The Impact of Total Quality Management Practices on Strategic Agility in Jordanian Concrete Companies

أثر ممارسات ادارة الجودة الشاملة على الرشاقة الاستراتيجية في شركات الباطون في الاردن

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Examination Committee's Decision

This thesis of the student **Zaid Ali Al-Shawabkeh** that study "The Impact of Total Quality Management Practices on Strategic Agility in Jordanian Concrete Company" has defined accepted and approved on 22/04/2019

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Zaid Ali Al-Shawabkeh

Dedication

This thesis is dedicated to my family. I would like to thank my father and my mother, whose love and guidance are with me in whatever I pursue. They are the ultimate role models. Most importantly, I wish to thank my loving and supportive wife, and my wonderful daughter.

I really cannot express my gratitude and thanks by words to my lovely family and friends; so I extend my deepest appreciation to them.

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The Impact of Total Quality Management on Strategic Agility

Prepared by: Zaid Ali Al-Shawabkeh

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Abstract

Purpose: This study aims to investigate the impact of total quality management sub-variables (top management commitment, continuous improvement, employee empowerment, customer management, and supplier management) on strategic agility of concrete companies.

Design/Methodology/Approach: This study is descriptive as well as cause/effect. Data collected from 120 managers and officers by questionnaire, from five companies in Amman, Jordan. After confirming the normality, validity, and reliability of the tool, the descriptive analysis carried out, and the correlation between variables checked. Finally, the impact tested by multiple regression.

Findings: The result shows that the Jordanian concrete companies implement total quality management sub-variables and strategic agility dimensions. It also shows that there is a strong correlation between total quality management sub-variables and strategic agility dimensions. Finally, it shows that total quality management practices positively impact strategic agility, and the highest impact was for the employee empowerment and customer management.

Practical and Managerial Implications: Implementing total quality management practices in concrete companies are necessary. Therefore, align total quality management within vision, mission and goals will direct strategic towards agility.

Limitations/Recommendations: The current study conducted in Jordanian concrete companies. Therefore, it recommends future researchers to collect more data over a longer period to check the current model validity and measuring instrument. It also recommends carrying out similar studies on other industries in Jordan and outside Jordan to ensure that results can be general.

Originality/Value: This study is one of the few studies to investigate the impact of total quality management on strategic agility in Jordanian concrete companies the study model was developed from various sources to formulate a new idea of total quality management and strategic agility.

Keywords: Total Quality Management, Strategic Agility, Jordanian Concrete Companies

أثر ممارسات ادارة الجودة الشاملة على الرشاقة الاستراتيجية في شركات الباطون في الاردن

إعداد: زيد علي الشوابكة

إشراف: د. عبد العزيز أحمد الشرباتي

الملخص

الغرض: تهدف هذه الدراسة إلى بحث أثر ممارسات ادارة الجودة الشاملة على الرشاقة الاستراتيجية لشركات الباطون في الاردن.

التصميم/الاجراءات: من أجل تطبيق هذه الدراسة جمعت البيانات من ١٢٠ مدير وقائد فريق وموظف مكتبي ممن يعملون في شركات الباطون الأردنية بواسطة الاستبانة. وبعد التأكد من التوزيع الطبيعي للإجابات وصدق وثبات الأداة، تم إجراء التحليل الوصفي والتحقق من الارتباط بين المتغيرات. وأخيرًا، تم اختبار الأثر بواسطة الانحدار المتعدد.

النتائج: أظهرت النتائج أن شركات الباطون الأردنية تطبق كل من متغيرات وأبعاد الرشاقة الاستراتيجية. وتظهر أيضا أن العلاقة بين متغيرات إدارة الجودة الشاملة وأبعاد الرشاقة الاستراتيجية قوية ايضا، تؤثر ممارسات إدارة الجودة الشاملة بشكل إيجابي على الرشاقة الاستراتيجية، وكان التأثير الأكبر لتمكين الموظفين وإدارة العلاقات مع الزبائن.

التطبيقات العملية والإدارية: تطبيق ممارسات إدارة الجودة الشاملة في شركات الباطون أمر لا بد منه. لذلك، فإن ادخال إدارة الجودة الشاملة في الرؤية والرسالة والأهداف ستوجه الاستراتيجيات نحو الرشاقة.

التطبيقات المجتمعية: توصي هذه الدراسة الشركات الأخذ بعين الاعتبار المسؤولية المجتمعية للشركات من خلال جميع عناصر ادارة الجودة الشاملة.

المحددات/التوصيات: أجريت الدراسة الحالية على شركات الباطون الأردنية. لذلك، توصي الباحثين في المستقبل بجمع المزيد من البيانات على مدى فترة زمنية أطول للتحقق من صلاحية النموذج الحالي وأداة القياس. كما توصي بإجراء دراسات مماثلة في صناعات أخرى في الأردن وخارج الأردن لضمان أن تكون النتائج عامة.

الأصالة/القيمة: هذه الدراسة هي واحدة من الدراسات القليلة التي بحثت في تأثير إدارة الجودة الشاملة على الرشاقة الاستراتيجية في شركات الباطون الأردنية، وقد تم تطوير نموذج الدراسة من مصادر مختلفة لصياغة فكرة جديدة عن إدارة الجودة الشاملة والرشاقة الاستراتيجية.

الكلمات المفتاحية: إدارة الجودة الشاملة، الرشاقة الاستراتيجية، شركات الباطون الأردنية.

Chapter One: Introduction

Background:

Today, more than ever all companies forced to respond to the continuously changing in the business environment to survive and compete; they cannot do anything without increasing the quality of their products or services. For a long time, the need for a system to increase the effectiveness of production is becoming a wish. Toyota Company was one of the first companies going to develop and apply total quality management that concern about lean production, six sigma, just in time (JIT) and supply chain management to achieve zero defect, zero inventory. Companies looking to increase their ability to produce products that meet or exceed customer requirement, in parallel they need a system to control and improve the production system. Actually, they need to apply total quality management to compete and survive. Juran (1995) the father of quality quoted about quality "every successful quality revolution has included the participation of upper management we know of no exceptions."

Total quality management considered one of the new managerial philosophies and practices adopted by both service and manufacturing organizations. Ugboro and Obeng, (2000) stated that the most important principles of total quality management are top management leadership and employee empowerment because it directly related to customer satisfaction. Kaynak (2003) stated that total quality management is a philosophy that seeks continuous improvement of an organization. Bayazit and Karpak (2007) stated that globalization increases the awareness of customers to find high-quality low-cost products throughout the world, which led to forcing companies to enhance the quality of goods and services. Sadikoglu and Zehir (2010) stated

that total quality management is a quality-oriented approach that implied by many organizations. Singh (2014) stated that organizations that use quality management, as a strategic foundation will achieve competitive advantage and enhance the performance for organizations. Tyagi (2014) explain total quality management as the word "Total" means involvement of all levels of employee and functions of the organization to reach customer satisfaction. It contains all processes, jobs, resources, outputs, persons, and places. Chen, et. al. (2016) stated that total quality management concern about developing products and processes through continuous improvements to exceed customers' expectations and the participation of all employees.

Finally, total quality management considered as very important philosophy in the world competition, and enhance the need total quality management practices for increasing the performance and organizational strategic agility also its competitive advantages. Therefore, this study directed to study the impact of total quality management on strategic agility in Jordanian concrete companies.

Study Purpose and Objectives:

The aim of this study is to investigate the impact of total quality management practices on strategic agility in Jordanian concrete companies. The study focus on the role of total quality management practices (top management commitment, employee empowerment, continuous improvement, supplier management, and customer management) and their impact on strategic agility (clarity of vision, understanding core competencies, selecting strategic targets, relationship with partners and taking action). While the study objectives are:

1. Provide a theoretical framework about the impact of total quality management practices on strategic agility that will support academics and researches about total quality management practices.
2. Evaluate the level of total quality management practices deployment in Jordanian concrete companies.
3. Raise the awareness to deploy the total quality management in Jordanian concrete companies.
4. To provide the sound of recommendations to managers at concrete companies and other related industries, as well as, for decision makers who concern about total quality management and strategic agility.

Study Significance and Importance:

This study may be considered as the first study in this industry in Jordan, which investigates the impact of total quality management on strategic agility in Jordanian concrete companies it's very important because it provides sound recommendation and solves problems that face the researcher and the workers in the concrete industry. This study is not only important for practitioners who work in the concrete industry, but also to other practitioners who work in other industries, as well as, for scholars and researchers. Therefore, the value of this study arises from the following scientific and practical considerations:

1. Drive the attention to the total quality management practices on and its influence on enhancing strategic agility of Jordanian concrete companies.
2. Highlight the importance of top management commitment, employee empowerment, continuous improvement, supplier management, and customer management the total quality management sub-variables and the quick influence on strategic agility in Jordanian concrete.

3. Support other researches in the study of total quality management, and its importance either on the concrete manufacturing industry or on other industries.

4. Support the decision makers in the concrete industry or even other industries, and provide a recommendation about total quality management.

Problem Statement:

From the researcher experience (as he is working in this field since four years), and from interviews conducted with many managers who are working in this field to define study problem; they said that they are facing many challenges, such as hyper-competition and the continuously changing in raw material prices.

The management role is about responding to those changes with a competitive selling price, to be the first mover toward customer or backward to suppliers and how to cascade all these processes into the internal operation and retain customers. The following factors forced organizations to be flexible and highly responding to these changes and adapt their business model to sustain, survive, and achieve competitive advantage: hyper-competition, continuously changing on business environment, high taxes, and low government funds for projects in Jordan, globalization and the ease of access to information enhance the need of the market and customer.

Worldwide organizations started to consider strategic agility to be one of the most requirements to sustain and survive. Powell (1995) stated that tacit knowledge, behavioral, imperfectly imitable features such as open culture, employee empowerment, and executive commitment could produce a competitive advantage. Tsourveloudis and Valavanis (2002) stated that the problems that face organizations not due to the low efficiency of workers, but

due to the administrative methods used which lack agile thinking, rapid changes, and improvements. Kannan (2005) said that the commitment to quality and an understanding of supply chain dynamics have the greatest effect on performance. McGrath, et. al. (2006) stated that companies apply different agility strategies in a dynamic business environment to adapt and survive. Snowden (2007) stated that organizations forced to change their strategies to survive and grow. Doz and Kosonen (2008) quoted that: “Five to ten years ago, you would set your vision and strategy and then start following it. That does not work anymore. Now you must be alerted every day, week, and month to renew your strategy.” Tallon and Pinsonneault (2011) stated that strategic agility able companies to analyze the situation and respond quickly.

Through reviewing the previous studies about the impact of total quality management practices on Jordanian concrete company’s strategic agility the literature still limited especially in the concrete industry. Therefore, this encourages the researcher to investigate the impact of total quality management practices on strategic agility in Jordanian concrete companies. Finally, to be a professional player in the business game, executives must find a tool to concur and work in with their total quality management practices to achieve strategic agility.

Based on the mentioned above problem statement, the following questions can be derived:

The main question:

1. Do total quality management practices (top management commitment, employee empowerment, continuous improvement, supplier management, and customer management) impact strategic agility in Jordanian concrete companies?

According to total quality management practices, the main question can be divided into the following sub-questions:

1.1: Does top management commitment impact strategic agility in Jordanian concrete companies?

1.2: Does employee empowerment impact strategic agility in Jordanian concrete companies?

1.3: Does continuous improvement impact strategic agility in Jordanian concrete companies?

1.4: Does supplier management impact strategic agility in Jordanian concrete companies?

1.5: Does customer management impact strategic agility in Jordanian concrete companies?

Study Hypotheses:

The problem questions can be answered by developing the following main hypothesis:

H_{01}: total quality management practices (top management commitment, employee empowerment, continuous improvement, supplier management, and customer management) do not impact strategic agility in Jordanian concrete companies, at ($\alpha \leq 0.05$).

According to Total quality management practices, the main hypothesis can be divided into the following sub-hypotheses:

$H_{01.1}$: top management commitment does not impact strategic agility in Jordanian concrete companies, at ($\alpha \leq 0.05$).

$H_{01.2}$: employee empowerment does not impact strategic agility in Jordanian concrete companies, at ($\alpha \leq 0.05$).

$H_{01.3}$: continuous improvement does not impact strategic agility in Jordanian concrete companies Organizations, at ($\alpha \leq 0.05$).

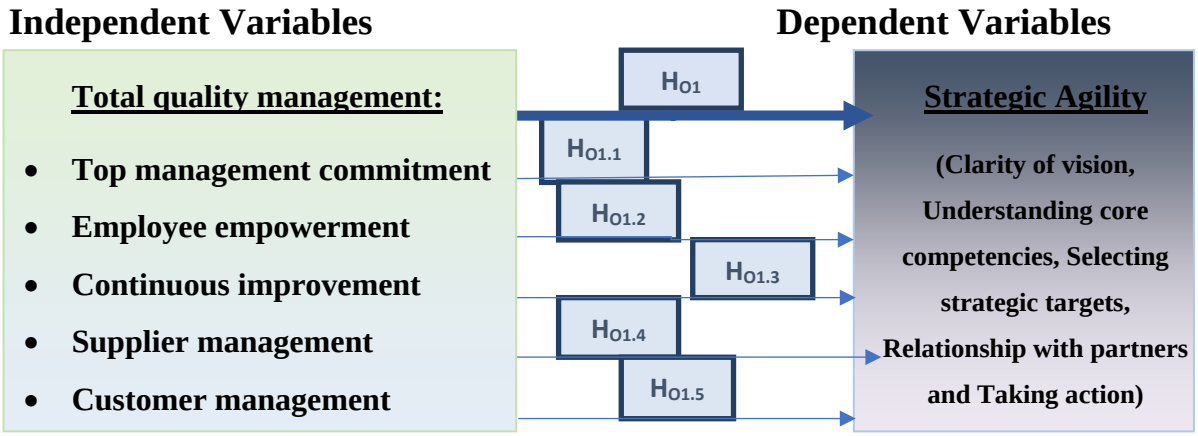
$H_{01.4}$: supplier management does not impact strategic agility in Jordanian concrete companies Organizations, at ($\alpha \leq 0.05$).

$H_{01.5}$: customer management does not impact strategic agility in Jordanian concrete companies Organizations, at ($\alpha \leq 0.05$).

Study Model:

This model has developed to study the impact of total quality management as an independent variable on strategic agility of the Jordanian concrete companies as the dependent variable, moreover, the impact of total quality management on strategic agility, finally each one of the total quality management sub-variable to be investigated on strategic agility.

Model 1.1: Study Model



Sources: The model is developed based on the following previous studies: for the independent variable (Dean and Bowen, 1994; Brah, et. al. 2000; Prajogo and McDermott, 2005; Sila, 2007; Abuzaid, 2015; Goetsch and Davis, 2016). For the dependent variable (Long, 2000; Sambamurthy, et. al. 2003; Abuzaid, 2015).

Operational Definitions of Variables and Dimension:

Total Quality Management: philosophy or tool aim to increase the quality of products, services, and process, achieve competitive advantage and to align quality with the company vision, mission, and goal by applying top

management commitment, employee empowerment, continuous improvement, supplier management, and customer management. These are the sub-variables of the study.

Top Management Commitment: the commit of top management to communicate company philosophy to all employees, ensures the availability of needed resource and budget to enhance quality, reward and evaluate employees based on the quality indicator. These indicators used to drive the questions 1-7 in the questionnaire.

Employee Empowerment: empower the employees by provides cross-training for all employees, involves all employees in discussion meetings, involves employees in decision-making, and authorizes employees to take decisions based on responsibility. These indicators used to drive the questions 8-14 in the questionnaire.

Continuous Improvement: monitors all processes continuously, use best practices indicators as a benchmark to improve processes, assigns suitable measurements for internal operations, and relies on feedbacks for further improvement. These indicators used to drive the questions 15-21 in the questionnaire.

Supplier Management: sets criteria for suppliers' selection, involves suppliers during developing its mission, shares forecasting with suppliers, evaluate suppliers based on performance, and develops a strong relationship with suppliers. These indicators used to drive the questions 22-28 in the questionnaire.

Customer Management: means the integration of efforts to satisfy customer need and expectations. These indicators used to drive the questions 29-35 in the questionnaire.

Strategic Agility: analyze the dynamic environments**,** Sense and respond to it, to survive, compete, achieve a competitive advantage, and adjust the company activities.

Clarity of Vision: sense the situation, consider all stakeholders before developing the company vision and communicates the vision to all employees. These indicators used to drive the questions 36-41 in the questionnaire.

Understanding Core Competencies: analyzes internal recourse and outsourcing to find and retain unique competencies. These indicators used to drive the questions 42-46 in the questionnaire.

Selecting Strategic Targets: screen the market, classifies the customer/market, select the customer/market, and focus on the targeted segment to achieve long-term profitability. These indicators used to drive the questions 47-51 in the questionnaire.

Relationship with Partners: means a strong relationship by involving partners in decision-making, mutual learning, and set a common objective. These indicators used to drive the questions 52-56 in the questionnaire.

Taking Action: consider future-outlook, flexible strategies, social responsibility and employee involvement in taking action process. These indicators used to drive the questions 56-60 in the questionnaire.

Limitations:

Human Limitation: this study carried out on managers at all levels and officers working in Jordanian concrete companies.

Place Limitation: this study carried on Jordanian concrete companies located at Amman - Jordan. All Jordanian concrete companies (head offices) are located in Amman.

Time Limitation: this study carried on within the period between 1st semester and 2nd semester of academic year 2018/2019.

Study Delimitation: the use of one industry limits study to be applied in other industries. The study carried out in Jordan; therefore, generalizing results of one industry and/or Jordanian setting to other industries and/or countries may be questionable. Extending the analyses to other industries and countries represent future research opportunities, that done by further testing with larger samples within the same industry, and including other industries will help mitigate the issue of generalizing conclusions on other organizations and industries. Moreover, gathering data through the questionnaires limits the results to the ability of a questionnaire to cover all needed data, and to that period.

Chapter Two: Conceptual and Theoretical Framework

Introduction:

This chapter includes theoretical and conceptual framework, which includes definitions of variables, the relationship between total quality management and strategic agility, previous studies and expected contributions of the current study as compared with previous studies.

Definitions and Components of Variables:

The following section includes different definitions for the independent variable and each sub-variable, as well as different definitions of the dependent variable and each dimension.

Independent Variable (Total Quality Management):

Many scholars define total quality management, Vuppalapati, et. al. (1995) stated that total quality management is an Inclusive philosophy of management concern about the customer satisfaction that will be achieved by continuous improvement of the product and process. Ovretveit (2000) stated that total quality management is a philosophy concern about strategy for the organization, personal development, quality management, and an information structure. Thakkar, et. al. (2006) stated that total quality management strives to increase customer satisfaction through the customer-centric design of processes and systems. Sadikoglu and Zehir (2010) stated that total quality management is a systematic approach for quality improvement to increase companies' performance in terms of quality, productivity, profitability, and customer satisfaction. According to Ioan (2011), total quality management related to organizational culture and attitude that aim to provide clients with products and

services that will achieve customer satisfaction also zero defects and zero waste. Goetsch and Davis (2016) stated that total quality management is an approach to execute business that aims to enhance an organization's competitiveness by the continuous improvement of the quality of its all component. Cho, et. al. (2017) stated that total quality management contains the tools, techniques, and procedures used to eliminate tolerance from a production process. Al-Damen (2017) stated that total quality management the culture that takes over by the organization and spread to employees in the organization.

In summary, total quality management can be defined as a philosophy or tool aim to increase the quality of products, services, and process, achieve competitive advantage and to align quality with the company mission, vision and goal by applying, top management commitment, employee empowerment, continuous improvement, supplier management, and customer management.

Total Quality Management Elements:

Different previous studies stated a different number of total quality management elements. Dean and Bowen (1994) argued that customer focus, continuous improvement, and teamwork are the basics of total quality management. Brah, et. al. (2000) selected 11 constructs to represent the critical factors of total quality management implementation: top management support, customer focus, employee empowerment, employee training, employee involvement, supplier quality management, service design, quality improvement reward, benchmarking, cleanliness, and organization. Prajogo and McDermott (2005) stated that the elements of total quality management are leadership, strategic planning, focus on the customer, information and analysis, people and process management. Sila (2007) stated that the main elements of

total quality management are leadership, strategic planning, strategic planning, information and analysis, human resource management, process management, and supplier management. Goetsch and Davis (2016) stated the main principles of total quality management consist of customer focus, management commitment, training, process capability and control, and measurement through quality improvement. Al-Damen (2017) stated that the principles of total quality management consist of customer focus, leadership, continuous improvement, employee's involvement, fact-based management, process management, strategic management, and supplier involvement.

In this study, the proposed total quality management elements are top management commitment, employee empowerment, continuous improvement, supplier management, and customer management.

Top Management Commitment: Ahire and O'Shaughnessy (1998) stated that top management should prove their commitment by a set of activities to increase and to be able for better application of quality information by employees (employee empowerment, employee involvement, and employee training). Ahire and Ravichandran (2001) stated that top management commitment could consider as one of the most important factors to achieve total quality management and total quality management success. Liang, et. al. (2007) stated that the confidence of the top management would provide a vision and road map to the managers and business units about the opportunities and risks in the spread of enterprise resource planning systems. Das, et. al. (2008) stated that top management commits to quality to achieve business objectives by spread the philosophy of the company to all employees and provide the required resource. Kasongo and Moono (2010) stated the top management commitment would enhance the competitiveness, effectiveness, and flexibility

of the entire organization by ensuring total involvement of all level of employees in the organization. Al-Damen (2017) stated that the commitment of top management to apply total quality management philosophy in company activities the main element that gives the strength to total quality management.

In summary, top management's commitment means the commit of top management to communicate company philosophy to all employees, ensures the availability of needed resource and budget to enhance quality, reward and evaluate employees based on the quality indicator.

Employee Empowerment: Ugboro and Obeng (2000) stated that employee empowerment led to increasing the level of job satisfaction and performance because of their participation in setting goals and making decisions. Lewis, et .al. (2006) stated that organizational performance and the results could be highly affected by employee empowerment. Chang, et. al. (2010) argued that employee empowerment can be defined as giving the employee a suitable resource and motivate them to solve problems related to quality. Kennedy and Schleifer (2006) stated that Innovation could boom when partnership takes place and partnership can be achieved best when teams are empowered. Al-Damen (2017) stated that the main elements of employee involvement are team works, increasing the level of employees' competencies, and emphasize on motivation and loyalty. In addition, the author stated that employee involvement is very important to the success of quality programs.

In summary, employee empowerment means to empower the employees by provides cross-training for all employees, involves all employees in discussion meetings, involves employees in decision-making, and authorizes employees to take decisions based on responsibility.

Continuous Improvement: Also called kaizen (Japanese word) means (Kai - do change, Zen - well). Dean and Bowen (1994) stated that continuous improvement emphasizes finding a new method to execute technical and administrative processes. Huang and Lin (2002) stated that by continuous improvement, the productivity will increase, cycle time can be shorter than before, and errors and defects will be disappeared by preventive actions. Al-Damen (2017) stated that Continuous improvement means producing an increase in the quality of products, increase production, achieve a competitive advantage, and reach and exceed customer expectations by finding a new tools technique. Antunes, et. al. (2017) stated that continuous improvement encourages employee for creatively thinking.

In summary, continuous improvement means monitors all processes continuously; use best practices indicators as a benchmark to improve processes, assigns suitable measurements for internal operations, and relies on feedbacks for further improvement.

Supplier Management: Szwejczewski, et. al. (2001) stated that supplier management emphasizes on managing the flow of high quality, value-for-money materials from innovative suppliers. (Lai, et. al. 2005) stated that the organization expects from its suppliers to deliver a high-quality product with continuous improvement on the standard. Bevilacqua, et. al. (2006) stated that a scheduled evaluation for supplier should be done to ensure that the supplier follows organization standard and quality. Hoyle (2007) stated that the win-win relationship between suppliers and organizations would increase the value of both. Al-Damen (2017) stated that organization and its suppliers are relies on each other, doing the business in the same environment, and have the same goal which is satisfying the customer.

In summary, supplier management means set criteria for suppliers' selection, involves suppliers during developing its mission, shares forecasting with suppliers, evaluate suppliers based on performance, and develops a strong relationship with suppliers.

Customer Management: Donavan, et. al. (2004) stated that customer orientation includes an employee's tendency to build a personal relationship with customers. Blocker, et. al. (2013) defines customer orientation as "a provider's capability to continuously probe customers' latent needs and uncover future needs. Al-Damen (2017) stated that the organization depends on customers, because of that, the organization must know and concern about the current and future needs, satisfy their needs and work to exceed their expectations. Park, et. al. (2017) stated that customer orientation means organizations main goal is to know and meet customer needs.

In summary, customer management means the integration of all efforts to satisfy customer need and expectations.

Dependent Variable (Strategic Agility):

Goldman, et. al. (1995) stated that strategic agility means that is organizations will be able to change and adapt possesses with the business environment to achieve competitive advantage. Grewal and Tansuhaj (2001) stated that in highly competitive environments agility are very important. McGrath, et. al. (2006) stated that to adapt and survive in a non-stable business environment, an organization must apply agile strategies. Doz and Kosonen (2010) described strategic agility as continuously improving processes and products and still flexible without reducing efficiency. Tallon and Pinsonneault (2011) argued that agile organization would have several market-response options. Idris and AL-Rubaie (2013) stated that organizations that apply

strategic agility look like a modern organization. Mavengere (2013) stated that strategic agility could be defined as strategic sensitivity, strategic response, and collective capabilities. Weber and Tarba (2014) stated that an organization that operates in rapid change environment must take a set of actions, those actions called strategic agility. Brueller, et. al. (2014) defines strategic agility as the ability to make intelligent, graceful, rapid strategic moves with a high level of precision. Lungu (2018) stated that strategic agility becomes a way to sustainability and innovation, especially in a dynamic business environment.

In summary, strategic agility means the process of analyzing the dynamic environments, sense, and responds to dynamic environments, to survive, compete, achieve a competitive advantage, and adjust the company activities.

Component of Strategic Agility:

Long (2000) provides a measure of strategic agility consists of seven dimensions: clarity of Vision, knowledge of Clients, understanding Core capabilities, selecting strategic targets, shared responsibility, knowledge of competitors and taking Action. Doz and Kosonen (2008) provide a measure of strategic agility consist of three dimensions: strategic sensitivity, collective commitment, and resource fluidity. Tallon and Pinsonneault (2011) stated that the main elements of strategic agility are responsiveness to changes in demand, innovation, and pricing, the adaptation supplier networks, response times to new product launches by rivals, market expansion, changes in product mix, and the adoption of new production. Idris and Al-Rubaie, (2013) stated that for any organization it is important to respond to changes in aggregate consumer demand, customize a product or service to suit an individual customer, react to new product or service launched by competitors. Furthermore, introduce new pricing schedules in response to changes in competitors' prices, expand into

new regional or international markets, change (expand or reduce) the variety of products/services available for sale, adopt new technologies to produce better, faster and cheaper products and services. Switches suppliers to avail of lower costs and better quality or improved delivery times the main elements of strategic agility.

In this study, the proposed strategic agility elements are clarity of vision, understanding Core competencies selecting strategic targets, relationship with partners and taking action.

Clarity of Vision: Long (2000) stated that clarity of vision means a clear, compelling vision of goals of the company shaping its strategic intent. Hong, et. al. (2004) stated that clarity of vision means the spreading of communication and understanding goals to achieve development. Khoshnood and Nematizadeh (2017) stated that clarity of vision provides a special mix of the speed and stability "needed for an organization strategic agility.

In summary, clarity of vision means to sense the situation, considers all stakeholders before developing the company vision, and communicates the vision to all employees.

Understanding Core Competencies: Long (2000) stated that understanding core competencies help to assign needed and available resources to activities for growing, enhancing, or reshaping the capabilities such as organizational knowledge, skills, processes, and know-how, also stated that companies must be will prepared to take the advantage of opportunities (first-mover). Sharifi and Zhang (2001) stated that the implementation of suitable practices by providing the required competencies help companies in responding to changes. Khoshnood and Nematizadeh (2017) stated that companies would

never take advantage form opportunities as long as there is no sufficient understanding of basic capabilities.

In summary, understanding core competencies means analyzes internal recourse and outsourcing to find and retain unique competencies.

Selecting Strategic Targets: Long (2000) stated that selecting strategic targets means the ability to identify opportunities based on an understanding of core competencies for success maximizing. Khoshnood and Nematizadeh (2017) stated that selecting strategic targets and objectives enhance the ability companies to modify, improve, or develop its capabilities in order to coordinate existing and emerging opportunities.

In summary, screen the market, classifies the customer/market, select the customer/market, and focus on the targeted segment to achieve long-term profitability.

Relationship with Partners: Long (2000) companies can create value-added from strong relationship with the clients, also stated that relationship with partners means the measure of the companies relationship with its value chain partners, knowledge of competitors-knowing what the competition is doing covering strategic intent, value-creating strategies, and product/service/process/market orientation. Sambamurthy et al. (2003) said that shared responsibility in a relation produce added-value.

In summary, a strong relationship by involving partners in decision making, mutual learning, and set a common objective.

Taking Action: Long (2000) stated that taking action in line with the vision, optimizing the core competencies and engaging people with an overall sense of purpose leads to a high level of strategic agility. Khoshnood and

Nematizadeh (2017)stated taking action means how the company accepts the random actions reveal as the opportunities, and the company speed in having a reaction.

In summary, consider future-outlook, flexible strategies, social responsibility and employee involvement in taking action process.

Previous Studies:

Cuaa, et. al. (2001) study titled "**Relationships between implementation of TQM, JIT, and TPM and manufacturing performance**" aimed to study the implementation and impact of total quality management, just-in-time, and total productive maintenance on isolation. The authors used the descriptive discriminant analysis method. The results showed that the significance of applying the exercises and mechanisms concerning to total quality management, just-in-time and total productive maintenance.

Kannan and Tan (2005) study titled **"Just in time, total quality management, and supply chain management: understanding their linkages and impact on business performance"**, aimed to study the correlation between just in time, supply chain management, and quality management, and how they affect business performance. Data collected by questionnaire from senior operations and materials managers. Results indicate that a commitment to quality and an understanding of supply chain dynamics have the greatest effect on performance.

Samat, et. al. (2006) study titled **"TQM practices, Service Quality, and Market Orientation: Some Empirical Evidence from a Developing Country"** aimed to study the relationship between total quality management practices, service quality, and market orientation, data collected from managers

by questionnaire. The result showed that employee empowerment, information and communication, customer focus, and continuous improvement impacts service quality, while, employee empowerment, and customer focus impacts the market orientation.

Ojha (2008) research titled "**Impact of strategic agility on competitive capabilities and financial performance**" aimed to study the impact of strategic agility on operational and financial performance, the results showed that market acuity is a critical determinant of strategic agility and strategic agility does not have any direct impact on financial performance.

Zelbst, et. al. (2010) study titled "**Relationships among market orientation, JIT, TQM, and agility**" aimed to study the relationship between market orientation, just-in-time, total quality management, and agile improvement programs within manufacturing organizations. Data were collected from 104 manufacturing managers, supervisors, and quality professionals and analyzed using a path analysis methodology, the result showed that agile has a positive impact on both organizational and logistics performance.

Inman, et. al. (2011) study titled **"Agile manufacturing: relation to JIT, operational performance and firm performance"** aimed to study JIT (JIT-purchasing and JIT-production) on operational and performance. Data collected from managers by questionnaire. Results showed that JIT-purchasing and JIT-production positively affect agile manufacturing. It also showed that there is a positive relationship between JIT-purchasing and JIT-production with operational performance.

Nzuve and Bakari (2012) study titled **"The Relationship between Empowerment and Performance in the City Council of Nairobe"** aimed to

study the relationship between employee empowerment practice and performance, data collected from 60 employees. The study results showed a very strong positive correlation between employee empowerment and performance.

Onyema and Akanbi (2012) study titled "**The influence Of Strategic Agility On The perceived Performance of Manufacturing Firms in Nigeria",** aimed to examine the impact of strategic agility. Data collected by questionnaire from all employees. Results showed that strategic agility measured by strategic sensitivity, collective commitment, or leadership unity and resource fluidity, Therefore, the result showed that companies should be proactive rather than reactive.

Oyedijo (2012) study titled **"Strategic agility and competitive performance in the Nigerian telecommunication industry: an empirical investigation"** aimed to study the relationship between strategic agility and competitive performance, data collected from managers by questionnaire. Results showed a strong relationship between strategic agility and competitive performance.

Kamal (2012) study titled "**The impact of total quality management on competitive advantage of pharmaceutical manufacturing companies in Jordan**" aimed to study the impact of total quality management on competitive advantage, data collected from managers at all levels by questionnaire. The results showed that total quality management practices positively affect competitive advantage.

Fartash and Davoudi (2012) titled "**The important role of the strategic agility in firms' capability and performance**" aimed to study the role of strategic agility and the suggestion of having strategic agility. The results

showed that the importance of achieving strategic agility relates to the ability to change.

Idris and AL-Rubaie (2013) study titled "**Examining the Impact of Strategic Learning on Strategic Agility"** aimed to investigate the impact of strategic learning on strategic agility. Data collected by questionnaire, the results showed that strategic learning affects strategic agility.

Abuzaid (2015) study titled **"Examination the Impact of Total Quality Management Practices in Achieving Strategic Agility: applied study on the Jordanian private hospitals"** aimed to study the impact of quality management practices on strategic agility. Data collected from managers by questionnaire. The results showed that total quality management practices positively affect strategic agility and customer orientation and supplier management have the greatest impact on strategic agility.

Shin, et. al. (2015) study titled "**Strategic agility of Korean small and medium enterprises and its influence on operational and firm performance,"** aimed to study the role of agility as a strategic intent and its effect on operational and firm performance. Data collected from employees by field interviews. They found that companies' strategic intent toward agility has a positive influence on their operational performance and customer retention.

Hemmati, et. al. (2016) study titled "**Development of fuzzy two-stage DEA model for competitive advantage based on RBV and strategic agility as a dynamic capability**" aimed to measure strategic agility using the following dimension; clarity of vision, understanding core capabilities, selecting strategic targets, shared responsibility, and taking action. The results showed a significant relationship between firm resources, strategic agility, and competitive advantage.

Nzewi and Moneme (2016) study titled **"Business Agility and Competitive Advantage of Selected Commercial Banks in Anambra State, Nigeria"** aimed to find the relationship between business agility capabilities and competitive advantage. The results showed a significant relationship between business agility and competitive advantage.

Orojloo, et .al. (2016) a study titled "**Strategic Agility Capabilities, Factors and their Effect on Organizational Performance: A Case Study of Iranian Banks**" aimed to study the impact of strategic agility on organizational performance. The results showed the strategic agility positively affect the organizational performance, also collective commitment has the highest effect on the organizational performance.

Taji, et. al. (2016) study titled "**Identification and Ranking of Key Factors Influencing Organizational Agility Implementation on Total Quality Management (TQM) in Universities**" aimed to find the factors affecting organizational agility implementation on total quality management. Data collected from experts and academics by questionnaire, the results showed that to apply organizational agility on total quality management, leadership and partnership and resources must consider.

Arbussa, et. al. (2017) study titled "**STRATEGIC AGILITY-DRIVEN BUSINESS MODEL RENEWAL: THE CASE OF AN SME"** aimed to show how the dynamic capabilities underlying strategic agility fit the SME context in the case of a service industry that implements business model innovation (BMI). The results of this qualitative paper showed a semi-fit of the existing strategic agility framework for SMEs in implementing BMI. Two of the proposed meta-capabilities (leadership unity and resource fluidity) seem to be inherent to SMEs.

Al-Damen (2017) study titled "**The impact of Total Quality Management on organizational performance Case of Jordan Oil Petroleum Company"** This study aimed to examine the impact of total quality management implementation on organizational performance. Data collected from managers at different levels. The results showed that total quality management positively affects organizational performance.

Khoshnood and Nematizadeh (2017) study titled "**Strategic Agility and Its Impact on the Competitive Capabilities in Iranian Private Banks**" aimed to study the concept of strategic agility and its dimension, and to show its importance and to examine its impact on the competitive capabilities. Data collected from managers and experts. The results showed that strategic agility significantly affects competitive capabilities. Moreover, among the dimensions of strategic agility, clarity of vision is the most influential factor in the competitive capabilities.

Sampath and Krishnamoorthy (2017) study titled "**Is strategic agility the new Holy Grail? Exploring the strategic agility construct**" aimed to discuss the concept of strategic agility and its impact on building stainable competitive advantage. The results showed that achieving strategic agility could well be the Holy Grail for companies looking for the elusive competitive advantage.

Lungu (2018) study titled "**Achieving strategic agility through business model innovation. The case of telecom industry"** aimed to emphasize on how the companies achieve strategic agility. Data collected from stakeholders and managers at different levels. The theoretical results serve as a tool to understand strategic agility and its relationship with the telecom industry.

What Differentiate the Current Study from Previous Studies?

This study may be considered as the first study to study the impact of total quality management on strategic agility in Jordanian concrete companies.

1. Purpose: most of the previous studies were undertaken to measure total quality management and strategic agility separately, while this study can be one of the first studies that examine the impact of total quality management on strategic agility.

2. Environment: most previous studies have implemented in various countries outside Jordan. The current study executed in Jordan.

3. Industry: few studies concern total quality management in the concrete industry.

4. Population: most of the previous studies considered sampling from the population, but this study surveyed all study population, which are the five concrete companies in Jordan, all these companies have targeted, and there is no need for sampling.

5. Previous studies aimed to identify the role of strategic agility on organization performance through competitive capabilities, whereas this study focuses on the impact of total quality management on strategic agility.

Through reviewing the literature, a few studies test the impact of total quality management practices on strategic agility. Therefore, this study purpose to enrich the literature and fill this gap in knowledge by showing the impact of total quality management practices on strategic agility in the Jordanian concrete companies. Therefore, the study main question is: do total quality management practices impact strategic agility in Jordanian concrete companies?

Chapter Three: Study Methodology

Introduction:

This chapter includes study design, population, and sampling, data collection methods, data collection analysis, study tool, validity and reliability test In addition to the respondent demographic description.

Study Design:

This study is descriptive as well as cause/effect. Its purpose is to investigate the impact of total quality management practices on strategic agility in Jordanian concrete companies. The study starts by reviewing previous studies to select the model and build the questionnaire, which developed through a panel of judges. Then the data collected from all managers and officers working at these companies by questionnaire. After checking the suitability and completeness of the collected questionnaires, the collected data checked and coded on SPSS 20. After assuring the data normality, validity, reliability, and correlation, the impact of the independent variable on the dependent variable tested through multiple regressions

Study Population, Sample, and Unit of Analysis:

Study population and sample: There are only five concrete companies in Jordan (Lafarge, Al-Manaseer, Nuqul, Masafat, and Al-Zuhaire). All these companies targeted, while the total number of managers and officers are only 160. The unit of analysis is the managers and officers at all levels, who are working in these companies.

Data Collection Methods (Tools):

The data that used for fulfilling the purposes of the study can be divided into two groups: secondary and primary data as follows:

Secondary Data: Data collected from different sources such as journals, working papers, researches, thesis, articles, and worldwide Web and Jordanian concrete companies.

Primary Data: Data collected by questionnaire.

The Questionnaire:

The Questionnaire developed to suit the current study and to match with the study hypothesis and research model. The original questionnaire items developed relying on previous studies. Then, the questionnaire revised and validated by an academic panel of judges to referee it.

The questionnaire includes three parts as follows:

Demographic Dimensions: gender, age, experience, education, position, and division.

Independent Variables (total quality management): The independent variable contains five sub-variables: Top management commitment, Employee empowerment, Continuous improvement, Supplier management, and Customer management. Seven items used to measure each sub-variable.

Dependent Variable (strategic agility): The independent variable contains five dimensions: clarity of vision, understanding Core competencies selecting strategic targets, relationship with partners and taking action. Five items used to measure each dimension. All variable items measured by five

Likert-scale as follows: Strongly agree (5), Agree (4), Neutral (3), Disagree (2), and Strongly Disagree (1).

Data collection and Analysis:

All managers and officers (160) working in these companies were targeted, and 160 questionnaires distributed, and only 120 questionnaires returned with a 75% Percentage form distributed. Data collected from three companies out of five companies during the period of March to April 2019. After checking all returned questionnaires suitable and coded against SPSS 20 for further analysis.

Validity Test:

Three methods used to confirm validity: content validity assured through using different sources to collect the data such as books, researches, articles, dissertations, thesis, working papers, journals, and the Internet. Face validity confirmed via the panel of judge committee (referee) as indicated in the appendix (1). The principal component factor analysis with KMO was used to test construct validity, if the loading factor for each item within its group is more than 40%, this shows that each sub-variable is suitable with other loading factors more than 0.50 is good and accepted if it is exceeding 0.40 (Hair, et. al. 2014). While Kaiser-Meyer-Olkin (KMO) is used to measure sampling adequacy, KMO values between 0.8 and 1 indicate that high sampling adequacy and 0.6 considered acceptable. Bartlett's Test of Sphericity (B.S.Test) of samples indicates samples harmony, and variance percentage explains the power of explanation when significance is less than 0.05 (95% confidence level), this indicates the usefulness factor analysis (Cerny & Kaiser, 1977). Finally, all shows that construct validity assumed.

Independent Variable (Total Quality Management):

Table (3.1) shows the loading factor among total quality management sub-variables rated between 0.715 and 0.832. Moreover, KMO has rated 80.9%, which indicates high adequacy, and the Chi^2 is 274.862, which indicates the fitness of model, also, the test produced an explanatory value of 64.265, which explains 64.27% of the variance. Finally, the significance of Bartlett's Sphericity is less than 0.05. Based on these results the construct validity assumed.

Table 3.1: Principal Component Factor Analysis for Total Quality Management:

Sub-Variable	F1	KMO	Chi^2	B.S. Test	Var%	Sig.
Top Management Commitment	0.825	0.809	274.862	10	64.265	0.000
Employee Empowerment	0.819					
Continuous Improvement	0.811					
Supplier Management	0.832					
Customer Management	0.715					

Top Management commitment:

Table (3.2) shows the loading factor of each item within the top management commitment group rated between 0.651 and 0.723. Moreover, KMO has rated 84.3%, which indicates high adequacy, and the Chi^2 is 205.855, which indicates the fitness of model, also, the test produced an explanatory value of 46.128, which explains 46.13% of the variance. Finally, the significance of Bartlett's Sphericity is less than 0.05. Based on these results the construct validity assumed.

Table 3.2: Principal Component Factor Analysis for Top Management Commitment:

Items	F1	KMO	Chi^2	B.S. Test	Var%	Sig.
TMC 1	0.695	0.843	205.855	21	46.128	0.000
TMC 2	0.681					
TMC 3	0.681					
TMC 4	0.651					
TMC 5	0.655					
TMC 6	0.666					
TMC 7	0.723					

Employee Empowerment:

Table (3.3) shows the loading factor of each item within the employee empowerment group rated between 0.694 and 0.805. Moreover, KMO has rated 90.2%, which indicates high adequacy, and the Chi^2 is 333.935, which indicates the fitness of model, also, the test produced an explanatory value of 56.924, which explains 56.92% of the variance. Finally, the significance of Bartlett's Sphericity is less than 0.05. Based on these results the construct validity assumed.

Table 3.3: Principal Component Factor Analysis for Employee Empowerment:

Items	F1	KMO	Chi^2	B.S. Test	Var%	Sig.
EE 1	0.737	0.902	333.935	21	56.924	0.000
EE 2	0.734					
EE 3	0.694					
EE 4	0.754					
EE 5	0.749					
EE 6	0.801					
EE 7	0.805					

Continuous Improvement:

Table (3.4) shows the loading factor of each item within the continuous improvement group rated between 0.714 and 0.817. Moreover, KMO has rated 90.3%, which indicates high adequacy, and the Chi^2 is 371.708, which indicates the fitness of model, also, the test produced an explanatory value of 59.294, which explains 59.29% of the variance. Finally, the significance of Bartlett's Sphericity is less than 0.05. Then construct validity assumed.

Table 3.4: Principal Component Factor Analysis for Continuous Improvement:

Items	F1	KMO	Chi^2	B.S. Test	Var%	Sig.
CI 1	0.770	0.903	371.708	21	59.294	0.000
CI 2	0.801					
CI 3	0.748					
CI 4	0.714					
CI 5	0.817					
CI 6	0.745					
CI 7	0.791					

Supplier Management:

Table (3.5) shows the loading factor of each item within the supplier management group rated between 0.721 and 0.81. Moreover, KMO has rated 86.5%, which indicates high adequacy, and the Chi^2 is 357.893, which indicates the fitness of model, also, the test produced an explanatory value of 57.144, which explains 57.14% of the variance. Finally, the significance of Bartlett's Sphericity is less than 0.05. Based on these results the construct validity assumed.

Table 3.5: Principal Component Factor Analysis for Supplier Management:

Items	F1	KMO	Chi^2	B.S. Test	Var%	Sig.
SM 1	0.721	0.865	357.893	21	57.144	0.000
SM 2	0.810					
SM 3	0.765					
SM 4	0.740					
SM 5	0.760					
SM 6	0.742					
SM 7	0.750					

Customer Management:

Table (3.6) shows the loading factor of each item within the customer management group rated between 0.701 and 0.814. Moreover, KMO has rated 86.9%, which indicates high adequacy, and the Chi^2 is 404.131, which indicates the fitness of model, also, the test produced an explanatory value of 59.841, which explains 59.84% of the variance.

Table 3.6: Principal Component Factor Analysis for Customer Management:

Items	F1	KMO	Chi^2	B.S. Test	Var%	Sig.
CM 1	0.814	0.869	404.131	21	59.841	0.000
CM 2	0.711					
CM 3	0.805					
CM 4	0.785					
CM 5	0.787					
CM 6	0.804					
CM 7	0.701					

Finally, the significance of Bartlett's Sphericity is less than 0.05. Based on these results the construct validity assumed.

Dependent variable (Strategic Agility):

Table (3.7) shows the loading factor of strategic agility Dimensions has related between 0.650 and 0.813. KMO rated 76%, which indicates high adequacy, and the Chi^2 173.974, which indicates the fitness of model, and the test produced an explanatory value of 54.839, which explains 54.84% of the variance. Finally, the significance of Bartlett's Sphericity is less than 0.05. Based on these results the construct validity assumed.

Table 3.7: Principal Component Factor Analysis for Strategic Agility:

Dimension	F1	KMO	Chi^2	B.S. Test	Var%	Sig.
Clarity of Vision	0.813	0.760	173.974	10	54.839	0.000
Understanding Core Competencies	0.725					
Selecting Strategic Targets	0.775					
Relationship with Partners	0.729					
Taking Action	0.650					

Clarity of Vision:

Table (3.8) shows the loading factor of each item within the clarity of vision group rated between 0.820 and 0.864. Moreover, KMO has rated 88.4%, which indicates high adequacy, and the Chi^2 is 318.518, which indicates the fitness of model, also, the test produced an explanatory value of 70.139, which explains 70.14% of the variance. Finally, the significance of Bartlett's Sphericity is less than 0.05. Based on these results the construct validity assumed.

Table 3.8: Principal Component Factor Analysis for Clarity of Vision:

Items	F1	KMO	Chi^2	B.S. Test	Var%	Sig.
CV 1	0.820	0.884	318.518	10	70.139	0.000
CV 2	0.831					
CV 3	0.820					
CV 4	0.864					
CV 5	0.853					

Understanding Core Competencies:

Table (3.9) shows the loading factor of each item within the understanding core competencies group rated between 0.730 and 0.815. Moreover, KMO has rated 83.1%, which indicates high adequacy, and the Chi^2 is 191.480, which indicates the fitness of model, also, the test produced an explanatory value of 58.526, which explains 58.53% of the variance. Finally, the significance of Bartlett's Sphericity is less than 0.05. Based on these results the construct validity assumed.

Table 3.9: Principal Component Factor Analysis for Understanding Core Competencies:

Items	F1	KMO	Chi^2	B.S. Test	Var%	Sig.
UCC 1	0.815	0.831	191.480	10	58.526	0.000
UCC 2	0.775					
UCC 3	0.730					
UCC 4	0.764					
UCC 5	0.738					

Selecting Strategic Targets:

Table (3.10) shows the loading factor of each item within the selecting strategic targets group rated between 0.768 and 0.838. Moreover, KMO has rated 86.7%, which indicates high adequacy, and the Chi^2 is 249.639, which indicates the fitness of model, also, the test produced an explanatory value of 64.681, which explains 64.68% of the variance. Finally, the significance of Bartlett's Sphericity is less than 0.05. Based on these results the construct validity assumed.

Table 3.10 Component Factor Analysis for Selecting Strategic Targets:

Items	F1	KMO	Chi^2	B.S. Test	Var%	Sig.
SST 1	0.788	0.867	249.639	10	64.681	0.000
SST 2	0.820					
SST 3	0.805					
SST 4	0.838					
SST 5	0.768					

Relationship with Partners:

Table (3.11) shows the loading factor of each item within the relationship with partners group rated between 0.812 and 0.882. Moreover, KMO has rated 86.9%, which indicates high adequacy, and the Chi^2 is 351.207, which indicates the fitness of model, also, the test produced an explanatory value of 71.551, which explains 71.55% of the variance. Finally, the significance of Bartlett's Sphericity is less than 0.05. Based on these results the construct validity assumed.

Table 3.11: Principal Component Factor Analysis for Relationship with Partners:

Items	F1	KMO	Chi^2	B.S. Test	Var%	Sig.
RP 1	0.840	0.865	351.207	10	71.551	0.000
RP 2	0.875					
RP 3	0.882					
RP 4	0.818					
RP 5	0.812					

Taking Action:

Table (3.12) shows the loading factor of each item within the taking action group rated between 0.813 and 0.866. Moreover, KMO has rated 86.0%, which indicates high adequacy, and the Chi^2 is 346.013, which indicates the fitness of model, also, the test produced an explanatory value of 71.326, which explains 71.33% of the variance. Finally, the significance of Bartlett's Sphericity is less than 0.05. Based on these results the construct validity assumed.

Table 3.12: Component Factor Analysis for Taking Action:

Items	F1	KMO	Chi^2	B.S. Test	Var%	Sig.
TA 1	0.813	0.860	346.013	10	71.326	0.000
TA 2	0.849					
TA 3	0.837					
TA 4	0.856					
TA 5	0.866					

Reliability Test:

(Cronbach's Alpha coefficients of internal consistency) used to test the consistency and suitability of the measuring tools, the reliable tools have a Cronbach's alpha above 0.70 and accepted if it is exceeding 0.60 (Hair, et. al. 2014). Table (3.13) shows the Total Quality Management Sub-Variables Cronbach's alpha ranges between 0.805 and 0.887. Moreover, it is for strategic agility Dimensions between 0.822 and 0.900, as shown in table (3.13) all sub-variables and dimensions are above 0.70. Therefore, the tool reliability is assumed.

Table 3.13: Reliability Test (Cronbach's Alpha) for all Variables.

Item	No of Items/Sub-variable	Cronbach's Alpha
Top Management Commitment	7	0.805
Employee Empowerment	7	0.872
Continuous Improvement	7	0.885
Supplier Management	7	0.874
Customer Management	7	0.887
Total Quality Management	**5 Sub-Variables**	**0.947**
Clarity of Vision	5	0.893
Understanding Core Competencies	5	0.822
Selecting Strategic Targets	5	0.863
Relationship with Partners	5	0.900
Taking Action	5	0.899
Strategic Agility	**5 Dimensions**	**0.928**

Demographic Characteristics of Respondents:

The following section describes the respondents' characteristics.

Gender: table (3.14) shows the majority of respondents are males, where 89 (74.2%), followed by females 31 with (25.8%) of respondents. the percent of male higher than female because of the nature of the concrete industry, because most of work is outside the offices.

Table 3.14: Gender Description.

		Frequency	Percent
Gender	Male	89	74.2
	Female	31	25.8
	Total	**120**	**100**

Age: table (3.15) shown that the majority of respondents ages are less than (30) years (51.7%), with 62 respondents followed by respondents between (30-49) years (30.8%), with 37 respondents followed by respondents between (40 -50) years (13.3%), with 16 respondents, finally respondents above (50) years (4.2%) with 5 respondents.

Table 3.15: Age Distribution.

		Frequency	Percent
Age	Less than 30	62	51.7
	Bet. 30-39	37	30.8
	Bet. 40-50	16	13.3
	Above 50	5	4.2
	Total	**120**	**100**

Experience: table (3.16) shows the most respondents have less than 10 years' experience rated 71 (59.2%), followed by 39 (32.5%) respondents between 10-20 years' experience, then between 21-30 years' experience 9 (7.5%), and finally above 30 years' experience only 1 (.8%).

Table 3. 16: Respondent Experience.

		Frequency	Percent
Experience	Less 10	71	59.2
	Between 10-20	39	32.5
	Between 21-30	9	7.5
	More than 30	1	0.8
	Total	**120**	**100**

Education: table (3.17) shows the most respondents are Bachelor holders 69 (57.5%), followed by Master holders 33 (27.5%), then Diploma holders 13 (10.8%), finally Ph.D. holders only 5 (4.2%).

Table 3.17: Respondents Education.

		Frequency	Percent
Education	Diploma	13	10.8
	Bachelor	69	57.5
	Master	33	27.5
	PhD	5	4.2
	Total	**120**	**100**

Position: table (3.18) shows the most respondents are supervisor 40(33.3%), followed by officer 37(30.8%), followed by manager 30(25%), followed by director 8 (6.7%), then vice president 3 (2.5%), finally general manager only 2 (1.7%).

Table 3.18: Respondents Position.

		Frequency	Percent
Position	Officer	37	30.8
	Supervisor	40	33.3
	Manager	30	25
	Director	8	6.7
	V. P	3	2.5
	GM	2	1.7
	Total	**120**	**100**

Division: table (3.19) shows the majority respondents are from the operation and quality department 49 (40.8%), followed by from sales and marketing department 39 (32.5%), then from finance 17 (14.2%), finally from supply chain department 15 (12.5%). The operation and quality represent the highest among others because this function is the main division that the company relies on.

Table 3.19: Respondents Division.

		Frequency	Percent
Division	Operation & Quality	49	40.8
	Supply Chain	15	12.5
	Sales & Marketing	39	32.5
	Finance	17	14.2
`	**Total**	**120**	**100**

Chapter Four: Data Analysis

Introduction:

This chapter includes data descriptive statistical analysis of respondents' perception, Person Bivariate Correlation matrix to test the relationship between total quality management sub-variables with each other, strategic agility dimensions with each other, and between total quality management variable and sub-variables with strategic agility dimensions. Finally, it includes hypothesis testing, which tests the impact of total quality management on strategic agility.

Descriptive Statistical Analysis:

For describing the respondents' perception about the implementations of each variable, dimension and items, means, standard deviations, t-values, ranking, and importance. The ranking will assign according to t-value consequence; importance will assign according to the following equation:

5-1/3 = 1.33,

Low importance: 1-2.33, Medium Importance: 2.34-3.66

High Importance: 3.67-5

Independent Variable (Total Quality Management):

Table (4.1) shows the means of total quality management sub-variables ranges between 3.72 to 3.76 and the standard deviation ranges between 0.584 and 0.742. This indicates that the respondents agree on the high importance of total quality management sub-variables. The average mean for all Quality Management sub-variables is 3.73 with a standard deviation of 0.551. Which shows the respondents agree on the high importance of total quality

management sub-variables, where the average of t-value=14.494 is more than T-tabulated=1.960. Table (4.1) shows the top management rated high importance, followed by supplier management, then employee empowerment, customer management, and continuous improvement, respectively.

Table 4.1: Mean, Standard Deviation, t-Value, Ranking, and Importance for Total Quality Management.

No.	Sub-Variable	Mean	S.D.	t-value	Sig.	Rank	Imp.
1	Top Management Commitment	3.76	0.584	14.292	0.000	1	High
2	Employee Empowerment	3.72	0.718	10.958	0.000	3	High
3	Continuous Improvement	3.72	0.727	10.779	0.000	5	High
4	Supplier Management	3.72	0.676	11.611	0.000	2	High
5	Customer Management	3.73	0.742	10.840	0.000	4	High
	Total Quality Management	**3.73**	**0.551**	**14.494**	**0.000**		**High**

T-Tabulated=1.960

Top Management Commitment:

Table (4.2) shows the mean of top management commitment items ranges between 3.62 and 3.84 with a standard deviation between 0.823 and 0.893. This explains that respondents agree on the high importance of most top management commitment items.

Table 4.2: Mean, Standard Deviation, t-Value, Ranking, and Importance for Top Management Commitment.

No.	Items	Mean	S.D.	t-value	Sig.	Rank	Imp.
1	The company top management communicates the company's philosophy to all employees.	3.84	0.830	11.108	0.000	1	High
2	The company top management follows agreed upon plans.	3.74	0.884	9.191	0.000	6	High
3	The company top management ensures the availability of needed resources.	3.81	0.823	10.760	0.000	2	High
4	The company top management assigns the required budget for business improvement.	3.78	0.864	9.821	0.000	3	High
5	The company top management participates in all meetings.	3.78	0.874	9.712	0.000	4	High
6	The company top management rewards employees based on suitable indicators.	3.62	0.852	7.929	0.000	7	Medium
7	The company top management commits to evaluates employees based on performance.	3.78	0.893	9.506	0.000	5	High
	Total Top Management Commitment	**3.76**	**0.584**	**14.292**	**0.000**		**High**

T-Tabulated=1.960

The average mean of top management commitment items is 3.76 with a standard deviation of 0.584, which shows the respondents agree on the high importance of top management commitment items, where the average of t-value=14.292 is more than T-tabulated 1.960.

Employee Empowerment:

Table (4.3) shows the mean of employee empowerment items ranges between 3.60 and 3.78 with a standard deviation between 0.907 and 1.006. This explains that respondents agree on the high importance of most employees' empowerment items.

Table 4.3: Mean, Standard Deviation, t-Value, Ranking and Importance for Employee Empowerment.

No.	Items	Mean	S.D.	t-value	Sig.	Rank	Imp.
1	The company provides cross-training for all employees.	3.75	1.006	8.165	0.000	4	High
2	The company involves all employees in discussion meetings.	3.73	0.978	8.117	0.000	6	High
3	The company authorizes employees to take decisions based on responsibility.	3.78	0.945	9.076	0.000	1	High
4	The company assigns duties to teams	3.68	0.907	8.250	0.000	3	High
5	The company assigns duties to individuals	3.74	1.006	8.125	0.000	5	High
6	The company involves employees in decision-making.	3.6	0.911	7.213	0.000	7	Medium
7	The company empowers employees to solve the problem.	3.74	0.921	8.819	0.000	2	High
	Total Employee Empowerment	**3.72**	**0.718**	**10.958**	**0.000**		**High**

T-Tabulated=1.960

The average mean of employee empowerment items is 3.72 with a standard deviation of 0.718, which shows the respondents agree on the high importance of employee empowerment items, where t-value=10.958.

Continuous Improvement:

Table (4.4) shows the means continuous improvement items range between 3.64 and 3.84 with a standard deviation between 0.900 and 0.979. This

explains that respondents agree on the high importance of most continuous improvement items. The average mean of continuous improvement items is 3.7 with a standard deviation of 0.727, which shows the respondents agree on the high importance of continuous improvement items, where the average of t-value=10.779 is more than T-tabulated 1.960.

Table 4.4: Mean, Standard Deviation, t-Value, Ranking, and Importance for Continuous Improvement.

No.	Items	Mean	S.D.	t-value	Sig.	Rank	Imp.
1	The company assigns suitable measurements for internal operations.	3.68	0.979	7.649	0.000	6	High
2	The company relies on feedbacks for further improvement.	3.69	0.960	7.895	0.000	5	High
3	The company clearly define the goal of improvement	3.72	0.900	8.724	0.000	2	High
4	The company uses preventive solutions for expected problems.	3.73	0.932	8.615	0.000	3	High
5	The company monitors all processes continuously.	3.84	0.961	9.590	0.000	1	High
6	The company uses best practices indicators as a benchmark to improve its' processes.	3.64	0.968	7.259	0.000	7	Medium
7	The company improves its processes continuously.	3.7	0.913	8.399	0.000	4	High
	Total Continuous Improvement	**3.72**	**0.727**	**10.779**	**0.000**		**High**

T-Tabulated=1.960

Supplier Management:

Table (4.5) shows the mean of supplier management items range between 3.62 and 3.81 with a standard deviation between 0.852 and .957. This explains that respondents agree on the high importance of most of supplier management items. The average mean of supplier management items is 3.72 with a standard deviation of 0.676, which shows the respondents agree on the high importance of supplier management items, where the average of t-value=11.611 is more than T-tabulated 1.960.

Table 4.5: Mean, Standard Deviation, t-Value, Ranking, and Importance for Supplier Management.

No.	Items	Mean	S.D.	t-value	Sig.	Rank	Imp.
1	The company updates all suppliers database.	3.62	0.881	7.668	0.000	6	Medium
2	The company sets criteria for suppliers' selection.	3.78	0.852	10.073	0.000	1	High
3	The company involves suppliers during developing its mission.	3.73	0.896	8.969	0.000	3	High
4	The company shares forecasting with suppliers.	3.66	0.957	7.536	0.000	7	Medium
5	The company develops strong relationship with suppliers.	3.81	0.882	10.038	0.000	2	High
6	The company involves suppliers in improvements activities.	3.75	0.937	8.767	0.000	4	High
7	The company evaluates suppliers based on performance.	3.67	0.863	8.460	0.000	5	High
	Total Supplier Management	**3.72**	**0.676**	**11.611**	**0.000**		**High**

T-Tabulated=1.960

Customer Management:

Table (4.6) shows the mean of customer management items range between 3.63 and 3.83 with a standard deviation between 0.932 and 0.986. This explains that respondents agree on the high importance of most of customer management items.

Table 4.6 Mean, Standard Deviation, t-Value, Ranking, and Importance for Customer Management.

No.	Items	Mean	S.D.	t-value	Sig.	Rank	Imp.
1	The company updates customers' database.	3.76	0.944	8.802	0.000	3	High
2	The company provides training on customer relationship with all employees.	3.63	0.962	7.117	0.000	7	Medium
3	The company uses customers' feedback for improvements.	3.77	0.959	8.756	0.000	4	High
4	The company uses customers' complaints for further development.	3.79	0.969	8.948	0.000	2	High
5	The company concerns about after selling services.	3.73	0.932	8.615	0.000	5	High
6	The company considers customer satisfaction for long-term relationship.	3.83	0.976	9.261	0.000	1	High
7	The company involves customers in decision-making.	3.64	0.986	7.132	0.000	6	Medium
	Total Customer Management	**3.73**	**0.742**	**10.840**	**0.000**		**High**

T-Tabulated=1.960

The average mean of customer management items is 3.73 with a standard deviation of 0.742, which shows the respondents agree on the high importance of customer management items, where the average of t-value=10.840 is more than T-tabulated 1.960.

Dependent Variable (Strategic Agility):

Table (4.7) shows the mean of strategic agility dimensions range between 3.69 and 3.77 with a standard deviation between 0.733 and 0.838. This explains that respondents agree on the high importance of strategic agility dimensions. The average mean is 3.72, with a standard deviation of 0.589, shows the respondents agree on the high importance of strategic agility dimensions, where the average of t-value=13.314 is more than T-tabulated=1.960. Table (4.7) shows the selecting strategic targets has rated highest importance, followed by understanding core competencies, then relationship with partners, taking action, clarity of vision, respectively.

Table 4.7: Mean, Standard Deviation, t-value, Ranking, and Importance of Strategic Agility dimensions

No.	Dimensions	Mean	S.D.	t-value	Sig.	Rank	Imp.
1	Clarity of Vision	3.69	0.821	9.140	0.000	5	High
2	Understanding Core Competencies	3.72	0.733	10.766	0.000	2	High
3	Selecting Strategic Targets	3.77	0.774	10.946	0.000	1	High
4	Relationship with Partners	3.72	0.838	9.346	0.000	3	High
5	Taking Action	3.69	0.821	9.166	0.000	4	High
	Total Strategic Agility	**3.72**	**0.589**	**13.314**	**0.000**		**High**

T-Tabulated=1.960

Clarity of Vision:

Table (4.8) shows that the mean of clarity of vision items range between 3.56 and 3.76 with a standard deviation between 0.964 and .994. This explains that respondents agree on the high importance of most clarity of vision items. The average mean of clarity of vision items is 3.6 with a standard deviation of

0.821, which shows the respondents agree on the high importance of clarity of vision items, where the average of t-value=9.140.

Table 4.8: Mean, Standard Deviation, t-Value, Ranking, and Importance for Clarity of Vision.

No.	Items	Mean	S.D.	t-value	Sig.	Rank	Imp.
1	The company senses the situation before developing vision.	3.56	0.994	6.153	0.000	5	Medium
2	The company considers all stakeholders during vision development.	3.75	0.964	8.526	0.000	1	High
3	The company communicates vision to all employees.	3.72	0.972	8.079	0.000	3	High
4	The company develops principles guiding	3.76	0.996	8.343	0.000	2	High
5	The company responds according to customers' need changes.	3.64	0.977	7.194	0.000	4	Medium
	Total Clarity of Vision	**3.69**	**0.821**	**9.140**	**0.000**		High

T-Tabulated=1.960

Understanding Core Competencies:

Table (4.9) shows the mean ranges between 3.67 and 3.76 with a standard deviation between 0.940 and 0.978. This explains that respondents agree on the high importance of all understanding core competencies items. The average mean is 3.72 with a standard deviation of 0.732, which shows the respondents agree on the high importance of understanding core competencies items, where the average of t-value=10.766.

Table 4.9: Mean, Standard Deviation, t-Value, Ranking, and Importance for Understanding Core Competencies.

No	Items	Mean	S.D.	t-value	Sig.	Rank	Imp.
1	The company analyzes its internal resources to find competencies.	3.75	0.955	8.604	0.000	1	High
2	The company searches for unique resources outside the company.	3.76	0.970	8.563	0.000	2	High
3	The company allocates funds for competencies improvement.	3.70	0.940	8.156	0.000	3	High
4	The company uses the core competencies to provide unique services.	3.73	0.978	8.117	0.000	4	High
5	The company develops competitive advantage based on core competencies.	3.67	0.947	7.714	0.000	5	High
	Total Understanding Core Competencies	**3.72**	**0.732**	**10.766**	**0.000**		**High**

T-Tabulated=1.960

Selecting Strategic Targets:

Table (4.10) shows the mean of selecting strategic targets items ranges between 3.69 and 3.8 with a standard deviation between 0.933 and 0.995. This explains that respondents agree on the high importance of all selecting strategic targets items. The average mean of selecting strategic targets items is 3.77 with a standard deviation of 0.774, which shows the respondents agree on the high importance of selecting strategic targets items, where the average of t-value=10.946 is more than T-tabulated 1.960.

Table 4.10: Mean, Standard Deviation, t-Value, Ranking, and Importance for Selecting Strategic Targets.

No.	Items	Mean	S.D.	t-value	Sig.	Rank	Imp.
1	The company screens the market based on criteria.	3.79	0.995	8.717	0.000	4	High
2	The company classifies customers based on long-term profitability.	3.80	0.949	9.233	0.000	1	High
3	The company selects the target segments.	3.69	0.933	8.121	0.000	5	High
4	The company focuses on the selected target segment.	3.79	0.952	9.112	0.000	2	High
5	The company maintains long-term relationships with selected customers.	3.79	0.986	8.792	0.000	3	High
	Total Selecting Strategic Targets	**3.77**	**0.774**	**10.946**	**0.000**		**High**

T-Tabulated=1.960

Relationship with Partners:

Table (4.11) shows the means of relationship with partners' targets items ranges between 3.66 and 3.76 with a standard deviation between 0.983 and 1.027. This explains that respondents agree on the high importance of the most relationship with partner's items. The average mean of relationship with partners items is 3.72 with a standard deviation of 0.838, which shows the respondents agree on the high importance of a relationship with partners items, where the average of t-value=9.346 is more than T-tabulated 1.960.

Table 4.11: Mean, Standard Deviation, t-Value, Ranking and Importance of Relationship with Partners.

No.	Items	Mean	S.D.	t-value	Sig.	Rank	Imp.
1	The company develops a strong relationship with partners.	3.73	1.012	7.846	0.000	3	High
2	The company involves partners in decision-making process.	3.70	0.967	7.932	0.000	2	High
3	The company and partners learn from each other.	3.76	0.970	8.563	0.000	1	High
4	The company shares information with partners.	3.66	0.983	7.336	0.000	5	Medium
5	The company sets common objectives with partners.	3.73	1.027	7.824	0.000	4	High
	Total Relationship with Partners	**3.72**	**0.838**	**9.346**	**0.000**		**High**

T-Tabulated=1.960

Taking Action:

Table (4.12) shows the mean of taking action items ranges between 3.59 and 3.77 with a standard deviation between 0.960 and 1.00. This explains that respondents agree on the high importance of most taking action items. The average mean of taking action items is 3.69 with a standard deviation of 0.821, which shows the respondents agree on the high importance of selecting strategic targets items, where the average of t-value=9.166 is more than T-tabulated 1.960.

Table 4.12: Mean, Standard Deviation, t-Value, Ranking, and Importance for Taking Action.

No.	Items	Mean	S.D.	t-value	Sig.	Rank	Imp.
1	The company making decisions based on future-outlook.	3.59	1.000	6.482	0.000	5	Medium
2	The company develops flexible strategies to respond to expected challenges.	3.69	0.960	7.895	0.000	3	High
3	The company considers all stakeholders in decisions.	3.75	0.972	8.450	0.000	2	High
4	The company involves employees in the strategy development	3.77	0.968	8.678	0.000	1	High
5	The company considers social responsibility in decision taking.	3.63	0.961	7.220	0.000	4	Medium
	Total Taking Action	**3.69**	**0.821**	**9.166**	**0.000**		**High**

T-Tabulated=1.960

The Relationship between Independent and Dependent Variables:

Table (4.13) shows the relationships between total quality management sub-variables (top management commitment, employee empowerment, continuous improvement, customer management, and supplier management) are medium to strong, where r ranging between 0.389 and 0.703. It also shows the relationships between Strategic agility dimensions are medium, where r ranges between 0.263 and 0.585.

Table 4.13: Bivariate Pearson Correlation between all Variables, Sub-Variables, and Dimension.

		1	2	3	4	5	6	7	8	9	10	11	12
1	TMC												
2	EE	.637**											
		.000											
3	CI	.703**	.554**										
		.000	.000										
4	SM	.548**	.607**	.541**									
		.000	.000	.000									
5	CM	.389**	.466**	.436**	.633**								
		.000	.000	.000	.000								
6	TQM	.803**	.816**	.807**	.833**	.743**							
		.000	.000	.000	.000	.000							
7	CV	.650**	.613**	.579**	.619**	.646**	.776**						
		.000	.000	.000	.000	.000	.000						
8	UCC	.469**	.592**	.524**	.620**	.661**	.722**	.554**					
		.000	.000	.000	.000	.000	.000	.000					
9	SST	.605**	.671**	.592**	.646**	.550**	.766**	.509**	.362**				
		.000	.000	.000	.000	.000	.000	.000	.000				
10	RP	.597**	.632**	.655**	.623**	.432**	.733**	.416**	.425**	.585**			
		.000	.000	.000	.000	.000	.000	.000	.000	.000			
11	TA	.466**	.496**	.555**	.467**	.442**	.608**	.488**	.343**	.380**	.263**		
		.000	.000	.000	.000	.000	.000	.000	.000	.000	.004		
12	SA	.756**	.813**	.788**	.804**	.735**	.975**	.804**	.715**	.767**	.733**	.675**	
		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	

***. Correlation is significant at the 0.05 level (2-tailed), **. Correlation is significant at the 0.01 level (2-tailed).**

Finally, the result shows that relationships between total quality management sub-variables and strategic agility are strong, where r ranges between 0.735 and 0.813, and the relationship between Total quality management and strategic agility is very strong, where r equals 0.975.

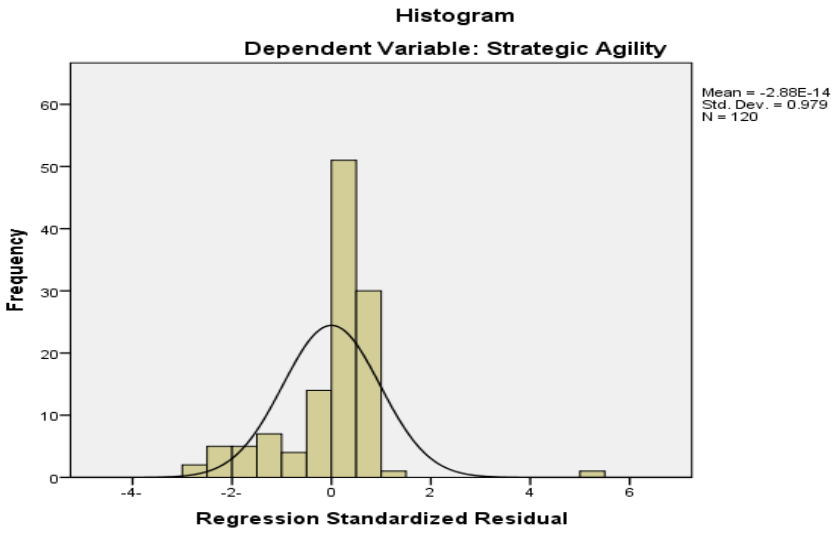
Hypotheses Testing:

After checking validity, reliability and the correlation between Total Quality Management sub-variables and strategic agility dimensions, multiple regression was used to test study hypotheses, also normality, Linearity Test, and independence of errors, multicollinearity (Sekaran, 2016).

Normality:

Figure (4.1) shows that the histogram shape of data follows the normal distribution, this indicates that the residuals do not affect normal distribution.

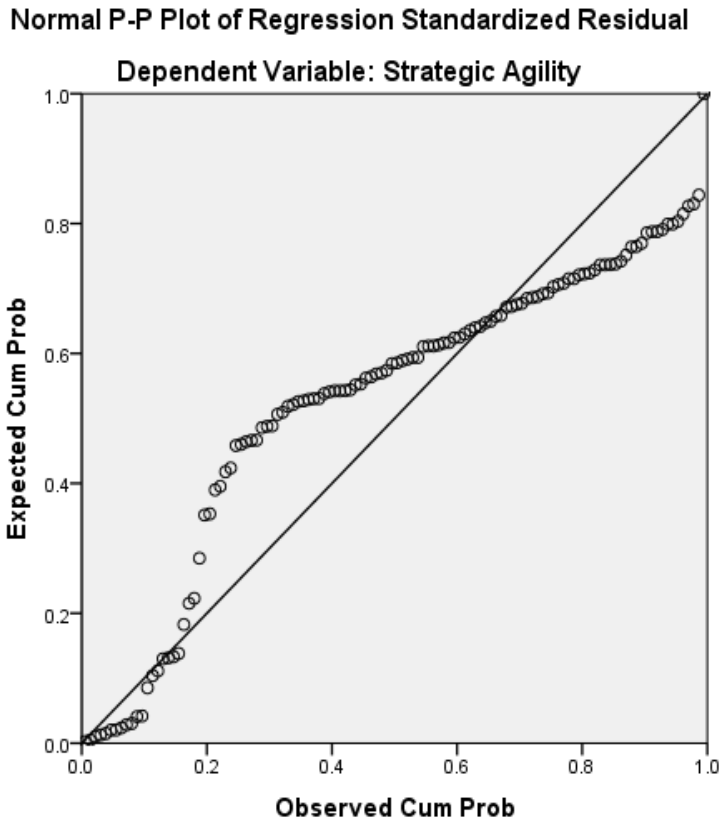
Figure 4.1: **Normality Test**



Linearity Test:

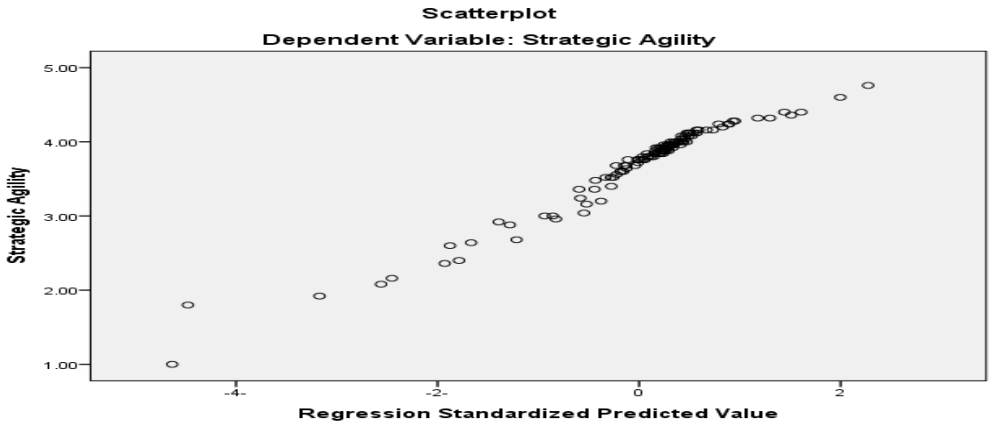
Figure (4.2) shows that the relationship between independent and dependent variables is linear.

Figure 4.2: Linearity Test



Independence of Errors: Figure (4.3) shows the scatter plot of errors around the mean; also, Durbin-Watson used to ensure the independence of errors.

Figure 4.3: Scatter plot Test



Multi-Collinearity: Table (4.14) shows the VIF (Variance Inflation Factor) value is less than 10, also the tolerance is more than 10%, therefore the Collinearity model does not violate this assumption. Durbin-Watson is 2.07 and it is almost two.

Table 4.14: Durbin-Watson Value and Variance Inflation Rate:

Sub-Variables	Collinearity Statistics		Durbin-Watson
	Tolerance	VIF	
Top Management Commitment	0.410	2.441	**2.076**
Employee Empowerment	0.489	2.046	
Continuous Improvement	0.459	2.178	
Supplier Management	0.443	2.255	
Customer Management	0.581	1.722	

Main Hypothesis:

H_{01}: total quality management practices (top management commitment, employee empowerment, continuous improvement, supplier management, and customer management) do not impact strategic agility at Jordanian concrete companies, at ($\alpha \leq 0.05$).

Table (4.15) shows that when regressing the five sub-variables of total quality management practices against strategic agility dimensions, f value shows the fitness of study model, and R^2 shows explanatory power of independent variable on the dependent variable. The model shows that Total quality management can explain 95% of the variation of strategic agility, where (R^2=0.954, F=474.187, Sig.=0.000). Therefore, null hypothesis rejected, and the new hypothesis states that total quality management practices sub-variables (top management commitment, employee empowerment, continuous improvement, supplier management, and customer management) impact strategic agility at Jordanian concrete companies, at a level of significance ($\alpha \leq 0.05$).

Table 4.15: Multiple Regression Analysis of Total Quality Management Sub-Variables against Strategic Agility.

Model	r	R^2	Adjusted R^2	F	Sig.
1	0.977[a]	0.954	0.952	474.187	0.000[b]

a. Dependent Variable: Strategic Agility b. Predictors: (Constant) Top Management Commitment, Employee Empowerment, Continuous Improvement, Supplier Management, And Customer Management.

Table (4.16) shows the effect of total quality management Sub-Variables on strategic agility.

Table 4. 16: Multiple Regressions Analysis of Total Quality Management Sub-Variables on Strategic Agility (ANOVA).

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.110-	0.085		-1.305-	0.195
	Top Management Commitment	0.133	0.032	0.132	4.197	0.000
	Employee Empowerment	0.256	0.024	0.311	10.850	0.000
	Continuous Improvement	0.233	0.024	0.287	9.705	0.000
	Supplier Management	0.183	0.026	0.210	6.966	0.000
	Customer Management	0.223	0.021	0.281	10.669	0.000

a. dependent variable: Strategic Agility, T-tabulated=1.960

$H_{01.1}$: top management commitment does not impact strategic agility at Jordanian concrete companies, at ($\alpha \leq 0.05$).

Table (4.16) shows that there is an impact of total quality management (top management commitment) on strategic agility dimensions, where (Beta=0.132, t=4.197, Sig.=0.000, $p<0.05$). Therefore, the null hypothesis rejected, and the new hypothesis states that top management commitment impact strategic agility at Jordanian concrete companies, at a level of significance ($\alpha \leq 0.05$).

$H_{01.2}$: employee empowerment does not impact strategic agility at Jordanian concrete companies, at ($\alpha \leq 0.05$). Table (4.16) shows that there is an impact of total quality management (employee empowerment) on strategic agility dimensions, where (Beta=0.311, t=10.850, Sig.=0.000, $p<0.05$).

Therefore, the null hypothesis rejected, and the new hypothesis states that employee empowerment has the highest on impact strategic agility at Jordanian concrete companies, at a level of significance (α≤0.05).

$H_{01.3}$: continuous improvement does not impact strategic agility at Jordanian concrete companies Organizations, at (α≤0.05). Table (4.16) shows that there is an impact of total quality management (continuous improvement) on strategic agility dimensions, where (Beta=0.287, t=9.705, Sig.=0.000, p<0.05). Therefore, the null hypothesis rejected, and the new hypothesis states that continuous improvement impacts strategic agility at Jordanian concrete companies, at a level of significance (α≤0.05).

$H_{01.4}$: supplier management does not impact strategic agility at Jordanian concrete companies Organizations, at (α≤0.05).Table (4.16) shows that there is an impact of total quality management (supplier management) on strategic agility dimensions, where (Beta=0.21, t=6.966, Sig.=0.005, p<0.05). Therefore, the null hypothesis rejected and the new hypothesis states that supplier management impacts strategic agility at Jordanian concrete companies, at a level of significance (α≤0.05).

$H_{01.5}$: customer management does not impact strategic agility at Jordanian concrete companies Organizations, at (α≤0.05).Table (4.16) shows that there is an impact of total quality management (customer management) on strategic agility dimensions, where (Beta=0.281, t=10.669, Sig.=0.005, p<0.05). Therefore, the null hypothesis rejected, and the new hypothesis states that customer management impacts strategic agility at Jordanian concrete companies, at a level of significance (α≤0.05).

In summary, results show that respondents agree on the high importance of total quality management sub-variables top management commitment rated

high importance, followed by supplier management, then employee empowerment, customer management, continuous improvement, respectively.

Results also show that the relationships between total quality management sub-variables are medium to strong, and the relationships between strategic agility dimensions are very strong, finally, the result shows that the relationships between total quality management sub-variables and strategic agility are strong, and the relationship between total quality management and strategic agility is very strong.

Finally, the results of multiple regression analysis showed that the total quality management and its sub-variables affect strategic agility, where employee empowerment has the highest impact, followed by customer management, then continuous improvement, supplier management, top management commitment, respectively.

Chapter Five: Results' Discussion, Conclusion and Recommendations

Results Discussion:

The results show that respondents agree on the high importance of total quality management sub-variables, where the top management commitment has rated the highest importance, followed by supplier management, then employee empowerment, customer management, continuous improvement, respectively. This indicates that the managers and officers working at Jordanian concrete companies are aware of the importance of the implantation of the total quality management sub-variables; this result supported by the following studies that mentioned the importance of total quality management and its sub-variables. Gilbert and Parhizgari (2000) study results showed that total quality practices improved quality and service. Cuaa, et. al. (2001) study results showed the importance of total quality management practices; process management, cross-functional product design, supplier quality management, and customer involvement. Kannan and Tan (2005) study results showed the importance of commitment to quality. Abuzaid (2015) study results showed that top management commitment to enhance quality efforts.

The results also showed that the respondents agree on the high importance of strategic agility dimensions, where selecting strategic targets has rated highest importance, followed by understanding core competencies, then relationship with partners, taking action, clarity of vision, respectively. This indicates that the managers and officers working at Jordanian concrete companies are aware of the importance of the implantation of the strategic agility dimension. These results have supported by the following studies that

mention the importance of strategic agility: (Abuzaid, 2015; Ofoegbu and Akanbi, 2012; Ojha, 2008; Hemmati, et. al. 2016; Oyedijo, 2012; Khoshnood and Nematizadeh, 2017). While Hemmati, et. al. (2016) study results showed that there is no implementation of strategic agility dimension in the study population. Khoshnood and Nematizadeh (2017) stated that the most important dimensions of strategic agility are clarity of vision

Results also show that the relationships among total quality management sub-variables are medium to strong, and the relationships among strategic agility dimensions are very strong, finally, the results showed the relationships between total quality management sub-variables and strategic agility are strong, and the relationship between total quality management and strategic agility is very strong. This result supported by Abuzaid (2015) study that found a strong relationship among total quality management sub-variables and strategic agility. Zelbst, et. al. (2010) stated that the combination of market orientation and just in time and total quality management improvement programs is not sufficient to establish competitive advantage; they are necessary precursors to agility. Hemmati, et. al. (2016) study results showed that there are relationships between firm resources, strategic agility, and competitive advantage.

Finally, the results of multiple regression analysis showed that the total quality management and its sub-variables affect strategic agility, where employee empowerment has the highest impact, followed by customer management, then continuous improvement, supplier management, top management commitment, respectively. Abuzaid (2015) study found that the total quality management practices have a positive impact on the strategic agility, and the highest impact was for the customer orientation, while the lowest impact was for the employee involvement on strategic agility. Kannan

and Tan (2005) results showed that commitment to quality has the greatest effect on performance compared to product design and supplier capability. Samat, et. al. (2006) results showed that employee empowerment, information and communication, customer focus, and continuous improvement significantly affected service quality whereas only employee empowerment and customer focus had a significant effect on market orientation. Nzuve and Bakari (2012) study found that employee empowerment had a significant positive influence on performance. Khoshnood and Nematizadeh (2017) study results found that strategic agility had a significant impact on the competitive capabilities of the private banks in Iran.

Conclusion:

This study was dedicated to answering the study main question: Do total quality management practices (top management commitment, employee empowerment, continuous improvement, supplier management, and customer management) impact strategic agility in Jordanian concrete companies? Data collected via a questionnaire, which tested for its validity and reliability. Then correlation and multiple regressions used to test the hypothesis.

The results of this study show the high implementation of total quality management sub-variables in Jordanian concrete companies. The top management commitment has the highest implementation rate among the sub-variables, then supplier management, after that employee empowerment, followed by customer management, and Continuous Improvement, respectively. Moreover, the findings show that high implementation of strategic agility dimensions, selecting strategic targets is the highest implemented dimension, followed by understanding core competencies, then relationship with partners, after that taking action and clarity of vision, respectively.

Results also show that the relationships between total quality management sub-variables are medium to strong, and the relationships between strategic agility dimensions are very strong, finally, the result shows that the relationships between total quality management sub-variables and strategic agility are strong, and the relationship between total quality management and strategic agility is very strong.

Finally, results indicate that there is a significant impact of the total quality management impact strategic agility, where employee empowerment has the highest impact, followed by customer management, then continuous improvement, supplier management, top management commitment, respectively. Moreover, employee empowerment has the highest impact, followed by customer management, then continuous improvement, supplier management, top management commitment, respectively.

Recommendations:

Recommendations for Jordanian concrete companies industries:

The study recommends that Jordanian concrete companies have to:

1. Align total quality management practices with strategic plans.
2. Focus on continuous improvement.
3. Provide a clear image of its vision to all employees.
4. Implement total quality management elements together, because they related to each other.
5. Establish a separate department to monitor and audit the total quality management continuously.
6. Provide cross training to all employees to ensure the importance of total quality management.

Recommendations for Academics and Future Research:

This study conducted in Jordanian concrete companies. To be able to generalize the current study results, it is recommended to conduct similar studies on the same industry in other countries.

This study is carried out on one industry (concrete ready-mix industry); therefore, it is advised to apply the same variables on other manufacturing industries.

This study is carried out within a limited period; therefore, it is advised to repeat this study after a suitable time to check industry development.

Extending the analyses to other industries and countries represent future research opportunities, which can be done on larger samples and different industries, this will help to mitigate the issue of generalizing conclusions on other organizations and industries**.**

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Appendices:

Appendix1: Panel of Referees Committee.

No.	Name	Qualification	Organization
1	Prof. Ahmed Ali Saleh	Prof. Management	Middle East University
2	Dr. Ahmad Al-Saukar	Associate Prof. E-Business	Middle East University
3	Dr. Amjad Etwaiqat.	Associate Prof. Management	Middle East University
4	Dr. Sameer Al-Jabali	Associate Prof. Marketing	Middle East University
5	Dr. Hussam Ali	Assistant Prof. Marketing	Middle East University
6	Dr. Mohammad Al-adaileh	Associate Prof. Management	Middle East University
7	Dr. Salwa Alsamerai	Associate Prof. Management	Israa University
8	Dr. Murad Atyani	Associate Prof. Management	Israa University

Appendix 2: Referees Committee Letter

جـــامـعـــة الـــشـرق الأوسـط
MIDDLE EAST UNIVERSITY
Amman - Jordan

Dear Doctor/Professor……..

May I request you to referee the attached a questionnaire, which will be used for a research paper titled “The Impact of Total Quality Management Practices on Strategic Agility in Jordanian concrete Companies”.

The questionnaire includes 60 questions, which may take 15 to 20 minutes to referee it. I am eager to learn from your comments, which will contribute to developing suitable questions to measure the variables. Your contribution is highly appreciated.

Please write your comments, suggestions, and recommendations opposite to each questionnaire. I am sure your contribution will add value to my thesis.

Again, thank you for your contribution, and if do you have any questions or concerns please contact me

Thank you for your fruitful contribution.

Prepared by: Zaid Ali Al-Shawabkeh

Supervised by: Dr. Abdel-Aziz Ahmad Sharabati

Appendix 3: Letter and Questionnaire of Respondents

جـــامـعـة الـــشرق الأوسـط
MIDDLE EAST UNIVERSITY
Amman - Jordan

Thesis Questionnaire

Dear Participant:

This questionnaire is a part of a thesis titled: "**The Impact of Total Quality Management Practices on Strategic Agility in Jordanian concrete companies".**

أثر ممارسات ادارة الجودة الشاملة على الرشاقة الاستراتيجية في شركات الباطون في الاردن

This questionnaire includes 60 paragraphs, which cover all independent, and dependent variables, and may take only 15 minutes from you to answer the questions.

Please, write a perception about the implementation of each paragraph in your company. All information and opinions you provide will be treated confidently, and will not be disclosed to any person or party; it will be only used for academic purposes.

I would like to thank you for your participation and support, and if do you have any question or comment.

Thank you for your effort.

Prepared by: Zaid Ali Al-Shawabkeh

Supervised by: Dr. Abdel-Aziz Ahmad Sharabati

Questionnaire of a thesis titled: "the Impact of Total Quality Management Practices on Strategic Agility in Jordanian concrete Company".

Part One: Demographic information

Company:

Gender: □Male □Female

Age (years): □Less than 30 □ Bet. 30-39 □Bet. 40-50 □Above 50

Experience (years): □Less 10 □Bet.10-20 □Bet.21-30□More than 30

Education: □Diploma □ Bachelor □Mater □Ph.D.

Position: □Officer□Supervisor□Manager□Director□V. P□GM

Division: □Operation & Quality □Supply Chain□ Sales & Marketing □Finance

Part Two: The following 60 questions tests the perception of Jordanian Concrete Companies employees about the Impact of Total Quality Management Practices on Strategic Agility. Please, rate each question according to actual implementation and not based on your belief, as follows: Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), and Strongly Disagree (1).

No.	Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	Total Quality Management					
	Top Management Commitment:					
1.	The company top management communicates the company's philosophy to all employees.	1	2	3	4	5
2.	The company top management follows agreed upon plans.	1	2	3	4	5
3.	The company top management ensures the availability of needed resources.	1	2	3	4	5
4.	The company top management assigns the required budget for business improvement.	1	2	3	4	5
5.	The company top management participates in all meetings.	1	2	3	4	5
6.	The company top management rewards employees based on suitable indicators.	1	2	3	4	5
7.	The company top management commits to evaluates employees based on performance.	1	2	3	4	5
	Employee Empowerment:					
8.	The company provides cross training for all employees.	1	2	3	4	5
9.	The company involves all employees in discussion meetings.	1	2	3	4	5
10.	The company authorizes employees to take decisions based on responsibility.	1	2	3	4	5
11.	The company assigns duties to teams	1	2	3	4	5
12.	The company assigns duties to individuals.	1	2	3	4	5
13.	The company involves employees in decision-making.	1	2	3	4	5

14.	The company empowers employees to solve the problem.	1	2	3	4	5
	Continuous Improvement:					
15.	The company assigns suitable measurements for internal operations.	1	2	3	4	5
16.	The company relies on feedbacks for further improvement.	1	2	3	4	5
17.	The company clearly define the goal of improvement	1	2	3	4	5
18.	The company uses preventive solutions for expected problems.	1	2	3	4	5
19.	The company monitors all processes continuously.	1	2	3	4	5
20.	The company uses best practices indicators as a benchmark to improve its' processes.	1	2	3	4	5
21.	The company improves its processes continuously.	1	2	3	4	5
	Supplier Management:					
22.	The company updates all suppliers' database.	1	2	3	4	5
23.	The company sets criteria for suppliers' selection.	1	2	3	4	5
24.	The company involves suppliers during developing its mission.	1	2	3	4	5
25.	The company shares forecasting with suppliers.	1	2	3	4	5
26.	The company develops a strong relationship with suppliers.	1	2	3	4	5
27.	The company involves suppliers in improvements activities	1	2	3	4	5
28.	The company evaluates suppliers based on performance.	1	2	3	4	5
	Customer Management:					
29.	The company updates customers' database.	1	2	3	4	5
30.	The company provides training on customer relationship with all employees.	1	2	3	4	5
31.	The company uses customers' feedback for improvements.	1	2	3	4	5
32.	The company uses customers' complaints for further development.	1	2	3	4	5
33.	The company concerns about after selling services.	1	2	3	4	5
34.	The company considers customer satisfaction for long-term relationship.	1	2	3	4	5
35.	The company involves customers in decision-making.	1	2	3	4	5
	Strategic Agility					
	Clarity of Vision					
36.	The company senses the situation before developing vision.	1	2	3	4	5
37.	The company considers all stakeholders during vision development.	1	2	3	4	5
38.	The company communicates the vision to all employees.	1	2	3	4	5
39.	The company develops guiding principles.	1	2	3	4	5
40.	The company responds according to customers' need changes.	1	2	3	4	5
	Understanding Core Competencies					
41.	The company analyzes its internal resources to find competencies.	1	2	3	4	5
42.	The company searches for unique resources outside the company.	1	2	3	4	5
43.	The company allocates funds for competencies improvement.	1	2	3	4	5
44.	The company uses the core competencies to provide unique services.	1	2	3	4	5
45.	The company develops a competitive advantage based on core competencies.	1	2	3	4	5
	Selecting Strategic Targets					
46.	The company screens the market based on criteria.	1	2	3	4	5
47.	The company classifies customers based on long-term profitability.	1	2	3	4	5
48.	The company selects the target segments.	1	2	3	4	5
49.	The company focuses on the selected target segment.	1	2	3	4	5
50.	The company maintains long-term relationships with selected customers.	1	2	3	4	5

	Relationship with Partners					
51.	The company develops a strong relationship with partners.	1	2	3	4	5
52.	The company involves partners in the decision-making process.	1	2	3	4	5
53.	The company and partners learn from each other.	1	2	3	4	5
54.	The company shares information with partners.	1	2	3	4	5
55.	The company sets common objectives with partners.	1	2	3	4	5
	Taking Action					
56.	The company making decisions based on future-outlook.	1	2	3	4	5
57.	The company develops flexible strategies to respond to expected challenges.	1	2	3	4	5
58.	The company considers all stakeholders in decisions.	1	2	3	4	5
59.	The company involves employees in the strategy development	1	2	3	4	5
60.	The company considers social responsibility in decision taking.	1	2	3	4	5

Appendix 4: Original Data Analysis Report: Demographic: Frequency and Percentage Table

Statistics

		Gender	Age	Experience	Education	Position	Division
N	Valid	120	120	120	120	120	120
	Missing	0	0	0	0	0	0

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	89	74.2	74.2	74.2
	Female	31	25.8	25.8	100.0
	Total	120	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 30	62	51.7	51.7	51.7
	Bet. 30-39	37	30.8	30.8	82.5
	Bet. 40-50	16	13.3	13.3	95.8
	Above 50	5	4.2	4.2	100.0
	Total	120	100.0	100.0	

Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less 10	71	59.2	59.2	59.2
	Between 10-20	39	32.5	32.5	91.7
	Between 21-30	9	7.5	7.5	99.2
	More than 30	1	.8	.8	100.0
	Total	120	100.0	100.0	

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	13	10.8	10.8	10.8
	Bachelor	69	57.5	57.5	68.3
	Master	33	27.5	27.5	95.8
	Ph.D.	5	4.2	4.2	100.0
	Total	120	100.0	100.0	

Position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Officer	37	30.8	30.8	30.8
	Supervisor	40	33.3	33.3	64.2
	Manager	30	25.0	25.0	89.2
	Director	8	6.7	6.7	95.8
	V. P	3	2.5	2.5	98.3
	GM	2	1.7	1.7	100.0
	Total	120	100.0	100.0	

Division

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Operation & Quality	49	40.8	40.8	40.8
	Supply Chain	15	12.5	12.5	53.3
	Sales & Marketing	39	32.5	32.5	85.8
	Finance	17	14.2	14.2	100.0
	Total	120	100.0	100.0	

Factor Analysis

Top Management Commitment

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.843
Bartlett's Test of Sphericity	Approx. Chi-Square	205.855
	df	21
	Sig.	.000

Communalities

	Initial	Extraction
The company top management communicates the company's philosophy to all employees.	1.000	.483
The company top management follows agreed upon plans.	1.000	.463
The company top management ensures the availability of needed resources.	1.000	.464
The company top management assigns the required budget for business improvement.	1.000	.424
The company top management participates in all meetings.	1.000	.429
The company top management rewards employees based on suitable indicators.	1.000	.443
The company top management commits to evaluates employees based on performance.	1.000	.522

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.229	46.128	46.128	3.229	46.128	46.128
2	.879	12.557	58.685			
3	.700	9.998	68.683			
4	.689	9.849	78.531			
5	.574	8.199	86.731			
6	.487	6.961	93.692			
7	.442	6.308	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
The company top management communicates the company's philosophy to all employees.	.695
The company top management follows agreed upon plans.	.681
The company top management ensures the availability of needed resources.	.681
The company top management assigns the required budget for business improvement.	.651
The company top management participates in all meetings.	.655
The company top management rewards employees based on suitable indicators.	.666
The company top management commits to evaluates employees based on performance.	.723

Extraction Method: Principal Component Analysis.[a]

a. 1 components extracted.

Factor Analysis

Employee Empowerment

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.902
Bartlett's Test of Sphericity	Approx. Chi-Square	333.935
	df	21
	Sig.	.000

Communalities

	Initial	Extraction
The company provides cross-training for all employees.	1.000	.544
The company involves all employees in discussion meetings.	1.000	.539
The company authorizes employees to take decisions based on responsibility.	1.000	.481
The company assigns duties to teams	1.000	.569
The company assigns duties to individuals.	1.000	.561
The company involves employees in decision-making.	1.000	.642
The company empowers employees to solve the problem.	1.000	.648

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.985	56.924	56.924	3.985	56.924	56.924
2	.667	9.529	66.452			
3	.583	8.328	74.780			
4	.532	7.603	82.383			
5	.481	6.874	89.257			
6	.393	5.621	94.878			
7	.359	5.122	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
The company provides cross-training for all employees.	.737
The company involves all employees in discussion meetings.	.734
The company authorizes employees to take decisions based on responsibility.	.694
The company assigns duties to teams	.754
The company assigns duties to individuals.	.749
The company involves employees in decision-making.	.801
The company empowers employees to solve the problem.	.805

Extraction Method: Principal Component Analysis.[a]

a. 1 components extracted.

Factor Analysis

Continuous Improvement

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.903
Bartlett's Test of Sphericity	Approx. Chi-Square	371.708
	df	21
	Sig.	.000

Communalities

	Initial	Extraction
The company assigns suitable measurements for internal operations.	1.000	.593
The company relies on feedbacks for further improvement.	1.000	.642
The company clearly define the goal of improvement	1.000	.559
The company uses preventive solutions for expected problems.	1.000	.510
The company monitors all processes continuously.	1.000	.667
The company uses best practices indicators as a benchmark to improve its' processes.	1.000	.554
The company improves its processes continuously.	1.000	.625

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.151	59.294	59.294	4.151	59.294	59.294
2	.605	8.639	67.933			
3	.580	8.290	76.222			
4	.518	7.398	83.620			
5	.460	6.567	90.187			
6	.381	5.448	95.635			
7	.306	4.365	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
The company assigns suitable measurements for internal operations.	.770
The company relies on feedbacks for further improvement.	.801
The company clearly define the goal of improvement	.748
The company uses preventive solutions for expected problems.	.714
The company monitors all processes continuously.	.817
The company uses best practices indicators as a benchmark to improve its' processes.	.745
The company improves its processes continuously.	.791

Extraction Method: Principal Component Analysis.[a]

a. 1 components extracted.

Factor Analysis
Supplier Management

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.865
Bartlett's Test of Sphericity	Approx. Chi-Square	357.893
	df	21
	Sig.	.000

Communalities

	Initial	Extraction
The company updates all suppliers' database.	1.000	.521
The company sets criteria for suppliers' selection.	1.000	.656
The company involves suppliers during developing its mission.	1.000	.585
The company shares forecasting with suppliers.	1.000	.548
The company develops a strong relationship with suppliers.	1.000	.578
The company involves suppliers in improvements activities	1.000	.550
The company evaluates suppliers based on performance.	1.000	.562

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.000	57.144	57.144	4.000	57.144	57.144
2	.756	10.807	67.951			
3	.617	8.817	76.768			
4	.574	8.201	84.969			
5	.384	5.488	90.457			
6	.367	5.237	95.694			
7	.301	4.306	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
The company updates all suppliers' database.	.721
The company sets criteria for suppliers' selection.	.810
The company involves suppliers during developing its mission.	.765
The company shares forecasting with suppliers.	.740
The company develops a strong relationship with suppliers.	.760
The company involves suppliers in improvements activities	.742
The company evaluates suppliers based on performance.	.750

Extraction Method: Principal Component Analysis.[a]
a. 1 components extracted.

Factor Analysis

Customer Management

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.869
Bartlett's Test of Sphericity	Approx. Chi-Square	404.131
	df	21
	Sig.	.000

Communalities

	Initial	Extraction
The company updates customers' database.	1.000	.662
The company provides training on customer relationship to all employees.	1.000	.506
The company uses customers' feedback for improvements.	1.000	.648
The company uses customers' complaints for further development.	1.000	.615
The company concerns about after selling services.	1.000	.619
The company considers customer satisfaction for a long-term relationship.	1.000	.646
The company involves customers in decision-making.	1.000	.492

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.189	59.841	59.841	4.189	59.841	59.841
2	.693	9.903	69.744			
3	.643	9.188	78.932			
4	.473	6.756	85.687			
5	.424	6.058	91.746			
6	.333	4.756	96.501			
7	.245	3.499	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
The company updates customers' database.	.814
The company provides training on customer relationship with all employees.	.711
The company uses customers' feedback for improvements.	.805
The company uses customers' complaints for further development.	.785
The company concerns about after selling services.	.787
The company considers customer satisfaction for a long-term relationship.	.804
The company involves customers in decision-making.	.701

Extraction Method: Principal Component Analysis.[a]

a. 1 components extracted.

Factor Analysis

Total Quality Management

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.809
Bartlett's Test of Sphericity	Approx. Chi-Square	274.862
	df	10
	Sig.	.000

Communalities

	Initial	Extraction
Top Management Commitment	1.000	.681
Employee Empowerment	1.000	.671
Continuous Improvement	1.000	.658
Supplier Management	1.000	.692
Customer Management	1.000	.511

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.213	64.265	64.265	3.213	64.265	64.265
2	.740	14.808	79.074			
3	.450	8.991	88.064			
4	.325	6.496	94.560			
5	.272	5.440	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Top Management Commitment	.825
Employee Empowerment	.819
Continuous Improvement	.811
Supplier Management	.832
Customer Management	.715

Extraction Method: Principal Component Analysis.[a]

a. 1 components extracted.

Factor Analysis
Clarity of Vision

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.884
Bartlett's Test of Sphericity	Approx. Chi-Square	318.518
	df	10
	Sig.	.000

Communalities

	Initial	Extraction
The company senses the situation before developing vision.	1.000	.672
The company considers all stakeholders during vision development.	1.000	.690
The company communicates vision to all employees.	1.000	.672
The company develops guiding principles.	1.000	.746
The company responds according to customers' need changes.	1.000	.728

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.507	70.139	70.139	3.507	70.139	70.139
2	.440	8.805	78.945			
3	.405	8.099	87.043			
4	.356	7.121	94.165			
5	.292	5.835	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
The company senses the situation before developing a vision.	.820
The company considers all stakeholders during vision development.	.831
The company communicates the vision to all employees.	.820
The company develops guiding principles.	.864
The company responds according to customers' need changes.	.853

Extraction Method: Principal Component Analysis.[a]

a. 1 components extracted.

Factor Analysis
Understanding Core Competencies

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.831
Bartlett's Test of Sphericity	Approx. Chi-Square	191.480
	df	10
	Sig.	.000

Communalities

	Initial	Extraction
The company analyzes its internal resources to find competencies.	1.000	.665
The company searches for unique resources outside the company.	1.000	.601
The company allocates funds for competencies improvement.	1.000	.532
The company uses the core competencies to provide unique services.	1.000	.584
The company develops a competitive advantage based on core competencies.	1.000	.545

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.926	58.526	58.526	2.926	58.526	58.526
2	.708	14.161	72.686			
3	.501	10.016	82.703			
4	.459	9.190	91.892			
5	.405	8.108	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
The company analyzes its internal resources to find competencies.	.815
The company searches for unique resources outside the company.	.775
The company allocates funds for competencies improvement.	.730
The company uses the core competencies to provide unique services.	.764
The company develops a competitive advantage based on core competencies.	.738

Extraction Method: Principal Component Analysis.[a]

a. 1 components extracted.

Factor Analysis
Selecting Strategic Targets

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.867
Bartlett's Test of Sphericity	Approx. Chi-Square	249.639
	df	10
	Sig.	.000

Communalities

	Initial	Extraction
The company screens the market based on criteria.	1.000	.622
The company classifies customers based on long-term profitability.	1.000	.673
The company selects the target segments.	1.000	.648
The company focus on the selected target segment.	1.000	.702
The company maintains long-term relationships with selected customers.	1.000	.590

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.234	64.681	64.681	3.234	64.681	64.681
2	.536	10.720	75.401			
3	.467	9.334	84.735			
4	.406	8.127	92.862			
5	.357	7.138	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
The company screens the market based on criteria.	.788
The company classifies customers based on long-term profitability.	.820
The company selects the target segments.	.805
The company focus on the selected target segment.	.838
The company maintains long-term relationships with selected customers.	.768

Extraction Method: Principal Component Analysis.[a]

a. 1 components extracted.

Factor Analysis
Relationship with Partners

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.865
Bartlett's Test of Sphericity	Approx. Chi-Square	351.207
	df	10
	Sig.	.000

Communalities

	Initial	Extraction
The company develops a strong relationship with partners.	1.000	.706
The company involves partners in the decision-making process.	1.000	.765
The company and partners learn from each other.	1.000	.778
The company shares information with partners.	1.000	.669
The company sets common objectives with .partners.	1.000	.660

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.578	71.551	71.551	3.578	71.551	71.551
2	.477	9.548	81.100			
3	.412	8.247	89.347			
4	.302	6.039	95.386			
5	.231	4.614	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
The company develops a strong relationship with partners.	.840
The company involves partners in the decision-making process.	.875
The company and partners learn from each other.	.882
The company shares information with partners.	.818
The company sets common objectives with .partners.	.812

Extraction Method: Principal Component Analysis.[a]

a. 1 components extracted.

Factor Analysis
Taking Action

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.860
Bartlett's Test of Sphericity	Approx. Chi-Square	346.013
	df	10
	Sig.	.000

Communalities

	Initial	Extraction
The company making decisions based on future-outlook.	1.000	.662
The company develops flexible strategies to respond to expected challenges.	1.000	.721
The company considers all stakeholders in decisions.	1.000	.701
The company involves employees in the strategy development	1.000	.733
The company considers social responsibility in decision taking.	1.000	.750

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigevalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.566	71.326	71.326	3.566	71.326	71.326
2	.457	9.133	80.459			
3	.430	8.593	89.052			
4	.314	6.274	95.326			
5	.234	4.674	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
The company making decisions based on future-outlook.	.813
The company develops flexible strategies to respond to expected challenges.	.849
The company considers all stakeholders in decisions.	.837
The company involves employees in the strategy development	.856
The company considers social responsibility in decision taking.	.866

Extraction Method: Principal Component Analysis.[a]

a. 1 components extracted.

Factor Analysis
Strategic Agility

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.760
Bartlett's Test of Sphericity	Approx. Chi-Square	173.974
	df	10
	Sig.	.000

Communalities

	Initial	Extraction
Clarity of Vision	1.000	.661
Understanding Core Competencies	1.000	.526
Selecting Strategic Targets	1.000	.601
Relationship with Partners	1.000	.532
Taking Action	1.000	.422

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.742	54.839	54.839	2.742	54.839	54.839
2	.804	16.079	70.918			
3	.666	13.318	84.237			
4	.442	8.839	93.075			
5	.346	6.925	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Clarity of Vision	.813
Understanding Core Competencies	.725
Selecting Strategic Targets	.775
Relationship with Partners	.729
Taking Action	.650

RELIABILITY

Top Management Commitment

Reliability Statistics

Cronbach's Alpha	N of Items
.805	7

Employee Empowerment

Reliability Statistics

Cronbach's Alpha	N of Items
.885	7

Supplier Management

Reliability Statistics

Cronbach's Alpha	N of Items
.874	7

Customer management

Cronbach's Alpha	N of Items
.887	7

Total Quality Management

Reliability Statistics

Cronbach's Alpha	N of Items
.856	5

Clarity of Vision

Reliability Statistics

Cronbach's Alpha	N of Items
.893	5

Understanding Core Competencies

Reliability Statistics

Cronbach's Alpha	N of Items
.822	5

Selecting Strategic Targets

Reliability Statistics

Cronbach's Alpha	N of Items
.863	5

Relationship with Partners

Reliability Statistics

Cronbach's Alpha	N of Items
.900	5

Taking Action

Reliability Statistics

Cronbach's Alpha	N of Items
.899	5

Strategic Agility

Cronbach's Alpha	N of Items
.791	5

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
The company top management communicates the company's philosophy to all employees.	120	3.84	.830	.076
The company top management follows agreed upon plans.	120	3.74	.884	.081
The company top management ensures the availability of needed resources.	120	3.81	.823	.075
The company top management assigns the required budget for business improvement.	120	3.78	.864	.079
The company top management participates in all meetings.	120	3.78	.874	.080
The company top management rewards employees based on suitable indicators.	120	3.62	.852	.078
The company top management commits to evaluates employees based on performance.	120	3.78	.893	.082
Top Management Commitment	120	3.7619	.58400	.05331
The company provides cross-training for all employees.	120	3.75	1.006	.092
The company involves all employees in discussion meetings.	120	3.73	.978	.089
The company authorizes employees to take decisions based on responsibility.	120	3.78	.945	.086
The company assigns duties to teams	120	3.68	.907	.083
The company assigns duties to individuals.	120	3.74	1.000	.091
The company involves employees in decision-making.	120	3.60	.911	.083
The company empowers employees to solve the problem.	120	3.74	.921	.084
Employee Empowerment	120	3.7179	.71763	.06551
The company assigns suitable measurements for internal operations.	120	3.68	.979	.089
The company relies on feedbacks for further improvement.	120	3.69	.960	.088
The company clearly define the goal of improvement	120	3.72	.900	.082
The company uses preventive solutions for expected problems.	120	3.73	.932	.085
The company monitors all processes continuously.	120	3.84	.961	.088
The company uses best practices indicators as a benchmark to improve its' processes.	120	3.64	.968	.088
The company improves its processes continuously.	120	3.70	.913	.083
Continuous Improvement	120	3.7155	.72713	.06638
The company updates all suppliers' database.	120	3.62	.881	.080
The company sets criteria for suppliers' selection.	120	3.78	.852	.078
The company involves suppliers during developing its mission.	120	3.73	.896	.082
The company shares forecasting with suppliers.	120	3.66	.957	.087
The company develops strong relationship with suppliers.	120	3.81	.882	.081
The company involves suppliers in improvements activities	120	3.75	.937	.086
The company evaluates suppliers based on performance.	120	3.67	.863	.079
Supplier Management	120	3.7167	.67617	.06173
The company updates customers' database.	120	3.76	.944	.086
The company provides training on customer relationship with all employees.	120	3.63	.962	.088
The company uses customers' feedback for improvements.	120	3.77	.959	.088
The company uses customers' complaints for further development.	120	3.79	.969	.088
The company concerns about after selling services.	120	3.73	.932	.085
The company considers customer satisfaction for long-term relationship.	120	3.83	.976	.089
The company involves customers in decision-making.	120	3.64	.986	.090
Customer Management	120	3.7345	.74226	.06776
Total Quality Management	120	3.7293	.55119	.05032
The company senses the situation before developing a vision.	120	3.56	.994	.091
The company considers all stakeholders during vision development.	120	3.75	.964	.088
The company communicates the vision to all employees.	120	3.72	.972	.089
The company develops guiding principles.	120	3.76	.996	.091
The company responds according to customers' need changes.	120	3.64	.977	.089
Clarity of Vision	120	3.6850	.82101	.07495

The company analyzes its internal resources to find competencies.	120	3.75	.955	.087
The company searches for unique resources outside the company.	120	3.76	.970	.089
The company allocates funds for competencies improvement.	120	3.70	.940	.086
The company uses the core competencies to provide unique services.	120	3.73	.978	.089
The company develops competitive advantage based on core competencies.	120	3.67	.947	.086
Understanding Core Competencies	120	3.7200	.73263	.06688
The company screens the market based on criteria.	120	3.79	.995	.091
The company classifies customers based on long-term profitability.	120	3.80	.949	.087
The company selects the target segments.	120	3.69	.933	.085
The company focus on the selected target segment.	120	3.79	.952	.087
The company maintains long-term relationships with selected customers.	120	3.79	.986	.090
Selecting Strategic Targets	120	3.7733	.77392	.07065
The company develops a strong relationship with partners.	120	3.73	1.012	.092
The company involves partners in the decision-making process.	120	3.70	.967	.088
The company and partners learn from each other.	120	3.76	.970	.089
The company shares information with partners.	120	3.66	.983	.090
The company sets common objectives with .partners.	120	3.73	1.027	.094
Relationship with Partners	120	3.7150	.83803	.07650
The company making decisions based on future-outlook.	120	3.59	1.000	.091
The company develops flexible strategies to respond to expected challenges.	120	3.69	.960	.088
The company considers all stakeholders in decisions.	120	3.75	.972	.089
The company involves employees in the strategy development	120	3.77	.968	.088
The company considers social responsibility in decision taking.	120	3.63	.961	.088
Taking Action	120	3.6867	.82063	.07491
Strategic Agility	120	3.7160	.58910	.05378

One-Sample Test

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
The company top management communicates the company's philosophy to all employees.	11.108	119	.000	.842	.69	.99
The company top management follows agreed upon plans.	9.191	119	.000	.742	.58	.90
The company top management ensures the availability of needed resources.	10.760	119	.000	.808	.66	.96
The company top management assigns the required budget for business improvement.	9.821	119	.000	.775	.62	.93
The company top management participates in all meetings.	9.712	119	.000	.775	.62	.93
The company top management rewards employees based on suitable indicators.	7.929	119	.000	.617	.46	.77
The company top management commits to evaluates employees based on performance.	9.506	119	.000	.775	.61	.94
Top Management Commitment	14.292	119	.000	.76190	.6563	.8675
The company provides cross training for all employees.	8.165	119	.000	.750	.57	.93
The company involves all employees in discussion meetings.	8.117	119	.000	.725	.55	.90
The company authorizes employees to take decisions based on responsibility.	9.076	119	.000	.783	.61	.95

The company assigns duties to teams	8.250	119	.000	.683	.52	.85
The company assigns duties to individuals.	8.125	119	.000	.742	.56	.92
The company involves employees in decision-making.	7.213	119	.000	.600	.44	.76
The company empowers employees to solve problem.	8.819	119	.000	.742	.58	.91
Employee Empowerment	10.958	119	.000	.71786	.5881	.8476
The company assigns suitable measurements for internal operations.	7.649	119	.000	.683	.51	.86
The company relies on feedbacks for further improvement.	7.895	119	.000	.692	.52	.87
The company clearly define the goal of improvement	8.724	119	.000	.717	.55	.88
The company uses preventive solutions for expected problems.	8.615	119	.000	.733	.56	.90
The company monitors all processes continuously.	9.590	119	.000	.842	.67	1.02
The company uses best practices indicators as benchmark to improve its' processes.	7.259	119	.000	.642	.47	.82
The company improves its processes continuously.	8.399	119	.000	.700	.53	.87
Continuous Improvement	10.779	119	.000	.71548	.5840	.8469
The company updates all suppliers' database.	7.668	119	.000	.617	.46	.78
The company sets criteria for suppliers' selection.	10.073	119	.000	.783	.63	.94
The company involves suppliers during developing its mission.	8.969	119	.000	.733	.57	.90
The company shares forecasting with suppliers.	7.536	119	.000	.658	.49	.83
The company develops strong relationship with suppliers.	10.038	119	.000	.808	.65	.97
The company involves suppliers in improvements activities	8.767	119	.000	.750	.58	.92
The company evaluates suppliers based on performance.	8.460	119	.000	.667	.51	.82
Supplier Management	11.611	119	.000	.71667	.5944	.8389
The company updates customers' database.	8.802	119	.000	.758	.59	.93
The company provides training on customer relationship to all employees.	7.117	119	.000	.625	.45	.80
The company uses customers' feedback for improvements.	8.756	119	.000	.767	.59	.94
The company uses customers' complaints for further development.	8.948	119	.000	.792	.62	.97
The company concerns about after selling services.	8.615	119	.000	.733	.56	.90
The company considers customer satisfaction for long-term relationship.	9.261	119	.000	.825	.65	1.00
The company involves customers in decision-making.	7.132	119	.000	.642	.46	.82
Customer Management	10.840	119	.000	.73452	.6004	.8687
Total Quality Management	14.494	119	.000	.72929	.6297	.8289
The company senses the situation before developing vision.	6.153	119	.000	.558	.38	.74
The company considers all stakeholders during vision development.	8.526	119	.000	.750	.58	.92
The company communicates vision to all employees.	8.079	119	.000	.717	.54	.89
The company develops guiding principles.	8.343	119	.000	.758	.58	.94

The company responds according to customers' need changes.	7.194	119	.000	.642	.47	.82
Clarity of Vision	9.140	119	.000	.68500	.5366	.8334
The company analyzes its internal resources to find competencies.	8.604	119	.000	.750	.58	.92
The company searches for unique resources outside the company.	8.563	119	.000	.758	.58	.93
The company allocates funds for competencies improvement.	8.156	119	.000	.700	.53	.87
The company uses the core competencies to provide unique services.	8.117	119	.000	.725	.55	.90
The company develops competitive advantage based on core competencies.	7.714	119	.000	.667	.50	.84
Understanding Core Competencies	10.766	119	.000	.72000	.5876	.8524
The company screens the market based on criteria.	8.717	119	.000	.792	.61	.97
The company classifies customers based on long-term profitability.	9.233	119	.000	.800	.63	.97
The company selects the target segments.	8.121	119	.000	.692	.52	.86
The company focuses on the selected target segment.	9.112	119	.000	.792	.62	.96
The company maintains long-term relationships with selected customers.	8.792	119	.000	.792	.61	.97
Selecting Strategic Targets	10.946	119	.000	.77333	.6334	.9132
The company develops strong relationship with partners.	7.846	119	.000	.725	.54	.91
The company involves partners in decision-making process.	7.932	119	.000	.700	.53	.87
The company and partners learn from each other.	8.563	119	.000	.758	.58	.93
The company shares information with partners.	7.336	119	.000	.658	.48	.84
The company sets common objectives with .partners.	7.824	119	.000	.733	.55	.92
Relationship with Partners	9.346	119	.000	.71500	.5635	.8665
The company making decisions based on future-outlook.	6.482	119	.000	.592	.41	.77
The company develops flexible strategies to respond to expected challenges.	7.895	119	.000	.692	.52	.87
The company considers all stakeholders in decisions.	8.450	119	.000	.750	.57	.93
The company involves employees in the strategy development	8.678	119	.000	.767	.59	.94
The company considers social responsibility in decision taking.	7.220	119	.000	.633	.46	.81
Taking Action	9.166	119	.000	.68667	.5383	.8350
Strategic Agility	13.314	119	.000	.71600	.6095	.8225

Correlations

Correlations

		TMC	EE	CI	SM	CM	TQM	CV	UCC	SST	RP	TA	SA
	P. Cor.	1	.637**	.703**	.548**	.389**	.803**	.650**	.469**	.605**	.597**	.466**	.756**
TMC	Sig.		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	120	120	120	120	120	120	120	120	120	120	120	120
	P. Cor.	.637**	1	.554**	.607**	.466**	.816**	.613**	.592**	.671**	.632**	.496**	.813**
EE	Sig.	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	120	120	120	120	120	120	120	120	120	120	120	120
	P. Cor.	.703**	.554**	1	.541**	.436**	.807**	.579**	.524**	.592**	.655**	.555**	.788**
CI	Sig.	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	120	120	120	120	120	120	120	120	120	120	120	120
	P. Cor.	.548**	.607**	.541**	1	.633**	.833**	.619**	.620**	.646**	.623**	.467**	.804**
SM	Sig.	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	120	120	120	120	120	120	120	120	120	120	120	120
	P. Cor.	.389**	.466**	.436**	.633**	1	.743**	.646**	.661**	.550**	.432**	.442**	.735**
CM	Sig.	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000
	N	120	120	120	120	120	120	120	120	120	120	120	120
	P. Cor.	.803**	.816**	.807**	.833**	.743**	1	.776**	.722**	.766**	.733**	.608**	.975**
TQM	Sig.	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	120	120	120	120	120	120	120	120	120	120	120	120
	P. Cor.	.650**	.613**	.579**	.619**	.646**	.776**	1	.554**	.509**	.416**	.488**	.804**
CV	Sig.	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	120	120	120	120	120	120	120	120	120	120	120	120
	P. Cor.	.469**	.592**	.524**	.620**	.661**	.722**	.554**	1	.362**	.425**	.343**	.715**
UCC	Sig.	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000
	N	120	120	120	120	120	120	120	120	120	120	120	120
	P. Cor.	.605**	.671**	.592**	.646**	.550**	.766**	.509**	.362**	1	.585**	.380**	.767**
SST	Sig.	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	120	120	120	120	120	120	120	120	120	120	120	120
	P. Cor.	.597**	.632**	.655**	.623**	.432**	.733**	.416**	.425**	.585**	1	.263**	.733**
RP	Sig.	.000	.000	.000	.000	.000	.000	.000	.000	.000		.004	.000
	N	120	120	120	120	120	120	120	120	120	120	120	120
	P. Cor.	.466**	.496**	.555**	.467**	.442**	.608**	.488**	.343**	.380**	.263**	1	.675**
TA	Sig.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.004		.000
	N	120	120	120	120	120	120	120	120	120	120	120	120
	P. Cor.	.756**	.813**	.788**	.804**	.735**	.975**	.804**	.715**	.767**	.733**	.675**	1
SA	Sig.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	120	120	120	120	120	120	120	120	120	120	120	120

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

Regression

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.977[a]	.954	.952	.12891	2.076

a. Predictors: (Constant), Customer Management, Top Management Commitment, Employee Empowerment, Continuous Improvement , Supplier Management
b. Dependent Variable: Strategic Agility

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	39.403	5	7.881	474.187	.000[b]
	Residual	1.895	114	.017		
	Total	41.297	119			

a. Dependent Variable: Strategic Agility
b. Predictors: (Constant) Top Management Commitment, Employee Empowerment, Continuous Improvement , Supplier Management , Customer Management,

Coefficients[a]

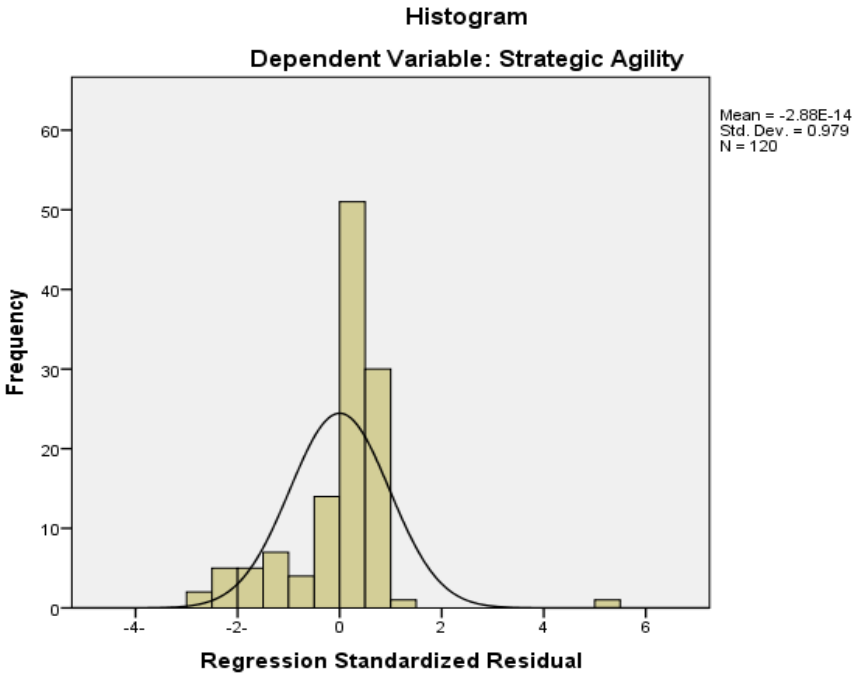
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.110-	.085		-1.305-	.195
	Top Management Commitment	.133	.032	.132	4.197	.000
	Employee Empowerment	.256	.024	.311	10.850	.000
	Continuous Improvement	.233	.024	.287	9.705	.000
	Supplier Management	.183	.026	.210	6.966	.000
	Customer Management	.223	.021	.281	10.669	.000

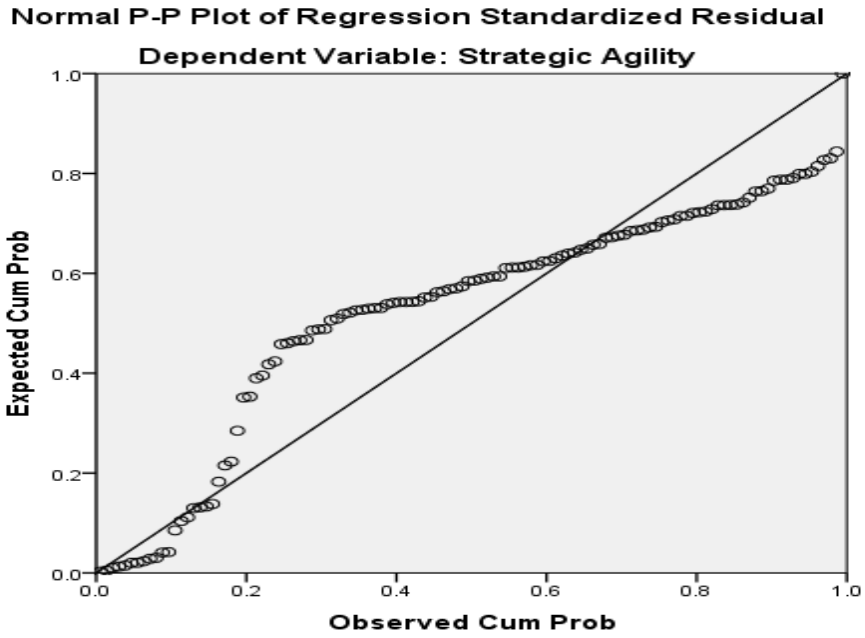
Coefficients[a]

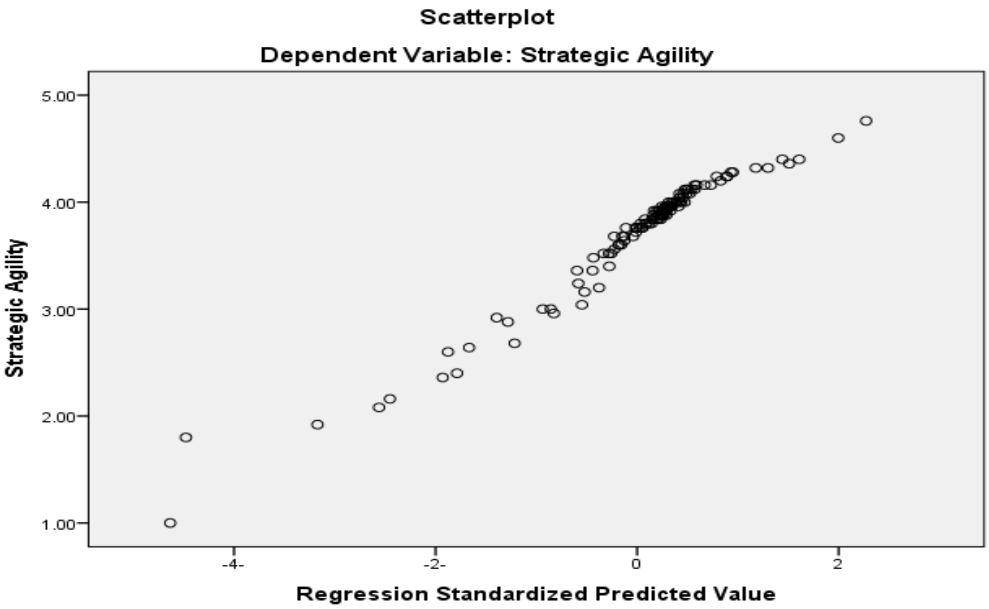
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Top Management Commitment	.410	2.441
	Employee Empowerment	.489	2.046
	Continuous Improvement	.459	2.178
	Supplier Management	.443	2.255
	Customer Management	.581	1.722

a. Dependent Variable: Strategic Agility

Charts


Histogram
Dependent Variable: Strategic Agility
Mean = -2.88E-14
Std. Dev. = 0.979
N = 120
Frequency
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Strategic Agility
Expected Cum Prob
Observed Cum Prob


Scatterplot
Dependent Variable: Strategic Agility
Strategic Agility
5.00
4.00
3.00
2.00
1.00
-4-
-2-
0
2
Regression Standardized Predicted Value