, the question of continuous training, quality circles, and the quality chain. He also argues that TQM "begins with education

and ends with education" because new employees begins with education and must continue with training, so they could tackle all problems, and that also related to the fact that workforce is fluctuating, ditto the expectations of the customers.

### 5. The Work of Feigenbaum

Feigenbaum is the founder of the concept "Total Quality Control". This approach concentrates on the system for total quality, engineering technology and quality, management strategies and quality, statistical technology and the application of total quality in the company. Feigenbaum states that quality involves everyone in the company from people on the top of the company's hierarchy to the unskilled workers. It is the sole responsibility of every department, not only the production department, to meticulously address the quality concept in the company. Hisintention supports and helps the businesses to design their own notion of quality so as to involve every single employee.

## 2.4 Relationships between TQM and Social Media

Over the years, the evolution of the internet era has made it possible for all consumers to enter the virtual circle of SM without any need of actual meeting. Similarly, it has given the opportunity to companies to interact with their customers (Hajli, 2014). After the appearance of SM, the tools and strategies for communication with customers have massively been altered. (Mangold and Faulds, 2009). Not long ago, TQM received remarkable praise and attention by academic researchers and American industry as a tool to improve competitiveness (Au and Choi, 1999) since it is considered as a grand source of sustainable advantageous competition for companies (Terziovski, 2006), in which many companies have started to realize that improvement is an essential component for successful global competition (Fok et al., 2001). Moreover, and owing

to its vital role in the development of management practices, TQM has been accepted between managers and practitioners as a constructive change in the management that spares no efforts to realize better customers' satisfaction by improving quality of products and processes (Anil and Satish, 2016).

The successful implementation of TQM includes but not restricted to; doing things right first time around, delighting customers and suppliers and achieving zero defects (Sit et al., 2009). These practices result in higher production capability and cost-efficiency. TQM techniques reinforce the fulfillment of the intended objectives and the elimination of wasting time; moreover, they are well-designated for the purpose of preventing and avoiding defects. (Maitah et al., 2014). The adoption of TQM practices is the key requirement for the survival in businesses as a result of the current head-to-head competition (Bagur-Femenías et al., 2016). To enhance competitiveness, companies have to up their game by producing high-quality and cost-effective products and services to maintain their market share (Tarí et al., 2007). Applying TQM practices reduces waste and increases productivity and the market share (Maitah et al., 2014). Thus, TQM improves financial performance on the overall (Terziovski, 2006).

The implementation of TQM in companies will affect them externally because it improves the company's image and customer satisfaction, and that will support its ability to remain in the market, will enhance and the company's competitiveness. On the other hand, the execution and improving of internal processes in companies will lead to reduce cost and to detect the processes that generate costs but don't create value for the companies (Bagur-Femenías et al., 2016).

SM and TQM practices share the same corresponding objectives; they both can be a rick source of suggestions for customers who have identical opinions and experiences

(Pääkkönen and Jokitulppo, 2017) and also a source of suggestions for businesses that have launched a relentless improvement in sharing information and opinions with customers (Mangold and Faulds, 2009). It is necessary to highlight the value of the continuous and direct contact with customers, for this makes them feel much more cherished and respected, and it in due course leads to improving the image of the company (Busscher, 2013).

On one hand, TQM has a vital role in improving effectiveness, flexibility, and competiveness to cater customers' needs and requirements (Anil and Satish, 2016). On the other hand, SM have changed customers from mere passive receipts into active creators of contents, through expressing and sharing their experiences and opinions (Kadam and Ayarekar, 2014). SM promote the relationships between consumers and the brand through reading comments and reviews from other consumers (Wang et al., 2016); reviews are largely instrumental in determining professional opinions and constructive suggestions for improving thee existing proven duct or developing new ones (Zheng et al., 2013). Therefore, quality managers can benefit from feedback and reviews from customers in their production system and Research & Development (R&D) map (Jiang et al., 2017). SM collaborate to build a robust relationship with suppliers through remaining in with them, and creating the potential for collaboration with other suppliers (Kadam and Ayarekar, 2014). SM have a substantial role in Customer Relationship Management (CRM) besides solving and identifying customer services issues **(**Smits and Mogos, 2013) via using different platforms like Facebook and other forums. CRM is measured by the number of customers that the company can reach out, effective communication with them, and also their feedback.

Using SM in companies cuts the cost needed for releasing information comparatively with traditional SM such as radio and television so that consumers could benefit from this information in choosing products and services at their convenience (Russo and Simeone, 2017). On the other side, companies can easily target specific customers in its pursuit to achieve customers' satisfaction.

Apart from that, SM have remarkable footprints in training; training is no longer bound by time or geographical limitations since information are now shared on SM websites, and they are accessible by all companies. As a result, the evolution of SM enhances training experience. Applications of training can be improved internally for employees and externally for customers. SM collaborates to reduce training cost, and support the distribution of training content.

What is more, SM enhance knowledge management, knowledge transference between employees, and the communication between customers and suppliers (Schneckenberg, 2009). Some companies have incepted to use, explore, and adopt SM in their work to grow, prosper and improve performance and profits, and to launch new products and services through SM platforms (Al Tawara and Gide, 2017). Launching new products comes on the heels pf understanding the choices and the opinions of customers, from the feedback and the experiences obtained directly from SM platforms. Therefore, the financial performance will be positively influenced. Eventually, the performance of the company will improve. Liu et al., (2015) concludes that financial performance has been affected by the brand engagement on SM, and also consumer engagement increases self-brand connection and brand usage intent. In short, SM help to establish a well-known reputation as well as a distinguished brand name for the company among its customers and rivals **(**Kadam and Ayarekar 2014). Building the brand name in the

minds of the customers helps companies in facilitating the word of mouth, the shared information and ultimately enhancing the overall financial performance.

### 2.4.1 The Importance of Information Technology (IT)

IT and Internet have managed to create a quantum leap in business, but this transformation is not unique to online business only; it's considered as a major apparatus in integrating electronic business capabilities into every aspect of value creation in customer issues such as procurement and customer relations management (Allahawiah et al., 2010). Therefore, companies start to compete in the amount of investments they devote to IT and the various computer applications (Igbaria et al., 1998).

Due to this, Social networks have been advocated by plethora of advanced IT innovations such as smart phones, wearable devices, and internet-based social networking applications such as Twitter and Facebook (Liu et al., 2015). The role of IT within any company is manifested in emerging the knowledge, also it is a reflection of competitive awareness (Good and Stone, 1995). According to Per Bharati et al., (2015), some SM technologies are designed to enhance knowledge sharing like blogs, some are meant to create knowledge like wikis while others are innovated to keep people connected like Facebook and LinkedIn. As such, the driving force of any company can be witnessed through the efforts they set forth in the IT arena, for the fruitful consequences it brings to the company inside and within the employees' level, and outside within its customers and competitors in the market (Stone et al., 2007). According to Mckinsey survey in 2011, it was demonstrated that 50% of ICT companies use social technologies to increase speed needed to access experts, whereas

70% of companies use social technologies such as social networking and blogs to increase speed in accessing knowledge (Bharati et al., 2015).

For the aforesaid reasons, companies decide to generously invest in IT (Legris et al., 2003) since it is deemed absolutely necessary to look out for new ways to improve productivity and financial performance in the company's endeavor to take on the current fierce competition. IT has become a universal therapy for its capabilities in reducing cost, improving productivity, enhancing quality and empowering companies' competitive edge (Fok et al., 2001). Increasing the level of production without increasing costs leads to enhancing the quality and surviving in the market (Legris et al., 2003). Applying IT in companies increases productivity, reduces costs, improves the product life cycle and then increases the distribution of products (Delić et al., 2014). So, companies are heavily investing in IT to improve performance through communicating with customers, and integrating with partners and suppliers, and improving employee collaborations (Richard and Jothi, 2012).

Quality management and IT applications furnish a very useful base for the improvement of company's performance (Forza, 1995), IT has the capacity and the potential to improve the performance of the individuals and the companies in which computer technology increases the productivity (Igbaria et al., 1998). These applications are utilized for supporting quality management practices through providing feedback and online reviews and facilitating the communication throughout any company (Delić et al., 2014). Online reviews have become a new way for companies to accumulate consumers' feedback to innovate new strategies for product creation and design (Li et al., 2014), in which online consumer reviews are taken as a new marketing tool (Zhu and Zhang, 2010) and it is employed to support several requirements (Charrada, 2016).

In the first instance, determining true options and reviews can help in improving the existing products and in developing new ones (Zheng et al., 2013) as well as representing customers' preferences, and may predict product sales (Zhu and Zhang, 2010). Then again, online review analysis assists in predicting sales volume, implementing targeted markets, and managing customers' relationships. These reviews have become a valuable source for sharing opinions besides having a considerate impact on purchasing decisions (Zheng et al., 2013). Therefore, feedback from customers has tremendous value, for it reflects customer preferences and customer behavior (Jiang et al., 2017). A huge number of online reviews are available over various channels such as discussion forums and stores for mobile applications to name a few (Charrada, 2016). A survey by comScore in 2007, an internet marketing survey, figures out that 24% of internet users search online before purchasing; thusly, many companies take advantage of online customer reviews as a new marketing tool (Zhu and Zhang, 2010).

The engagement of IT in companies requires specific levels of change from management to support such ingenious initiatives in companies (Tallon and Kraemer 2007). These initiatives lead to positive performance in companies (Bresnahan et al., 2002). In the development of IT phases, quality management practices are applied through system development process, system design, construction accuracy, and software quality assurance research (Gorla et al., 2010).

From another angle, internet serves to furnish customers with the needed sources of data, information, communication and entertainment. Moreover, consumers can convey their thoughts and communicate their knowledge via different social network platforms. Internet facilitates the communication process amongst customers themselves and

amongst companies and their customers through the use of new marketing approaches. Unequivocally, Social networks are the main example of this phenomenon, which is derived from IT. Several approaches have been proposed to explain the adoption of new technologies; namely, Technology Acceptance Model (TAM) is the prime example to elucidate such innovations. In the upcoming section, Technology Acceptance Model (TAM) is further discussed; it has become popular because it anticipates the acceptance of the new technologies ranging from software packages to various online services in companies (Evans et al., 2014), and it is convenient for companies who adopt SM in their businesses more than any other technologies.

### 2.4.2 Technology Acceptance Model (TAM)

TAM is developed by Davis (1989); it contributes to provide an insight of how marketers in companies utilize IT in their quest with information (Stone et al., 2007), whilst information is counted as an invaluable asset, it provides advantages and enriches managerial capabilities through decision making and enhancing the efficiency of the company (Good and Stone, 1995).

TAM constructs are twofold: Perceived Usefulness (PU) and Perceived Ease of Use (EU) (Pinho and Soares, 2011). PU is originally defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Hajli, 2013) whereas (EU) is established as "the degree to which a person believes that using a particular system would be free of effort" (Evans et al., 2014). One of the ways TAM could express is to predict consumer behavior (Hajli, 2013), it provides perceptions to users on how they will perform their tasks using information system. Perceptions of EU and the usefulness received affect users' attitudes toward system, which in turn impacts perceived company performance (Stone

et al., 2007). As stated by Pinho and Soares (2011), EU contributes to better performance because of the positive relationship between EU and PU. PU has more effect than EU to use social networks, and users would adopt the new technologies to achieve promotions and rewards. Hajli (2014) explains in a study that has done by using TAM to demonstrate the role of SM in the interaction process with consumers which leads to build trust and increase the intention to buy.

### 2.5 ICT Sector in Palestine

ICT sector has become an economic driving force in the developed countries due to its outstanding contributions in the production process. Whereas the Palestinian ICT sector is in the growing level still, it has been noted that the number of companies and labor force are enormously expanding. In addition, this sector has achieved some goals; it has managed to provide the internet and fixed line services to reach all the consumers and provide better top-notch services.

This sector officially saw the light in the 1980s; the breakthrough inception was through trading and selling computers and some electronic parts. Afterwards, this has been culminated when the Palestinian National Authority (PNA) came in 1993; since this, the ICT sector has been privatized, and much specifically when the Palestinian Telecommunications company (PALTEL) was founded in 1997. PALTEL provides best-of-breed top-notch the fixed line and the internet services among others.

The Palestinian ICT sector plays a vital role in expediting development and growth. It is recognized as a prime mover for the Palestinian economy in addition to being a strong contributor and a largely significant influence on the infrastructure development and the rapid growth. Furthermore, the ICT sector contributes generously to the Palestinian GDP, and it also has become one of the most important indicators of economic progress

(Tucker, 2012) due to the great number of employees who work in this sector. Briefly, the private sector used to have around 3% of the Palestinian workforce as employees in 2013 while it now employs more than 65% of labor force (Morrar et al., 2019). The employees are very productive, and they contribute more than 8% to the Palestinian GDP; the annual market growth is approximately 25% and the estimated market size is$500-638 million (Corps, 2013). The current ICT Palestinian sector has 180 companies, with 9200 employee approximately. It is counted vital to point out that 50% of the Palestinian ICT companies comprise hardware distributors, telecommunications companies and ICT consulting and training. As for the second 50%, it operates in software development and online services. The table below shows that the number of employees and companies of the ICT sector according to the statistics from PCBS.

Table 4: Number of Employees and Companies of the ICT Sector

| Value Added | Production | No. of Employees | No. of Companies | Year |
|---|---|---|---|---|
| 180.2 | 239.7 | 5,252 | 628 | 2000 |
| 165.8 | 182.8 | 4,160 | 479 | 2001 |
| 140.2 | 154.2 | 3,720 | 469 | 2002 |
| 165 | 186.6 | 4,329 | 444 | 2003 |
| 185 | 204.4 | 5,860 | 649 | 2004 |
| 112 | 146.8 | 6,002 | 619 | 2005 |
| 241.5 | 288.6 | 6,239 | 598 | 2006 |
| 267.7 | 306.5 | 1,211 | 448 | 2007 |
| 289.8 | 312.3 | 8,492 | 1140 | 2008 |
| 380.2 | 447.8 | 9,568 | 1169 | 2009 |
| 408.6 | 454.8 | 4,377 | 446 | 2010 |
| 441 | 501.8 | 5,418 | 500 | 2011 |
| 468.3 | 544.5 | 6,792 | 597 | 2012 |
| 452.7 | 632.7 | 7,616 | 591 | 2013 |
| 436.9 | 694 | 6,898 | 605 | 2014 |
| 538553.4 | 672734.2 | 8,815 | 677 | 2018 |

The Palestinian ICT sector is gaining growth and recognition in the Palestinian territory and around the world in view of the fact that this sector has the potential and capacity to secure sustainable growth as mentioned in the second issue of PITA monthly newsletter in 2019. Similarly, it has been evolved over the last decade, in which the number of companies have been vividly increased, and so did the number of companies that depend on this lively sector (Morrar and Gllouj, 2016). Morrar et al., (2019) state that companies are more productive with ICT intensive tools than companies with less ICT tools; the use of mobile phone also improves the productivity in services companies. A survey conducted in line with (PCBS) in 2011 aims to measure the extent of utilizing the ICT tools in the Palestinian companies, and to determine the extent of progress of the economic growth throughout the revolution of ICT Palestinian sector. The results are depicted in Table 5 below.

Table 5: The Percentage of Utilizing the ICT Tools in ICT Companies

| ICT Tools | West Bank | Gaza |
|---|---|---|
| **Usage of Internet** | 41.30% | 34% |
| **Telecommunications** | 37.30% | 50.30% |
| **Computer** | 19.90% | 9% |
| **Laptop** | 31.60% | 22.20% |
| **iPad** | 19.80% | 14.30% |
| **Smart Phone** | 89.80% | 75.50% |
| **Internet at Home** | 60.60% | 38% |
| **Television** | 30.40% | 55.90% |
| **Smart TV (LCD, LED)** | 75.30% | 36.40% |
| **Satellite** | 94.30% | 84.10% |
| **Fixed Line** | 40.10% | 23.70% |
| **Cellular Connection** | 97.20% | 95.70% |

The aforementioned table elaborates the percentage of using of ICT tools in the WB and Gaza. The percentages indicate that the ICT companies are keen on developing and nourishing through the usage of the ICT tools. In addition, the number of users in cellular connections has increased to reach 4.2 million at the end of 2019 though it did not exceed 2.6 million by the end of 2010. This vividly means that there is an increase of 63%. Besides, the average number of mobiles reached to 85 per 100 people around the end of 2019 comparatively with 65 mobiles per 100 people at the end of 2010.

Table 6 below explicates the development in the number of user's subscribers in both of fixed-line and cellular connections from 1996 till 2015 as mentioned in the statistics in (**PCBS).**

Table 6: Number of Users of Fixed Lines and Cellular Connections (1996-2015)

| Year | **1996** | **2000** | **2004** | **2008** | **2011** | **2012** | **2013** | **2015** |
|---|---|---|---|---|---|---|---|---|
| **Number of Fixed line** | 83,621 | 272,211 | 271,458 | 354,804 | 382,700 | 393,880 | 403,025 | 406,500 |
| **Number of Cellular Connections** | 24,238 | 85,000 | 436,628 | 1,314,406 | 2,884,964 | 3,190,233 | 3,267,819 | 3,531,000 |
| **Number of users of cellular connections per 100** | 1 | 3 | 13 | 34 | 69 | 74 | 74 | 78 |

Additionally, companies that use internet for sending and receiving e-mails and dealing with other companies is 47.2%, and 38.6% for searching information of products and services, and 11.5% for purchasing and providing services for customers (PCBS, 2009). The successful adoption and implementation of TQM practices generate more effective performance in ICT companies in Palestine **(**Maitah et al., 2014), since the adoption of TQM practices in ICT sector in Palestine is vital and effective, it is absolutely necessary

for these companies to adopt these practices to improve the overall performance. Also, the adoption of electronic commerce is a consequential apparatus for business growth in the ICT companies in Palestine, and to inspire other companies to invest in the e-commerce to increase their potential of rapid growth and development (Herzallah and Mukhtar, 2015). Rabayah and Qalalwi (2011) believe that the use of ICT and the mobile phones in the Palestinian companies positively affects the productivity, the internal processes and the relations with customers and suppliers.

## 2.6 Chapter Summary

SM platforms are changing the face of business worldwide whether on the level of performance, marketing, productivity, quality or even the sales volumes. The development of SM allows companies to employ SM networks effectively, efficiently and fruitfully. This chapter crystallizes the benefits of SM and TQM as well as the correlation between them. The prime goal of this thesis is to investigate the relationship between the use of SM on TQM practices in the ICT companies in Palestine through distributing a questionnaire, which is discussed in the upcoming chapter that targets to furnish a comprehensive overview of the research methodology.

# Chapter Three: Research Methodology

## 3.1 Overview

This chapter puts forward a comprehensive overview of the research methodology, research approach, research population and sample size calculation, data collection tools, survey design, reliability, validity, and finally data analysis approach.

## 3.2 Types of Research

The utmost purpose of identifying the research genre, which is the research design, is to set a solid foundation to successfully investigate, address and answer all aforesaid research questions. There are three types of research (Collis and Hussey, 2013).

- **Exploratory Research:**

Neelankavil (2015) confirms that the goal of the exploratory research is to formulate the problem and hypotheses in addition to developing and answering the research questions. It is the sole source when the data are hard to obtain, and scarce to be found.

- **Descriptive Research:**

This genre is primarily used to characterize the current and the existing phenomenon while it is still in the process of study through collecting the available sources of data (Atmowardoyo, 2018). It is based on improving practices and tackling problems through observation and description (Koh and Owen, 2000). The most common and used tool for data collection is survey and observation (Nassaji, 2015).

- **Explanatory Research**

This type of research is traced beyond the conventional scope of description. It encompasses the process of explaining and analyzing the root-cause of how a particular issue is happening, measuring causal relationships among them, and determining how events may affect certain outcomes (Collis and Hussey, 2013).

For this particular research, the study research approach adopts an explanatory methodology; in other words, it explains a unique phenomenon through a questionnaire to study the effect of using SM on TQM practices in ICT organizations in Palestine.

## 3.3 Research Approach

Research approach is a systematic procedure meant to address the research questions. It inaugurates with general assumptions and ends up with detailed methods of data collection, analysis and interpretations. The procedures are the very core of research design; on the other hand, research methods are based on the research problem (Creswell and Creswell, 2017).

Undeniably, using improper procedures and opting for inappropriate research approach result in unreliable findings, and harmful recommendations (Atmowardoyo, 2018). Thus, according to Creswell (2012), there are three main research approaches:

- **Qualitative Research Approach**

The focal point of concentration for this type of research is the situation in it's entirely. It necessitates detailed explanation and observation, and it is interpretative too

(Ochieng, 2009). It is built on profound understanding of the problem and the whole aspects without numerical data (Queirós et al., 2017).

- **Quantitative Research Approach**

This kind of research seeks to examine the reciprocal relationship among variables which represents an attribute or a characteristic of the targeted population (Creswell, 2012). It is empirical since the samples are generally representative, and the results are taken if they constitute a sufficient view of the entire population (Queirós et al., 2017). The data is numerical and analyzed through special software and statistics (Saunders, 2011).

- **Mixed Method Research Approach**

Creswell and Creswell (2017) define the mixed method approach as combined approaches between quantitative and qualitative approaches. It bridges the gap between both approaches (Onwuegbuzie and Leech, 2006). This type of approaches takes longer time and reveals more solid results than using any other approach independently (Malina et al., 2011). For the thesis in hand, the quantitative research approach is adopted, and it is meant to investigate the interconnection between variables via conducting a research that involves collecting and analyzing data accumulated through a questionnaire. Moreover, the quantitative approach is essential to explain a special phenomenon by collecting numerical data, and formulating questions designated to be answered using quantitative methods (Sukamolson, 2007). Pursuant to Queirós et al., (2017), the quantitative approach collects data systematically and objectively through adopting formal instruments and well-structured procedures. Besides, it is appropriate because the sample of quantitative data represents the population whilst the qualitative

approach utilizes smaller sample size. This, eventually, leads to inaccuracy and generalizability (Rahman, 2017).

Similarly, qualitative approach targets to extensively understand the various dimensions of the problem under analysis focusing on the interpretation of the aspects of reality. This means that it is not specialized with numerical data. For this reason, it heavily consumes time, and does not provide objectively verifiable results (Saunders, 2011). On the other hand, the quantitative research has a short time frame, but it is insufficient in terms of human perceptions and resources required for large scale research (Choy, 2014).

### 3.4 Research Methodology Diagram

Figure 3.1 demonstrates the steps that the research mainly consists of. They are as follows:

Reviewing the literature, formulating the research hypotheses, objectives and the questions, developing the research methodology, developing the study population, developing the data collection tools, analyzing the data and finally drawing results and recommendations.

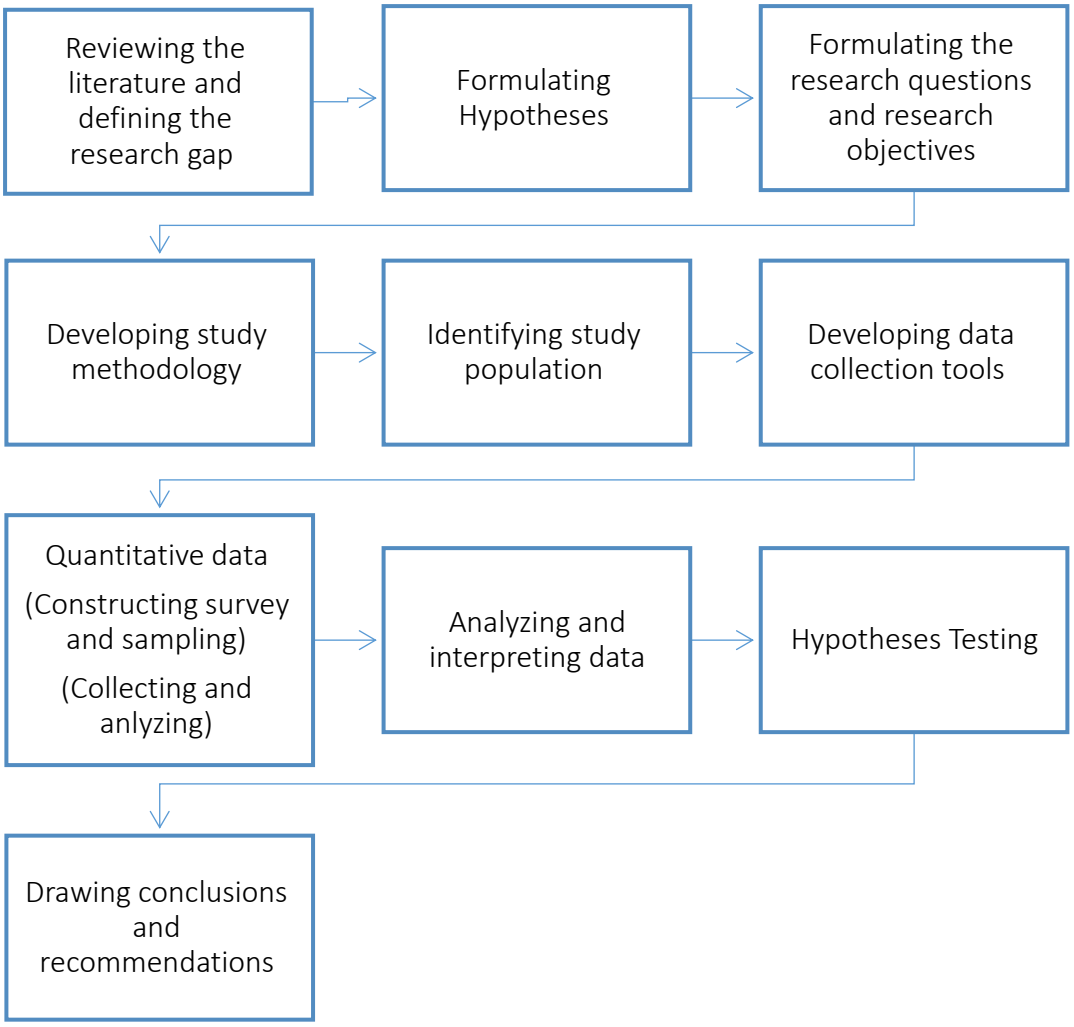


Figure 3.1: Research Methodology Diagram.

### 3.5 Research Population and Sample Size

The study population comprises of Information and Communication (ICT) companies and firms operating in Palestine in both of WB & Gaza. Palestinian ICT sector includes 180 companies operating according to the regulations of the Palestinian Information Technology Associations of Companies (PITA).

Some terms have been established to data collected that reflects the questions and the objectives of the research. Thus, only organizations that meet these terms will be included in the population. These terms are:

1. The organization must be enlisted in the Palestinian Information Technology Associations of Companies (PITA).
2. The organization must be legally registered and licensed to work in Palestine.
3. The organization must be registered under IT as field of expertise.
4. The organization must have a well-established organizational structure.

Based on the above terms, 180 organizations met these terms. Determining sample size is very important to generalize and reflect the results to whole population specifically, the needed sample size is calculated using the formula of Thompson (2012):

$$n = \frac{N \times p(1-p)}{([N-1 \times (d^2 \div z^2)] + p(1-p))}$$

where:

n: Sample size.

N: Population size (180).

z: Confidence level at 95% (1.96).

d: Error proportion (5%).

While using the above equation to calculate the sample size for the population of 180, it is found that the needed sample size is n = 120.

### 3.6 Data Collection Tools

There are two categories of data; namely: primary and secondary. Most of all, primary data are collected using procedures that fit the very research problem. It is best known to the first-hand source such as surveys (Hox and Boeije, 2005). On the other hand, secondary data is the already-collected data from previous research for purpose of research problem (Sarstedt and Mooi, 2014). It is less expensive and more prompt than primary data (Mulhern, 2010).

For research in hand, data are obtained from both channels. The primary data depicted in the use of a survey, which will be among a specific target group. As a consequence, this type of data is counted as the core of the study. As for the secondary data, they have a potent effect in designing the survey and creating the questions; they are included in the research in the literature review that is accumulated from e-books, articles, reports, and previous similar researches.

#### 3.6.1 Survey

Survey is defined as a systematic tool designated for gathering information needed to understand some aspects of the behavior of the population that will yield in a more accurate analysis (Sukamolson, 2007). It is an effectual tool that can be managed personally or electronically (Harrell and Bradley, 2009). Consequently, it is less expensive and more time-efficient than any other tools such as focus group and interviews (Sekaran and Bougie, 2016).

In pursuing this research, and as part of the survey, a well-designed and corroborated questionnaire was distributed amongst the respondents from the ICT Palestinian organizations, to gather the required data and information pertinent to the study.

### 3.6.2 Survey Design and Structure

The questions of the survey were formulated based on the literature review. Then, the first copy of the questionnaire was sent to specialists and academics who have wide experience in SM and quality management to guarantee the validity of the questionnaire. Appendix A includes the details of the experts who substantiated the questionnaire. The questionnaire commences with an introduction elaborating the purpose of the research, the expected time to fill the questionnaire, and confirmation on the privacy of the responses. After the introduction, the questionnaire contains the three main sections. First section, includes four questions. This section is intended to collect general demographic information about the organization, such as organization's size and the number of employees. Second section consists of seven questions. This section addresses to measure to what extent organizations use SM and depend on to enhance the organization performance. A five-point Likert scale from 1 (strongly agree) to 5 (strongly disagree) was used to measure respondents' answers. Third section includes seven subsections. These subsections tackle the TQM practices in the ICT organizations. More specifically, such practices encompass the main principles of TQM, namely, customer focus, relationship management, leadership, continuous improvement, employee involvement, process management, quality planning. Each subsection has from 2 to 5 questions to measure to what extent the use of SM affects TQM practices using five-point Likert scale from 1 (strongly agree ) to 5 (strongly

disagree). Appendix (B) includes both Arabic and English versions of the final validated draft of the questionnaire.

To ensure the consistency of the data, Cronbach Alpha was used to measure the reliability which is "the degree to which the measure of a construct is consistent and dependable" (Bhattacherjee, 2012). Cronbach Alpha is widely used to measure the internal consistency and the reliability between items. It is also called coefficient alpha (Heo et al., 2015).

### 3.7 Data Analysis Approach

This section explicates the methods and the techniques used to dissect the data obtained and convert it to useful information to that eventually constitutes the overall final results. After online questionnaires were distributed, and the answers exported to an Excel sheet, the SPSS software was used to analyze the gathered data, which will be analyzed statistically via Regression.

Regression is an influential statistical method to define the relationship between two or more variables. It takes the lead in the interpretation of quantitative studies (Twomey and Kroll, 2008), and the specification of the relationships between variables particularly when having cause and effect relations (Uyanık and Güler, 2013).

In the research under consideration, the relationships between variables are keenly studied. The core of regression method is to determine and understand how a variable control other variables (Jeon, 2015). Therefore, regression could be a powerful tool to analyze the collected data. Consequently, the purpose of using regression identified as the following:

1. To figure out the independent variables affecting the dependent variable.

2. To determine relationship between independent and dependent variables. If independent variables change, the researcher figures out the amount of changes in dependent variable.
3. To estimate the dependent variables according to the changes of a set of independent variables.

### 3.8 Ethical Considerations

Ethical concerns are considered during the development of this research as it is based on the values of ethical considerations. The researcher adheres to upload high standard of integrity and accountability to act according to the core values and guiding principles of the research through ensuring the principle of transparency. Therefore, the researcher announces in the first section of the questionnaire that the taken information is just for the scientific research purposes, and will not be used or distributed for other reasons (Appendix B). In addition, all the questionnaires had been collected without mentioning names or references. All the answers and results are confidentially stored.

Chapter four includes comprehensive, descriptive, inferential and statistical analysis of the collected data.

# Chapter Four: Analysis and Findings

## 4.1 Overview

After the required data have been obtained, data analysis is conducted based on the methodology mentioned in the previous chapter using (SPSS) software. This chapter presents the descriptive analysis, testing the hypotheses and assessing the assessment of utilizing SM on TQM practices in ICT companies. In the first section, Cronbach Alpha is tested; subsequently, the thesis presents the demographic characteristics, the percentage, the frequency, the mean and the standard deviation of the company type, number of active employees, the age of the company and the SM used in the company. Then, measuring the level of utilization of SM, to what extent companies use SM and how they harness this usage, followed by testing the hypotheses through using regression. That said, the study determines the current situation of using SM and its effect on TQM practices in Palestinian ICT companies.

## 4.2 Questionnaire Analysis

A questionnaire is used to accumulate the quantitative data, which is designated by the means of online forms. Afterwards, they were distributed via e-mail among the executives of each company. All respondents replies are labelled as anonymous and kept in a database. The variables are coded next and defined into SPSS program. The first test intends to test the reliability of the questionnaire while Cronbach Alpha method aims to test the consistency criterion. Besides, many statistical analytical tools are employed to investigate the relations between elements such as Pearson and Spearman tests.

Appertaining to the result of Cronbach Alpha in Table 7, the Cronbach Alpha coefficients are 0.888 and 0.928 for SM and TQM practices, respectively. Therefore, the reliability criterion for survey elements are above 70%, which is considered as excellent.

Table7: Reliability Statistics

| Items | No. of Items | Cronbach's Alpha |
|---|---|---|
| Social Media | 7 | 0.888 |
| Customer Focus | 5 | 0.916 |
| Relationship Management | 3 | 0.807 |
| Leadership | 3 | 0.91 |
| Continuous Improvement | 3 | 0.9 |
| Employee Involvement | 3 | 0.72 |
| Process Management | 2 | 0.894 |
| Quality Planning | 4 | 0.849 |
| Total Quality Management Practices | 23 | 0.928 |

### 4.3 Characteristics of the Participating ICT Companies in Palestine

Throughout the current section, the demographic characteristics in terms of company type, number of employees, age and SM used of the target companies are put forward. Descriptive analysis is concretely conducted to identify frequency, percentage and the standard deviation of each demographic variable**.**

#### 4.3.1 Descriptive Analysis of Demographic Characteristics

Per the descriptive analysis, 34.3% of responded companies work in ICT Software Solutions whereas 31.4% specialized in Hardware Solutions, and 27.5% in Telecommunications. From another point of view, ICT companies which work in Advanced Training constitute around 9%. With respect to the number of employees, companies which have number of employees less than 50 establish around 83.3%. As for the companies which have number of employees more than 50 compose around

16%. Additionally, companies which have been in the market for more than 10 years constitute 69.6% and 30% for companies below the 10-year market experience. It is found as well that the most common type of SM used by the surveyed ICT companies is Facebook with 19.6%, WhatsApp with 16.7%, or both with 27.9%. On the other hand, companies which use Instagram and Facebook are 3.9% whereas companies which use all types of SM are 9.8%. Table 8 demonstrates the descriptive analysis of the participating ICT companies.

Table 8: Descriptive Analysis of the Participating ICT Companies

| Variable | Categories | Frequency | Percent % |
|---|---|---|---|
| **Company Type** | Telecommunications. | 28 | 27.5 |
| | ICT Equipment And Hardware Solutions. | 32 | 31.4 |
| | ICT Software Solutions Markets. | 35 | 34.3 |
| | ICT Advanced Training. | 4 | 3.9 |
| | All. | 3 | 2.9 |
| **Number of Employees** | Less than 10 | 34 | 33.3 |
| | 10 – 50 | 51 | 50 |
| | 51 -250 | 13 | 12.7 |
| | More than 250 | 4 | 3.9 |
| **Company Age** | Less than 5 | 11 | 10.8 |
| | 5-10 | 20 | 19.6 |
| | More than 10 | 71 | 69.6 |
| **Social Media Used** | FaceBook | 20 | 19.6 |
| | Instagram | 1 | 1 |
| | WhatsApp | 17 | 16.7 |
| | Facebook + WhatsApp | 28 | 27.5 |
| | Email | 6 | 5.9 |
| | Skype | 6 | 5.9 |
| | Facebook +Instagram | 4 | 3.9 |

| | | | |
|---|---|---|---|
| | Facebook + Twitter + WhatsApp+ Instagram | 10 | 9.8 |
| | All Types of Social Media | 10 | 9.8 |

### 4.4 Descriptive Analysis of SM Utilization

Descriptive analysis carried out for SM utilization is presented hereof. More accurately, the descriptive analysis including frequency, percentage, means and standard deviation for all of the statements are presented in Table 9. It is vividly obvious that that most used practices in the Palestinian ICT companies are the social network platforms as a marketing tactic for their products and services. This purpose has also been followed by another endeavor by companies to monitor their customers and obtain direct and honest feedback from them so that they can enhance their performance and improve the image of the company locally and globally.

On the contrary, the least used practice is adopting SM as an official channel for communicating with customers, handling complaints, and for customizing one or more job titles related to SM.

Table 9: Descriptive Analysis of Social Media Utilization

| Social Media (SM) | Strongly Agree n (%) | Agree n (%) | Neutral n (%) | Disagree n (%) | Strongly Disagree n (%) | Mean (rank) | Standard Deviation |
|---|---|---|---|---|---|---|---|
| The company uses SM to promote its products and services | 48(47.1) | 42(41.2) | 10(9.8) | 1(1.0) | 1(1.0) | 4.32 | 0.77 |
| The company takes advantage of SM by obtaining feedback from (likes, publishing, | 33(32.4) | 47(46.1) | 14(13.7) | 7(6.9) | 1(1.0) | 4.02 | 0.91 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| and following-up from Facebook and Instagram) | | | | | | | |
| "The company adopts SM as an official channel for communicating with customers and handling complaints and suggestions" | 25(24.5) | 25(24.5) | 22(21.6) | 28(27.5) | 2(2.0) | 3.42 | 1.18 |
| "The company allocates part of the material and human resources to follow the company's SM (there is one or more job titles related to SM" | 18(17.6) | 45(44.1) | 17(16.7) | 18(17.6) | 4(3.9) | 3.54 | 1.09 |
| The company uses SM to create new markets to help spread the company globally | 22(21.6) | 54(52.9) | 16(15.7) | 8(7.8) | 2(2.0) | 3.84 | 0.92 |
| The company uses SM to reach the target segments accurately and thus achieve more efficiency and effectiveness in marketing and performance | 34(33.3) | 44(43.1) | 11(10.8) | 12(11.8) | 1(1.0) | 3.96 | 1 |
| "The company employs all options and services provided by SM such as: statistics for followers, Messenger bot, funded advertisements, or artificial intelligence technologies." | 19(18.6) | 41(40.2) | 24(23.5) | 17(16.7) | 1(1.0) | 3.59 | 1 |
| **Total** | Grand Mean = 3.81 | | | Standard Deviation = .76 | | | |

### 4.5 Descriptive Analysis of TQM Practices

In this section, descriptive analysis conducted for all of TQM practices is presented. More explicitly, the descriptive analysis include frequency, percentage, mean and standard deviation of all of statements.

#### 4.5.1 Descriptive Analysis of Customer Focus Practice

The descriptive analysis for each of the statements of customer focus practice in ICT companies in Palestine are presented in Table 10. Companies show higher concerns

regarding raising the awareness and knowledge of customers about the company's products, followed by reaching out to new customers and expanding the work through SM platforms, and then companies will be able to obtain customer feedback on SM. On the flip side, these companies present lower concern regarding creating and updating a database of its customers and developing its relationship with them through ongoing communication via SM.

Table 10: Descriptive Analysis of Customer Focus Practice in ICT Palestinian Companies

| Customer Focus | Strongly Agree n (%) | Agree n (%) | Neutral n (%) | Disagree n (%) | Strongly Disagree n (%) | Mean (rank) | Standard Deviation |
|---|---|---|---|---|---|---|---|
| The company uses SM to increase awareness and knowledge of customers about the company's products, especially new ones | 38(37.3) | 54(52.9) | 5(4.9) | 4(3.9) | 1(1.0) | 4.22 | 0.79 |
| The company seeks to reach new customers and expand the work through SM | 33(32.4) | 56(54.9) | 8(7.8) | 4(3.9) | 1(1.0) | 4.14 | 0.79 |
| The company regularly collects customer feedback on SM | 21(20.6) | 54(52.9 | 18(17.6) | 8(7.8) | 1(1.0) | 3.84 | 0.87 |
| The company develops its relationship with customers through continuous communication with them through SM | 18(17.6) | 55(53.9) | 15(14.7) | 13(12.7) | 1(1.0) | 3.75 | 0.93 |
| The company works to create and update a database of its customers via SM | 17(16.7) | 38(37.3) | 31(30.4) | 14(13.7) | 2(2.0) | 3.53 | 0.99 |
| **Total** | **Grand Mean = 3.89** | | | **Standard Deviation = .7** | | | |

### 4.5.2 Descriptive Analysis of Relationship Management Practice

The descriptive analysis for each of the statements of relationship management practice in ICT companies in Palestine are elucidated in Table 11. Companies demonstrate higher concerns regarding tracking SM platforms and channels of local and global competitors to view their products, followed by enhancing communication with partners through SM, and then selecting suppliers through the information available online.

Table 11: Descriptive Analysis of Relationship Management practice in ICT Palestinian Companies

| **Relation Management** | **Strongly Agree n (%)** | **Agree n (%)** | **Neutral n (%)** | **Disagree n (%)** | **Strongly Disagree n (%)** | **Mean (rank)** | **Standard Deviation** |
|---|---|---|---|---|---|---|---|
| The company uses SM to enhance its communication with its partners (suppliers, society, and shareholders) | 13(12.7) | 52(51.0) | 24(23.5) | 12(11.8) | 1(1.0) | 3.63 | 0.88 |
| The company tracks SM and channels of local and global competitors to see their products | 26(25.5) | 61(59.8) | 9(8.8) | 6(5.9) | 0 | 4.05 | 0.76 |
| The company seeks to select suppliers through the information available on them on SM | 7(6.9) | 37(36.3) | 38(37.3) | 19(18.6) | 1(1.0) | 3.29 | 0.88 |
| **Total** | **Grand Mean = 3.65** | | | **Standard Deviation = .63** | | | |

### 4.5.3 Descriptive Analysis of Leadership Practice

The descriptive analysis for each of the statements of leadership practice in ICT companies in Palestine are presented in Table 12. Companies show higher concerns regarding understanding the importance of using SM, and seeking to support and reward employees for their involvement in SM to achieve business goals. At the other

end, these senior management companies manifest lower concern in terms of their responsibility for SM shares, suggestions and ideas.

Table 12: Descriptive Analysis of Leadership Practice in ICT Palestinian Companies

| Leadership | Strongly Agree n (%) | Agree n (%) | Neutral n (%) | Disagree n (%) | Strongly Disagree n (%) | Mean (rank) | Standard Deviation |
|---|---|---|---|---|---|---|---|
| The senior management of the company understands the importance of using SM | 38(37.3) | 55(53.9) | 6(5.9) | 2(2.0) | 1(1.0) | 4.25 | 0.73 |
| Senior management seeks to support and reward employees for their involvement in SM to achieve business goals | 27(26.5) | 66(64.7) | 7(6.9) | 1(1.0) | 1(1.0) | 4.15 | 0.66 |
| Senior management responsible for sharing suggestions and ideas | 16(15.7) | 57(55.9) | 24(23.5) | 3(2.9) | 2(2.0) | 3.8 | 0.88 |
| Total | **Grand Mean = 4.06** | | | **Standard Deviation = .63** | | | |

### 4.5.4 Descriptive Analysis of Continuous Improvement Practice

The descriptive analysis for each of the statements of continuous improvement practice in ICT companies in Palestine are depicted in Table 13. Companies show higher concerns regarding the use of SM to improve its overall performance in general or to develop its existing products or new products, in addition to enhancing the quality of its products by taking into account the feedback of customers on SM. On the contrary, these companies show lower concern regarding taking into consideration SM feedback to reduce the existing errors and address the complaints published in these platforms**.**

Table 13: Descriptive Analysis of Continuous Improvement Practice in ICT Palestinian Companies

| Continuous Improvement | Strongly Agree n (%) | Agree n (%) | Neutral n (%) | Disagree n (%) | Strongly Disagree n (%) | Mean (rank) | Standard Deviation |
|---|---|---|---|---|---|---|---|
| The company uses SM to improve its performance in general or to develop its existing products or new products | 15(14.7) | 61(59.8) | 19(18.6) | 6(5.9) | 1(1.0) | 3.81 | 0.79 |
| The company takes advantage of SM to reduce the existing errors and address complaints in these networks | 16(15.7) | 51(50.0) | 28(27.5) | 6(5.9) | 1(1.0) | 3.74 | 0.83 |
| The company improves the quality of its products by studying customer feedback on SM | 20(19.6) | 52(51.0) | 22(21.6) | 7(6.9) | 1(1.0) | 3.81 | 0.86 |
| Total | **Grand Mean = 3.78** | | | **Standard Deviation = .7** | | | |

### 4.5.5 Descriptive Analysis of Employee Involvement Practice

The descriptive analysis for each of the statements of employee involvement practice in ICT companies in Palestine are presented in Table 14. Companies show higher concerns regarding creating an internal communication platform for employees across social networks so as to enhance communication and interaction amongst them, to generalize a culture of quality and its goals "Unity of Purpose", and to motivates the employees to interact with the ads and posts on SM to achieve better results. Conversely, these companies evince lower concern regarding making benefit of employees' personal accounts to reach out to customers in an attempt to address their urging problem.

Table 14: Descriptive Analysis of Employee Involvement Practice in ICT Palestinian Companies

| Employee Involvement | Strongly Agree n (%) | Agree n (%) | Neutral n (%) | Disagree n (%) | Strongly Disagree n (%) | Mean (rank) | Standard Deviation |
|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Company employees use their personal accounts to communicate with customers and solve problems that they may reach or are referred to and related to their company | 10(9.8) | 24(23.5) | 17(16.7) | 42(41.2) | 9(8.8) | 2.84 | 1.1 |
| The company creates an internal communication channel for employees across social networks to enhance communication and interaction and to generalize a culture of quality and its goals "Unity of purpose" | 22(21.6) | 56(54.9) | 15(14.7) | 8(7.8) | 1(1.0) | 3.88 | 0.87 |
| The management motivates its employees to interact with its ads and posts on SM to obtain better results | 19(18.6) | 60(58.8) | 16(15.7) | 6(5.9) | 1(1.0) | 3.88 | 0.81 |
| **Total** | **Grand Mean = 3.53** | | | **Standard Deviation = .6** | | | |

### 4.5.6 Descriptive Analysis of Process Management Practice

The descriptive analysis for each of the statements of process management practice in ICT companies in Palestine are presented in Table 15. Companies indicate higher concerns regarding having expertise and competencies in the research and development department within the company, which are capable of keeping pace with rapid changes in the technology arena followed by planning to improve the overall performance on SM.

Table 15: Descriptive Analysis of Process Management Practice in ICT Palestinian Companies

| Process Management | Strongly Agree n (%) | Agree n (%) | Neutral n (%) | Disagree n (%) | Strongly Disagree n (%) | Mean (rank) | Standard Deviation |
|---|---|---|---|---|---|---|---|
| The company has expertise and competencies in the research and development department within the company capable of keeping pace with rapid changes in advanced technology | 33(32.4) | 55(53.9) | 7(6.9) | 6(5.9) | 1(1.0) | 4.11 | 0.84 |
| The company is planning to improve performance on SM | 19(18.6) | 70(68.6) | 8(7.8) | 4(3.9) | 1(1.0) | 4 | 0.71 |
| **Total** | **Grand Mean = 4.05** | | | **Standard Deviation = .68** | | | |

### 4.5.7 Descriptive Analysis of Quality Planning Practice

The descriptive analysis for each of the statements of quality planning practice in ICT companies in Palestine are presented in Table 16. Companies establish higher concerns regarding having constant monitoring on the level of product quality in comparison with pursuing to offer best-of-breed cost-effective products and services through SM, try to offer sufficient information to the customer to help in taking the purchasing decision, or seek to search for catchy and appealing products or services to the customer before displaying them on SM.

Table 16: Descriptive Analysis of Quality Planning Practice in ICT Palestinian Companies

| Quality Planning | Strongly Agree n (%) | Agree n (%) | Neutral n (%) | Disagree n (%) | Strongly Disagree n (%) | Mean (rank) | Standard Deviation |
|---|---|---|---|---|---|---|---|
| The company seeks to offer products or services that offer the lowest price discounts and offers through SM | 30(29.4) | 43(42.2) | 19(18.6) | 9(8.8) | 1(1.0) | 3.9 | 0.96 |
| The company seeks to offer enough information to the customer to help in purchasing decision through SM | 23(22.5) | 53(52.0) | 19(18.6) | 6(5.9) | 1(1.0) | 3.9 | 0.85 |
| The company seeks to search for products or services of interest to the customer before displaying them on SM | 17(16.7) | 60(58.8) | 21(20.6) | 3(2.9) | 1(1.0) | 3.9 | 0.75 |
| The company constantly monitors the level of product quality | 38(37.3) | 57(55.9) | 6(5.9) | 1(1.0) | 0 | 4.3 | 0.62 |

| | | |
|---|---|---|
| **Total** | **Grand Mean = 3.99** | **Standard Deviation = .60** |
| **Total TQM Practices** | **Grand Mean = 3.85** | **Standard Deviation = 0.51** |

### 4.6 Testing the Hypotheses

This part provides a hypothesis testing by using simple linear regression to investigate the assessment of utilization of SM on TQM practices as well as its sub dimensions in ICT Palestinian companies. The study in hand comprises of one main hypothesis and seven sub-hypotheses enlisted as follows:

**First Hypothesis**

H0: there is no statistical evidence confirming that there is a correlation between SM and *TQM practices* in Palestinian ICT companies at 5% level of significance.

In an effort to test this hypothesis, the SM assessment on TQM practices ought to be tested in order to check if H0 is supported or not. Plus, the simple linear regression test has been carried out to investigate the assessment of SM on TQM practices at significant level $\alpha$=0.05. The results are enlisted inside Table 17.

As for the prime hypothesis that TQM practices have a strong positive correlation with SM (R=0.816) and ($R^2$=66.6%) of variance of TQM have been explained by SM. Despite that, the B coefficient (B= 0.562) and its statistical significance (p <0.001) which means increasing the use of SM by one unit, and this will eventually lead to increasing TQM practices by (0.562) unit in Palestinian ICT companies.

We can conclude that the SM is a significant predictor for TQM practices in Palestinian ICT companies. In view of this, the null hypothesis (H0) is rejected. Then:

$$TQM = 1.713 + 0.562\ SM.$$

**Second Hypothesis**

H0-1: there is no statistical evidence confirming that there is a correlation between SM and *customer focus* in Palestinian ICT companies at 5% level of significance.

In an effort to test this hypothesis, the SM assessment on customer focus ought to be tested in order to check if H0-1 is supported or not. Plus, the simple linear regression test has been carried out to investigate the assessment of SM on customer focus at significant level $\alpha=0.05$. The results are enlisted inside Table 17.

The customer focus has a strong positive correlation with SM ($R=0.789$) and ($R^2=62.2\%$) of variance of customer focus has been explained by SM. Despite that, the B coefficient ($B= 0.744$) and its statistical significance ($p<0.001$) means increasing the use of SM by one unit, which will eventually lead to increasing customer focus by (0.744) unit in Palestinian ICT companies.

We can conclude that the SM is a significant predictor for customer focus in Palestinian ICT companies. In view of this, the null hypothesis (H0-1) is rejected. Then:

$$Customer\ focus = 1.056 + 0.744\ SM.$$

**Third Hypothesis**

H0-2: there is no statistical evidence confirming that there is a correlation between SM and *relationship management* in Palestinian ICT companies at 5% level of significance.

In an effort to test this hypothesis, the SM assessment on relationship management ought to be tested in order to check if H0-2 is supported or not. Plus, the simple linear

regression test has been carried out to investigate the assessment of SM on relationship management at significant level α=0.05. The results are enlisted inside Table 17.

The Relationship Management has a strong positive correlation with SM (R=0.610) and ($R^2$ =37.3%) of variance of relationship Management has been explained by SM. Despite that, the B coefficient (B= 0.511) and its statistical significance (p<0.001) means increasing the use of SM by one unit, which will eventually lead to increasing in relationship management by (0.511) unit in Palestinian ICT companies.

We can conclude that the SM is a significant predictor for relationship management in Palestinian ICT companies. In view of this, the null hypothesis (H0-2) is rejected. Then:

Relationship management = 1.709 + 0.511 SM.

**Fourth Hypothesis**

H0-3: there is no statistical evidence confirming that there is a correlation between SM and *leadership* in Palestinian ICT companies at 5% level of significance.

In an effort to test this hypothesis, the SM assessment on leadership ought to be tested in order to check if H0-3 is supported or not. Plus, the simple linear regression test has been carried out to investigate the assessment of SM on leadership at significant level α=0.05. The results are enlisted inside Table 17.

The leadership has a strong positive correlation with SM (R=0.658) and ($R^2$ =43.3%) of variance of leadership has been explained by SM. Despite that, the B coefficient (B= 0.548) and its statistical significant (p<0.001) means increasing the use of SM by one unit, which will eventually lead to increasing leadership by (0.548) unit in Palestinian ICT companies.

We can conclude that the SM is a significant predictor for leadership in Palestinian ICT companies. In view of this, the null hypothesis (H0-3) is rejected. Then:

$$\text{Leadership} = 1.975 + 0.548\ \text{SM}.$$

**Fifth Hypothesis**

H0-4: there is no statistical evidence confirming that there is a correlation between SM and *continuous improvement* in Palestinian ICT companies at 5% level of significance.

In an effort to test this hypothesis, the SM assessment on continuous improvement ought to be tested in order to check if H0-4 is supported or not. Plus, the simple linear regression test has been carried out to investigate the assessment of SM on continuous improvement at significant level $\alpha=0.05$. The results are enlisted inside Table 17.

The continuous improvement has a strong positive correlation with SM (R=0.822) and ($R^2$ =67.5%) of variance of continues improvement has been explained by SM. Despite that, the B coefficient (B= 0.757) and its statistical significance ($p<0.001$) means increasing the use of SM by one unit, which will eventually lead to increasing in continuous improvement by (0.757) unit in Palestinian ICT companies.

We can conclude that the SM is a significant predictor for continuous improvement in Palestinian ICT companies. In view of this, the null hypothesis (H0-4) is rejected. Then:

$$\text{Continuous improvement} = 0.900 + 0.757\ \text{SM}.$$

**Sixth Hypothesis**

H0-5: there is no statistical evidence confirming that there is a correlation between SM and *employee involvement* in Palestinian ICT companies at 5% level of significance.

In an effort to test this hypothesis, the SM assessment on employee involvement ought to be tested in order to check if H0-5 is supported or not. Plus, the simple linear regression test has been carried out to investigate the assessment of SM on employee involvement at significant level $\alpha$=0.05. The results are enlisted inside Table 17.

The employee involvement has a moderate positive correlation with SM (R=0.396) and ($R^2$ =15.6%) of variance of employee involvement has been explained by SM. Despite that, the B coefficient (B= 0.236) and its statistical significance (p=0.003) means increasing the use of SM by one unit, will which will eventually lead to increasing employee involvement by (0.236) unit in Palestinian ICT companies.

We can conclude that the SM is a significant predictor for employee involvement in Palestinian ICT companies. In view of this, the null hypothesis (H0-5) is rejected. Then:

Employee involvement = 2.634 + 0.236 SM.

**Seventh Hypothesis**

H0-6: there is no statistical evidence confirming that there is a correlation between SM and *process management* in Palestinian ICT companies at 5% level of significance.

In an effort to test this hypothesis, the SM assessment on process management ought to be tested in order to check if H0-6 is supported or not. Plus, the simple linear regression test has been carried out to investigate the assessment of SM on process management at significant level $\alpha$=0.05. The results are enlisted inside Table 17.

Process management has a moderate positive correlation with SM (R=0.464) and ($R^2$ =21.5%) of variance of process management has been explained by SM. Despite that, the B coefficient (B= 0.415) and its statistical significance (p<0.001) means increasing the use of SM by one unit, which will eventually lead to increasing process management by (0.415) unit in Palestinian ICT companies.

We can conclude that the SM is a significant predictor for TQM practices in Palestinian ICT companies. In view of this, the null hypothesis (H0-6) is rejected. Then:

Process management = 2.471 + 0.415 SM.

**Eighth Hypothesis**

H0-7: there is no statistical evidence confirming that there is a correlation between SM and *quality planning* in Palestinian ICT companies at 5% level of significance.

In an effort to test this hypothesis, the SM assessment on quality planning ought to be tested in order to check if H0-7 is supported or not. Plus, the simple linear regression test has been carried out to investigate the assessment of SM on quality planning at significant level α=0.05. The results are enlisted inside Table 17.

The quality planning has a strong positive correlation with SM (R=0.691) and ($R^2$ =47.8%) of variance of quality planning has been explained by SM. Despite that, the B coefficient (B= 0.553) and its statistical significance (p<0.001) means increasing the use of SM by one unit, which will eventually lead to increasing quality planning by (0.553) unit in Palestinian ICT companies.

We can conclude that the SM is a significant predictor for quality planning in Palestinian ICT companies. In view of this, the null hypothesis (H0-7) is rejected. Then:

Quality planning = 1.881 + 0.553 SM.

Table 17: Simple Linear Regression Analysis for Effect of SM on TQM Practice.

| Independent Variable | Dependent Variables | Constant | R | R2 | B coefficient | P value | Decision |
|---|---|---|---|---|---|---|---|
| **Social Media (SM)** | Total Quality Management | 1.713 | 0.816 | 0.666 | 0.562 | 0 | H0 rejected |
| | Customer Focus | 1.056 | 0.789 | 0.622 | 0.744 | 0 | H0-1 rejected |
| | Relationship Management | 1.709 | 0.61 | 0.373 | 0.511 | 0 | H0-2 rejected |
| | Leadership | 1.975 | 0.658 | 0.433 | 0.548 | 0 | H0-3 rejected |
| | Continuous Improvement | 0.9 | 0.822 | 0.675 | 0.757 | 0 | H0-4 rejected |
| | Employee Involvement | 2.634 | 0.396 | 0.156 | 0.236 | 0 | H0-5 rejected |
| | Process Management | 2.471 | 0.464 | 0.215 | 0.415 | 0 | H0-6 rejected |
| | Quality Planning | 1.881 | 0.691 | 0.478 | 0.553 | 0 | H0-7 rejected |

In short, the regression analysis has shown that SM is a significant predictor for TQM, and SM has a positive correlation with TQM dimensions. Consequently, we can

conclude that SM pulled of the prediction of TQM practices in Palestinian ICT companies.

### 4.7 Bivariate Analysis

This section investigates any significant differences between variables, the relationship between SM and demographic characteristics in addition to the relationship between TQM practices and demographic characteristics. The analysis (Bivariate Analysis) is evolved through using spearman correlation test. Spearman correlation test is used to examine the strength and direction of the monotonic relationship between two continuous or ordinal variables (Schober et al., 2018).

The answer of the correlation has always been between 1 and -1 which means that the correlation is either negative or positive or have no relationship. It should be pointed out that -1 means that there is perfect negative correlation while 0 means that there is no correlation; however, 1 means that there is a perfect positive correlation

It is pertinent to note that the sign of the coefficient indicates the direction. If the coefficient is negative, it reveals that one variable tends to increase whereas the other has to decrease. If the coefficient is positive, the two variables increase or decrease simultaneously.

The value of ρ means the strength of the correlation (whether it is positive or negative). More specifically, ρ has the following ranges and explanations (Baak et al., 2020).

- (0.0 to .19) very weak correlation.
- (.2 to .39) weak correlation.
- (.4 to .69) moderate correlation.
- (.7 to .89) strong correlation.

- (.9 to 1) very strong correlation.

### 4.7.1 Relationships between TQM Practices and Demographic Characteristics of ICT Companies

In this section, the correlation between TQM Practices and demographic Characteristics' of companies is validated through Spearman correlation test.

In Table 18 depicted below, it is shown that all TQM practices are poorly correlated with demographic characteristics because ρ ranges between (0.0 to.19). By the same token, customer focus has a very weak correlation with company type, employees number, company age, and SM type, (ρ = .064 .04 .15 072) respectively. There is also no statistically significant correlations between customer focus and characteristics' of companies (p-value > 0.05).

Relationship management is unsatisfactorily interrelated with company type, employees number, company age, and SM type, (ρ = .071, .145, .19, .12) respectively. There is also no statistically significant correlations between relationship management and characteristics' of companies (p-value > 0.05). Leadership has very weak correlation with company type, employees number, company age, and SM type, (ρ = .165 .077 .144 .00), respectively. There is also no statistically significant correlations between leadership and characteristics' of companies (p-value > 0.05).

Continuous improvement has very weak correlation with company type, employees number, company age, and SM type, (ρ = .071 .097 .099 .006) respectively. There is also no statistically significant correlations between leadership and characteristics' of companies (p-value > 0.05).

Employee involvement has very weak correlation with company type, employees number, company age, and SM type, (ρ = .121 .011 .080 .149) respectively. There is also no statistically significant correlations between leadership and characteristics' of companies (p-value > 0.05).

Process management has very weak correlation with company type, employees number, company age, and SM type, (ρ = .068 .008 .032 .177) respectively. There is also no statistically significant correlations between leadership and characteristics' of companies (p-value > 0.05).

Quality planning has very weak correlation with company type, employees number, company age, and SM type, (ρ = .017 .178 .034 .003) respectively. There is also no statistically significant correlations between leadership and characteristics' of companies (p-value > 0.05).

TQM practices have very weak correlation with company type, employees number, company age, and SM type, (ρ = .031 .103 .146 .042) respectively. There is also no statistically significant correlations between leadership and characteristics' of companies (p-value > 0.05).

In a nutshell, there are no correlations and significance between TQM practices and demographic characteristics. The results are enlisted in Table 18.

Table 18: Spearman correlations Test Between TQM Practices and Demographic Characteristics of Companies

| **TQM practices** | | **Company Type** | **Employees Number** | **Company Age** | **SM Type** |
|---|---|---|---|---|---|
| **Customer Focus** | P | -0.064 | -0.04 | -0.158 | -0.072 |
| | Sig. | 0.522 | 0.691 | 0.112 | 0.471 |

| | | | | | |
|---|---|---|---|---|---|
| **Relationship Management** | P | 0.071 | -0.145 | -0.19 | -0.126 |
| | Sig. | 0.48 | 0.146 | 0.056 | 0.208 |
| **Leadership** | P | 0.165 | -0.077 | -0.144 | 0 |
| | Sig. | 0.098 | 0.445 | 0.15 | 0.997 |
| **Continuous Improvement** | P | 0.071 | -0.097 | -0.099 | -0.006 |
| | Sig. | 0.479 | 0.33 | 0.324 | 0.949 |
| **Employee Involvement** | P | -0.121 | -0.011 | -0.08 | -0.149 |
| | Sig. | 0.225 | 0.913 | 0.426 | 0.136 |
| **Process Management** | P | 0.068 | -0.008 | -0.032 | 0.177 |
| | Sig. | 0.495 | 0.936 | 0.751 | 0.075 |
| **Quality Planning** | P | 0.017 | -0.178 | -0.034 | -0.003 |
| | Sig. | 0.863 | 0.074 | 0.734 | 0.98 |
| **TQM Practices** | P | 0.031 | -0.103 | -0.146 | -0.042 |
| | Sig. | 0.761 | 0.304 | 0.142 | 0.677 |

### 4.7.2 Relationship between SM and Demographic Characteristics of ICT Companies:

In this section, the correlation between SM and demographic characteristics of companies is tested through Spearman correlation test. In Table 19 depicted below, it shown that demographic characteristics of companies are poorly correlated with SM because ρ ranges between (0.0 to.19).

By the same token, SM has a very weak correlation with company type, employees number, company age, and SM type, (ρ = .025 .021 .07 .049) respectively. There is also no statistically significant correlations between SM and characteristics' of companies (p-value > 0.05). The results are enlisted inside Table 19.

Table 19: Spearman Correlation Test Between SM and Demographic Characteristics of Companies

| **Demographic Characteristics of Companies** | **Social Media (SM)** | | |
|---|---|---|---|
| | **N** | **Spearman Correlation ρ** | **P-value** |

| | | | |
|---|---|---|---|
| **Company Type** | 102 | 0.025 | 0.745 |
| **Employees Number** | 102 | 0.021 | 0.795 |
| **Company Age** | 102 | 0.07 | 0.389 |
| **SM Type** | 102 | 0.049 | 0.505 |

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

The preceding table illustrates that there is neither statistically significant, nor is there any correlation between SM and Demographic characteristics of companies.

# Chapter Five: Discussion

## 5.1 Overview

This chapter demonstrates the discussion of the research main results and findings obtained through the analysis of the previous chapter. All of these results are dissected in the previous chapter through data gathered from the distributed questionnaire; the questionnaire has been analyzed statistically using "SPSS" program. The outcome of the study will be further discussed ahead. In addition to that, this section draws a comparison between the results of the preceding identical researches and the study in hand. The following sections discuss the descriptive analysis of the characteristics of Palestinian ICT companies, SM usage, TQM practices and testing hypotheses.

## 5.2 Discussion of Descriptive Analysis of SM Used in ICT Companies

Facebook is a business marketing tool for promoting products and services; customers gain benefits from SM while searching for information about products and services through social networking panels such as Facebook to name a few. In the descriptive analysis, the results elucidate that Facebook ranks the top first amongst other most common applications used in ICT companies. Kusum et al., (2016) affirms that Facebook is a manner to gain new customers, and promote new products. Moreover, Curran et al., (2011) confirms that it is a new trend to engage with customers. Facebook adoption has a positive impact on sales performance (Dodokh, 2017). According to a study carried out by Alalwan et al., (2017), Facebook was able to pull off 5.4 billion dollars from advertising with growing of 58%.

### 5.3 Discussion of SM Usage

Recently, customers judge companies based on its presence and engaging activities on SM because they are counted as an important strategic tool among companies. SM advertising has provided companies with a new strategic tactic for publicizing their products and services. SM usage collaborates to support companies' initiatives in raising customers' awareness, and stimulate them to purchase their products (Alalwan, 2018).

Based on the results of analysis, ICT Palestinian companies highly prioritize the promotional activities for their products and services. The role of advertising strategies have impacted raising the awareness of customers (Bhardwaj, 2017). Kusum et al., (2016) states that SM is the state-of-the-art art, up-to-date and most effective manner to promote products and services. On the other hand, Alalwan et al., (2017) reckons that SM better be used by companies to expand the horizon of their promotional

campaigns and to reach out to different markets. This ultimately leads to raising the awareness of customers.

Based on the descriptive analysis, it is illustrated that the company utilize SM by obtaining feedback from (likes, publishing, and following-up from Facebook and Instagram). By the same token, Kim, Lim, & Brymer (2015) declares that SM build relationships with partners through likes, comments and shares.Throughout the previous chapter, the assessment of using SM on TQM practices is assessed. SM is considered the independent variable. So, in line with the performed analysis, it is elaborated that SM usage has positive assessment on TQM practices.

As specified in a study conducted by Sayyad and Nermeen (2018) in the Palestinian business firms, the use of SM leads to a dramatically high increase sales; similarly, it is confirmed SM give rise to a positive relationship between SM usage and increase revenues. Another study done by Bhardwaj (2017) concludes that SM is an effective source to transform leads into sales if publicized appropriately.

## 5.4 Discussion of TQM Practices

TQM is a business management approach which aims to improve performance by delivering top-notch products and services so as to enhance the image of the company and its capability to compete in the market. (Lee et al., 2010). Delić et al., (2014) surmises that improving the TQM practices positively affects the company performance.

Throughout this section, each practice is discussed based on the findings from the previous chapter, in which TQM practices are counted as dependent variables.

### 5.4.1 Customer Focus

Customer focus refers to living up to or even exceeding customer expectations (Sadikoglu and Zehir, 2010). Prioritizing the fulfillment of customers' needs help to developing the business, improving customer satisfaction, and maintaining strong relationships with them. Based on the descriptive analysis, companies use SM to increase awareness and knowledge of customers about the new products and services. They also seek to reach out to new customers, and build relationships with them through unremitting communication. According to Elena (2016), constant communication and getting closer to customers leads to better interaction and engagement, realizing customers' satisfactions and maintaining the company's market share. In addition, companies endeavor to create and update customers' database, and collect their feedback consistently. Customers' feedback facilitates the communication process within the company (Delić et al., 2014). In the same manner, companies can utilize SM to stay connected with their customers and targeted customers for free (Singh and Sinha, 2017).

Based on testing the formulated hypotheses, targeting new customers and collecting customers feedback are companies' highest concern which totally corresponds with customers' focus concept because knowing their aspiration and opinions through collecting feedback increases customers' loyalty and satisfaction. As a result, collecting feedback and reaching new customers ensure the company's identification of the fluctuating needs of its customers as well as its survival and success on the long-run. Moreover, through collecting customer feedback, product quality will be improved (Jiang et al., 2017). Consequently, this coincides with the hypothesis of testing the positive assessment of SM on customers' focus.

### 5.4.2 Relationship Management

Relationship management is a tactic used by companies to maintain a certain level of engagement with its partners and to create satisfactory rapport with them instead of viewing the relationship as merely transactional. Based on the descriptive analysis, the companies track SM as channels of local and global competitors to see their products. It is found that 85% of ICT companies agree that SM support them to follow-up the channels of local and global competitors through the different applications on SM, tracking the competitors through SM helps in developing the business if followed by updated plans to offer discounts to induce new customers and compete in the market (Dodokh, 2017). Likewise, companies solicit to select suppliers through the information available about them on SM and enhance constant communication with them. The principal role of SM in developing trust and building relationships with partners, suppliers and customers is an incontrovertible consideration for companies (Tajvidi and Karami, 2017) because partners have access to all information and experiences from other customers, in which 63% of ICT companies benefit from SM to enhance the relationships with their partners. According to a study done by Baird and Parasnis (2011), it is established that by getting closer to customers and suppliers, companies can increase their revenues.

Based on testing the formulated hypotheses, it is figured out that there is a paralleled interdependence between SM and relationship management in Palestinian ICT companies,

Precedent studies explained that supplier involvement is an ongoing and interconnected process to transform new knowledge into supply chain networks (Laursen and Andersen, 2016) through providing their knowledge and expertise.

This result is in harmony with a study carried out by Cheng and Krumwiede (2018) since their study shows that the use of SM enhances relationship management. Still and all, SM can be used as venues for sharing and communication with their manufacturers and supply chain network (Kaplan and Haenlein, 2010) in order to develop new products efficiently and effectively. Upon which, the external communication can ameliorate the quality of products and services as well as the knowledge shared with external partners (Bharati et al., 2015).

### 5.4.3 Leadership

Leadership has always been in the driving's seat to set goals and values in order to cater customers' needs and requirements. Based on the descriptive analysis, senior management is fully cognizant of the importance of using SM in ICT Palestinian companies. Furthermore, 91% of companies are aware of their obligation to support and reward employees for their involvement in SM to achieve business goals. Bharati et al., (2015) indicates that senior management promote the collaborations between employees and the external customers through SM. Also, senior management is utterly answerable for sharing suggestions and ideas with employees.

Based on testing the formulated hypotheses, it is comprehended that there is a positive correlation between SM and Leadership in Palestinian ICT companies. Qualman (2010) concludes that leaders have a pivotal role in creating and polishing the image of the company. It is suggested as well that senior management must adopt SM such as Facebook to create and maintain the relationships outside their businesses. According to Kotler et al., (2016), SM provide multiple benefits to leaders. They can easily create accounts on different application owing to the fact that the accessibility to these platforms is free, and can be easily used to build a personal brand. What is more, leaders

can constantly engage with other partners such as employee and customers while creating a brand image of the company.

### 5.4.4 Continuous Improvement

Continuous improvement is to incessantly thrive to enhance the organizational operations and achievements. Based on the descriptive analysis, continuous improvement shows high concern in developing the operations cycle, chain of commands and the quality of the products and services by studying customer feedback on SM, and feedback from customers which eventually support quality managers to take precise decision (Jiang et al., 2017).

Based on testing the formulated hypotheses, it is confirmed that there is a positive correlation between SM and continuous improvement in Palestinian ICT companies. The company uses SM to improve its overall performance in general or to develop its existing products or new products, and takes the advantage of collecting customer feedback to reduce the existing errors and address all complaints. Also, Zhu and Zhang (2010) deduce that companies raise awareness of their products through posting customer reviews and feedback. More accurately, SM can help in getting information about feedback about products and services (Dodokh, 2017).

### 5.4.5 Employee Involvement

Employee involvement is the contribution of employees in the process of TQM, which elevates their loyalty, engagement and commitment, and leads to enhance the overall performance and innovation of the company. Based on the descriptive analysis, companies create an internal communication platform for employees through social network venues to enhance communication and interaction amongst employees and to

generalize the culture of quality and its goals "Unity of purpose". As stated by Terziovski (2006), if there is a unity of purpose, barriers between employees and departments will be eliminated, and so customer satisfaction can be realized and improved. Likewise, senior management motivates its employees to interact with the advertisements and posts it publishes on SM in order to obtain better results. As a result, this coincides with the leadership term, in which senior management rewards employees who interact on SM, and that will affect positively on companies' overall performance. More unerringly, SM keep employees posted with the latest news about the industry and development in their field of expertise (Alalwan et al., 2017).

Based on testing the formulated hypotheses, it is confirmed that there is a positive correlation between SM and employees' involvement in the Palestinian ICT companies. This result is concordant with a study carried out by Dreher (2014). The study represented that the participation of employees in SM has many benefits, in which the activities of employees on SM can positively affect the reputation of the company, enhance the quality of the products, and publicize the brand. Employees know the vision of their company well, which makes them trustworthy and legitimate representatives of their company.

Also, Alalwan et al., (2017) supposes that the activities of employees on SM can benefit the company's reputation. In study conducted by Agresta and Bonin (2011), it is shown that employees' participation in SM nowadays is taking the priority over any other activity since they encapsulate the companies character and shape its reputation by working as dedicated representatives and agents of their companies.

Involving employees on SM builds relationships and with targeted audience such as investors and customers or future targeted customers (Alalwan et al., 2017).

### 5.4.6 Process Management

Companies improve their performance through taking corrective actions, and evaluating their values. Based on the descriptive analysis, companies have high agreement on improving performance through SM with percentage of 87%, also 86% of companies have competencies and expertise capable of keeping pace with rapid changes.

Based on testing the formulated hypotheses, it is confirmed that there is a positive correlation between SM and process management in Palestinian ICT companies. The use of SM creates value for companies especially in internal operations, marketing, customer services, and sales (Tajvidi and Karami, 2017). Consequently, this builds the capacities of companies to increase their performance and help them to improve performance on SM platforms through the competences and the expertise within these departments, which are capable of keeping pace with rapid changes in advanced technology.

### 5.4.7 Quality Planning

Quality planning is to plan and improve quality management on all levels and evaluate them along with customer requirement and company capabilities. Based on the descriptive analysis, 93% of companies are in agreement to constantly monitor the level of product quality while 71% of companies seeks to offer cost-effective products and services. They also seek to offer sufficient information to the customer to help in purchasing decision.

Based on testing the formulated hypotheses, it is confirmed that there is a positive correlation between SM and quality planning in Palestinian ICT companies. Thus,

companies have to stay connected and keep strong relationships with customers to satisfy customers' needs (Elena, 2016) in order to identify the changing trends and needs among customers (Parveen et al, 2015). Therefore, companies must define customers' requirement and provide offers and discounts and enough information to help them in taking purchasing decisions.

### 5.5 Chapter Summary

This chapter crystallizes around the discussion of the results obtained from previous chapter. It elaborates a comparison between the results and a comparison between the results with previous related studies from literature and this study was conducted. The following chapter discusses the conclusions, recommendations, limitation of study and future directions.

## Chapter Six: Conclusions and Recommendations

### 6.1 Overview

This chapter paves the finish line of the study in hand with fruitful results and findings. It also discusses the contribution of the thesis, study limitations, and proposed recommendations as well as suggestions for future studies.

### 6.2 Conclusions

The study investigates the assessment of using SM on TQM practices in ICT companies in Palestine.

1. SM have a crucial assessment on TQM practices in Palestinian ICT companies.

2. Customer focus, relationship management, leadership, continuous improvement, quality planning is solidly and positively correlated with SM
3. Employee involvement and process management have moderately positive relationship with SM.
4. There are no correlations and significance between demographic characteristics with TQM practices and using SM.
5. Facebook is the most common used application in ICT Palestinian companies.
6. SM boosts continuous improvement by taking advantage of feedback and reviews collected from different SM platforms to take precise decisions and improving the quality of products and services through reducing the existing errors. Therefore, the quality of these products will be improved.
7. The constant communication through using SM leads to better interaction with customers and then identifies their needs and that leads to more satisfied customers, in which SM is considered as an official channel for communicating with customers and handling complaints and suggestions.
8. SM expands the work while reaching new customers, so that will assist companies' businesses processes to forecast future sales of products and reach target customer group.
9. Collecting feedback and reaching new customers ensure the company's identification of the fluctuating needs of its customers as well as its survival and success on the long-run.
10. Promoting products and services through various platforms on SM is in scope of saving money.
11. SM helps in exchanging ideas, with either external parties or top management, so companies could update plans to improve performance in companies.

### 6.3 Recommendations

This study vividly shows that companies can benefit from SM platforms and TQM practices to support and motivate the commitment towards the assessment of using SM on TQM practices, which result in a better performance. Therefore, the study proposes a set of solid recommendations in accordance with the aforesaid conclusions. These recommendations are enlisted as follows:

1. PITA management ought to encourage the ICT companies to utilize all SM panels in their work.
2. Raising the awareness of the ICT companies chain of commands/ top management about the importance of utilizing SM and keeping up with the updated developments in SM arena in their business.
3. Paying much attention by ICT companies to exploit using SM platforms, to collect customers' feedback to cater their needs and fulfill their requirements effectively and efficiently.
4. Planning and organizing for training courses to the ICT companies' employees in field of communication and customers' monitoring and management. Because the main issue in using SM is the communication with customers. Moreover, trainings enrich their knowledge to be able to answers all the customers' questions.
5. Employing all SM platforms in the aspects of business. Based from the results, SM applications have vital role to promote their products and have effect on their growing especially Facebook.
6. Facebook is recommended to be used in ICT companies due to its effect on growing businesses.

7. Reviewing the current use of SM and TQM practices by top management, due to the positive effect of using SM on TQM practices.
8. ICT companies need to work more efficiently on enhancing its image on different SM platforms and websites by having a periodic plan.
9. The companies recommended to allocate part of the material and human resources to create jobs related to SM.

### 6.4. Limitation of the Study

It is necessary to shed the light on the below limitations of the study:

1. The database for ICT companies is not updated either in the telephone numbers or the names of active companies.
2. Lack of awareness within many companies have hindered the flow of the survey.
3. Targeted only ICT Palestinian companies sector caused limited generalizability.
4. Due to declaring the state of emergency in Palestine as a result of coronavirus while collecting primary data, the researcher faced difficulty in in this stage in terms of the required sample size.

### 6.5 Research Contribution and Future Research Direction

This research has a remarkably valuable contribution and addendum to the literature as it is one of its kind, which addressed the assessment of using SM on TQM practices in developing country context. The outcome in developing country is value added to all Palestinian ICT companies in which research results assist and improve Palestinian ICT companies in understanding the current level TQM practices and SM utilization to help them clarify their strengths and weaknesses so as to enhance their performance at last.

This research also contributed theoretically through high lightening what main practices that should be worked on in ICT companies. Since this research is valuably unique, more researches are highly needed and recommended to profoundly investigate the relations between TQM practices and SM utilization, in which the researcher proposes to conduct further researches in the field of SM and TQM. For example, to study the assessment of using SM on each practice, also to carry out researches in other sectors, or to conduct comparative study amongst the different sector to measure the performance levels between these sectors.

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# Appendixes

## Appendix (A): Experts and arbitrators who reviewed the survey.

| No. | Name | Details |
|---|---|---|
| 1. | Mr.Anwar Alshaer | Quality Assurance Section Head at PALTEL Company |
| 2. | Dr. Yahya Saleh | Thesis supervisor. Associate Professor in Industrial Engineering. Expert in Quality Management, An-Najah National University. |
| 3. | Dr. Ayham Jaaron | Thesis co-supervisor. Associate Professor in Industrial Engineering. Expert in Quality Management, De Montfort University, UK. |
| 4. | Dr. Majeed Mansour | Associate Professor in Marketing and Customer Satisfaction. Arab American University-Palestine. |
| 5. | Dr. Sami Sadder | PhD Candidate in Szent Istvan Egyetem (SZIE)-Hungary. Social Media Expert. |
| 6. | Eng. Mohannad Hijjawi | Director of SPARK (an ICT Organization). Social Media Expert. |

## Appendix (B) : Thesis Survey

الجامعة العربية الامريكية
THE ARAB AMERICAN UNIVERSITY

**الموضوع: استبانة بحث علمي**

تقوم الباحثة بهذه الدراسة كمتطلب تكميلي للحصول على درجة الماجستير في إدارة الجودة من الجامعة العربية الأمريكية، بعنوان:

**"أثر استخدام وسائل الاتصال الاجتماعي على ممارسات الجودة في شركات الاتصال والمعلومات التكنولوجية في فلسطين"**

يهدف هذا الاستبيان الى التعرف على أثر استخدام وسائل التواصل الاجتماعي على ممارسات الجودة، وقد صممت هذه الاستبانة لجمع المعلومات حول موضوع الدراسة، يرجى منكم التكرم في الاجابة عن فقراتها شاكرين لكم تعاونكم، ومؤكدين لكم بأن المعلومات التي ستقدمونها لنا ستسخدم لأغراض البحث العلمي فقط.

**شكرا لحسن تعاونكم،**

**حلا نصرالله**

| **القسم الأول : الخصائص الديموغرافية** |
|---|
| **A: هذا القسم يتكون من 3 اسئلة عامة، يرجى الإجابة عنها جميعها، بوضع دائرة حول الإجابة المناسبة:** |
| **A-1تخصص المؤسسة:**<br>( ) Telecommunications services 1.<br>( ) ICT equipment and hardware solutions 2.<br>( ) ICT software solutions markets 3. |

**A-2 عدد الموظفين:**

1. أقل من 10 ( )
2. من 10 الى 50 ( )
3. من 51 الى 250 ( )
4. أكثر من 250 ( )

**A-3 عمر الشركة:**

1. أقل من 5 سوات
2. من 5 سنوات الى 10 سنوات
3. أكثر من 10 سنوات

**A-3 وسيلة التواصل الاجتماعي الموجودة داخل المؤسسة ( ممكن اختيار اكثر من خيار):**

1. فيسبوك
2. انستغرام
3. تويتر
4. واتساب
5. اخرى ..

**القسم الثاني: المعرفة والاطار العام**

**B- وسائل التواصل الإجتماعي**: هي الوسائل التي تمكن المؤسسات للترويج عن المنتجات، الخدمات، لأسعار ونقاط البيع من خلال قنوات التواصل الاجتماعي على الانترنت والتواصل مع والاستفادة من مجتمع أكبر مقارنة مع القنوات الإعلانية والتسويقية التقليدية. تكون هذا الجزء من 6 أسئلة، يرجى وضع إشارة عند الجواب الذي يمثل أفضل وصف:

| الرقم | السؤال | مموافق بشدة | موافق | محايد | غير موافق | غير موافق بشدة |
|---|---|---|---|---|---|---|
| B-1 | تستخدم المؤسسة وسائل التواصل الاجتماعي للترويج عن منتجاتها وخدماتها | | | | | |
| B-2 | تقوم المؤسسة بالإستفادة من وسائل التواصل الاجتماعي عن طريق الحصول على التغذية الراجعة من (الاعجابات والنشر و المتابعة من الفيسبوك و الانستغرام) | | | | | |
| B-3 | "تعتمد الشركة وسائل التواصل الاجتماعي كقناة رسمية للتواصل مع العملاء ومعالجة الشكاوى والاقتراحات"، | | | | | |
| B-4 | "تخصص الشركة جزء من الموارد المادية والبشرية لمتابعة وسائل التواصل الاجتماعي الخاصة بالشركة (يوجد مسمى وظيفي أو أكثر مرتبط بوسائل التواصل الاجتماعي)" | | | | | |
| B-5 | تستخدم المؤسسة وسائل التواصل الاجتماعي لخلق اسواق جديدة للمساعدة في نشر المؤسسة عالميا | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| B-6 | تستخدم الشركة وسائل التواصل الاجتماعي للوصول الى الشرائح المستهدفة بدقة وبالتالي تحقيق كفاءة وفاعلية أكثر بالتسويق والأداء | | | | | |
| B-7 | "توظف الشركة كافة الخيارات والخدمات التي تقدمها وسائل التواصل الاجتماعي مثل: الاحصائيات للمتابعين، ، إعلانات ممولة، أو Messenger bot تقنيات الذكاء الاصطناعي". | | | | | |

**القسم الثالث: ممارسات إدارة الجودة**

**C-Q1: Customer Focus "التركيز على الزبون" :**

يتكون هذا الجزء من 5 أسئلة، يرجى وضع إشارة عند الجواب الذي يمثل أفضل وصف:

| الرقم | السؤال | مموافق بشدة | موافق | محايد | غير موافق | غير موافق بشدة |
|---|---|---|---|---|---|---|
| C-Q1-1 | تستخدم المؤسسة وسائل التواصل الاجتماعي في زيادة وعي ومعرفة الزبائن بمنتجات الشركة خاصة الجديدة منها | | | | | |
| C-Q1-2 | تسعى المؤسسة الى الوصول الى زبائن جدد والتوسع في العمل عبر وسائل التواصل الاجتماعي | | | | | |
| C-Q1-3 | تجمع المؤسسة بانتظام ردود فعل الزبائن على وسائل التواصل الاجتماعي | | | | | |
| C-Q1-4 | تطور المؤسسة علاقتها بالزبائن من خلال التواصل المستمر معهم عبر وسائل التواصل الاجتماعي | | | | | |
| C-Q1-5 | تعمل المؤسسة على إنشاء وتحديث قاعدة بيانات لعملائها عبر وسائل التواصل الاجتماعي | | | | | |

**C-Q2: Relationship Management " " :**

يتكون هذا الجزء من سؤالين، يرجى وضع إشارة عند الجواب الذي يمثل أفضل وصف:

| الرقم | السؤال | مموافق بشدة | موافق | محايد | غير موافق | غير موافق بشدة |
|---|---|---|---|---|---|---|
| C-Q2-1 | تستخدم الشركة وسائل التواصل الاجتماعي لتعزيز تواصلها مع شركائها (الموردين والمجتمع، والمساهمين) | | | | | |
| C-Q2-2 | تتابع الشركة وسائل التواصل الاجتماعي وقنوات المنافسين المحليين والعالمين للاطلاع على منتجاتهم | | | | | |
| C-Q2-3 | تسعى المؤسسة الى اختيار الموردين من خلال المعلومات المتوفرة عنهم على وسائل التواصل الاجتماعي | | | | | |

**C-Q3 Leadership القيادة" :**

يتكون هذا الجزء من سؤالين، يرجى وضع إشارة عند الجواب الذي يمثل أفضل وصف:

| الرقم | السؤال | مموافق بشدة | موافق | محايد | غير موافق | غير موافق بشدة |
|---|---|---|---|---|---|---|
| C-Q3-1 | تدرك الإدارة العليا في المؤسسة أهمية استخدام وسائل التواصل الاجتماعي | | | | | |
| C-Q3-2 | تسعى الادارة العليا الى دعم الموظفين ومكافئتهم لانخراطهم في وسائل التواصل الاجتماعي لتحقيق اهداف العمل | | | | | |
| C-Q3-3 | تشارك الادارة العليا المسؤولين عن وسائل التواصل الاجتماعي بالاقتراحات والافكار | | | | | |
| **C-Q4: Continuous Improvement " التحسين المستمر" :**<br>يتكون هذا الجزء من 4 أسئلة، يرجى وضع إشارة عند الجواب الذي يمثل أفضل وصف: | | | | | | |
| الرقم | السؤال | مموافق بشدة | موافق | محايد | غير موافق | غير موافق بشدة |
| C-Q4-1 | تستخدم الشركة وسائل التواصل الاجتماعي لتحسين أدائها بشكل عام او تطوير منتجاتها الحالية او المنتجات الجديدة | | | | | |
| C-Q4-2 | تستفيد المؤسسة من وسائل التواصل الاجتماعي لتقليل الاخطاء الموجودة ومعالجة الشكاوي المتداولة على تلك الشبكات | | | | | |
| C-Q4-3 | تحسن المؤسسة من جودة منتجاتها من خلال دراسة ملاحظات الزبائن عبر وسائل التواصل الاجتماعي | | | | | |
| **C-Q5: Employee Involvement " شمل الموظفين" :**<br>يتكون هذا الجزء من 3 أسئلة، يرجى وضع إشارة عند الجواب الذي يمثل أفضل وصف: | | | | | | |
| الرقم | السؤال | موافق بشدة | موافق | محايد | غير موافق | غير موافق بشدة |
| C-Q5-1 | يستخدم موظفي الشركة حساباتهم الشخصية للتواصل مع العملاء وحل المشاكل التي قد يصلون اليها أو التي يتم الإشارة لهم بها وتتعلق بشركتهم | | | | | |
| C-Q5-2 | تنشيء الشركة قناة تواصل داخلية للموظفين عبر شبكات التواصل الاجتماعي لتعزيز التواصل والتفاعل Unityولتعميم ثقافة الجودة وأهدافها of purpose | | | | | |
| C-Q5-3 | تحفز الإدارة موظفيها للتفاعل مع اعلاناتها ومنشوراتها على وسائل التواصل الاجتماعي للحصول على نتائج افضل | | | | | |
| **C-Q6: Process Management " إدارة العمليات" :**<br>يتكون هذا الجزء من 5 أسئلة، يرجى وضع إشارة عند الجواب الذي يمثل أفضل وصف: | | | | | | |

| الرقم | السؤال | مموافق بشدة | موافق | محايد | غير موافق | غير موافق بشدة |
|---|---|---|---|---|---|---|
| C-Q6-1 | المؤسسة لديها خبرات وكفاءات في قسم البحث والتطوير داخل المؤسسة قادر على مواكبة التغيرات السريعة في التكنولوجيا المتقدمة | | | | | |
| C-Q6-2 | تقوم المؤسسة في التخطيط لتحسين الأداء على وسائل التواصل الاجتماعي | | | | | |
| C-Q7 :Quality Planning : "تخطيط الجودة" <br> يتكون هذا الجزء من 4 أسئلة، يرجى وضع إشارة عند الجواب الذي يمثل أفضل وصف: | | | | | | |
| الرقم | السؤال | مموافق بشدة | موافق | محايد | غير موافق | غير موافق بشدة |
| C-Q7-1 | تسعى المؤسسة الى عرض المنتجات او الخدمات التي تطرح خصومات وعروض اقل سعر من خلال سائل التواصل الاجتماعي | | | | | |
| C-Q7-2 | تسعى المؤسسة الى عرض معلومات كافية للزبون تساعد في اتخاذ قرار الشراء من خلال وسائل التواصل الاجتماعي | | | | | |
| C-Q7-3 | تسعى المؤسسة الى البحث عن المنتجات او الخدمات التي تهم الزبون قبل عرضها على وسائل التواصل الاجتماعي | | | | | |
| C-Q7-4 | تقوم المؤسسة بمراقبة مستوى جودة المنتجات باستمرار | | | | | |

الجامعة العربية الأمريكية
ARAB AMERICAN UNIVERSITY

# College of Postgraduate Studies

## Quality Management Master Program

"Questionnaire about the assessment of using social media on total quality management practices in information and communication technology".

**Dear Respondent,**

The following questionnaire has been developed to collect the necessary information about the assessment of using social media on total quality management practices in

information and communication technology. This questionnaire is to be administered in fulfillment for the requirements of the master's degree in quality management, College of Postgraduate Studies at Arab American University-Palestine. The collected data will strictly be kept confidential for academic research purposes

Thank you.

**Hala Nasrallah**

| **Part one: Demographic and General Information:** |
|---|
| **This part consists of 4 questions, please tick the answer that describe the best answer:** |
| **A-1 : Company Type**<br>( ) Telecommunications services<br>( ) ICT equipment and hardware solutions<br>( **)** ICT software solutions markets |
| **A – 2: Number of Employees**<br>( ) less than 10<br>( ) 10-50<br>( **)** 51-250<br>( **)** more than 250 |
| **A – 3: Company Age**<br>( ) less than 5 years<br>( )5 to 10 years<br>( ) More than 10 years |
| **A – 4: What is the Type of SM used in company?**<br>( ) Facebook<br>( )Instagram<br>( )Twitter<br>( ) Whatsapp |

| **Part Two: Knowledge and General Information** |
|---|
| B- Social Media: It is the means that enables companies to promote products, services through channels on the internet and communicate with and benefit from a larger community compared to traditional advertising and marketing channels. |
| **This part consists of 7 questions, please tick the answer that describe the best answer** |

| NO. | Social Media (SM) | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|---|---|---|---|---|---|
| **B-1** | The company uses SM to promote its products and services | | | | | |
| **B-2** | The company takes advantage of SM by obtaining feedback from (likes, publishing, and following-up from Facebook and Instagram) | | | | | |
| **B-3** | "The company adopts SM as an official channel for communicating with customers and handling complaints and suggestions" | | | | | |
| **B-4** | "The company allocates part of the material and human resources to follow the company's SM (there is one or more job titles related to social media" | | | | | |
| **B-5** | The company uses SM to create new markets to help spread the company globally | | | | | |
| **B-6** | The company uses SM to reach the target segments accurately and thus achieve more efficiency and effectiveness in marketing and performance | | | | | |
| **B-7** | "The company employs all options and services provided by SM such as: statistics for followers, Messenger bot, funded advertisements, or artificial intelligence technologies." | | | | | |

**Part Three: Total Quality Management Practices**

C**ustomer Focus:**
**This part consists of 5 questions, please tick the answer that describe the best answer:**

| NO. | Customer Focus | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|---|---|---|---|---|---|
| **C-Q1-1** | The company uses SM to increase awareness and knowledge of customers about the company's products, especially new ones | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **C-Q1-2** | The company seeks to reach new customers and expand the work through SM | | | | | |
| **C-Q1-3** | The company regularly collects customer feedback on SM | | | | | |
| **C-Q1-4** | The company develops its relationship with customers through continuous communication with them through SM | | | | | |
| **C-Q1-5** | The company works to create and update a database of its customers via SM | | | | | |
| **Relationship Management**<br>**This part consists of 3 questions, please tick the answer that describe the best answer:** | | | | | | |
| **NO.** | **Relation Management** | **Strongly Agree** | **Agree** | **Neutral** | **Disagree** | **Strongly Disagree** |
| **C-Q2-1** | The company uses SM to enhance its communication with its partners (suppliers, society, and shareholders) | | | | | |
| **C-Q2-2** | The company tracks SM and channels of local and global competitors to see their products | | | | | |
| **C-Q2-3** | The company seeks to select suppliers through the information available on them on SM | | | | | |
| **Leadership**<br>**This part consists of 3 questions, please tick the answer that describe the best answer:** | | | | | | |
| **NO.** | **Leadership** | **Strongly Agree** | **Agree** | **Neutral** | **Disagree** | **Strongly Disagree** |
| **C-Q3-1** | The senior management of the company understands the importance of using SM | | | | | |
| **C-Q3-2** | Senior management seeks to support and reward employees for their involvement in SM to achieve business goals | | | | | |
| **C-Q3-3** | Senior management responsible for sharing suggestions and ideas | | | | | |
| **Continuous Improvement**<br>**This part consists of 3 questions, please tick the answer that describe the best answer:** | | | | | | |
| **No.** | **Continuous Improvement** | **Strongly Agree** | **Agree** | **Neutral** | **Disagree** | **Strongly Disagree** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **C-Q4-1** | The company uses SM to improve its performance in general or to develop its existing products or new products | | | | | |
| **C-Q4-2** | The company takes advantage of SM to reduce the existing errors and address complaints in these networks | | | | | |
| **C-Q4-3** | The company improves the quality of its products by studying customer feedback on SM | | | | | |
| **Employee Involvement**<br>**This part consists of 3 questions, please tick the answer that describe the best answer** | | | | | | |
| **NO.** | **Employee Involvement** | **Strongly Agree** | **Agree** | **Neutral** | **Disagree** | **Strongly Disagree** |
| **C-Q5-1** | Company employees use their personal accounts to communicate with customers and solve problems that they may reach or are referred to and related to their company | | | | | |
| **C-Q5-2** | The company creates an internal communication channel for employees across social networks to enhance communication and interaction and to generalize a culture of quality and its goals "Unity of purpose" | | | | | |
| **C-Q5-3** | The management motivates its employees to interact with its ads and posts on SM to obtain better results | | | | | |
| **Process Management**<br>**This part consists of 2 questions, please tick the answer that describe the best answer** | | | | | | |
| **NO.** | **Process Management** | **Strongly Agree** | **Agree** | **Neutral** | **Disagree** | **Strongly Disagree** |
| **C-Q6-1** | The company has expertise and competencies in the research and development department within the company capable of keeping pace with rapid changes in advanced technology | | | | | |
| **C-Q6-2** | The company is planning to improve performance on SM | | | | | |
| **Quality Planning**<br>**This part consists of 4 questions, please tick the answer that describe the best answer** | | | | | | |

| NO. | Quality Planning | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|---|---|---|---|---|---|
| **C-Q7-1** | The company seeks to offer products or services that offer the lowest price discounts and offers through SM | | | | | |
| **C-Q7-2** | The company seeks to offer enough information to the customer to help in purchasing decision through SM | | | | | |
| **C-Q7-3** | The company seeks to search for products or services of interest to the customer before displaying them on SM | | | | | |
| **C-Q7-4** | The company constantly monitors the level of product quality | | | | | |

## الملخص

تهدف هذه الدراسة إلى تقييم اثر استخدام وسائل التواصل الاجتماعي على ممارسات ادارة الجودة الكاملة في شركات الاتصالات والتكنولوجيات في الضفة الغربية و قطاع غزة. تم اعتماد منهج البحث الكمي من خلال اختبار الفرضيات و تم جمع البيانات الاولية من خلال توزيع الاستبانة على 120 شركة.

الاستبانة التي تم تطويرها تتألف من ثلاثة أجزاء. يهدف الجزء الأول إلى جمع بيانات عن خصائص عامة للشركة. ويهدف الجزء الثاني إلى جمع بيانات حول استخدام وسائل التواصل الاجتماعي باستخدام 7 فقرات. وأخيراً، يهدف الجزء الثالث، والذي يتضمن 7 اجزاء عن ممارسات ادارة الجودة ( التركيز على الزبون، إدارة العلاقات، القيادة، التحسين المستمر، شمل الموظفين، ادارة العمليات، تخطيط الجودة) إلى جمع بيانات حول مستوى ممارسات ادارة الجودة. تم استخدام مقياس ليكرت الخماسي في الجزأين الثاني والثالث من الاستبانة. وتم تحليل البيانات باستخدام كل من الأساليب الإحصائية الوصفية والاستدلالية بما في ذلك والمتوسطات الحسابية، والانحرافات المعيارية، والانحدار المتعدد. وتم استخدام برنامج الرزم الإحصائية في العلوم الاجتماعية في تحليل البيانات.

تشير النتائج الرئيسية إلى ان وسائل التواصل الاجتماعي لها اثر ايجابي قوي على ممارسات إدارة الجودة (التركيز على الزبون، ادارة العلاقات، القيادة، التحسين المستمر، ادار التخطيط) و اثر ايجابي متوسط على كل من ( شمل الموظفين و إدارة العمليات).

هذه الدراسة تزود نتائج لترشد شركات الاتصالات وتكنولوجيات المعلومات بكيفية التعامل مع وسائل التواصل الاجتماعي و تحسينها. بناءً عليه، يقترح الباحث على شركات الاتصالات وتكنولوجيا المعلومات بتحسين استخدام وسائل التواصل الاجتماعي لما لها اثر ايجابي على ممارسات إدارة الجودة الكاملة. حيث ان هذه الدراسة الأولى من نوعها، وتسلط الضوء على اهمية استخدام وسائل التواصل الاجتماعي.

# The Assessment of Social Media Utilization on Total Quality Management Practices in Information and Communication Technology Companies in Palestine

Hala Maurice Nasrallah

2020