THE MEDIATING IMPACT OF TARGET COSTING IN THE RELATIONSHIP BETWEEN INFORMATION AND PRODUCTS QUALITY

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ABSTRACT

Modern management accounting methods have grown rapidly and will become one of a catalyst for the country's industrial and economic growth of Jordan. Although it has become one of the most common accounting methods in Europe, its adoption in Jordan remains low. With a high percentage of Jordanian industrial companies seeking to keep pace with development. Thus, many modern methods of managerial accounting have emerged, and one of which is the target cost (TC) method. The target cost method is a cost management approach that is based on demand-driven production because it focuses on customer requirements for quality, cost and time. Jordan began emphasizing the application of target costs as an appropriate method in the production process to achieve high-quality products at reasonable prices. The main objective of this study is to gauge the role of information and targeted cost method on the quality of products. The quantitative method has been selected with a designed questionnaire involved 282 respondents comprising of the General Managers, Production Manager, Chief Financial Officers, Strategic and Planning Managers, Engineering department Managers and Finance Managers. The results showed that the information have a negative impact on the use of the target cost. The results also showed that the information has a negative impact on improving the quality of products. The results also showed that the targeted cost plays a positive mediating role in the relationship between information and the quality of products. This study has many valuable theoretical and practical contributions. In particular, this research has attempted to ascertain the impact that information has on the target cost and the quality of products. More importantly, therefore, this study has different implications for theory and practice. One of the most important recommendations of the study is to research the factors that affect business supervisors in their use of modern methods of managerial accounting, as this will be a valuable comparative work with the current research that focuses on industrial companies.

Keywords: Target Cost, Information, Modern Management Accounting, Products Quality

I. INTRODUCTION

1.1 Background Of the Study

Jordan is located in an important and pivotal position in the Middle East and North Africa region (MENA) (IMF, 2021). And is classified by the world economy as a developing country and low-income country, due to low per capita income and high unemployment (Schiff et al., 2015). The general situation in the Jordanian

industrial sector is varied, as industrial products in Jordan are considered to be of the high cost compared to the same products in other countries, and the reason is due to the high cost of raw materials, taxes, and fees imposed on those materials in addition to the high wages of workers compared to other countries (Akande & Khadka, 2018). As for the quality of products in the industrial sector, Jordanian products are distinguished by average quality compared to other countries. Customers generally see Jordanian products as products of medium quality, and despite this, customers hope to improve the quality of these products to become distinct and high-quality products that keep pace with the best products provided globally (Al-Attar & Alsoboa, 2016).

The current economic community is characterized by increasing competition, rapid technological development, shortening the life cycle of products and consumers' desire for renewable products of a suitable price and high quality (Zourob, 2016). Under these circumstances, each institution seeks to satisfy the wishes of the largest possible number of customers and thus maximize its market share and ensure its survival. This depends on several factors, including the ability to produce and market renewable products that meet consumer requirements in terms of quality and price (Menon & Melendez, 2017).

Because of these changes in the economic environment, it is necessary for industrial companies to use modern managerial accounting methods and avoid traditional methods, to maintain competitive advantage and cope with the great economic development, and achieve high-quality products of these companies (Atwi, 2018). Thus, many modern methods of managerial accounting have emerged, one of which is the target cost (TC) method. The target cost method is defined by the IFAC (2008) as "a cost management approach that is based on demand-driven production because it focuses on customer requirements for quality, cost, and time" (Al-Attar & Alsoboa, 2016).

The target cost method is based on the idea of studying the needs and desires of customers and determining the appropriate price that the customer can pay for a product, we can then implement the target cost method through several steps (target price setting, target profit setting, target cost setting (Seddeq & Yousef, 2018; Jayeola & Onou, 2014).

Target cost method grew in Japan in (1973) as a tool for the development of some American methods and a private method to give the Japanese industries competitive advantages in terms of cost, price, and quality to meet the modern industrial business environment variables, The concept of target cost method is applied in order to improve the enterprise culture towards cost management more than traditional methods, which are limited to the cost of inventory and the combined costs (Appelbaum et al., 2017).

In order to reduce the technological gap between developing and developed countries in the industrial sector, many developed and developing countries have launched several initiatives to apply modern management accounting methods such as target cost (Bin Saeed, 2015). Global industrial companies have realized the benefits of target cost because they are a global phenomenon that is pervasive in both industrialized and developing countries (PCIP, 2020). Consequently, the majority of advanced industrial companies in the world have turned to the use of modern methods of administrative accounting, including target cost. Thus, official entities such as the American Institute of Certified Public Accountants (AICPA) and the International Federation of Accountants (IFAC) have set standards in this regard. Today's reality requires organizations to participate in the process of adopting these modern methods for better performance in line with the challenges of intense competition in the market. Target cost has been used in this regard (Cooper, 2017). And the target cost method is one of the most modern tools in cost measurement (Ghafeer et al., 2014). The use of traditional cost-accounting techniques has weakened the ability of industrial firms to determine the cost of their products to conform to the nature of modern economic variables, increased competition, and multiple products, and to provide them at a fixed price so that companies can survive and sustain (Mohammad, 2016).

The low use of the target cost method in Jordan is because some managers are afraid to apply this method (Al-Awawdeh & Al-Sharairi, 2012). It is therefore essential to investigate the role of target cost among industrial companies in

Jordan, especially since this factor has not been tested empirically in Jordan. However, most of the studies that had been conducted focused on certain sectors in general. There are low studies that had been done to understand the role of target cost in Jordan. Therefore, there is a need for a study to investigate the role specifically in industrial companies' domain.

Previous studies also showed that the target cost method is used by more than 77% of industrial companies in Jordan, but not adequately applied in other companies. In addition, many of the industrial companies still lack confidence in the usage of the target cost method and are quite unaware of the benefits and importance of the target cost method (TC). Importantly, they still regard the target cost method as very complex and hence are not willing to use this Modern administrative-accounting method in their practice. (Talib, 2018; Mohammad, 2016). Amroon et al. (2016) In this regard, the researcher asserts that there is a tendency that the application of the targets cost method in developing countries in general, and in Jordan in particular, may continue to dwindle as a result of poor perceptions of the target cost method users and/or due to lack of adequate skills in employing modern methods in management accounting. Hence, though the target cost method (TC) is being applied in most industrialized countries; developing nations like Jordan are reluctant to use the method (Amroon et al., 2016).

Unfortunately, the literature on the role of target cost in the Middle East and African countries was limited even though global studies have revealed the importance of the target cost method in production. A critical review of past studies from this perspective has revealed that the majority of studies only investigated target cost (Khateeb et al., 2019; Oliva et al., 2016; Mohammad, 2016). Amroon et al. (2016) affirm that " Without a good understanding about the role of the target cost method, it would be challenging to make them appreciate the contributing factors that the target cost method will make on the quality of their products.

The crucial gaps in the research area are the depth and scope of the studies. Of course, the lack of literature on studies done in the middle east in general and Jordan, in particular, made it more crucial for an effort to be devoted toward it. Gaps in previous studies have focused on

certain large companies that have the resources and the means to apply the target cost, with very few of these studies focusing on SMEs. Another gap that appeared relates to many studies that have used the information to reduce costs and reach target cost, and have not research the impact of target cost or information on the quality of products using a mediating variable.

The basic curiosity in the researcher's mind is the importance of information and Target costing methods to improve the quality of products in the manufacturing sector in Jordan, and the industrial sector was chosen because it represents the largest sector in the Jordanian market.

1.2 Study Objectives

❖   To examine the impact of Information and the implementation the Target Cost of industrial companies.

❖   To examine the impact of Information on Products Quality of industrial companies.

❖   To examine of relationship between Target cost and Products Quality of industrial companies.

❖   To examine the mediating impact of Target cost on the relationship between the Information and Products Quality of industrial companies.

1.3 Study Questions

❖   Is there an impact of Information and the implementation of the Target cost of industrial companies?

❖   Is there an impact of Information on Products Quality of industrial companies?

❖   Is there a relationship between Target cost and Products Quality of industrial companies?

❖   Is there mediating impact of Target cost on the relationship between Information and Products Quality of industrial companies?

1.4 Hypotheses Development

❖   H1. Information has a positive significant

relationship with the company's use of Target Cost.

❖   H2. Information has a positive significant relationship with Products Quality.

❖   H3. Target Cost has a positive significant

on Products Quality.

❖   H4. Target cost has a positive mediating impact on the relationship between Information and Products Quality of industrial companies.
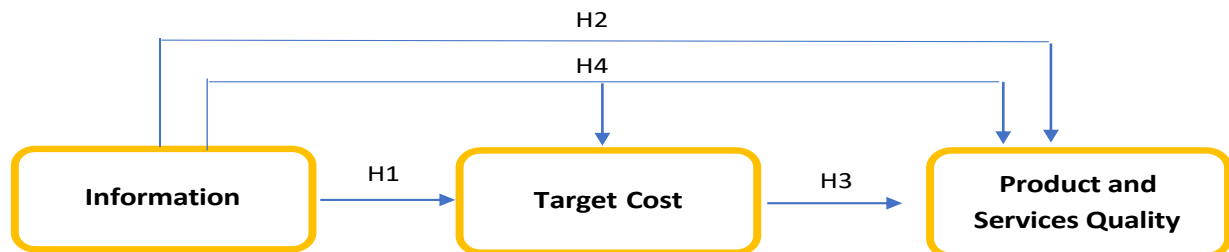
1.5   Study Framework

Figure 1 Framework

1.6   Significance Of Study

This study is of great importance both theoretically and practically. The first is the insight it provides into the use of the modern administrative-accounting methods represented in target cost in the industrial companies in Jordan listed on the Amman Stock Exchange. Most of the previous studies focused on developed countries or on specific sectors in developing countries. As yet, no extensive study has addressed this issue to contribute new information to the literature, most of the studies that studied modern methods of administrative accounting focused on specific sectors and situations (Khalil, 2012; Haddad, 2011; Farrell, 2010; Hassan & Yahya, 2018).

In this study the use of the target cost and its impact on products quality of industrial companies in Jordan will be investigated, to understand how target cost can help to reduce product costs, and whether such a reduction will help to produce products at a suitable price and high quality, thus contributing to the competitive advantage of the company and continuity in the market.

The previous studies have examined the study of the direct effect of information as an independent variable on the other dependent variables (Farrell, 2010; Ismail et al., 2010). This research presents a new framework through the use of a mediate variable. The objective is to clarify the effect of information as an independent variable in which we seek to clarify

the impact on target cost and thus the impact on the quality of products. Finally, this study could help academics and researchers, by broadening the scope of future studies on the subject.

2.   LITERATURE REVIEW

2.1   Overview Of Target Cost

The Japanese have used target cost for almost 30 years as a strategic tool to manage costs. However, managers outside Japan did not have enough knowledge to show the great importance of this approach (Al-Matarneh, 2008). They believed that any article or book containing the costing system, discusses a subject of accountants' work, so they are out of their interest.

Target cost arose in Japan in the sixties of the last century and developed in the early seventies and was circulated in the eighties gradually from one sector to another, and developed articles and publications focused on target cost, but slowly but not known outside Japan (Touhami, 2002), and spread later in the countries as a new technique in the area of accounting management because of the increased competition between companies and the opening of markets with each other and the development of communication systems, and became the economic units are required to produce renewable products keep pace with developments in the modern business environment and looking for methods Which enables them to stay as long as possible in the

market by offering the lowest cost products and the best quality and technology (Al-Habeiti, 2009). Target cost starts from the stage of planning and design through studying the market and identifying the products that meet the customers' wishes and meet their demands with products of suitable quality and price, because they are considered the appropriate way to manage costs in the future.

The introduction of target cost was first introduced in Japan and has been defined by the Japan Accountants Association as a "profit management process in general, by determining product quality, price, distribution and other product-related objectives that enable the organization to achieve its profit strategies, achieve those levels mentioned in the planning phases of the product as a whole and develop it to the level that meets the customers' expectations and needs (Mukhopadhyaya, 2009).

Touhami defines it as a recent introduction of cost management approaches applied in the development and design phase, as it differs from traditional cost management methods applied at the production stage. It is not an administrative method of cost control but a means of reducing costs (Touhami, 2002).

Al-Matarneh defines it as an activity aimed at reducing costs during the lifecycle of new products, while ensuring product quality and satisfying consumer needs by examining all cost reduction ideas during the planning, research and production development stages (Al-Matarneh, 2008).

TC is defined as "a cost management tool aimed at reducing the cost of the product during the planning, development and design phase, so this tool attempts to reduce the cost at the design stage for the speed and magnitude of the savings that can be achieved at that stage while maintaining the quality of the product, Its functional capabilities, and the degree of customer confidence in it (Pasquire et al., 2011).

2.2   The Hashemite Kingdom of Jordan

Jordan is a small developing country. Located in the Middle East with a total area of 89,342 square kilometers, Jordan has a population of 5.4 million, of which 1.2 million live in the capital Amman. Jordan has limited resources and per capita GDP is around 1,207.8 Jordanian dinars (US$1,725). Natural resources are phosphates, fertilizers, potash, agricultural products and light industries (Al-Zu'bi, 2012).

The Hashemite Kingdom of Jordan is a constitutional monarchy with a representative government. The King, His Majesty King Abdullah II, is the Head of State, Executive Director and Commander-in-Chief of the Armed Forces. The King exercises his executive authority through the Prime Minister, the Council of Ministers or the Council of Ministers. The Council of Ministers shall be accountable to the elected House of Representatives, which, together with the Senate, constitutes the legislative power of the government. The judiciary is an independent branch of government. Since 1989, all elements of the Jordanian political spectrum have embarked on the path of greater democracy, liberation and consensus-building. These reforms, guided by the late King Hussein, put Jordan on an irreversible path towards democracy (Al-Zu'bi, 2012).

The ASE was established in March 1999 as a private, non-profit organization with administrative and financial autonomy. It is allowed to operate as a stock exchange. The stock exchange is governed by a seven-member board of directors. The Executive Director oversees day-to-day responsibilities and reports to the Board of Directors. The ASE membership includes 69 brokerage firms in Jordan (ASE, 2021). ASE is committed to the principles of fairness, transparency, efficiency and liquidity. ASE seeks to provide a strong and secure environment for listed securities while protecting and guaranteeing investors' rights. To provide this transparent and effective market, the ASE has implemented internationally recognized guidelines for market divisions and listing standards (ASE, 2021). To comply with international standards and best practices, ASE-Stock Exchange works closely with the Jordan Securities Commission (JSC) on oversight matters and maintains strong relationships with exchanges, associations and other international organizations. The Stock Exchange is an active member of the Federation of Arab Stock Exchanges and the Federation of Eurasian Stock Exchanges (FEAS), a full member of the World

Federation of Stock Exchanges (WFE) and an associate member of the International Organization of Securities Bodies (IOSCO) (Al-Zu'bi, 2012).

The Stock Exchange is responsible for providing companies with the means to raise capital by listing on the stock exchange, encouraging the active market in listed securities on the basis of effective price determination and fair and transparent trading, and providing modern and effective facilities and equipment for trading recoding trading. Price dissemination, monitoring and regulating trading in the market, coordinating with the Securities Authority as necessary, to ensure compliance with the law, protect the fair market and investor, develop and enforce a code of professional ethics between board members and faculty, ensure accurate and timely information Appropriate from market exporters and dissemination of market information to the public (Al-Zu'bi, 2012).

2.3   Overview Of Products Quality

the Products Quality defined as It is the provision of the product or service to the consumer with the required specifications without any manipulation of the standards to be met in this product or service, in other words, to provide it to customers in a way that facilitates the customer to use this product or service (Mosawi & Abdul-Haq, 2018). The quality of products or services is one of the main factors that contribute to the success or failure of companies and therefore it seeks to provide high-quality products through which to achieve a competitive advantage that achieves consumer satisfaction. Service to consumer needs, degree of product conformity to technical and engineering design specifications (Horngren et al., 2015). Therefore, quality can be divided into:

design quality, which is how to meet the specifications of the product or service needs and wishes of the consumer, which is quality from the point of view of the consumer.

the quality of conformity and includes the manufacture of the product in accordance with the specifications of technical and engineering design, which is the quality from the perspective of the company (Abu Musa, 2000).

Thus, it can be concluded that poor quality can occur for two reasons, the first being a mismatch between the expectations of consumers and the design specifications, which is known as the design quality deviation, and the second is a mismatch between the design specifications and the actual results, which is known as the deviation of the quality of symmetry (Marei, 2002).

2.4   Information and Target Cost

Information is one of the most important factors in value engineering, through which they know the basic things about the target customer category (Cerqueiro et al., 2011). Studies indicate that there is an effect of information on the use of target cost (Abu-Raghif, 2012), however there is empirical evidence to prove the impact of information on the use of target cost, many empirical studies have been used to examine the impact of information on the use of modern management accounting methods (Rashim & Arslan, 2018), resulted For example, Zeghal & Maaloul (2010) found that there is a strong correlation between information and the use of modern management accounting methods, including target cost, these results mean that factors such as quality of information, sources of information and methods of gathering information They affect companies to use and adopt modern techniques in management accounting at different stages of production, Hasan et al. (2018) found that there is a significant impact of information on the use of modern technologies in management accounting in different contexts and countries. Experimental evidence in other fields related to the impact of information on the use of companies for target cost, many studies have already examined the relationship between information and use by industrial companies, and the results of these studies were inconclusive, such as the study of Hasan & Yahya (2018), where this study adopts that their Positive impact on target cost use through information collected before, during and after the production process. Insignificant results were also found by Kathim (2008) and Talib (2018). This means that there is a difference in the importance of information depending on the size of the company, the nature of its work and the products it provides. As mentioned above, this study examines the effects of information on

the use of target cost in industrial companies. It's concluded that the management and staff in those companies realize the benefit and productivity resulting from the use of target cost in production processes and this will positively affect the adoption of technology and use, and information has a significant impact on companies to use target cost. Information seeks to understand and interpret the corporate environment. It is not easy to draw conclusions about the role of information in the decision to use target cost due to contradictory results in previous research. This issue requires further investigation. As mentioned in the above discussion. The conclusion is that information has a significant impact on the use of modern methods in management accounting, previous studies are similar in context and culture as well as in technological development.

2.5   Information Effort and Products Quality

Previous studies indicate the impact of information on the quality of products (Jasim & Othman, 2017), and there is empirical evidence to prove the impact of information on the quality of products, and several empirical studies have been used to examine the impact of information on the quality of products (Rashim & Arslan, 2018) For example, Zeghal & Maaloul (2010) found that there is a strong relationship between information and the quality of products. Mustafa (2016) found that information has a significant impact on the quality of products in different contexts and countries. Many studies have already examined the relationship between information and its use by industrial companies in improving the quality of products, and the results of these studies are inconclusive, such as Al-Kabbaji (2014). It is not easy to draw conclusions about the role of information in improving the quality of products due to contradictory results in previous research. This issue requires further investigation. In the above discussion, the conclusion is that information has an impact on improving the quality of products, and previous studies are similar in context and culture as well as in technological development.

2.6   Target Cost and Products Quality

Products quality are considered to be a major driving force behind any wealthy nation (Nickell, 1995). It is one of the indicators that top management uses to monitor firms' activities to keep the firms and its strategies in the correct direction (Neely et al., 1994). According to this concept, companies worldwide continuously work to enhance their performance through many continuous improvement techniques.

Therefore, products quality considers the indices of success, growth, prosperity, failure, strategy implementation, and goal achievements to provide assistance in decision-making (Neely, 2002; Neely et al., 1994; Skinner, 1971). Products quality, in particular, is a critical determinant of an organization's future, on the condition that the organization will use relative, reliable, credible and informative measurements to help in predicting tomorrow while learning from yesterday.

Several previous studies showed a positive relationship between modern management accounting methods adoption and products quality (Chan et al., 2010; Salim & Yadav, 2012). Other studies (Sahai, & Srivastava, 2012; Kang et al., 2010) showed negative results between modern management accounting methods capability and products quality. Kang et al. (2010) supported these findings because there is no relationship between modern management accounting methods and firms' profitability. The findings of McSherry et al. (2015) showed a significant effect on time savings and firms' profitability.

The same measures were used by Ismail et al. (2010) who revealed that when companies aligned their accounting modern management accounting methods requirements, they have a greater possibility to yield better products quality. In another related study, Ismail et al. (2010) revealed that firms that make use of sophisticated IT can provide more management accounting information and consequently improve products quality.

According to Hasan et al. (2018), despite the fact that the modern management accounting methods assist companies to produce products as more efficiency and low cost. Meanwhile, in other related studies, Talib. (2018) stated that the modern management accounting methods

impact on products stems from technological, organizational, and environmental factors.

The companies that have adopted the application of modern management accounting methods have improved products quality, where these methods are used in the production process in its various stages, this contributes to lower costs, improve product quality and satisfy customers' desires. Organizations that use modern management accounting techniques can provide them with a strong and distinctive ability resulting from combining cost reduction while maintaining quality. In fact, the use of these methods allows companies to achieve a competitive advantage and high performance. Due to the rapid development and competition in international markets, it is necessary for companies to adopt such methods, they have shifted to using the best management accounting tools and techniques, to help them develop their business and stay in the market (Drury, 2013).

The negative effects of products quality are supported by several past studies that discover that people usually get suboptimal solutions and reduce performance when excessively rely on organizational routines. However, even with mandatory training and use, some corporate managers were reluctant to apply modern management accounting methods (Zeghal & Maaloul, 2010). This causes resistance from managers, who intend to avoid the burden of using the technique, and in their view, the use of target cost will reduce their performance and improve quality of products (Zengin & Ada, 2010).

Also, many companies do not know the tools to improve products and improve production. Most corporate employees and even senior management also do not understand target cost implementation procedures or the purpose of their implementation (Al-Matarneh, 2008) therefore, sometimes they will take a negative attitude towards target cost implementation projects. Even if target cost is applied within the company, target cost can become a problem in some cases, there is always a fear of a problem during the application process and therefore it is difficult for employees in the company to address the problem, because some problems need specialists in such modern accounting methods, and at the same time it is also possible for modern management accounting methods can contribute to reduce costs, time and effort

and raise Productive efficiency, the empirical evidence in other related areas may negatively influence the innovation and new ideas that play important role in today business environment that dominated by the high level of competitive uncertainty (Haddad, 2011)

Companies that lag behind their knowledge of modern management accounting methods will fail to cope with the many challenges posed by the modern business environment; this will adversely affect their products quality. The literature review showed that there was no consensus on the effects of the perceived cost performance target. Some authors have pointed out that the application of target cost contributes to improving the products quality by reducing costs and maintaining quality and thus can achieve a competitive advantage. However, other studies have not indicated these benefits. This study uses value engineering factors to identify and examine factors at the organizational level that affect the use and adoption of target cost, as well as whether companies' use of target cost improves their products quality. Thus, further research is needed to examine this issue.

3.   RESEARCH METHODOLOGY

3.1   Research Approach

Selection of appropriate approach and method assumes critical importance when conducting research (Galliers, 1992). A review of prior studies in prior target cost adoption research helps to identify the most appropriate approach to carry out the research.

The survey approach dominates accounting and management adoption research methodologies. It provides snapshots of specific practices or behavior at a specific time from which inferences may be made (Zeng & Lin, 2007). It is realistic and helps make proper generalizations (Mohamad & Ismail, 2009). Additionally, it enables the researcher to focus on a specific problem, pursue a rigorous method, and generate valid conclusions (Sekaran, 2003). Pinsonneault and Kraemer (1993) emphasize that the survey approach is most appropriate when the dependent and independent variables are well-defined and a conceptual model of the expected relationships exists. This study has a well-defined dependent variable and there is

clear causality between research variables and are supported by a theoretical basis. This study is also interested in generalizing the research result to industry firms. Due to these characteristics, this study will adopt the survey approach to investigate and examine the research framework.

3.2   Research Design

This step involves making decisions about the purpose, location, type, processing, control, and level of analysis (Sekaran, 2003), this vital step helps to formulate a checklist that can guide the activities and processes used by the researcher in achieving research objectives and verifying the validity of hypotheses. Descriptive research will be conducted to obtain the respondent's profile, calculate the frequencies of demographic variables, and to confirm the standard and average deviation of variables. This will help the researcher to record the current status of each building. In addition, SEM was used to examine the effect of intermediate variables as described in the theoretical framework. The research design of this study is argued as the most established one as it has assisted in establishing the relationship between the independent variables and the dependent variable.

3.3   Population And Sampling

The study community consists of all the industrial companies listed on the ASE, which number until the end of the December - 2021 (47) industrial company According to the records of Amman Stock Exchange (ASE). The majority of the Jordanian industrial companies is located in Amman. According to the annual company's guide. (www.ase.com.jo).

Sekaran (2006) defines sampling as "a process of selecting a sufficient number of elements from the population so that by studying the sample and an understanding of its properties or the characteristics, we will be able to generalize the properties or characteristics to the population elements."

The sample is considered as a sub-set of the population. According to Kumar (2006), the sampling frame can be used for selecting the samples. Numerous techniques can be applied to choose the samples. Sekaran and Bougie (2016)

suggested three possible sampling techniques generalize the results, which are simple random sampling, cluster sampling, and systematic sampling. However, the census of population is an investigation of all the elements that make up the population by a focus on the total population rather than a sample (Zikmund et al., 2013). In this study, the population in this study is 47 industrial companies.

This study adopted a proportionate stratified random sampling method. This involved separating the population into sub-groups and then randomly drawing a sample from each group (Gay et al., 2006). Stratification is an efficient research sampling design because it ensures that the resulting sample is distributed in the same way as the population in terms of the stratifying criterion (Hair et al., 2010). A systematic random sampling method was utilized in this field, to enable it to generalize to the population (Bryman & Bell, 2003). Hair et al (2006) recommend selecting a random sample in which each person in the population has an equal probability of being chosen. Leedy and Ormrod (2005) also emphasize that in selecting a random sample, the researcher can take for granted that the characteristics of the sample approximate the characteristics of the population.

The sample is considered as a sub-set of the population, the sampling frame can be used for selecting the samples. For this study, the stratified random sample was used so that the sample included all the industrial sectors listed on the ASE, the sample of the study consisted of finance managers, production managers, heads of financial, quality managers, strategic and planning managers, and engineering department manager, in 47 industrial companies. The questionnaire was distributed six questionnaires for each company. The total number of questionnaires to be distributed will be 282 questionnaires.

3.4   Measurement Scale

Each variable is measured through a knowledge matrix using specific scale values. A scale is a tool that indicates individual answers vary based on the study variables (Sekaran, 2000). Generally speaking, the sample scale adopted in this study is the Likert scale as it is the common scale used in questionnaires and the most established one in survey studies. After

providing their responses to the Likert measurement, the assessment of the respondents is displayed based on different levels. Hence, the Likert scale, particularly the 5-point scale depicted from 1 (strongly disagree) to 5 (strongly agree) was used for its easy creation, management, and reliability (Churchill & Brown, 2004).

3.5   Reliability and Validity

Validity and reliability are two frequently encountered concepts in measurement and evaluation, Peter (1981) stated that validity refers to the extent to which a measurement tool actually measures the construct that it is supposed to measure. Validity provides the answer to the question; does the scale serve its purpose? Earlier researchers for reliability and validity have tested all of the constructs which were used. Reliability which was occasionally referred to as internal consistency also refers to the extent to which the measurement instrument precisely and repeatedly measures the intended construct (Churchill, 1979).

There are several aspects of reliability test when one should think about research work. Hair et al. (2006) assert that the reliability of scale differs greatly and it depends on the sample of the research or study. Its importance in research work has made very necessary for researchers to check that each of the scales is very reliable for the sample of the research work. In line with this, there is a need to check the internal consistency of the scales used in the study. The Cronbach's Alpha indicator which is the common predictor of the internal consistency will be adopted in this study, item reliability can fall within the range of 0 to 1. Hair et al. (2006) suggests a Cronbach' Alpha coefficient of more than 0.50 to be the accepted level especially if the scale of the study has less than 10 units. But in most social science researches the value of Cronbach's Alpha should be greater than or equal to .70 to be accepted in reliability testing (George & Mallery, 2008).

3.6   Data Collection Procedures

The developed questionnaire will enable the gathering of the sought-after data from industrial companies of the identified sector after obtaining permission from them. Accordingly, Sekaran (2003) regarded a structured questionnaire to be a method that is fitting for the gathering of data in the situation where the researcher has the exact knowledge of the requirement in addition to the manner in which the variables of interest are to be measured. Similarly, he also views questionnaires to be an efficient mechanism of data gathering, particularly in the situation where: (1) there is a need to safeguard the respondents' privacy, and (2) the responses are expected to be in a standardized way. Furthermore, a questionnaire is usually easy to analyze, low-cost to administer, familiar to most people, and can help to reduce bias as the researcher's influence on the respondents' answers is minimized. The questionnaires were distributed to the companies by e-mail.

3.7   Descriptive Analysis

Generally, descriptive analysis is for describing interesting phenomena (Sekaran & Bougie, 2010). In another word, descriptive information is statistically analyzed to describe the frequency of a certain phenomenon, the central tendency or average score, and the level of variability. All these can be regarded as the frequency, mean and standard deviation of the variables. Therefore, this study applied descriptive analysis to the characteristics of the sample and all constructs of the study.

4.   RESULTS AND DISCUSSION

4.1   Response Rates

In line with the decision to use the entire population, the research distributed questionnaires to 282 respondent's citizens in Jordan who are currently working in industrial companies. Out of 282 distributed, only 258 questionnaires were returned. In addition, Hair et al. (2010) argued that it is better for researchers to discard any case of respondents from the collected questionnaires if the missing data are more than 50%. Based on their recommendation, 24 questionnaires were discarded because more than 50% of them were incomplete. Questionnaire was distributed purposively to Finance Managers, Production Managers, Chief Financial Officers, General

Managers, Strategic and Planning Manager and Engineering department managers who are related to the field of study. Data collection was conducted from the mid of Oct. 2021 to 25 of Dec. 2021. This resulted in 258 usable responses for further analysis, yielding an overall response rate of 91.5%. However, before the data analysis is done, it is essential to take into account the data accuracy which was fed into the data file and also the output that would produce non-distorted correlations (Tabachnick & Fidell, 2001). Also, 9 cases were deleted with univariate cases. This means that the total sample size is 249. Table 4.1 shows the breakdown (summary of response rates and Outliers).

Table 4.1

Summary of Response Rates

QUESTIONNAIRE ADMINISTERED	N	PERCENTAGE
Undelivered	0	0
Uncompleted	24	8.5%
Number of responses	258	91.5%
Response rate (258/282)	258	91.5%
Outliers (9 cases)	9	3.2 %

4.2   Descriptive Analysis

A descriptive analysis was then conducted to describe the general situation of the region in the Jordanian context. In relation to this, Table 4.2 shows the mean, standard deviation, maximum, minimum, Skewness, and Kurtosis value of the constructs. For ease of interpretation of the Likert scale of five points, the current study used three categories as follows: scores lower than the value of 2.33 [4/3 + lowest value (1)] were regarded as low, whereas scores of 3.67 [highest value (5) - 4/3] were regarded as high while the scores that fall in between were regarded as moderate scores.

Table 4.2 shows that the smallest value of nearly every construct was 1.00 while the largest value was 5.00. These values reflect the minimum and maximum levels of the Likert scale that this study employs. Also, as construable by the data, the information had the minimum mean value of 3.5472 with the standard deviation of 1.05544. Therefore, three categories of mean values stated were above 2.33 but less than 3.67 (moderate), and above (high). It can thus be said that respondents tended to exhibit a high level of perceptions regarding the quality of products because the mean value for this variable exceeded 3.67. However, they exhibit a moderate level of information and target cost.

Table 4.2 *Descriptive Statistics of the Constructs*

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
TC	249	1.00	5.00	3.6554	.92317	-.642	.154	-.353	.307
INF	249	1.00	5.00	3.5472	1.05544	-.765	.154	-.103	.307
PQ	249	2.00	5.00	4.0710	.80870	-.879	.154	.338	.307

4.3   Reliability Analysis

Reliability analysis was used in this research in order to guarantee the measures of the variables are internally stable and remain consistent throughout the process, including the variety of items that measure the concept. (Sekaran, 2003). In this research, reliability was gauged using Cronbach's alpha coefficients. The measures were believed to suffice in their level of reliability, in reference to the Cronbach's alpha

values that are equal to or exceeding 0.70; whereas, measuring the strength of its reliability will be carried out according to Hair et al. Table (4.3) provides the values of Cronbach's alpha for all the variables. It appears from the Table that the values of Cronbach's alpha ranged between 0.788 and 0.933 These values are good to excellent. Thus, it can be concluded that the measures have an acceptable level of reliability.

Table 4.3 V*alues of Cronbach's alpha for all the variables*

DIMENSION	(TC)	(INF)	(PQ)
ITEMS	6	5	5
CHRONBACH ALPHA	0.911	0.933	0.788

4.4   Assessment Of Normality

Many of the statistical procedures including correlation, regression, t-tests, and analysis of variance, namely parametric tests, are based on the assumption that the data follows a normal distribution (Ghasemi and Zahediasl, 2012). For

this reason, an Assessment of normality is required to achieve the objective of this study. Table (4.4) shows the results of the normality test.

Table 4.4 *Results of normality test:*

Variable	Min	Max	Skew	c.r.	Kurtosis	c.r.
(INF)	1.000	5.000	-.761	-4.899	-.125	-.404
(TC)	1.000	5.000	-.638	-4.109	-.370	-1.192
(PQ)	2.000	5.000	-.874	-5.631	.308	.991

4.5   Computations Of Effects on Variables

4.5.1 Standardized Total Effects

Standardized Total Effects are displayed in Table (4.5)

Table 4.5 *Standardized Total Effects*

Variable	(INF)	(TC)
(TC)	-.021	.000
(PQ)	.011	.299

Table (4.5) shows Standardized Total Effects. The standardized total (direct and indirect) effect of (INF) on (TC) is -.021. That is, due to both direct (unmediated) and indirect (mediated) effects of (INF) on (TC), when (INF) goes up by 1 standard deviation, (TC) goes down by 0.021 standard deviations. The standardized total (direct and indirect) effect of (INF) on (PQ) is .011. That is, due to both direct (unmediated) and indirect (mediated) effects of (INF) on (PQ), when (INF) goes up by 1 standard deviation, (PQ) goes up by 0.011 standard deviations. The standardized total (direct and indirect) effect of (TC) on (PQ) is .299. That is, due to both direct (unmediated) and indirect (mediated) effects of (TC) on (PQ), when (TC) goes up by 1 standard deviation, (PQ) goes up by 0.299 standard deviations. Table 4.6 Standardized Total Effects - Two Tailed Significance.

Table 4.6 *Standardized Total Effects - Two Tailed Significance*

Variable	(INF)	(TC)
(TC)	.728	...
(PQ)	.803	.001

These are a bootstrap approximation obtained by constructing two-sided bias-corrected confidence intervals. The standardized total (direct and indirect) effect of (INF) on (TC) is not significantly different from zero at the 0.05 level (p=.728 two-tailed). The standardized total (direct and indirect) effect of (INF) on (PQ) is not significantly different from zero at the 0.05 level (p=.803 two-tailed). The standardized total (direct and indirect) effect of (TC) on (PQ) is significantly different from zero at the 0.001 level (p=.001 two-tailed).

4.5.2 Indirect Effects

The results of standardized and standardized indirect effect are shown in Table (4.7)

Table 4.7 *Standardized Indirect Effects*

Variable	(INF)	(TC)
(TC)	.000	.000
(PQ)	-.006	.000

This Table shows standardized indirect effects. The standardized indirect (mediated) effect of (INF) on (PQ), when (INF) goes up by 1 standard deviation, (PQ) goes down by 0.006 standard deviations. This is in addition to any direct (unmediated) effect that (INF) may have on (PQ). Table 4.8 Standardized Indirect Effects - Two Tailed Significance.

Table 4.8 *Standardized Indirect Effects - Two Tailed Significance*

Variable	(INF)	(TC)
(TC)	.000	.000
(PQ)	.681	000

These are a bootstrap approximation obtained by constructing two-sided bias- corrected confidence intervals. The standardized indirect (mediated) effect of (INF) on (PQ) is not significantly different from zero at the 0.05 level (p=.681 two-tailed).

4.6   Testing The Hypotheses

4.6.1 Testing the hypotheses between (INF) and (TC)

As shown in table (4.5), Information (INF) has a negative relationship on the company's use of target cost with a value of -.021. However, this impact is not significantly different from zero at the 0.05 level as p is .728 which is greater than .05 as shown in table (4.6). Therefore, this hypothesis (H1) is rejected.

4.6.2 Testing the hypotheses between (INF) and (PQ)

As shown in table (4.5), Information (INF) has a positive impact on products quality with a value of .011. However, this impact is not significantly different from zero at the 0.05 level as p is .803 which is greater than .05 as shown in table (4.6). Therefore, this hypothesis (H2) is rejected.

4.6.3 Testing the hypotheses between (TC) and (PQ)

As shown in table (4.5), Target cost (TC) has a positive impact on products quality with a value of .299. However, this impact is significantly different from zero at the 0.05 level as p is .001which is less than .05 as shown in table (4.6). Therefore, this hypothesis (H3) is accepted.

4.6.4 Testing the hypotheses of Mediation Effects of (TC) for the relationship between Information (INF) and products quality (PQ)

As shown in table (4.7), Target Cost (TC) negatively mediates the relationship between Information (INF) and products quality (PQ) with a value of -.006. However, this impact is not significantly different from zero at the 0.05 level as p is .681 which is greater than .05 as shown in table (4.8). Therefore, this hypothesis (H4) is rejected.

5.   DISCUSSION, CONTRBUTIONS, RECOMMENDATIONS, AND CONCLUSION

5.1   Discussion Of Hypotheses Testing

5.1.1 Information (INF) has not a positive significant relationship with the company's use of target cost (TC)

In the model that this present study proposes, Information is conjectured to positively impact on target cost. Accordingly, the parameter estimation results for the above hypothesis was statistically found to be not significant (H1: INF→ TC; β =-0.021, P-value = 0.728), which means that this hypothesis was rejected, insinuating that the Information factor doesn't effect on target cost. This result is not in line with (Abu-Raghif, 2012), (Rashim & Arslan, 2018) and Zeghal & Maaloul (2010). who indicate that there is an effect of information on the use of target cost, however, there is empirical evidence that does not support our result in terms of the impact of information on the use of target cost? However, though Hasan et al. (2018) is not in line with this result, his findings revealed that the results are contextual a circumstantial which partially supports our result in the context of Jordan. Other results of many studies were inconclusive, such as the study of Hasan & Yahya (2018), where this study adopts that their Positive impact on target cost use through information collected before, during and after the production process. In addition, insignificant results were also found by Kathim (2008) and Talib (2018). This means that there is a difference in the importance of information depending on the size of the company, the nature of its work and the products it provides. This may be explained by the extent to which management and staff in those companies realize the benefit and productivity resulting from the use of target cost in production processes and this will positively affect the adoption of technology and use, and information has a significant impact on companies to use target cost. In fact, this impact requires to understand and interpret the corporate environment due to contradictory results in previous research. This issue requires further investigation. However, the application of these studies on similar context and culture as

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well as in technological development could be attributed to such contradiction.

5.1.2 Information (INF) has a positive significant relationship with products quality (PQ)

In the model that this present study proposes, Information is conjectured to positively impact on products quality. Accordingly, the parameter estimation results for the above hypothesis were statistically found to be non-significant (H2: INF→ PQ; β =0.011, P-value =0.803), which means that this hypothesis was rejected, insinuating that the Target cost factor doesn't affect on products quality. This is not in accordance with many other previous studies that indicate the impact of information on the quality of products. These studies include (Jasim & 2017, 2012), (Rashim & Arslan, 2018), Zeghal & Maaloul (2010) and Mustafa (2016). other studies are inconclusive, such as Al-Kabbaji (2014).

5.1.3 Target cost (TC) has a positive effect on products quality (PQ)

In the model that this present study proposes, Target cost is conjectured to positively impact on products quality. Accordingly, the parameter estimation results for the above hypothesis were statistically found to be significant (H3: TC→ PQ; β =0.299, P-value =0.001), which means that this hypothesis was accepted, insinuating that the Target cost factor effect on products quality. This result is in accordance with many other studies. These include studies of (Jasim & Othman, 2017; Drury, 2013). However, other studies as (Zeghal & Maaloul, 2010; Al-Matarneh, 2008 and Al-Haddad, 2011) did not agree with these results. More importantly, the literature review showed that there was no consensus on the effects of the target cost.

5.1.4 Target Cost (TC) mediates the relationship between Information (INF) and products quality (PQ)

In the model that this present study proposes, was conjectured Target cost as mediate between Information and quality of products. Accordingly, the parameter estimation results for the above hypothesis were statistically found to be non-significant (H4: INF→TC→ PQ; β =-0.006, P-value =0.681), which means that this hypothesis was rejected, insinuating that the Target cost as a mediate factor between

Information and quality of products it has no effect. This result is in line with the first hypothesis which revealed that Information (INF) has not a positive significant relationship with the company's use of target cost. From literature, we can conclude, as literature may support otherwise, that there is a fault in the information system or the price cost. However, the lack of competitiveness, due to closed market with no export, and the quality of services generally offered by the Jordanian companies could be attributed to the insignificance of this relationship, specifically the mediation of the target cost.

5.2   Contributions

This study has attempted to ascertain the impact that value engineering has on the target cost and the quality of products. Target cost is a pricing method geared towards improving the company's ability to compete especially in the product markets. There is a need to understand target cost in order to understand how effective they are in reducing costs and improving product quality. The cost theory seeks to show information as a critical and important factor in supporting and improving the quality of products, whether in terms of cost, quality, or market availability. However, this study attempted to examine the cost theory in developing countries, namely Jordan, which is located in the Middle East.

The results showed the absence of a statistically significant relationship between the information and the target cost. Cost theory shows the creativity is one of the modern factors that contribute to raising production efficiency, and providing high-quality products, as this factor according to cost theory is based on customer desire and market needs, in addition to the appropriate price and high quality. The cost theory also focused on avoiding unwanted activities that may increase the cost of a product or service, through functional analysis. The development of products according to cost theory contributes greatly to supporting the activities of companies, by keeping abreast with the latest products and the company strives to develop them, this saves the company potential losses in the event of not developing its products or services.

5.3 RECOMMENDATIONS FOR FUTURE RESEARCH

Future businesses should explore the use of modern accounting methods within other Arab countries in the region in particular. Future studies can continue to study this aspect based on other sectors that are likely to include banking, education, and agriculture. The industrial gap must be considered as a major obstacle preventing companies from adopting the targeted cost method and value engineering.

5.4 Conclusion

The study explains the way in which the specific research objectives were achieved in relation to the previously established results. This study examines the use of the target cost by industrial companies in Jordan. This study focuses on addressing the applicability of target cost by using information, founded in developed countries, to cultures other than Western or developing countries. The main belief is that all theories of adopting modern methods of management accounting are created and generated in developed countries, causing these theories to suffer from industrial and cultural bias. This bias might stop the applicability of these accounting theories when moving to other cultures and environments. On the contrary, the developments of methods and accounting methods during the last years of the twentieth century have led to the necessity of companies to keep pace with this development at the local and global levels, in addition to their benefits, making it impossible for companies at the global or local levels to ignore these advantages or avoid the application of methods Modern in management accounting. Moreover, the current work has enriched the knowledge related to the acceptance of modern methods in managerial accounting within the scientific work of cost theories.

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