

IMPACT OF ADOPTION TOTAL QUALITY MANAGEMENT PRACTICES AND CORPORATE SOCIAL RESPONSIBILITIES ON ORGANIZATIONAL PERFORMANCE AN EMPIRICAL STUDY BASED ON THE ROLE OF INFORMATION TECHNOLOGY IN HEBEI HUIGONG MACHINERY EQUIPMENT LIMITED COMPANY

GAO YUE

PhD Student, Limkokwing University of Creative Technology (LUCT), Malaysia. Student Id: 110032282.
Email: gaoyue1010@hotmail.com

Dr. SITI AIDA SAMIKON*

Limkokwing University of Creative Technology, Malaysia. *Corresponding Author

Abstract

This study aims to examine the effects of adopting TQM practices and CSR on the organizational performance of manufacturing companies. The research's objectives could be determined as follows: to identify the factors influencing the performance of manufacturing company, to determine the impact of adoption TQM practice and CSR responsibility toward the performance of manufacturing, to analyze the mediating role of IT and CSR responsibility and the performance of manufacturing and to develop a framework of TQM practice and corporate social responsibility for manufacturing company of Hebei China. Data collect made using questionnaire distribution in other to find out the result. The Total quality management methods seem to be well known for motivating businesses to perform efficient and effective of processes, processes, and solutions that satisfy consumers' standards. Total quality management is essential for creating new goods and other advances in the world of companies serving the economic growth of the country. This essay examines the idea of TQM, its advantages, and how it relates to infrastructure development in companies engagement. The study used a quantitative methodology and a random sampling of 200 workers from industrial companies in Hebei, China. Utilizing questionnaires for data collection and SPSS 20 for data analysis, percentages trends like the means and maximum are generated. The research's results have been presented using a basic descriptive method. The study has also revealed several advantages of TQM measures like better quality products, the company's corporate social responsibility, ongoing progress into globe, and effective achievement of requirements and aspirations.

Keywords: TQM, Practices, CSR, Company, Manufacturing, Performance, Achievement and Manufacturing.

1.1 BACKGROUND OF STUDY

Hebei Huigong Mechanical Equipment Co., Ltd. started established in 2001 and specialized in gearing research & innovation. It is a technologically advanced firm that combines study and manufacturing. The firm, which is based in Julu County, Hebei Province, has nine manufacturing units for gear manufacturing, casting, and heat treatment, two interconnected warehousing, and other essential reasonable working facilities (Jinlong et al., 2019). Hebei Huigong has been dedicated to the mechanical manufacturing business for more than 10 years and has extensive production expertise as well as high-quality development and manufacturing machinery. In addition, in 2003, the firm received ISO 9001:2000 Quality Management

Approval. Alongwith Hebei Machinery Science Research Institute, Fundamentals Institution of Hebei University of Science and Technology, Full-Service Organizations, and Zhengzhou Gear Research Division, the founded a proctored exam for gear product development and a prefectural mechanical lab. Researchers also created the "National Standard of Heat Treatment for Heavy-Duty Gear," which was approved either by PRC's Department of Information Technology. Hebei Huigong focuses on mining garbage trucks, excavators, technical industrial gear drives, hydro seals, and frame components production. The primary items for mining electric wheels dump trucks and mechanical dump truck have included entire series wheel infrastructure and manufacturing, complex mechanical axle delegation, gearbox PTO assembly, and structure parts. The items are extensively used in cement mixer models from well-known companies such as Terex, Xiangtan Motor, Unit Rig, Komatsu, Sany Mining Machine, and Belaz. Hebei Huigong emphasizes product quality to gain consumer appreciation and follows through on reliability commitments (Zhu et al., 2020).. It also processes innovative local and international manufacture, handling, and tests equipment that can provide excess goods for clients via precision production and rigorous testing.

Total Quality Management has received a great deal of press recently, owing to its relevance in strengthening an organization's total performance. The many techniques of Process Improvement play an important part in increasing an organization's competitive edge and, as a result, boosting its performance levels. Quality management and performance control are two additional essential areas of an organization's growth that TQM is associated to. Most companies that have quality control in place have consistently high sales volumes, which equates to greater effort growth. According to Faeq et al., (2021), TQM is widely utilized as a method to enhance the overall quality of goods and services given by different industrial organizations, according to the research literature.

1.2 PROBLEM STATEMENT

Businesses need to integrate TQM procedures with CSR programs more than ever if they want to enhance the efficiency of their organizations. The effect of these methods on the efficiency of organizations, particularly in the context of Chinese manufacturing enterprises, is not supported by empirical data, however. Additionally, there hasn't been enough research done on how IT may improve TQM and CSR practices as well as business results.

China's manufacturing industry has a number of issues, including inadequate rising labor production, an incomplete regulatory system of industrialization, and lack of key competencies, bad technological infrastructural development, excessive power consumption, contamination, and insufficient value creation. Although China's manufacturing industry are still very much in infancy, it is critical to embrace the industrial potential. The solutions outlined in this research could he used in China's industrial sector during the Industrial Revolution. Corporate clients' complete pleasure becomes the fundamental long - term objective inside a firm. Whenever the firm's whole facilities are used for service, it will be able to accomplish objectives. To accomplish so, the company must accept, implement, and prioritize the problem of reliability as a critical component. TQM might be used effectively in the execution of various procedures,

particularly in corporations. Performance appraisal is now becoming a crucial concern for all enterprises, including corporate, economic, or development, based on this concept. (Paais, M. and Pattiruhu, J.R. (2020)

Most of the issues faced by manufacturing includes:

- Inadequate staff information and technical growth, particularly among lower-wage workers.
- Dissatisfaction with one's job, remuneration, impact on the working, and workplace.
- Conflicts among manager of the organization, as well as company-wide organizational barriers.
- The shortage of motivational, choice, cooperation, interaction, and synchronization management expertise.
- The transitory, varied, and rapid character of manufacturing activities.

1.3 RESEARCH QUESTIONS

1. What are the challenges and barriers faced by Hebei Huigong Machinery Equipment Limited Company in implementing TQM practices and CSR initiatives, and how can they be overcome?
2. How does the integration of TQM practices and CSR initiatives contribute to sustainable development in Hebei Huigong Machinery Equipment Limited Company?
3. What is the mediating role of IT and CSR responsibility and the performance of manufacturing in Hebei China?
4. Does the framework of TQM practice and corporate social responsibility contribute to manufacturing company of Hebei China?

1.4 RESEARCH OBJECTIVES

1. To identify the internal and external factors that hinder the successful implementation of TQM practices and CSR initiatives in Hebei Huigong Machinery Equipment Limited Company.
2. To propose strategies and recommendations for overcoming the challenges and barriers to TQM and CSR implementation, including the use of IT solutions.
3. To analyze the mediating role of IT and CSR responsibility and the performance of manufacturing in Hebei China.
4. To develop a framework of TQM practice and corporate social responsibility for manufacturing company of Hebei China.

1.5 SIGNIFICANCE OF RESEARCH

The study on the effects of Hebei Huigong Machinery Equipment Limited Company's adoption of Total Quality Management (TQM) techniques and Corporate Social Responsibility (CSR) on the company's efficiency has important academic and practical significance. On a theoretical level, the study can shed light on how TQM practices and business results are related, as well as how IT plays a role in supporting this relationship. Additionally, it can add to the expanding body of research on the combination of TQM and CSR, which is becoming more and more understood as a critical component of sustainable growth in businesses. Practically speaking, the study can help executives and workers at Hebei Huigong Machinery Equipment Limited Company and other businesses in the sector by offering valuable advice on how to boost their operational effectiveness, client satisfaction, and economic performance through the use of TQM procedures and CSR programs.

1.6 SCOPE OF THE STUDY

The study focused on the perceived impact of Total Quality Management Practices and Corporate Social Responsibilities on organizational performance. In other to investigate how such company perform it practices, when does this total Quality Management practice and corporate social responsibilities on organization performance need in an organization.

1.7 DEFINITIONS KEY TEAMS

1.7.1 Total Quality Management

(TQM) is a strategic tool that focuses on customer satisfaction as a means of achieving long-term success. All members of a company engage in a TQM endeavor by taking steps to improve processes, products, services, as well as the culture inside which they operate. From being successful, a company must be founded on a set of beliefs that could enhance the brand, features of this system that it is only the appropriate decision, and increase sales while keeping old buildings. (Pambreni et al., 2019).

1.7.2 Corporate Social Responsibility

(CSR) consists of techniques that businesses use as part of its corporate structure to guarantee that their activities are both responsible and desirable. As little more than a result, there are few concepts of CSR. It's hardly unexpected, given how much time it takes for a widely recognized term to emerge for several topics (Úbeda-García et al., 2021).

1.7.3 Organizational Performance

Organizational performance is described as the variation between a firm's actual outputs and its expected outcomes goals and objectives. These repeated activities that rely on processes in order for the company to succeed must be measured in order for management to determine the degree of performance and, if necessary, take action to enhance performance within the processes. As just a result, the specific categories and the idea of firm success can be said to be intimately linked. As a result, all businesses are likely to use available funds and resources to

attain specific from before the goals (Pambreni et al., 2019).

1.7.4 Performance

Performance act of preparing or performing a theatre, performance, or other type of amusement is known as performance. It can also be described as the act or process of performing or completing tasks, activity, or operation. Performance was among the most contentious notions on which academics and theorists have never reached a consensus. (Mehralian et al., 2022).

1.7.5 Information Technology

(IT) is the creation, processing, storage, security, and sharing of all kinds of electronic data using computers, storage, communication, and other machines, equipment, and operations.

1.7.6 Manufacturing

Manufacturing is the practice of converting inputs into outputs or elements become completed things using equipment, skilled effort, equipment, and process conditions? Ability to present companies to sell completed goods for more than just the raw material required.

1.8 RESEARCH PLAN WORKFLOW DIAGRAM

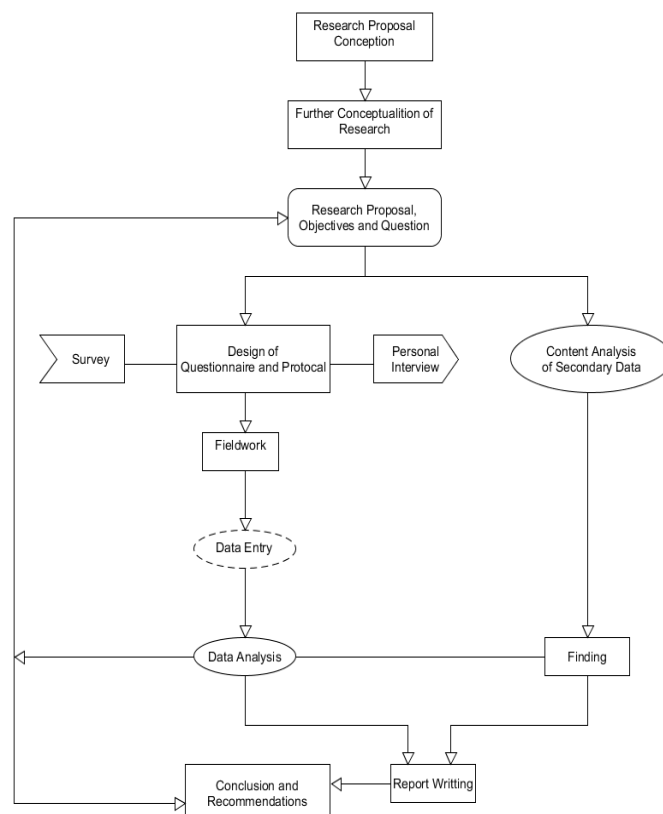


Figure 1: Research Process diagram

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

The study's goal in this chapter is to learn more about total quality management strategies and the impact of corporate social responsibility on organizational performance. In order to review what has been investigated globally on total quality management techniques and corporate social obligations on organizational performance in relation to fine relevant facts of research, the researcher did a comprehensive analysis of the literature. In addition, analyses the source of your contribution to the topic under discussion and, if possible, eliminate contradictions by relying on the discoveries identified with favorable comments (Zaid et al., 2020).

The chapter also serves as the study's foundation. It starts with an overview of total quality management strategies and the impact of corporate social responsibility on organizational performance, as defined in this study. It outlines the conceptual framework used in the research and gives an overview of the relevant literature on the variables. Several previous research on TQM techniques and corporate social obligations on organizational performance in the function of information and technology are presented in the research study. Several studies on whole TQM implementation have been conducted. The benefits of full quality performance and organization social responsibility are driving its growth.

TQM approach for achieving and maintaining high levels of performance. It is critical to enhance work environment and try to decrease the risks of mistakes in the firm in order to meet the needs of clients. The primary goal of general quality management is to bring about radical transformation inside a firm. Secondly, the reliability control aims to combine the socialist structure classic control school of thought with a scientific/system-oriented management. It greatly depends, and it's not always required to presume that perhaps the employees are suitable for the company (A Buchari , 2018).

2.2 OVERVIEW OF TOTAL QUALITY MANAGEMENT

Total Quality Management (TQM) is a collection of procedures implemented across an organization for the purpose of ensures that the company continually fulfils or ahead of schedule. As a technique of quality performance, Quality management puts a high emphasis on information that is being gathered and monitoring. This Continuous Quality Improvement Reference begins with an overview of process improvement and contains charts, statistics, and devices to create a corporation establish a culture of continuous improvement. Quality improvement involves activities throughout all levels of organizations to reparation "establish and maintain a culture where people are always improving its capacity to achieve on-demand offerings that consumers will find particularly valuable. "Maximum" highlights that divisions other than output (such as brand management, finance, research & development) are required by law to transform their business; "organization" reinforces that agencies other than producing (such as sales team, finance and accounting, research & development) are bound by law to satisfy their customers "Top management must better control reliability via grant money, mentoring, resourcing, as well as self-improvement, according to the report. There seems to be

no universally accepted strategy, TQM operations often rely largely on product testing skills and equipment that have already been created (Kasemsap, 2017).

2.2.1 Total Quality Management

Total quality management is a comprehensive management technique that aims to integrate all organizational activities in order to consistently meet customer expectations and improve system quality in order to promote profitability and productivity in businesses. Quality management has arisen as a management paradigm for maximizing the efficiency and profitability of organizations. Several research studies demonstrate that successful application of quality management strategies helps businesses reach greater levels of profitability and organizational performance (Singh and Misra, 2021).

2.2.2 Total Quality Management Implementation

Although many top managements are knowledgeable of Total quality management, the quality of execution has been extremely low. However, good Total quality management will aid Malaysian businesses in strategically setting themselves to participate both domestically and worldwide. Environmental elements, in particular, including even administrative determination underpinned by commitments, will encourage and strengthen Total quality management in Malaysia. Furthermore, the importance of integrative Total quality management training and also its deployment in the construction industry has already been underlined and shown. Might likely improve the performance of its instruction by adopting another more comprehensive approach to leadership, establishing internal testing processes, and instilling the culture of excellence. The suggested a performance measurement evaluation strategy for renovation initiatives at the business and venue levels, recognizing Total quality management at the corporate strategy (Abbas and Kumari, 2021).

2.2.3 Role of Participants in Total Quality Management

Transformational leadership frequently necessitates infrastructural improvements inside an organization. When individuals get the self - control, they are more driven to achieve the overall goals of the organization. Whenever individuals throughout all organizational levels are engaged, their skills may be put to good use for the organization's advantage. According to (Abbas, 2020), the basic concept would be as regards

2.2.4 Total Quality Management Practices

Quality management is conceptualized as “here which aims to address customer demand while also enhancing reliability and productivity. Quality improvement is critical for care providers to reduce the risk of infection they provide, and also to give them confidence their monitoring, obtain quite ethical organization, boost employee morale, enhance pledge, encouraging personal cohesiveness, and reduce unnecessary job satisfaction. How comprises Quality management but what were the see through for Quality improvement strategy implementation? (Singh and Misra, 2021).

2.3 OVERVIEW OF CORPORATE SOCIAL RESPONSIBILITY

Its idea of actually identifying those obligations had first been studied in the context with in mid-1950s, this can be seen as the birth of such present fixtures and equipment of CSR Initiatives. In actuality, the study and conceptual emphasis of Corporate social responsibilities mostly during mid-1950s had been on the interpersonal level of understanding (Seghyar, Nafzaoui and Hammoumi, 2022), supplying these with actual ramifications.

2.3.1 Corporate Social Responsibility

Corporate social responsibility is a concept that may be as old as the notion of business itself. The background of the ancient world contains several examples of firms engaging in corporate social responsibility. Large corporations arose as a result of enormous manufacturing in Europe and other parts of the world, sparking a discussion over business personal accountability. CSR is a sustainability part of strategy that tries to protect the environment's cultural, social, and economic components. Throughout the last decade, the notion of corporate social responsibility has gotten a lot of attention, and its importance in the business world is growing all the time. Business outlook, laws and guidelines, business culture and behavior, and market rivalry levels all influence CSR operations (Abbas, 2020).

2.4 INFORMATION TECHNOLOGY

The value of Total Quality Management as a potent strategy for achieving corporate culture is becoming more widely recognized. Individuals' lack of knowledge of Total quality management, a due to lack of knowledge on Performance measurement, a total absence of executive support, a concentration on rapid profit, and a lack of established guidelines, according to the researcher, are all problems that obstruct Innovation process in firms. (Lobo, Samaranayake and Subramanian, 2019).

2.4.1 Important of Information Technology

This same research and implementation of operating systems and any sort of technologies that hold, acquire, research, send signals, alter, and transfer relevant data is referred to as knowledge tech (IT). Technological advancement is a part of a computer that helps individuals execute the jobs they want and utilize on a daily. Many It knowledge framework with only a company to formally establish what they want and through order to satisfy the objectives, than exhibit that us what present tech exists to execute their necessary duties, then put that innovation in the configuration, or create a separate settings. In society today, the extent of digital systems is grossly underestimated.

2.4.2 The Role of Information Technology on Organizational Practices

Many studies concerning the influence of computers on organizational life existed inside the 1960s, at the dawn of the computer revolution. A new set of projections about the advancement of modern configurations of digitalization on future institutional arrangements was released in 2001. As we strive to comprehend what will happen to organizations in the next few years and evaluate the current crop of prophecies, it is good to look at what occurred to prior theories.

There has been universal consensus that there will be revolutionary evictions on organizational context since the initial computer industries such as chemical.

2.4.3 The Role of Information Technology in Social Responsibilities

The set of different important organizational attributes that influence organizational performance is extensive. We've decided to focus on someone who has been indicated by previous research, are crucial to organizational success, and have a clear IT connection. Furthermore, many prospective organizational goals may be covered, but effectiveness and creativity appeared as perhaps the most achievement possibilities in connection to IT in our evaluation of past studies. When considering that non-IT enabled structural aspects, data sources, conditions stipulated, and so on already help to facilitate the relationship between organizational features and consequences, the reason for include IT as a facilitator in the model becomes clear. In general, we believe that IT serves to alter or modify the influence of various factors (Giffari et al., 2021).

2.4.4 Information Technology and Organizational Practices

Through pieces to research data and connective infrastructures, sector has a great influence on business procedures, leading to widespread business transformation. Sourcing is making progress in the information technology which is redefining internationalization and reshaping the production chain utilizing innovative systems to enable the shift to a more profitable and long-term firm. This progress creates new making sure manufacturing tailored to the kind of consumers and sellers, with the goal of lowering inventories and store in order to achieve more efficient service delivery, improving transportation infrastructure, and coordinating amongst team members (Prajogo and Mcdermott, 2021).

2.5 REVIEW OF CONSTRUCTION AND CONCEPTS INVOLVED

The study chose to employ comparison between the two businesses. To learn very much about the influence of different scholars on total quality management operation, specialists chose to employ development company executives at all levels. The several particular instance variables were reviewed to offer a thorough grasp of the difficulties in the organizations pertaining to the total quality management initiative. According to the (Jimoh et al., 2019), the study technique is especially suitable to various scholars since it allows including in examination of one component of an issue in a short period of relatively short period of time.

2.5.1 Approaches for Total Quality Management Practice in an Organization

It's indeed critical to gather input on achievement or to be recognized for positive contribution to mostly to the change effort in the embodied some of the other absolutely vital Performance management functionalities that are required for helping to improve Lean Methodology of Organizations, and evidently these are appropriate to the original impression are shown in this finding. According to (Zhang, Oo and Lim, 2022), the intention to adopt Total quality management may be classified into three categories, which are as follows:

- Recognition and planning: Throughout this phase, the organization recognizes and gathers data on the main aspects where change has the most influence on the level, and it plans the precise basic tasks again for adjustment of all other organization's assets.
- Strategy for development: At this point, it is vital to establish a strategy for increase in quality, and should include suitable staff development programs.

2.6 RELATE THEORIES AND MODELS ORGANIZATIONAL PERFORMANCE

Its notion of Performance via Employees emphasizes the importance of either an organization's individuals in overall processes of accomplishment. Including this notion, it is critical to think in an organization's methods and practices cannot achieve value it absent appropriate engagement and cooperation of its people resources in total continuous operations. As a result, individuals in an organization must being provided a significant position in the initiatives, as well as be fit to carry out improvements duties. Performance on All Initiatives mandates that integrity obstacles and associated concerns be on corporate's priorities at all times in achieve performance improvements.(Zaid et al., 2020).

2.7 DEFINITION OF VARIABLES

2.7.1 Strategic planning

Strategic planning involves the method through which a corporation prioritizes and concentrates its resources, including the organizational strategies. Approach that allows a corporation to forecast and prepare developments and posture itself to act. Firms need to establish a competitiveness that once again sets them apart against the competition.

2.7.2 Information Management

During last 15 years, may have been significant improvement in the adoption of methodologies. Firms' management ideas have shifted dramatically in several areas. Performance management has evolved into much greater than a package of effective tools it has evolved into a new organizational strategy that is causing significant shifts in how individuals, corporations, and even complete cultures collaborate.. (Alaghbari, Al-Dubai and Arishi, 2022).

2.7.3 Human Resource Management

Human Resource Management has grown in importance and importance for businesses. HRM's role in authoritative responsibility and progress can indeed be overlooked. It's impossible to achieve success absent employing HR procedures. HRM, according to (Kebede Adem and Viridi, 2021).

2.7.4 Business Culture and Behavior

The content, value, profitability, and delivering performance objectives are referred to as operational performance (Zaidi and Ahmad, 2020), on the other hand, described operational performance is the firm's objective to decrease integrated planning expenditures, satisfy turnaround time, enhance resource use efficiencies, and fulfil load quickly. Establishments

value operational efficiency because it leads to enhanced profitability, large goods, pleased consumers, and greater profits. According to (Dubey et al., 2019).

2.7.5 Employees Satisfaction

In several places of the globe, Organizational practices and employee engagement are thoroughly examined. It is well accepted that Organizational practices are nearly inextricably linked to job happiness. Since numerous experts and practitioners believe that good organization procedures lead to employee satisfaction, which in turn leads to greater continuous implementation (Madanat, 2018).

2.7.6 Organizational Performance

Throughout entire, factual performance in the public at large focused on management delivery and was judged on organizational sufficiency and efficacy. In virtue from many recent strategic planning, knowledgeable performance interconnection has recently been a focus of real investigation. The literature mostly discusses implementation on four different levels: (a) each person labor (implementation review), (b) the team or small collecting (team performance), (c) the program history, and (d) the relationship (influential performance). (Singh et al., 2018).

2.8 CONCEPTUAL FRAMEWORK OF THE STUDY

The investigation was influenced by Deming's philosophy of 'strong understanding. It is critical to steer future development, there's usually a must shift to a new term of organizational administration built on more employee-management interaction. According to the researcher, the transition should only be achieved through a large update of concept, such as great understanding, which fundamentally combines theoretical foundations discussing organizations, variety, insight, and mind. Performance is established by organization, deviation is a natural law, and continuous improvements causes a feedback loop, according to thorough comprehension. (Andrewis et al., 2018).

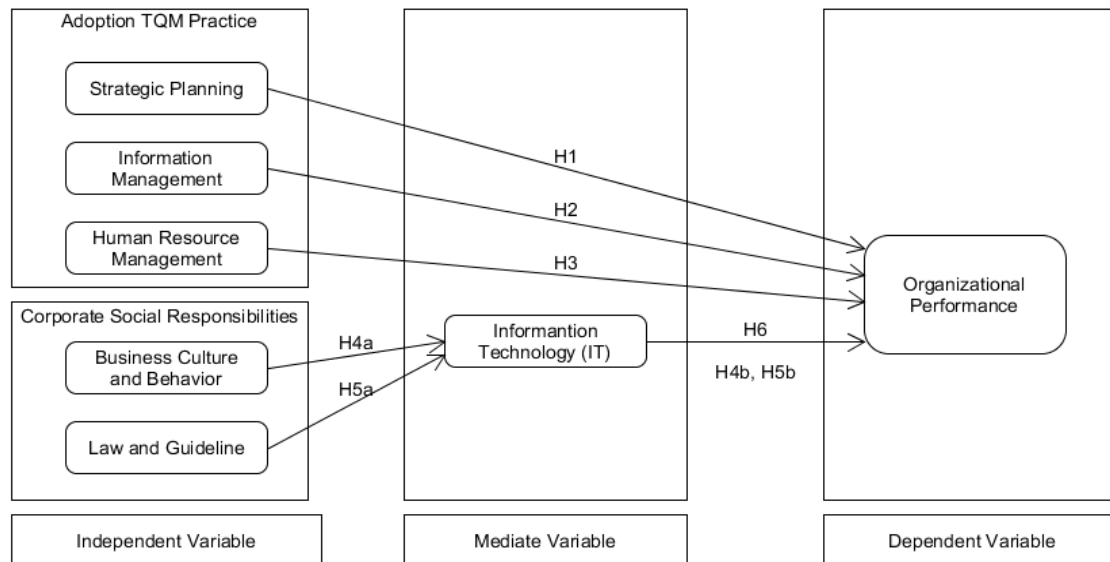


Figure 2: Conceptual Framework

Organizational behavior is that foundation of Deming's notion of 'deep understanding' as a corporate strategy, based on the concept that firms as structures are realized up of interconnected operational activities as elements, as demonstrated by the understanding for a particular policy. The theory is relevant to comprehending Deming's quality control philosophy, and it emphasizes the necessity of expertise in TQM implementation, as illustrated in the information of difference part. The aspect highlights, but usually not related to, the platform's influence on work engagement or the ultimate consequences for organization. 'Comprehensive understanding' acknowledges the appearance and embedding of 'performers' in a socio - economic context, which might be people, corporations, or perhaps the condition. According to the idea, such characters influence corporate behaviors and operations in justifying and argue their case. As an organizational strategy, it sets out the structure for upper staff to change and construct organizations that bear the weight of history, with success for all as the main goal. Physical labor and continued attempts, according to (Madanat, 2018) really aren't the right remedy to management policies.

3.0 RESEARCH METHODOLOGY

3.1 INTRODUCTION

This section discusses the techniques that were used as a part of the research. It clarifies the independent and dependent variable, research design, members, instruments, and data gathering method and data analysis, talk about the finding and conclusion. Sample of questions will be used for data gathering to distinguish the Impact adoption of total quality management practices and corporate social responsibilities on organization performance of manufacturing company hebei china: an empirical study based on the role of information technology in hebei

huigong machinery equipment limited company and discuss the finding and conclusion. Furthermore, the research approach that supports this analysis is described in this chapter. The focus of this section is to explore and describe key methodological approaches that influenced the methodology and methodologies used in this investigation (Faeq et al., 2021). This section discusses in detail conceptual research viewpoints and an explanation for such specific philosophical underpinning that was chosen as adequate for with this study, as well as the major research strategies, the research design used in this thesis, the timeframe, as well as the research methods needed for collecting and analyzing data. The conceptual framework and indeed the methods are separated into two parts inside this part. Very first portion will provide an overview of the theory that will serve as the foundation for this study, while the second portion will illustrate the understanding of the research methodology (Abukhader and Onbaşıoğlu, 2021).

This same main objective of this research is an industrial company in Asia which utilizes a method to better performance of an organization especially regarding Total Quality Management, like a technique to organizational planning that aims to optimize organization competitive strength by continuously improving goods, facilities, personnel management, practices, and indeed the surroundings. Purpose-driven the characteristics that might affect firm's effectiveness, including Total quality management, Compensation And reward, and Effectiveness Managing Systems, will restrict the context of the analysis. Asia, that either employs a model to enhance an organization's effectiveness, particularly in terms of TQM Implementation, methodology for strategic plan that maximizes an institution's international competitiveness by upgrading items, services, employee relation, methods, and even the environment. Reason for existence The factors analyzed, and even the link and impact from one factor then another, will really be limited by the qualities that may affect a company's current performance, such as Performance managing, Appraisal and motivation, and Success Managerial Organizations (Jalilvand, Pool and Jamkhaneh, 2018). The population is composed among all individuals of an environment or a grouping. Workers somewhere at senior level of another one of Malaysia's operating in the global that apply a framework known Quality Improvement Control to establish a senior executive strategy.

3.2 RESEARCH DESIGN

Method uses only quantitative. Questionnaires of the research were used to get primary data from Hebei Huigong Machinery Equipment Limited Company. This research will be conducted utilizing quantitative approaches. The method is excellent for capturing the advantages of qualitative techniques while avoiding identical flaws. We will collect qualitative data in this research. This study employs a hybrid method design, which follows the patterns found in the literature review. Techniques, approaches, and methods are combined to increase the breadth and depth of understanding and evaluation.

This data is a "set of carefully arranged dialogues in a calm and non-threatening atmosphere to acquire views about a predefined topic." Every data method for data gathering included five to six persons chosen from the three distinct sectors of the Companies (Easterday et al., 2018).

Research design is defined by (Jimoh et al., 2019) as "a conceptual framework of explanation than allows organizations to draw inferences regarding causal links amongst some of the variables tested. The numerous concerns relevant to the survey strategy, according to (Sader, Husti and Daróczy, 2019), include the objective of this survey, this same kind of inquiry, the method of sampling that must be employed, the techniques wherein the original dataset will be acquired, including the evaluation technique.

3.3 RESEARCH METHOD

The process of selecting respondents for the research on the impact of TQM practices and CSR on organizational performance in Hebei Huigong Machinery Equipment Limited Company will depend on the specific research objectives and the research methodology chosen. The population for this study would typically consist of employees, managers, and other stakeholders of the company, as they are the ones who are directly involved in the implementation and monitoring of TQM and CSR initiatives. For instance, if the research objective is to investigate the challenges and barriers to TQM and CSR implementation, a suitable population for the study would be the employees and managers who are responsible for the implementation of these practices, as well as those who are affected by them.

3.4 POPULATION AND SAMPLING METHOD

The research, random sampling will be employed for both sampling and population. The current study's target population is the. Hebei Huigong Machinery Equipment Limited Company employs between 200 and 500 people. "All individuals of well group of people, things, or concepts, which might be living or nonliving things," says the definition of population. The sample is a portion of the population selected for the research, and the example estimate is the method for selecting the sample from the population (Shutler et al., 2021). The sample is a subset of the population chosen for the research, and the sample group is the method used to choose sample from the target population. A sample is a portion group of items or persons selected from a defined population using a specific process. The data for this study will be collected using the random selection approach (Shutler et al., 2021).

Based compute the number of respondents, estimated that perhaps a study sample of 152 was necessary from such a demographic of around 250 people, as indicated in Table below. Questionnaire Monkey: limited sample calculation produced strong correlation of 152. As little more than a result, the study selects simple randomized sample also as form of survey questions study population, that enable the study to pick a sample size with partiality. It usually works whenever the study seems to have a precise survey amount that includes the whole studies demographic (Easterday et al., 2018).

Table 1: The sample size of population

Population size	Sample size	Population size	Sample size
10	10	95	76
15	14	100	80
20	19	110	86
25	24	120	92
30	28	130	97
35	32	140	103
40	36	150	108
45	40	220	140
50	44	230	144
55	48	240	148
60	52	250	152
65	56	260	155
70	59	270	159
75	63	280	162
80	66	290	165
85	70	300	175
90	73	320	181

3.4.1 Sample Design

The sample design for the research on the impact of adopting Total Quality Management (TQM) practices and Corporate Social Responsibility (CSR) on organizational performance in Hebei Huigong Machinery Equipment Limited Company will depend on the specific research questions, objectives, and methodology chosen. The sample design aims to select a representative subset of the population to ensure the validity and reliability of the study's findings. One possible sample design for this study is stratified random sampling, where the population is divided into subgroups based on relevant criteria, such as job position, department, or level of involvement in TQM and CSR initiatives. The subgroups can then be sampled randomly to ensure that each subgroup is represented in the sample.

3.4.2 Sampling Technique

Sampling technique refers to the method used to select a representative group of participants from a larger population in research studies. The sampling technique used in a study can affect the validity and reliability of the findings. In this study, the sampling technique used was random sampling. The sampling technique used in this study was random sampling. Random sampling was appropriate for this study because it ensured that all members of the population had an equal chance of being selected and increased the representativeness of the sample.

3.5 RESEARCH INSTRUMENTS

There must be two types of sample methods of collecting data used in actual evidence: descriptive

and analytical. Both systems have advantages and disadvantages. The quantitative technique allows research to dig deeper into specific concerns. The breadth, flexibility, and complexity of research method are enhanced by performing observation without becoming bound by preset part of the methodology. The empirical technique, on either hand, necessitates use of structured questionnaires in order to fit publics' choices diverse viewpoints and views into a limited percentage of preset process in the form, to which numerical values are allocated (Chan, 2020).

3.6 VALIDITY AND RELIABILITY

The properties of reliability and validity are important contributors to dataset accuracy. Because once observations are devoid of sampling variation and produce similar findings, component is considered dependable. Durability is aided by dependability. However, it is not adequate to satisfy the criteria for plausibility, and aids in determining the "quality" of measures. Coherence, on the other hand, is the degree whereby the facts of the study properly reflect what's been going on in the circumstance. In reality, great dependability doesn't often imply accuracy. As a result, either primary or secondary variables would being obtained while keeping validity and the reliability under account in order to create reliable analytical interpretations (Chan, 2020).

3.7 PILOT TEST

The pilot research is a small study conducted before to the main study to evaluate a survey, interviews, checklists, or participant observation in reducing the chances of participants having some difficulty taking the survey. Both internal consistency and dependability of a findings of the study are determined by the simplicity and design of something like the questionnaires, including the rigor with which the pilot test was conducted. The pilot research also allows again for validity and reliability of research questionnaires to be assessed, as well as ensuring that perhaps the respondents understand the questionnaires, straightforward, and rational. The goal of the pilot testing is to make certain that this same validity of the test by gathering thoughts and input from such a limited selection of the target respondents. This is a small test aimed to collect feedback and preconceived notions to a randomized trial to provide more an understanding of the difficulties or issues that may arise with survey or questionnaire queries (Chan, 2020).

3.8 DATA COLLECTION TECHNIQUES

Primary and secondary material collections can both be used to get information. Interviewing, surveys, inference, and motivating tactics are also the main categories of data gathering procedures. In reality, the data gathering techniques used in a study are determined by the challenges and objectives of the study. As a result, the research has adopted survey and interview approaches, that both primary and secondary data will indeed be employed for improved literature review and improved study conclusions. Employees at "Hebei Huigong Machinery Equipment Limited Company" are the study's target group. Throughout this study, questionnaires will be the primary tool for acquiring data. The items in the surveys were both

structured (closed-ended questions) and disorganized (open-ended questions) (open-ended question). The purpose of the questionnaires is to gather information from the employees and management. Things like current employee and field of study are included in this poll. The structured inquiries examined subjective reactions in order to clarify the desired reactions and, at the same time, improve the study's proposal plan. To collect data, the researcher used prepared examination collaborators (Shutler et al., 2021).

3.8.1 Questionnaire

The questionnaire is a pre-written series of questions that is delivered to specified persons with the goal of obtaining data. In the worlds of academia and industry, questionnaire is amongst the most often used data gathering methods. Furthermore, many people are familiar with utilizing the survey as a data collecting tool. Because although questionnaires can be seen as the sole means of data collection, it is frequently advised that surveys would be combined with some other approaches in a multiple case study. From the other hand, has demonstrated that perhaps the usage of surveys in and of itself has several benefits. Firstly, surveys reduce cost and resources since they may be distributed to a large number of people at a cheap cost. Secondly, participants' thoughts and responses are delivered in a timely manner. Finally, answering the question is frequently a straightforward & simple procedure (Jimoh et al., 2019). Finally, survey participants can fill out surveys at dates and times that are convenient for themselves.

3.8.2 Primary Data

The experiment required primary data for the particular aim of studying the subject challenge. Observation activities, individuals, things, and surveys can provide survey method. Utilizes a variety of methodologies to address study challenges and aims, including surveys, interviewing, and surveys. The key benefit of actual information is that it is consistent with the study's goals. Information will be collected in this study by completing moderately interviewing with administration and polling workers and company with surveys (Personal and Archive, 2018).

3.8.3 Secondary Data

Secondary data is information that has already been obtained by somebody else a reason apart from the study's present requirements. Secondary data has the great attributes: it is easily available, generally affordable, and can be collected rapidly. (Martins, 2018).

3.8.4 Quantitative Research

During survey method, the overall procedure is to develop a hypothesis by linking significant factors in a regulated context. Using quantifiable technique is referred to as the traditional, pragmatic, practical, or objectivist approach. According to (Article, 2019), the scientific method regards actuality as concrete, that is, material that should be assessed accurately that used a survey or apparatus. Quantitative research frequently employs series of questions descriptive research. The study survey questionnaire been set up and distributed to software development Software using SPSS or Google Forms. All obtained data will be entered in an

SPSS or Excel sheet to evaluate the data, segregate the results, and portray the statistics in its suitable form in order to build the illustrations and charts. The closed-ended question structure was utilized in the survey, which provides interviewees with a consistent framework of sources from which to pick their replies. Clarification, directness, and attractiveness are all elements of a study. Accurate and dependable answers are the result of clear and knowledgeable inquiries combined with appropriate reaction options (Wei et al., 2022).

3.9 QUALITATIVE ANALYSIS

This emphasis on texts instead of statistics is commonly accepted as a crucial element of qualitative analysis. According to (Musa, 2022) there is no universal approach for assessing descriptive methodology. The phrase questionnaire survey is frequently used interchangeably question and answer session. Psychology alludes towards the utilization of non-numerical data; therefore, descriptive analysis makes reference to data representations besides just words which that study investigates, including photos or film clips. Qualitative approach and theme stated that there are two separate methods of descriptive research (Corominas, Matas and Ruiz-carulla, 2017),

3.10 QUANTITATIVE ANALYSIS

SPSS statistics methods are commonly used to do quantitative method. Chi-square evaluation, reliability test, multiple regressions, principal component analysis, and other approaches were among the most often utilized. Most quantitative method, on the other hand, starts with qualitative and inferential analytics to illustrate different characteristics of the data. According to (Beverelli et al., 2018), regardless of what kind of data gathered, it is essential to begin the research by identifying trends inside the original data. The below approach was used to determine the cell dimensions again for Likert goals scored: The ratings vary from 1 (low) to 5 (highest), for a possible range of 4 ($5-1=4$). Because there were 5 cells, the bandwidth was limited by the total of cells, yielding a cell area of 0.8 ($5/4$). Like a result, the dimension of the very first cell was $1 + 0.8 = 1.8$. Table 4.6 illustrates this point. This means is perhaps the greatest commonly utilized statistic, yet it isn't enough to characterize the data on its own. To highlight the variability of the statistics, a sample variance is necessary, as well as the frequency distribution was chosen as being the most important framework throughout this research.

Table 2: Likert Scale Sample

Point Scale	Mean	Qualitative Interpretation	Level of agreement
1	$1 < 1.8$	Strongly disagree	Very low
2	$1.8 < 2.6$	Disagree	Low
3	$2.6 < 3.4$	Moderate	Moderate
4	$3.4 < 4.2$	Agree	High
5	$4.2 < 5$	Strongly agree	Very high

The data was then subjected to statistical analysis. Through use of statistical approaches to form conclusions about populations from samples benefit of the entire estimates of population findings is known as statistical techniques. This is accomplished by looking at the quantitative form for correlations, themes, and variations. Overall significance of a link inside a sample may be determined via appropriate statistical. In many other terms, it could be used to determine the extent to which individual factors have an effect on development. Quantitative Statistical, Anova, Correlation, and Regression are some of the most prevalent methods of appropriate statistical. For experience major distribution of the data, T-tests look at how far the received data matches predicted variables. Anova is the process of analyzing the differences in a collection to see which factors have the most interpretative implications for understanding the variety and are thus more likely to be important features (Hitchon et al., 2020).

3.11 RELIABILITY

It's indeed important to pay increased recognition to the correctness and usefulness of the scale in order to reduce the risk of obtaining inconsistent data and to improve the trustworthiness of the outcome conclusions. The term reliability refers towards how consistently the research's discoveries are, whereby if comparable research were undertaken given identical conditions, the present survey's conclusions might be verified. Here's what refers to someone as an initiative's kindness. By reducing inefficiencies, pilot testing aid in establishing the dependability of analysis tools. Cronbach's alpha value is a good indication of something like the content validity of measures that don't include proper or incorrect scoring systems; consequently, it should be applied for surveys containing measurement scale. According to Sun. et al. (2007), the Cronbach's alpha coefficient is between 0.70 and 1.00 in response to the fact inside the original study construct validity. In many other respects, when Cronbach's alpha score is higher than the acceptable bottom level of 0.7, the measures utilized there in equipment are dependable.

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Figure 3: Cronbach alpha sample

Cronbach's alpha coefficient is being used in the research to compare the questionnaire's reliability and validity. Cronbach's Alpha coefficient values varied from 0.70 to 0.87 with each component of such systematic review, as shown in Table 4.8. Furthermore, the Cronbach's Alpha coefficient for the whole questionnaire's characteristics were 0.91. The above

demonstrates the internal coherence and harmonization of the questionnaire's inquiries, as well as the impartiality of the data analysis findings.

3.12 PROCESS AND DESIGN OF RESEARCH

This part is focused with both the survey methodology and procedure, and it will be used to provide a thorough grasp of something like the fact - finding mission. Qualitative study, according to (Reiter, 2018), is really the structure which that study presents for gathering and analyzing data. The current investigation really will be discussed thoroughly, and the method should indeed be clarified in the recommended design. As a result, this study is organized in such a way which the viewer can simply follow along with the procedure.

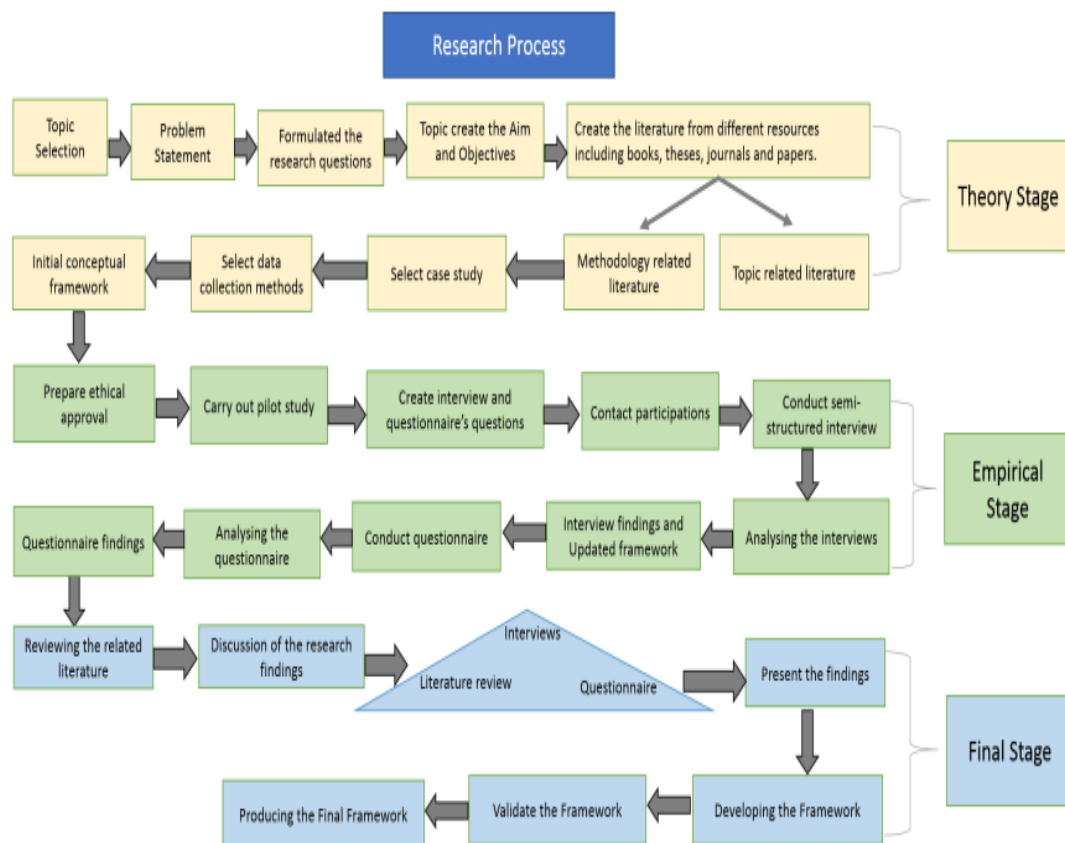


Figure 4: Research process sample

References

1. A Pilot Test of Group Based Cognitive Behavioral Therapy to Augment Vocational Services for Persons With Serious Mental Illness: Feasibility and Competitive Work Outcomes Kukla, Marina, PhD; Strasburger, Amy, M., MA; Salyers, Michelle, P., PhD; Rollins, A' (no date), 206(2018).
2. Abbas, J. and Kumari, K. (2021) 'Examining the relationship between total quality management and knowledge management and their impact on organizational performance: a dimensional analysis', *Journal of Economic and Administrative Sciences*, ahead-of-p(ahead-of-print). Available at: <https://doi.org/10.1108/JEAS-03-2021-0046>.
3. Androwis, N. et al. (2018) 'Total quality management practices and organizational performance in the construction chemicals companies in Jordan', *Benchmarking*, 25(8), pp. 3180–3205. Available at: <https://doi.org/10.1108/BIJ-05-2017-0094>.
4. Chan, S.H. (2020) 'Examining The Reliability And Validity Of Research Instruments Using Partial Least Squares Structural Equation Modeling (Pls-Sem) Issn 1648-3898 Issn 2538-7138', (April 2018). Available at: <https://doi.org/10.33225/jbse/18.17.239>.
5. Dubey, R. et al. (2019) 'Big data analytics and artificial intelligence pathway to operational performance', *LJMU Research Online* [Preprint].
6. Easterday, M.W. et al. (2018) 'The logic of design research', *Learning: Research and Practice*, 4(2), pp. 131–160. Available at: <https://doi.org/10.1080/23735082.2017.1286367>.
7. Ershadi, M.J., Najafi, N. and Soleimani, P. (2019) 'Measuring the impact of soft and hard total quality management factors on customer behavior based on the role of innovation and continuous improvement', *TQM Journal*, 31(6), pp. 1093–1115. Available at: <https://doi.org/10.1108/TQM-11-2018-0182>.
8. Faeq, D.K. et al. (2021) 'Total Quality Management And Hotel Employee Creative Performance: The Mediation Role Of Job Embeddedment', *Journal of Contemporary Issues in Business and Government*, 27(1). Available at: <https://doi.org/10.47750/cibg.2021.27.01.001>.
9. Giffari, A. et al. (2021) 'Corporate Social Responsibilities: Business Responses to the COVID-19 Pandemic', *Conference Towards ASEAN Chairmanship 2023 (TAC 23 2021)*, 198, pp. 213–219.
10. Jimoh, R. et al. (2019) 'Total quality management practices and organizational performance: the mediating roles of strategies for continuous improvement', *International Journal of Construction Management*, 19(2), pp. 162–177. Available at: <https://doi.org/10.1080/15623599.2017.1411456>.
11. Kasemsap, K. (2017) 'The role of total quality management practices on quality performance', *Operations and Service Management: Concepts, Methodologies, Tools, and Applications*, 14(2), pp. 996–1027. Available at: <https://doi.org/10.4018/978-1-5225-3909-4.ch046>.
12. Kebede Adem, M. and Virdi, S.S. (2021) 'The effect of TQM practices on operational performance: an empirical analysis of ISO 9001: 2008 certified manufacturing organizations in Ethiopia', *TQM Journal*, 33(2), pp. 407–440. Available at: <https://doi.org/10.1108/TQM-03-2019-0076>.
13. Lobo, S.R., Samaranayake, P. and Subramanian, N. (2019) 'The impact of TQM and information communication technology (ICT) as an enabler in the quality management assessment framework (QMAF) on business outcomes', *International Journal of Systems Science: Operations and Logistics*, 6(1), pp. 69–85. Available at: <https://doi.org/10.1080/23302674.2017.1344329>.
14. Madanat, H.G. (2018) 'Level of Effectiveness of Human Resource Management Practices and Its Impact on Employees' Satisfaction in the Banking Sector of Jordan', *Journal of Organizational Culture*, 22(1), pp. 1939–4691.
15. Martins, F.S. (2018) 'Secondary Data In Research – Uses And Opportunities Cite it like this ', pp. 5–8.

16. Mehralian, G. et al. (2022) 'The effects of corporate social responsibility on organizational performance in the Iranian pharmaceutical industry: The mediating role of TQM', *Journal of Cleaner Production*, 135, pp. 689–698. Available at: <https://doi.org/10.1016/j.jclepro.2016.06.116>.
17. Muthukrishnan, N. and Management, E.R. (2022) 'An Outlook And Impact Analysis Of Corporate Governance Decisions , Board Resolutions , Corporate Social Responsibility An Outlook And Impact Analysis Of Corporate Governance Decisions , Board Resolutions , Corporate Social Responsibility Activities In', (December 2021).
18. Pambreni, Y. et al. (2019) 'The influence of total quality management toward organization performance', *Management Science Letters*, 9(9), pp. 1397–1406. Available at: <https://doi.org/10.5267/j.msl.2019.5.011>.
19. Personal, M. and Archive, R. (2018) 'Munich Personal RePEc Archive Qualitative Research Methodology in Social Sciences and Related Subjects Qualitative Research Methodology in Social Sciences and Related Subjects', (85654).
20. Prajogo, D.I. and Mcdermott, C.M. (2021) 'The relationship between total quality management practices and organizational culture', (November 2005). Available at: <https://doi.org/10.1108/01443570510626916>.
21. Seghyar, N., Nafzaoui, M.A. and Hammoumi, E.L. (2022) 'Management And Control Tools For Corporate Social Responsibility : Between The Proactive Strategy And The Adaptive Strategy Empirical Study Of Large Companies In Morocco', (01), pp. 45–69. Available at: <https://doi.org/10.17605/OSF.IO/QGFB3>.
22. Shutler, D. et al. (2021) 'Demographical and morphological differences among coyotes (*Canis latrans*) relative to sampling method', 204(January), pp. 197–204.
23. Singh, K. and Misra, M. (2021) 'Linking Corporate Social Responsibility (CSR) and Organizational Performance: the moderating effect of corporate reputation', *European Research on Management and Business Economics*, 27(1), p. 100139. Available at: <https://doi.org/10.1016/j.iiedeen.2020.100139>.
24. Úbeda-García, M. et al. (2021) 'Corporate social responsibility and firm performance in the hotel industry. The mediating role of green human resource management and environmental outcomes', *Journal of Business Research*, 123(June 2020), pp. 57–69. Available at: <https://doi.org/10.1016/j.jbusres.2020.09.055>.
25. Zaid, A.A. et al. (2020) 'The Impact of Total Quality Management and Perceived Service Quality on Patient Satisfaction and Behavior Intention in Palestinian Healthcare Organizations', *Trku*, 62(03), pp. 221–232. Available at: <https://www.researchgate.net/publication/341043587>.
26. Zaidi, Z.M. and Ahmad, N. (2020) 'Total Quality Management (TQM) Practices and Operational Performance in Manufacturing Company', *Research In Management Of Technology And Business*, 1(1), pp. 13–27. Available at: <https://doi.org/10.30880/rmtb.2020.01.01.002>.
27. Zhang, Q., Oo, B.L. and Lim, B.T.H. (2022) 'Linking corporate social responsibility (CSR) practices and organizational performance in the construction industry: A resource collaboration network', *Resources, Conservation and Recycling*, 179(January). Available at: <https://doi.org/10.1016/j.resconrec.2021.106113>.
28. Zhu, J. et al. (2020) 'MACS: Rapid Aqueous Clearing System for 3D Mapping of Intact Organs', *Advanced Science*, 7(8), pp. 1–14. Available at: <https://doi.org/10.1002/adv.201903185>.