



Can TQM affect Organizational Ambidexterity and Job Burnout: Evidence from Suez Canal Authority

submitted by

Dr. Sherif Adel Abd El-Aleem Abd El-Hameed

Lecturer of Business Administration

Faculty of Commerce & Business Administration

Helwan University

sherif.abdel@commerce.helwan.edu.eg

Raya International Journal of Business Sciences

vOLUME (3), ISSUE (10), july 2024

<https://www.rijcs.org/>

Publisher

Raya Higher Institute of Management and Foreign Trade in New Damietta

Can TQM affect Organizational Ambidexterity and Job Burnout: Evidence from Suez Canal Authority submitted by

Dr. Sherif Adel Abd El-Aleem Abd El-Hameed

Lecturer of Business Administration

Faculty of Commerce & Business Administration

Helwan University

sherif.abdel@commerce.helwan.edu.eg

ABSTRACT

This study seeks to examine relationship between TQM practices, organizational ambidexterity and job burnout in one of the most important national institutions in Egypt, Suez Canal Authority. The study was applied on employees & administrators'

cadre working within Suez Canal Authority branch in Ismailia governorate. Results showed positive significant relationship between TQM practices and exploitation dimension & exploitation dimension of organizational ambidexterity. In addition, negative significant relationship was found between TQM practices and emotional exhaustion dimension & low personal achievement dimension of job burnout, however no significant relationship was found between TQM practices and loss of human interaction dimension of job burnout. The study recommends in order to increase organizational ambidexterity level in Suez Canal Authority, senior managers

and decision makers must deepen practices of continuous improvement, employee participation & empowerment, management by facts, training, and emotional healing.

Key Words: Total Quality Management, organizational ambidexterity, Exploitation, Exploration, job burnout, Empowerment, Emotional Exhaustion.

ملخص البحث: تهدف هذه الدراسة إلى تحليل العلاقة بين تطبيق ممارسات إدارة الجودة الشاملة وكل من مستوى البراعة التنظيمية ومعدل الإحتراق الوظيفي في واحدة من أهم المؤسسات القومية في مصر وهي هيئة قناة السويس. تم تطبيق هذه الدراسة على كادر الموظفين والإداريين العاملين بمقر هيئة قناة السويس بمحافظة الإسماعيلية. أظهرت نتائج الدراسة وجود علاقة إيجابية معنوية بين كافة أبعاد وممارسات إدارة الجودة الشاملة (القيادة الإدارية والتوجه الإستراتيجي، مشاركة العاملين وتمكينهم، التركيز علي العملاء والموردون، التحسين والتعلم المستمر، وجودة البيانات والتقارير) ومستوي البراعة التنظيمية ببعديها الإستكشاف والإستغلال. كما وجد الباحث أيضا علاقة معنوية عكسية بين كافة أبعاد وممارسات إدارة الجودة الشاملة ومعدل الإحتراق الوظيفي متمثلا في بعدي الإنهاك العاطفي وتدني الإنجاز الشخصي، ولم تثبت نتائج التحليل الإحصائي معنوية العلاقة بين ممارسات إدارة الجودة الشاملة ومعدل الإحتراق الوظيفي متمثلا في بعد فقدان التعامل الإنساني. أوصت الدراسة بتعميق ممارسات التحسين المستمر، تمكين ومشاركة العاملين، التدريب، الاحتواء العاطفي، والإدارة من خلال الحقائق لدي المديرين وصناع القرار داخل الهيئة وذلك من أجل زيادة مستوي البراعة التنظيمية.

الكلمات المفتاحية: إدارة الجودة الشاملة، البراعة التنظيمية، الاستكشاف، الاستغلال، الإحتراق الوظيفي، الاحتواء العاطفي، التمكين.

1. Introduction:

Due to the challenges facing business organizations at the present time as well as great competitive pressures they are exposed to; these organizations have sought to build their own competitive advantages that enable them to support and improve their competitive position continuously in their markets (Darmawan et al., 2020). One of the most important competitive advantages that organizations can enjoy is its adoption of Total Quality Management practices. Such practices contribute to improving financial & operational performance of the organization, which in turns helps in increasing market share and gaining strong competitive position (Elvina et al., 2022).

Jimoh et al. (2019) insists that total quality management is seen as a great engine for changing towards better position as well as a basic measure of differentiation between institutions. It has been adopted by many organizations recently due to its superior strategic importance due to its critical role in increasing organizational efficiency & competitiveness. Applying total quality management practices in business organizations can reduce consumer complaints as well as quality costs, which contributes to achieving customer satisfaction (Leitão et al., 2019; Taba, 2018).

There is no doubt that organizational ambidexterity has a very important role inside any organization, it is the most important indicator for assessing organization effectiveness as well as the critical factor in predicting organizational success (Fu et al., 2016).

The ability of the organization or the manager to both exploit existing capabilities and explore new ones is considered one of the most important strategies for ensuring effectiveness and growth. Exploitation, together with exploration, constitutes a two-dimensional construct called “organizational ambidexterity”

(Giménez et al., 2023). Indeed, when boredom exists, unproductive attitudes and behaviors will start to appear including apathy, lack of interest in jobs, frustration & dissatisfaction, high rates of absenteeism, and high rate of employee turnover. This in turn will lead to poor customer services level and lack of organizational effectiveness (Lloria & Burbano, 2024).

According to Asif & de Vries, (2015); Bottini et al. (2024); Nien et al. (2024) fairness & equality between employees, effective rewards, as well as good working conditions can improve employee's performance & outcomes. Such outcomes are represented in terms of increasing job satisfaction level, increasing emotional commitment, and reducing negative outcomes including role stress, intention to leave work, and job burnout. From this point of view, the current research seeks to test the influential relationship between total quality management practices, job burnout rate, level of organizational ambidexterity within one of the most prestigious national bodies and organizations operating in Egypt which is the Suez Canal Authority.

2. Theoretical Framework for Research Variables.

2.1 Total Quality Management.

The concept of TQM has witnessed and undergone many changes over the past two decades (Alshourah, 2021). Quality in seventies focused on effective inspection methods for checkup & examination in an attempt to identify defective units that follow production, in the late eighties it turned to the process of statistical control as well as access to defective units from the source itself (Babu & Thomas, 2021). Then, the concept evolved into emphasizing quality to ensure that products suits its requirements, its use or its suitability for design & usage objectives. Then the focus was directed to quality of conformity with specifications to ensure right actions from the first time and every time (Bathaei et al., 2021).

According to Daqar & Constantinovits (2020) total quality management is considered an administrative philosophy, strategic approach, as well as a means of managing change that aims to transfer contemporary organizations from traditional patterns of thinking to professional patterns that are compatible with dynamic changing environment. TQM requires participation of talents in mobilizing their skills and abilities to achieve improvement continuously (Nguyen & Nagase, 2019).

(Peng et al., 2020) insists that, there is no one specific definition for TQM, every researcher looks at this modern administrative approach according to his/her background. Abbas (2020) realize TQM as a philosophy based on participation and integration between all employees in different administrative levels to improve quality of products & services provided, and to satisfy customers by meeting their needs & desires.

Anil & Satish (2019); Bouranta et al. (2019); Do et al. (2020) argued that TQM is a method that aims to meet needs and desires of customers as well as needs of all employees working inside the organization. In addition, TQM is a strategy to improve organizational performance through commitment of all employees in the organization to fulfill customer requirements & achieve customer satisfaction at lowest possible cost through continuous improvement of services and organizational processes.

As shown, TQM system is not more than an extension of continuous improvement cycles, it concerned with improving performance and paying attention to all production and operation elements (Shafiq et al., 2019). TQM philosophy is based on many variables & dimensions including quality, human resources, effective communication, effective work teams, technology, organizational internal & external environment, and organization competitive strategies (Sweis et al., 2019).

Crosby, one of the founders of total quality philosophy, defined TQM as organized methodology to ensure progress of activities that were planned in advance (Al- Saffar & Obeidat, 2020). TQM has become slogan for large number of organizational activities, which range from zero defects in produced units to immediate delivery, flexibility, competitiveness, and achieving customer satisfaction (Gallo et al., 2019).

Many Arab & foreign studies have focused on identifying TQM practices affecting organizational effectiveness, customer satisfaction, institutional differentiation, organizational ambidexterity, job burnout, organizational creativity, organizational culture, employee satisfaction and institutional excellence (Ajmal et al., 2016; Al-Dhaafri et al., 2016; Al-Dhaafri & Alosani, 2020; Aquilani et al., 2017; Aziz & Morita, 2016; Nguyen & Nagase, 2019; Temiz et al., 2021). In this regard, many current empirical studies have concluded that TQM practices help companies to develop innovation capabilities as well as innovation outcomes.

In light of various studies & researches reviewed, and in accordance with the practical part of this research; the researcher was able to identify & specify five basic critical TQM practices (Alharthy & Ajina, 2023; Bahia et al., 2023; Lapoint, 2022; Lepistö et al., 2022; Salimian et al., 2020; Kiesnere & Baumgartner, 2019; Lizarelli et al., 2019; Khalaf & Salem, 2018; Psomas et al., 2017; Pimentel & Major, 2016; Barouch & Kleinhans, 2015). Below is a detailed review of these critical TQM practices, as these practices will represent independent variable of this research.

2.1.1 Administrative Leadership & Strategic Direction.

Senior management support is defined as the degree of interest of senior managements in participating in company's work, supporting it, and providing all requirements for success, which is part of effective leadership. It is the conviction of senior management regarding importance of quality practices evidenced by their

role in developing programs & policies that will support the concept of quality, providing all types of material & moral support to all employees, as well as urging them to employ and use this concept.

2.1.2 Employee Participation & Empowerment.

Japanese have been able to achieve tangible excellence through their adoption of participatory & motivational methods. Therefore, this point should be one of the basic pillars to be adopted when applying TQM strategy. Launching events, encouraging innovation & creativity, creating developmental & motivational programs, as well as cultivating spirit of team work and self-participation are basic factors for solidifying organizational structure and achieving organizational success. Success of quality management depends on employee's participation at various levels, this participation is a form of authority delegation.

2.1.3 Focus on Customers & Suppliers.

TQM almost based on customer, customer is considered the primary focus of activities related to TQM. The term "customer" in TQM included both external & internal customers, internal customer represents employees working in various organizational units inside the organization.

2.1.4 Continuous Improvement & Learning.

Continuous improvement is considered an administrative philosophy that aims to work continuously on developing processes & activities related to machines, materials, individuals, and production methods. Continuous improvement requires rapid response to changes on one hand and simplification of procedures & operational activities on the other hand. Components of continuous improvement includes standardizing & documenting procedures, appointing teams to identify processes that need improvement, using analytical methods & problem-solving

tools, using the Plan-Do-Check-Implement cycle (PDCI), as well as documenting improvement procedures.

2.1.5 Quality of Data and Reports.

Making decisions based on facts considered to be one of most important pillars on which TQM is based. To apply this concept, it is necessary to rely on techniques & resources that create effective channels in order to empower workers and communicate with them all required information and facts that they can use in making effective decisions. Information considered to be TQM cornerstone, when perfect information revealed inside the organization TQM practices can be smoothly applied and implemented.

2.2 Organizational Ambidexterity.

Organizational ambidexterity has become an urgent necessity for organizations in light of severe competition witnessed recently in global & local business environment. Organizational ambidexterity contributes to improve organizational performance through increasing its efficiency and flexibility, thus maintaining its sustainability (Moreno-Luzon et al., 2023). Duncan was the first to use organizational ambidexterity term referring to the ability of organizations to design dual structures that facilitate innovation practices. Organizational ambidexterity seeking at exploiting existing resources and exploring new possibilities that align operations to focus on new opportunities in the future (Chams-Anturi et al., 2019; Nafei, 2019).

(Kassotaki, 2022; Dranev,2020) insists that organizational ambidexterity represents organization's ability to excel in achieving both elements of exploitation and exploration; this can be fulfilled by excelling in exploiting current opportunities to enable incremental innovation that modify and enhance existing products, as well

as exploring new opportunities to introduce complete changes in current products/services.

(Salas-Vallina et al., 2021) demonstrate ambidexterity as the organization's ability to continue learning through two sets of activities which are exploiting existing competencies and exploring new opportunities. Current study will deal with organizational ambidexterity in terms of its two basic dimensions which are exploration and exploitation, a brief review about each of them will be demonstrated in the following section (Garousi Mokhtarzadedeh et al., 2022; Pertusa-Ortega et al., 2021; Clauss et al., 2021; Gieske et al., 2020; Centobelli et al., 2019).

2.2.1 Exploitation:

Exploitation include practices such as best choice, operational efficiency, implementation, and achievement. Literature refers to exploitation as selection, efficiency, and improvement that succeeds by reducing variation, closing gaps, and increasing control. Exploitation regarded as knowledge for continuous improvement, modification, selection, and introducing gradual change in existing products, processes, and services, its aim is to expand existing competencies in addition to introduce gradual changes. Exploitation means exploiting current capabilities and satisfying needs of current customers and markets.

2.2.2 Exploration:

Exploration defined as searches for new knowledge and opportunities, exploration simply refers to searching for knowledge and conducting experimentation to bring out radical changes and create new ideas, products, and services. Exploration is the pursuit of new knowledge through complex thinking for the purpose of innovation, which associated with certain degree of risk. It may transform small organizations into market-leading organizations, and large organizations may fall if they don't continuously explore.

2.3 Job burnout.

(Heldiana P. et al., 2024) insists that Job burnout is defined as a state of mental and physical exhaustion resulting from individual's organizational stress, leading to a lack of motivation especially when individual's dedication to a specific cause or relationship fails to achieve desired results. Individuals who burn out from their work deplete their energetic resources and lose their dedication to work.

(Hameli et al., 2024) argued that job burnout is a psychological symptom or syndrome that includes an extended response to chronic personal stress at work. It was defined also as a psychological phenomenon that individuals are exposed to as a result of their inability to adapt to work pressures, which leads them to feeling unable to solve problems, and thus losing interest in work as well as feeling psychologically stressed while performing work. Job burnout is a long-term reaction where individuals are unable to deal with work pressures effectively, leading them to fall in fatigue feelings, loss of emotion, lack of motivation, inattention, apathy, and other negative symptoms that seriously affect individual's behavior at work (Day et al., 2017).

Burnout represent negative aspects of psychological relationship that exist between employees and their job, it includes three dimensions that are interconnected with each other, which are emotional exhaustion, loss of human interaction, and low personal achievement (Bazmi et al., 2019; Liu et al., 2022). Emotional exhaustion represents the vital dimension of burnout; it refers to the total exhaustion of an employee's emotional feelings. Emotional exhaustion is linked to employee's lack of self-confidence, low morale, losing energy to deal with operational issues, and mental withdrawal.

Loss of human interaction refers to the individual's separation from people around him including co-workers, clients, subordinates, and supervisors. Employees

here suffers from dullness of feelings, dissipation of personality, harshness in dealing, pessimism, frequent criticism, and sarcasm toward colleagues. Finally, low personal achievement refers to employee's underestimation of his abilities & achievements, it sometimes called negative self-evaluation. Employees here realizes that all work days are exhausting as most of their time from their point of view are wasted in doing work that doesn't add value to them (Basinska & Daderman, 2019; Dahiya & Raghuvanshi, 2023).

3. Literature Review & Formulating Research Model.

After reviewing TQM, organizational ambidexterity, and job burnout literature, it became clear that; there is a scarcity of researches/studies that dealt with direct relationships that might exist between TQM practices, organizational ambidexterity, and job burnout. Companies employing TQM practices must spent great effort to be creative in goods/services and in the same time should support/satisfy physiological dimension of their employees. Creativity is necessary for companies seeking to increase productivity & raise quality, therefore, process creativity is fully consistent with the goals of TQM (Sfakianaki, E., 2019).

In light of this scarcity, the researcher believes that there is an urgent scientific & practical necessity to search for practices that contribute to enhancing level of organizational ambidexterity & reducing job burnout level within organizations. Current research primarily focusses on current status of applying TQM practices within Suez Canal Authority, consequently the researcher tries to measure whether these practices have a positive impact on enhancing level of organizational ambidexterity and reducing levels of job burnout within Suez Canal Authority. Below

are number of previous studies that explain & analyze different relationships between TQM practices, organizational ambidexterity, and/or job burnout.

Terje et al. (2023) aims to empirically examine the role of ambidextrous leadership on employees' ambidexterity and job-directed performance. Specifically, the study explores in detail how ambidextrous leadership is linked to two types of job-directed performance in health professionals, namely service quality of care and creativity, in addition to what role employee ambidexterity has in this relationship. A cross-sectional survey was developed, and data were gathered through convenience sampling of N=258 health professionals of in-home care services across municipalities based in Norway. Results revealed that, ambidextrous leadership was found to have a direct impact on both employee service & quality of care ($\beta = 0.236$) and employee ambidexterity ($\beta = 0.395$). The direct relationship between ambidextrous leadership and employee creativity was non-significant.

Bahia et al. (2023) examine the role of TQM as a philosophy for improvement in the academic organization, as it represents a necessary trend in developing the activities of many organizations in the light of globalization and the challenges that these organizations face. e Technical Institute / Diwaniyah in Iraq was chosen as an applied field. To achieve the objectives of the study, a questionnaire of sixty item has been used. The sample comprised sixty-five academic staff members from various parts of the organization. According to the purpose of the study, two main hypotheses were formulated. Findings indicate that, supporting and adopting TQM practices will be fruitful as a successful business philosophy for the continuity by creating appropriate requirements and conditions.

Pertusa-Ortega et al. (2021) analyzes the influence of quality management practices on organizational ambidexterity & performance in hotel industry. The paper uses Partial Least Squares (PLS) analysis based on data from 365 Spanish hotels. Results show that quality management practices favor the development of organizational ambidexterity, that is, they help balance exploitation and exploration activities, and this contributes to improving hotel performance. This paper contributes in developing new knowledge regarding quality management as a facilitator of ambidexterity, and the mediating role of ambidexterity in shaping relationship between quality management & hotel performance.

(Glaveli et al., 2022) provides insights on the application of critical soft TQM practices in primary and secondary education and their impact on teachers' job satisfaction. Six soft TQM elements were traced as critical to the success of TQM implementation in the school environment: participation/involvement in continuous improvement, teamwork, empowerment, appraisal systems/recognition and reward for quality, training and development (T&D) and leadership (vision/commitment to quality culture). An online questionnaire was used as the research instrument. The participants were 200 primary and secondary public school teachers working in urban, semi urban and rural regions of Greece. findings revealed that leadership and empowerment are the most highly implemented TQM practices in primary and secondary education. Moreover, participation/involvement, appraisal systems/recognition and rewards and leadership were the TQM elements that had a positive association with teacher's job satisfaction.

Sweis et al. (2019) aims to examine the relationship between TQM practices and organizational & quality performance of Royal Jordanian Airlines and to specify which of the studied practices control the performance. Independent variables included the TQM practices (top management commitment, training and education, teamwork and continuous improvement) while dependent variables are organizational performance & quality performance. Data were obtained from 179 members in the top managerial positions of the RJ out of 247. Findings reveal a strong relationship between TQM practices and organizational and quality performance of the Royal Jordanian Airlines. The study recommends that managers should consider TQM practices to enhance performance, allocate resources and develop an environment that supports continuous improvement ideas.

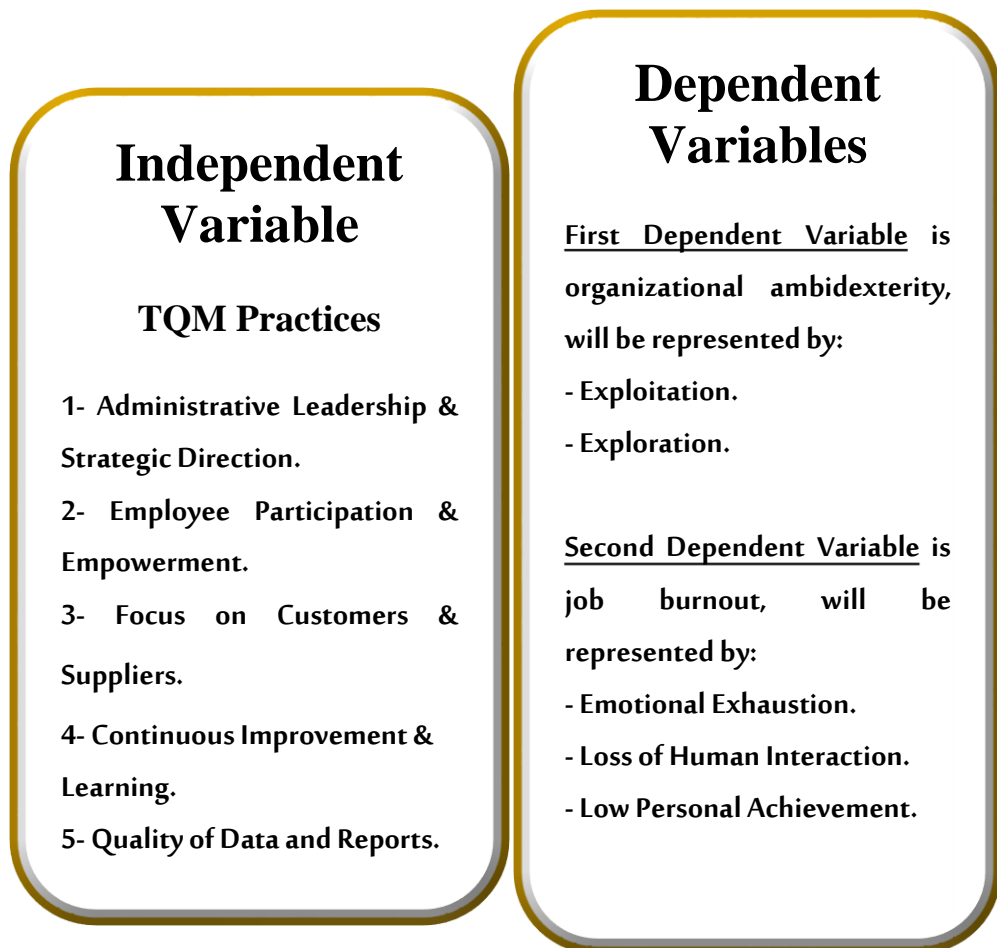
Nafei (2019) tries to identify the role of organizational ambidexterity as a mediating variable in the relationship between psychological capital and strategic success. Research population composed of all employees at Teaching hospitals in Egypt. Due to the time & cost constraints, the researcher adopted sampling method to collect necessary data. Findings support positive relationship between psychological capital (hope, optimism, resilience, and self-efficacy) and Organizational Ambidexterity. Also, the researcher found positive relationship between psychological capital and strategic success, finally results highlights positive relationship between Organizational Ambidexterity and Strategic Success.

4. Proposed Research Model.

Regarding TQM, as mentioned before, there is no consensus among writers and researchers about best practices of TQM that have critical impact on

organizational ambidexterity and job burnout. However, majority of studies refer to five vital TQM practices, these five practices will represent TQM as an independent variable in this research. Organizational ambidexterity on the other hand will represent the first dependent variable in this research. The second dependent variable in this research will be represented by job burnout. In the light of these variables, research model can be expressed in the following figure:

Figure (1): Research Model



5. Pilot Study & Formulating Research Problem.

As mentioned before, attention to TQM has become a global phenomenon among organizations, specialists, and researchers due to its connection to all aspects of human activities inside the organization. With respect to Suez Canal Authority, Egyptian government recently made great efforts to improve & develop all range of services offered by the authority, authority's board has also made strenuous efforts to develop human element within the authority based on their convictions & beliefs that; developing human element is the main engine for sustainable development process. Suez Canal is an important international seaway that occupies a vital position in the global trade movement. On the local level, it is a vital & critical institution as it represents one of the most important sources of foreign currency in Egypt, about eighteen thousand to thirty thousand ships pass through it annually, carrying approximately about 14% of total world trade with value of goods estimated approximately at 1.7 trillion US dollars¹.

In order to define research problem and in order to clarify research objectives, the researcher conduct some personal interviews² in order to identify the extent to which different dimensions of TQM practices are applied within Suez Canal

¹ Suez Canal Authority published reports 2022, ministry of planning and economic development, economic & social performance monitoring reports 2022 (<https://mped.gov.eg/>).

² In this regard, the researcher chose a random sample of twenty-five employees working within Suez Canal authority branch in Ismailia governorate including managers, department heads, senior executives, engineers, accountants, and human resource specialists, noting that there was no prior arrangement in the process of selecting sample items, but rather they were chosen randomly.

Authority and accordingly to recognize whether there is some sort of impact of these practices on organizational ambidexterity and rates of Job Burnout. Different questions were asked & discussed with selected sample, the researcher found that; most respondents agree on the importance of TQM practices & confirmed on its critical consequences on internal operational performance. Also, the researcher noticed that, most employees support existence of some positive practices within the authority without knowing that these practices were linked directly to TQM concept.

However, the researcher noticed an existing discrepancy revealed between participants regarding their interpretation and understanding to organizational ambidexterity and Job Burnout concepts. Most respondents agreed that, TQM practices is a very important objective that most organizations should strive to make utmost effort in order to apply its practices. Based on respondent's responses, the researcher wasn't able to determine whether there is a relationship between applying TQM practices, organizational ambidexterity and rates of Job Burnout. Finally, in the light of the conducted pilot study, the researcher drop, add, and re-paraphrase some questions in order to develop and formulate research questionnaire in its final form.

In the light of the previous discussion; current research addresses a problem from which most Egyptian organizations suffers, which represented by presence of difference and disparity in applying TQM practices in the Egyptian public enterprise sector. Consequently, the main problem of this research stemming from the volatility & discrepancy that exists between Egyptian public organizations with respect to their degree of applying TQM practices, also this research tries to identify whether there

is a significant relationship between applying TQM practices, organizational ambidexterity and Job Burnout rates in one of the most important national institutions in Egypt, Suez Canal Authority.

In the light of the pilot study conducted by the researcher, and after examining different studies throughout managerial literature; the main problem of this research can be expressed in the following research question; can TQM practices within Suez Canal Authority affect level of organizational ambidexterity and rates of Job Burnout? Consequently, this research attempts to answer such questions as;

(1) What is the current status of applying TQM practices within Suez Canal Authority?

(2) Can TQM practices affects exploitation dimensions & exploration dimensions of organizational ambidexterity within Suez Canal Authority?

(3) Can TQM practices affect levels of emotional exhaustion, human interaction, and personal achievement within Suez Canal Authority.

(4) Can personal & functional differences between employees affect their opinions regarding TQM practices and consequently its impact on organizational ambidexterity level and rates of Job Burnout.

6. Research Hypotheses.

The First Main Hypothesis: There is a statistically significant relationship between TQM practices and level of organizational ambidexterity.

From this main hypothesis, the following sub-hypotheses were derived:

1st sub-hypothesis: There is a statistically significant relationship between applying TQM practices and exploitation dimension of organizational ambidexterity.

2nd Sub-hypothesis: There is a statistically significant relationship between applying TQM practices and exploration dimension of organizational ambidexterity.

The Second Main Hypothesis: There is a statistically significant relationship between TQM practices and job burnout rate.

From this main hypothesis, the following sub-hypotheses were derived:

1st Sub-hypothesis: There is a statistically significant relationship between applying TQM practices and emotional exhaustion dimension of job burnout.

2nd Sub-hypothesis: There is a statistically significant relationship between applying TQM practices and loss of human interaction dimension of job burnout.

3rd Sub-hypothesis: There is a statistically significant relationship between applying TQM practices and low personal achievement dimension of job burnout.

The Third Main Hypothesis: There are no statistical significant differences between respondent's responses according to personal & occupational variables on their opinions regarding TQM practices and accordingly its impact on organizational ambidexterity & rates of job burn out.

From this main hypothesis, the following sub-hypotheses were derived:

1st Sub-hypothesis: There are no statistical significant differences between respondent's responses within Suez Canal Authority according to Job title.

2nd Sub-hypothesis: There are no statistical significant differences between respondent's responses within Suez Canal Authority according to Managerial level.

7. Research Significance.

This research primarily attempt is to analyze the impact of applying TQM practices on both level of organizational ambidexterity and rates of job burnout

within Suez Canal Authority. Throughout this research, the researcher attempt to provide some recommendations that might contribute in enhancing levels of organizational ambidexterity as well as reducing job burnout rates within Suez Canal Authority.

The researcher also aims to contribute directly in increasing manager's awareness within Suez Canal Authority regarding the importance of applying TQM practices, which might subsequently affect level of organizational ambidexterity and job burnout rates. Finally, this research will contribute in opening ways in front of researchers to conduct future studies in the light of its empirical findings.

8. Research Limits.

This research was conducted within the following limits:

Theoretical limits: As mentioned before; the main focus of this research is to analyze the impact of TQM practices within Suez Canal Authority on both level of organizational ambidexterity and job burnout rates.

Human limits: This research is limited to studying the concept of TQM practices as well as analyzing its impact on both level of organizational ambidexterity and job burnout rates from the view point of employees working within Suez Canal Authority. Reason for choosing employees to analyze research variables through them is that; TQM practices are considered a solidarity responsibility among all employees inside all managerial levels within the authority, thus, through examining those internal employees the extent of applying TQM practices and its impact on both organizational ambidexterity and job burnout can be evaluated & analyzed.

Application Limitations: The research was conducted during the third quarter of 2023. Empirical part of this research was applied on Suez Canal Authority branch in Ismailia governorate due to ease of collecting data. Also, majority of manpower & employees inside Suez Canal Authority exists in Ismailia's authority branch.

9. Research Population/Sample & Data Collection Methods.

According to Suez Canal Authority annual report issued at the end of 2022, total number of employees working within the authority in all of its three branches (Suez, Port Said, and Ismailia) reached about 16,000 employees & workers³. Employees & administrators' cadre represents about 17% (2,700 employees), while workers & technicians' cadre represents about 83% (13,300 technical & marine workers). Due to large size of research population & consequently difficulty of collecting data from authority's three main branches in Suez, Ismailia, and Port Said. Research population will be limited only to employees & administrators' cadre inside Suez Canal Authority branch in Ismailia governorate only. Reasons for selecting

³ Regarding organizational structure of Suez Canal Authority, Chairman of Authority's Board comes at the top of the organizational structure, department directors (board members) exist in the next managerial level. Suez Canal Authority contains about fifteen different departments which are Management department, Personnel Affairs department, communication & Information Systems department, Dredging department, Shipyards department, Tunnels & Bridges department, Planning & Research department, Engineering department, legal department, Services department, Procurement department, Financial department, Works department, Transit department, and Affiliated Companies department. Each director has three deputies in the three branches of the authority in Suez, Port Said, and Ismailia governorates.

employees & administrators' cadre in Ismailia branch exclusively is that; number of employees & workers within Ismailia's branch represents the largest percentage⁴ compared to the other two branches in Suez and Port Said, also authority's headquarter was found to be located in Ismailia governorate, finally the researcher found great access for obtaining required data from authority's branch in Ismailia governorate.

Accordingly, actual size of research population represents about 1,278 of employees & administrators who are working within different departments inside authority's branch in Ismailia governorate. Research population includes various job categories & titles such as captains, engineers, accountants, and all administrative workers & employees in different departments within the authority such as the Engineering department, financial department, legal department, movements department, communications department, information systems, supply chain

⁴ According to Suez Canal authority published reports at the end of 2022, total number of employees working inside Suez Canal authority branch in Ismailia governorate reach 7,742 employees and workers, this percentage represent about 50% of total number of employees and workers inside the three main branches of Suez Canal Authority in Suez, Ismailia, and Port Said. From these 7,742 employees and workers, employees & administrators' cadre represents about 1278 employees in different departments & divisions while workers and technicians' cadre represents about 6,464 worker & technician.

department, dredging department, services department, and planning department. In the light of research population, a convenient random sample were selected⁵.

Accordingly, sample size of this research consist of 296 employees representing employees & administrators' cadre in all departments & sectors inside Suez Canal Authority branch in Ismailia governorate. About 300 survey questionnaires⁶ were distributed by the researcher in order to collect research data.

⁵ Steven K. Thompson, (2012). Sampling. Third Edition, p:59-60. Stephen Thompson's equation is among the most popular formulas for calculating sample size from research population. The equation can be represented in the following formula:

$$n = \frac{NP(1 - P)}{(N - 1) (d^2/z^2) + P(1 - P)}$$

(n) refers to sample size.

(N) refers to population size.

(Z) value = 1.96 which refers to significance level (0.05) & confidence level of (0.95)

(P) refers to probabilistic value (0.50)

(d) represent margin error (0.05)

⁶ The researcher relied primarily on survey list (questionnaire) as a mean for collecting research data; survey list includes four main sections reflecting general data, demographical data, occupational data, and different questions & statements to measure through it different research variables. Five-point Likert scale was utilized in order to facilitate responding process as through this five-point scale respondents can easily answer research questions and state their level of agreement. Data was then extracted, classified, tabulated, and analyzed in order to draw conclusions & recommendations.

Data was collected through field visits & Google Form lists. After excluding incomplete & invalid surveys; Number of correct responses reached 274 forms, referring to a response rate of 92%.

10. Statistical Analysis & Testing Hypotheses.

Through analyzing research hypotheses; the researcher aims to achieve set of findings & results that fills research gap and answer all research questions. Research hypotheses will be statistically tested & analyzed through a number of statistical techniques that are consistent with research hypotheses and suitable to nature of collected data. Statistical analysis includes reliability & validity tests, classification of research data, descriptive statistics for research variables, simple linear regression analysis, and analysis of variance "ANOVA" (Roni & Djajadikerta, 2021).

10.1 Reliability & Validity Test.

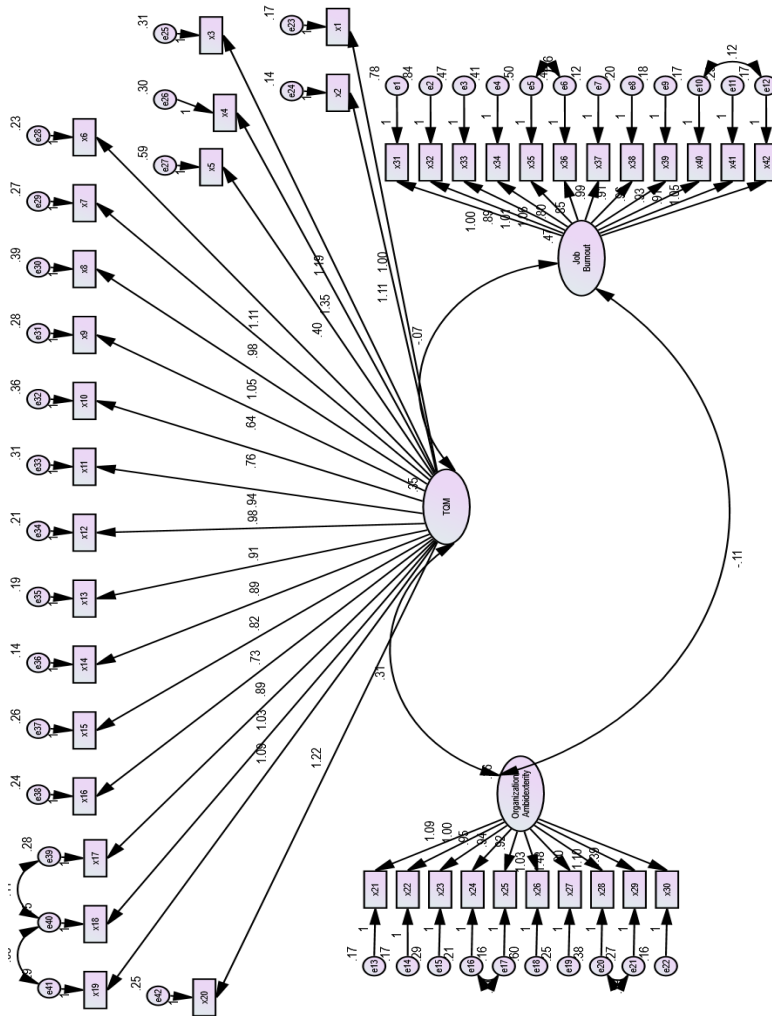
Reliability means "the extent to which the scale is stable and doesn't contradict itself". To verify the stability of the study scale, Cronbach's Alpha coefficient will be used. While, validity means that the study tool measures what it was designed to measure (Cho & Kim, 2015). The following table represent reliability coefficient & validity coefficient for the study variables.

Table (1): Reliability & validity coefficients for research variables

Variables		Items	Cronbach's Alpha coefficient	Validity Coefficient
TQM Practices		20	0.957	0.978
Dimensions	Administrative leadership & strategic direction	4	0.934	0.966
	Employee participation & empowerment	4	0.851	0.922
	Focus on clients & suppliers	4	0.889	0.943
	Continuous improvement & learning	4	0.896	0.947
	Quality of data and reports	4	0.933	0.966
Organizational Ambidexterity		10	0.939	0.969
Dimensions	Exploitation	5	0.926	0.962
	Exploration	5	0.909	0.953
Job Burnout		12	0.936	0.967
Dimensions	Emotional exhaustion	4	0.879	0.938
	Loss of human interaction	4	0.894	0.946
	Low personal achievement	4	0.945	0.972
Total		42	0.927	0.963

Value of the Cronbach's Alpha coefficients for all study variables and its dimensions exceeds 0.7, which is acceptable and reflects high level of stability and internal consistency. On the other hand, validity coefficient for each variable exceeds 0.8, and this value is considered acceptable and high as well. That's to say, the value

of the Cronbach's Alpha coefficients and validity coefficients indicates an acceptable



research tool that fits for its purpose.

Confirmatory Factor Analysis (CFA) was employed to validate hypothesized structure of research model.

Figure (2): CFA Summary.

Conducted analysis yielded unstandardized estimates, illuminating direct relationships between observed & latent variables. The observed variables, denoted by x_1 through x_{42} , represent diverse indicators measured in research questionnaire. These are posited to manifest underlying variables including total quality management, organizational ambidexterity and job burnout. Findings indicate that; indicators have varying degrees of association with their respective constructs, as evidenced by path coefficients. Indicators with higher coefficients (1.09) demonstrate stronger linkage to latent construct compared to those with lower coefficients (0.89).

Inter-construct relationships were also evaluated, results indicate direct influence of TQM and job burnout, also organizational ambidexterity was directly related to TQM, these results was denoted by path coefficients of (-0.07) and (1.22) respectively. These relationships signify that; TQM practices minimize rates of job burnout inside Suez Canal Authority. Moreover, the capacity for Organizational Ambidexterity appears to bolster TQM initiatives. The model also includes a covariance path between job burnout & organizational ambidexterity, suggesting a potential correlation between these variables. However, negative coefficient (-0.11) implies an inverse relationship, indicating that as organizational ambidexterity increases, job burnout may decrease, or vice versa. Error terms, represented by e_1 to e_{42} , were associated with each indicator, acknowledging the measurement error or unique variance inherent in the observed variables. Finally, CFA model supports theoretical propositions underlying research model, providing a statistical foundation for subsequent analyses and discussions within this research.

10.2 Classification of Research Data.

Classification of research sample was conducted depending on some personal & occupational factors for employees working within Suez Canal authority. Personal

& occupational factors include gender, age stage, managerial level, job title, academic qualification, and years of experience.

According to research sample description; majority of sample members were males, as their number reached 231 members, representing 84.3%, while the number of females reached 43 members, representing 15.7%. More than half of sample members belong to thirty to forty age stage, their number reached 156 members, representing about 56.9%. Regarding academic qualifications, majority of sample members hold bachelor's degree, their number reached 106 members, representing 38.7%, followed by those holding a Postgraduate (Diploma / MA/ PhD), their number reached 93 representing about 33.9%. With respect to managerial level, majority of research sample members belong to Middle management level, their number reached 133 people representing about 48.5% from the whole sample size. Considering job title, about one third of research sample hold the position of Senior Executive, their number reached 92 members, representing about 33.6%.

10.3 Descriptive Statistics for Research Variables.

In this section, the researcher will discuss some statistical measures (Ross, 2017) for questions asked to measure each of research variables.

10.3.1 TQM Practices.**Table (2): Mean & Standard Deviation for questions related to TQM Practices.**

N	Questions	Mean	S.D	Importance Order	General Trend
First: Administrative Leadership & Strategic Direction					
1	Authority's management realizes the importance of applying quality concept.	4.241	0.716	1	Comp. agree
2	Authority's management supports and spreads the culture of quality among all employees.	4.219	0.753	2	Comp. agree
3	Authority's management encourages employees to continuously learn, invent and create.	4.077	0.967	3	Agree
4	Authority's management works on enhancing quality values internally.	3.956	0.893	4	Agree
Dimension Mean		4.123			Agree
Second: Employee Participation & Empowerment					
1	Authority's management works on enhancing teamwork practices and workers empowerment.	4.047	0.776	1	Agree
2	Authority's management appreciates distinguished employees for their role in improving the level of operations efficiency.	3.996	0.810	2	Agree
3	Authority's management keen on employee's participation in setting goals and solving problems.	3.956	0.876	3	Agree
4	Authority's management provides training programs for employees according to job needs.	3.909	0.805	4	Agree
Dimension Mean		3.977			Agree

N	Questions	Mean	S.D	Importance Order	General Trend
Third: Focus on Clients & Suppliers					
1	Authority's management keen to deal with client complaints for the purpose of improving and developing performance.	4.168	0.785	1	Agree
2	Authority's management keen to communicate permanently with its clients.	4.157	0.653	2	Agree
3	Authority's management keen to communicate permanently with its suppliers.	4.058	0.739	3	Agree
4	Authority's management keen to provide technical support and assistance to clients.	4.051	0.749	4	Agree
	Dimension Mean	4.109			Agree
Fourth: Continuous Improvement & learning					
1	Authority's management keen to use advanced technological techniques while reviewing & examining operational processes.	4.402	0.705	1	Comp. agree
2	Authority's management keen to verify the accuracy and compatibility of service design before providing such operations.	4.226	0.690	2	Comp. agree
3	Authority's management keen to enhance clients value added by providing new improved services.	4.219	0.654	3	Comp. agree
4	Authority's management keen to use quality control standards to improve continuously the level of operational efficiency.	4.212	0.645	4	Comp. agree
	Dimension Mean	4.265			Comp. agree

N	Questions	Mean	S.D	Importance Order	General Trend
Fifth: Quality of Data & Reports					
1	Authority's management keen to make its decisions based on reliable and valid information.	4.332	0.748	1	Comp. agree
2	Authority's management keen to raise the quality of available data through using effective systems in order to rationalize decision-making process.	4.288	0.742	2	Comp. agree
3	Authority's management supports data & information analysis processes at all organizational levels.	4.146	0.839	3	Agree
4	Authority's management keen to provide smart & agile communication channels through all organizational levels to ensure timely access of data & information.	4.080	0.873	4	Agree
	Dimension Mean	4.212			Comp. agree
	Overall Mean of TQM	4.137			Agree

Regarding the first dimension, it is clear that, sample members' opinions fall between completely agreeing & agreeing, mean values for this dimension exceed 3.4 and standard deviation values are extremely low referring to low dispersion between respondents. Regarding the second and third dimensions, sample members' opinions reflect agreement, mean values fall between 3.4 and 4.19. However, fourth dimension represent completely agreeing with high mean value reached 4.265.

Finally, sample members’ opinions regarding the fifth dimension falls between completely agreeing and agreeing, this was evident by the mean value of 4.212. The overall mean of the whole independent variable (TQM practices) reached 4.137.

10.3.2: Organizational Ambidexterity.

Table (3): Mean & Standard Deviation for organizational ambidexterity.

N	Statements	Mean	S.D	Importance Order	General Trend
First: Exploitation					
1	Authority’s management keen to expand the scope of services provided to clients.	4.186	0.683	1	Agree
2	Authority’s management keen to improve quality of services provided to suit clients’ needs.	4.172	0.782	2	Agree
3	Authority’s management keen to utilize technological advances in order to maintain client’s satisfaction.	4.110	0.728	3	Agree
4	Authority’s management keen to develop internal managerial systems with the aim of raising the level of operational performance.	4.106	0.789	4	Agree
5	Authority’s management keen to expand the scale of current services while reducing their internal processing costs.	4.022	0.731	5	Agree
Dimension Mean		4.119			Agree
Second: Exploration					
1	Authority’s management keen to deploy and test new ideas & services to ensure clients satisfaction.	4.128	0.844	1	Agree

N	Statements	Mean	S.D	Importance Order	General Trend
2	Authority's management keen to follow flexible strategies to attract new clients.	4.117	0.822	2	Agree
3	Authority's management keen to follow flexible management systems to ensure immediate response to market changes.	4.080	1.024	3	Agree
4	Authority's management keen to form specialized work teams to achieve radical innovation with the aim of enhancing strategic performance.	4.055	0.930	4	Agree
5	Authority's management seek continuously to diffuse its activities through conducting geographical expansion.	3.964	0.998	5	Agree
	Dimension Mean	4.069			Agree
	Overall Mean of the Variable	4.094			Agree

Regarding the first dimension of organizational ambidexterity (Exploitation) and the second dimension of organizational ambidexterity (Exploration), it is clear that samples' opinions represent agreeing, with a mean value exceeding 4.0 associated with low standard deviation values which reflects low dispersion between sample members' opinions. The overall mean of the whole organizational ambidexterity variable represents agreement with a mean value reached 4.094.

10.3.3 Job Burnout.

Table (4): Mean & standard deviation for Job Burnout variable.

N	Questions	Mean	S.D	Importance order	General Trend
First: Emotional Exhaustion					
1	In morning I feel exhausted & unable to face another day of work.	2.712	1.103	1	Quite agree
2	I feel that my work within the authority drains me emotionally.	2.460	1.119	2	disagree
3	I am bored because of my work in the authority.	2.190	0.976	3	disagree
4	I feel collapsed and suffocated sometimes due to work pressures.	2.117	0.969	4	disagree
Dimension Mean		2.370		disagree	
Second: Loss of Human Interaction					
1	I have been treating others harshly since I took this job.	2.058	0.900	1	disagree
2	I no longer care about what happens to my colleagues at work.	2.022	0.873	2	disagree
3	I feel that my feelings will dull because of my work within the authority.	1.953	0.766	3	disagree
4	Some of my colleagues think that I am the cause of some of their problems.	1.923	0.764	4	disagree
Dimension Mean		1.989		disagree	
Third: Low Personal Achievement					
1	I feel that I have achieved nothing in this work.	2.040	0.827	1	disagree

N	Questions	Mean	S.D	Importance order	General Trend
2	I have doubts that my impact on performance and achievement rates are negative.	2.004	0.832	2	disagree
3	I feel failure in my work and tend to evaluate myself negatively.	1.967	0.781	3	disagree
4	I feel loss of personal commitment in work relationships.	1.923	0.759	4	disagree
	Dimension Mean	1.984			disagree
	The overall Mean of the variable	2.114			disagree

Regarding the first dimension of job burnout, sample members' opinions fall between quite agree & disagree, with a mean values between 2.1 and 2.75 associated with low standard deviation values. General trend for this dimension is disagreement, with a mean value of 2.370. with respect to the second and third dimension of job burnout, sample members' opinions represent disagreement, mean values fall between 1.8 and 2.59, general trend for both dimensions is disagreement with mean values of 1.989 & 1.984 respectively. Overall mean of Job Burnout variable represents disagreement with a mean value of 2.114.

10.4 Testing Research Hypotheses.

10.4.1 Testing the First Main Hypothesis.

Simple linear regression analysis will be used to test the first main hypothesis of this research with its two derived sub-hypotheses, simple linear regression aims to test the relationship between one independent variable and one dependent variable, it was confirmed that, assumptions for using simple regression were met for

all hypotheses (normality of the probability distribution of residuals, Homoscedasticity, and no Autocorrelation).

Ordinary Least Squares method (OLS) was used to estimate the parameters of the simple linear regression model to measure the impact of TQM practices on overall level of organizational ambidexterity within Suez Canal Authority. First main hypothesis can be tested through the following model:

$$y_1 = \beta_0 + \beta_1 x + e_{it}$$

Where:

y_1 : Organizational Ambidexterity (dependent variable).

x : TQM practices (independent variable).

β_0 : Regression constant, and β_1 represents the regression coefficient.

e_{it} : Random error.

Table (5): Results of testing the first main hypothesis.

Independent Variable	Coefficients β_i	F- test		T- test		coeff of determination R^2	Multiple correlation coefficient R
		F- statistic	P value (Sig.)	T- statistic	P-value (Sig.)		
(Constant)	0.052	623.03	0.000	0.317	0.751	0.696	0.834
TQM practices	0.977			24.961	0.000		

Results of F-test indicates significance of the regression model as a whole, where P-Value (Sig.) =0.00 is less than 0.05, thus we accept the alternative hypothesis that the model is significant. With respect to coefficient of determination, value of $R^2 = 0.696$, which means that TQM practices explain 69.6% of changes that occur in the value of organizational ambidexterity. Regarding correlation

coefficient, value of $R = 0.834$, which indicates existence of strong correlation between TQM practices & organizational ambidexterity. Considering significance of independent variable, value of $\beta_1 = 0.977$, which indicates existence of positive relationship between TQM practices as an independent variable and organizational ambidexterity as a dependent variable. Results of t- test indicates that this relationship is significant, as the P-value (Sig.) = .000 which is Less than (0.05).

In the light of these analysis, the researcher can accept the first main hypothesis as there is a positive significant relationship between TQM practices and levels of organizational ambidexterity with a confidence level of 95%.

Considering the first sub-hypothesis, the impact of applying TQM practices on exploitation dimension of organizational ambidexterity can be identified through the following model:

$$y_2 = \beta_0 + \beta_1 x + e_{it}$$

Where:

y_2 : Exploitation dimension of organizational ambidexterity (dependent variable).

x : TQM practices (independent variable).

β_0 : Regression constant, and β_1 represents the regression coefficient.

e_{it} : Random error.

Table (6): Results of testing the first sub-hypothesis

Independent Variable	Coefficients β_i	F- test		T- test		coeff of determination R^2	Multiple correlation coefficient R
		F- statistic	P value (Sig.)	T- statistic	P-value (Sig.)		
(Constant)	.148	688.457	.000	.968	.334	.717	.847
TQM practices	.960			26.238	.000		

Results of F-test indicates significance of the whole regression model, where P-Value (Sig.) = 0.00 is less than 0.05, thus we accept the alternative hypothesis that the model is significant. With respect to coefficient of determination, value of $R^2 = .717$, which means that TQM practices explain about 71.7% of changes that occur in value of the exploitation dimension of organizational ambidexterity, remaining percentage is due to random error. Regarding correlation coefficient, value of $R = .847$, which indicates existence of strong correlation between TQM practices & exploitation dimension of organizational ambidexterity. Value of $\beta_1 = .960$, which indicates existence of a positive relationship between TQM practices and exploitation dimension of organizational ambidexterity. T- test results also indicate that this relationship is significant, as the P-value (Sig.) = .000 which is Less than (0.05).

In the light of these analysis, the researcher can accept the first sub-hypothesis as there is a positive significant relationship between TQM practices & exploitation dimension of organizational ambidexterity.

Considering the second sub-hypothesis, the impact of applying TQM practices on exploration dimension of organizational ambidexterity within Suez Canal Authority can be identified through the following model:

$$y_3 = a_0 + a_1 x + e_{it}$$

Where:

y_3 : Exploration dimension of organizational ambidexterity (dependent variable).

x : TQM practices (independent variable).

a_0 : Regression constant, and a_1 represents the regression coefficient.

e_{it} : Random error.

The following table shows results of simple regression analysis:

Table (7): Results of testing second sub-hypothesis.

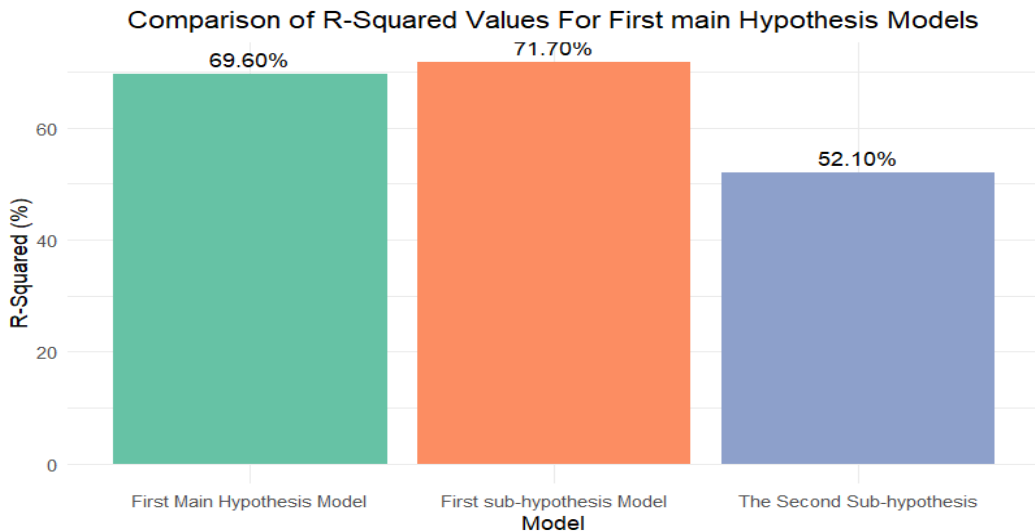
Independent variable	Coefficients a_i	F- test		T- test		coeff of determination R^2	Multiple correlation coefficient R
		F- statistic	P-value (Sig.)	t- statistic	P-value (Sig.)		
(Constant)	-.044			-.183	.855		
TQM practices	.994	296.059	.000	17.206	.000	.521	.722

Results of F-test indicates significance of the whole regression model, P-Value (Sig.) =0.00 is less than 0.05, thus we accept the alternative hypothesis that the model is significant. With respect to coefficient of determination, value of $R^2 = .521$, which means that TQM practices explain 52.1% of changes that occur in the value of exploration dimension of organizational ambidexterity. Regarding

correlation coefficient, value of $R = .722$, which indicates existence of a strong correlation between TQM practices and exploration dimension. Value of $\alpha_1 = .994$, which indicates existence of positive relationship between TQM practices and exploration dimension of organizational ambidexterity. Results of t-test indicates that this relationship is significant, P-value (Sig.) = .000 which is less than (0.05).

In the light of these analysis, the researcher can accept the second sub-hypothesis as there is a positive significant relationship between TQM practices and exploration dimension of organizational ambidexterity with a confidence level of 95%. Coefficient of determination (R^2) for the first main hypothesis with its two derived sub-hypotheses can be represented in the following figure.

(Figure 3): R-squared Values for the First Main Hypothesis



10.4.2 Testing the Second Main Hypothesis.

Simple linear regression analysis will be used to test the second main hypothesis of this research with its three derived sub-hypotheses. Ordinary Least Squares method (OLS) was used to estimate the parameters of the simple linear

regression model to measure the impact of TQM practices on overall level of job burnout (emotional exhaustion, loss of human interaction, low personal achievement) within Suez Canal Authority. Considering the second main hypothesis, the impact of applying TQM practices on overall level of job burnout can be represented in the following table:

Table (8): Results of testing the second main hypothesis.

Independent variable	Coefficients a_i	F- test		T- test		coeff of determination R^2	Multiple correlation coefficient R
		F- statistic	P-value (Sig.)	t- statistic	P-value (Sig.)		
(Constant)	3.186	13.48	0.000	10.811	0.000	0.047	0.217
TQM practices	-0.259			-3.672	0.000		

Results of F-test indicates significance of the regression model as a whole, where the P-Value (Sig.) =0.00 is less than 0.05, thus we accept the alternative hypothesis that the model is significant. Considering coefficient of determination, value of $R^2 = .047$, which means that TQM practices explain 4.7% of changes that occur in job burnout. With respect to correlation coefficient, value of $R = .217$, which indicates existence of moderate correlation between TQM practices & job burnout.

Considering significance of the independent variable, value of $\beta_1 = -0.259$, which indicates existence of negative relationship between TQM practices and job burnout. Result of the t-test indicates that this relationship is significant, P-value (Sig.) = .000 which is less than (0.05). In the light of these analysis, the researcher can

accept the second main hypothesis as there is a negative significant relationship between TQM practices and job burnout rates with a confidence level of 95%.

Considering the first sub-hypothesis, the impact of applying TQM practices on emotional exhaustion dimension of job burnout within Suez Canal Authority can be represented in the following table:

Table (9): Results of testing the first sub-hypothesis

Independent variable	Coefficients a_i	F- test		T- test		coeff of determination R^2	Multiple correlation coefficient R
		F- statistic	P-value (Sig.)	t- statistic	P-value (Sig.)		
(Constant)	4.520	34.339	.000	12.198	.000	.112	.335
TQM practices	-.520			-5.860	.000		

Results of F-test indicates significance of the regression model as a whole, P-Value (Sig.) = 0.00 is less than 0.05, thus we accept the alternative hypothesis that the model is significant. Considering coefficient of determination, value of $R^2 = .112$, which means that TQM practices explain 11.2% of the changes that occur in the value of emotional exhaustion dimension of job burnout, remaining percentage is due to random error. Regarding correlation coefficient, value of $R = .335$, which indicates existence of moderate correlation between TQM practices and emotional exhaustion dimension of job burnout.

Value of $\beta_1 = -.520$, which indicates existence of negative relationship between TQM practices and emotional exhaustion dimension of job burnout. Result of t- test indicates that this relationship is significant, as the P-value (Sig.) = .000

which is Less than (0.05). In the light of these analysis, the researcher can accept the first sub-hypothesis as there is a negative significant relationship between TQM practices and emotional exhaustion dimension of job burnout with a confidence level of 95%.

Considering the second Sub-hypothesis, the impact of applying TQM practices on loss of human interaction dimension of job burnout within Suez Canal Authority can be represented in the following table:

Table (10): Results of testing the second sub-hypothesis

Independent variable	Coefficients a_i	F- test		T- test		coeff of determination R^2	Multiple correlation coefficient R
		F- statistic	P-value (Sig.)	t- statistic	P-value (Sig.)		
(Constant)	2.362	1.421	.234	7.472	.000	.005	.072
TQM practices	-.090			-1.192	.234		

Results of F-test indicates non-significant model, where P-Value (Sig.) = .234 is more than 0.05, thus we accept the null hypothesis that the model is non-significant. Value of $R^2 = .005$, which means that TQM practices explain .5% of changes that occur in value of loss of human interaction dimension. Value of $R = .072$, which indicates existence of weak correlation between TQM practices & loss of human interaction dimension. Value of $a_1 = -.090$, which indicates existence of negative relationship between TQM practices and loss of human interaction dimension of job burnout.

In the light of these analysis, the researcher can reject the second sub-hypothesis as there is a negative non-significant relationship between TQM practices & loss of human interaction dimension of job burnout.

Considering the third Sub-hypothesis, results shown below:

Table (11): Results of testing the third sub-hypothesis

Independent variable	Coefficients n_i	F- test		T- test		Coeff of determination R^2	Multiple correlation coefficient R
		F- statistic	P- value (Sig.)	t- statistic	P- value (Sig.)		
(Constant)	2.674	4.652	.032	8.275	.000	.017	.130
TQM practices	-.167			-2.157	.032		

Results of F-test indicates significance of the regression model as a whole, where P-Value (Sig.) =0.032 is less than 0.05, thus we accept the alternative hypothesis that the model is significant. Considering coefficient of determination, value of $R^2 = .017$, which means that TQM practices explain 1.7% of changes that occur in value of low personal achievement dimension of job burnout. Value of $R = .130$, which indicates existence of weak correlation between TQM practices and low personal achievement dimension of job burnout.

Value of $\beta_1 = -.167$, which indicates existence of negative relationship between TQM practices and low personal achievement dimension of job burnout. Result of the t-test indicates that this relationship is significant, P-value (Sig.) = 0.032 which is less than (0.05). In the light of these analysis, the researcher can accept the third sub-hypothesis as there is a negative significant relationship between TQM practices and low personal achievement dimension of job burnout.

10.4.1 Testing the Third Main Hypothesis.

In order to test the third main hypothesis with its two derived sub-hypotheses the researcher will conduct analysis of variance test (ANOVA), it was confirmed that assumptions of using this test (normality & homogeneity of variance) were met.

Table (12): Results of testing the first sub-hypothesis

Variable	Classes	Mean	Standard Deviation	F- test	
				F- statistic	P-value (Sig.)
TQM practices	Agent Manager	4.1096	.45078	3.845	.002
	Department Head	4.1944	.46078		
	Department Agent	4.0092	.60008		
	Business Manager	4.1597	.53781		
	Assistant Business Manager	3.9069	.55358		
	Senior Executive	4.3147	.58603		

P-value (sig.) = 0.002 which is less than (0.05), therefore there is statistical significant differences between respondent's responses according to their Job title. Accordingly, the researcher will reject the first sub-hypothesis. In order to determine source of differences, the researcher will use least significant difference test⁷.

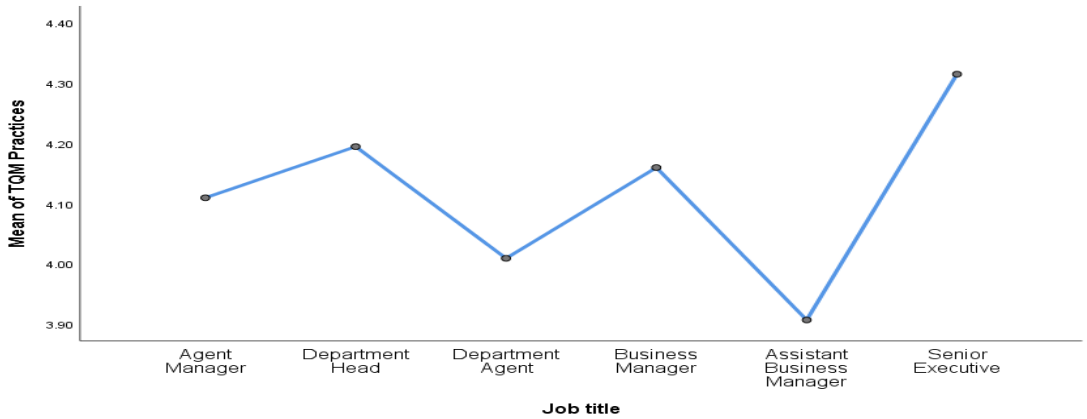
⁷ Dodge, Y. (2008), Least Significant Difference Test. The Concise Encyclopedia of Statistics, Springer, New York, 302-304. The least significant difference (LSD) test is used in the context of the analysis of variance, when the F-ratio suggests rejection of the null hypothesis H_0 , that is, when the difference between population means is significant. This test helps to identify populations whose means are statistically different.

Table (13): Results of testing the first sub-hypothesis

Pairwise Comparisons	Mean Difference (I-J)	P-value (Sig.)
Agent Manager - Department Head	-.08483	.623
Agent Manager - Department Agent	.10046	.436
Agent Manager - Business Manager	-.05006	.738
Agent Manager- Assistant Business Manager	.20267	.162
Agent Manager - Senior Executive	-.20506	.101
Department Head - Department Agent	.18529	.212
Department Head - Business Manager	.03477	.835
Department Head- Assistant Business Manager	.28750	.077
Department Head - Senior Executive	-.12023	.407
Department Agent - Business Manager	-.15052	.214
Department Agent - Assistant Business Manager	.10221	.375
Department Agent - Senior Executive	-.30552	.001
Business Manager- Assistant Business Manager	.25273	.067
Business Manager - Senior Executive	-.15500	.185
Assistant Business Manager - Senior Executive	-.40773	.000

Based on these results, significant differences exist between department agents and senior executives, also results revealed significant difference between assistant business managers & senior executives according to their opinions regarding TQM practices and its impact on firm's level of organizational ambidexterity and rates of job burnout. In both cases p-value (sig.) was less than (0.05). Difference between rest of job titles was found to be insignificant as p-value (sig.) was greater than (0.05). Mean differences according to job title categories can be represented in the following figure.

(Figure 4): Mean Differences for TQM practices according to job title



Considering the second sub-hypothesis, results of ANOVA test can be represented in the following table:

Table (14): Results of testing the second sub-hypothesis

Variable	Classes	Mean	Standard Deviation	F- test	
				F- statistic	P-value (Sig.)
TQM practices	First Line management	4.2959	.59685	6.765	.001
	Middle management	4.0188	.57302		
	Senior management	4.1443	.45151		

Based on ANOVA test results, P-value (sig.) = 0.001 which is less than (0.05), therefore there is statistical significant differences between respondent’s responses within Suez Canal Authority according to their managerial level. Accordingly, the researcher will reject the second sub-hypothesis. In order to determine source of the differences, the researcher will use least significant difference test (LSD).

Table (15): Results of testing the second sub-hypothesis

Pairwise comparisons	Mean Difference (I-J)	P-value (Sig.)
First Line management - Middle management	.27708	.000
First Line management - Senior management	.15156	.141
Middle management - Senior management	-.12552	.202

Based on these results, significant differences exist between employees in first line management level & employees in middle management level, p-value (sig.) reached .000, which is less than (0.05). On the other hand, differences between the employees in senior management level & employees in both first line management level and middle management level was found to be non-significant, p-value (sig.) was greater than (0.05).

(Figure 5): Mean Differences according to managerial level



11. Findings & Recommendations.

Results indicates that, there is a positive significant relationship between applying TQM practices within Suez Canal Authority and the overall level of organizational ambidexterity. When considering both dimensions of organizational ambidexterity, TQM practices was found to explain about 70% of changes that occur

in level of organizational ambidexterity within Suez Canal Authority, correlation coefficient also revealed strong correlation between TQM practices and overall level of organizational ambidexterity inside the authority (Pertusa-Ortega et al., 2021; Gieske et al., 2019; Palm & Lilja, 2017; Galvez et al., 2016).

Simultaneously, Results showed positive significant relationship between applying TQM practices within Suez Canal Authority and exploitation dimension, TQM practices found to explain about 71.7% of changes that occur in value of exploitation dimension of organizational ambidexterity. Results also showed positive significant relationship between applying TQM practices within Suez Canal Authority and exploration dimension, TQM practices found to explain about 52.1% of changes that occur in value of exploitation dimension of organizational ambidexterity (Kafetzopoulos, 2020; Snell et al., 2015).

Regarding the relationship between TQM practices & rates of job burnout, results indicates negative significant relationship between TQM practices and overall rates job burnout inside Suez Canal Authority. TQM practices was found to explain about 4.7% of changes that occur job burnout rates (Bakhshi et al., 2019). Simultaneously, Results showed negative significant relationship between applying TQM practices within Suez Canal Authority and emotional exhaustion dimension, TQM practices explain about 11.2% of the changes that occur in value of emotional exhaustion dimension of job burnout (Song et al., 2020; Lu & Gursoy, 2016; Lizano & Barak, 2015). Results also showed negative significant relationship between applying TQM practices within Suez Canal Authority and low personal achievement dimension, TQM practices explain about 1.7% of changes that occur in value of low personal achievement dimension of job burnout. On the other hand, negative non-significant relationship was found between TQM practices and loss of human interaction dimension of job burnout.

However, the researcher found significant difference between respondent's responses within different departments inside Suez Canal Authority based on respondent's job title and managerial level. Regarding job title, significant differences exist between department agents & senior executives, also results revealed significant difference between assistant business managers & senior executives according to their opinions regarding TQM practices and its impact on firm's level of organizational ambidexterity and rates of job burnout. Considering managerial level, results showed significant differences between employees in first line management level & middle management level. However, differences between employees in senior management level and both first line & middle management level was found to be non-significant.

In the light of research results shown previously, the researcher recommends all managers and decision makers inside public institutions generally and inside Suez Canal Authority specifically to be careful in applying & following TQM practices within their institutions as these practices will have critical impact on levels of organizational ambidexterity and rates of job burnout. In this regard, the researcher recommends senior management level inside Suez Canal Authority to continue internal reform & development efforts through investing more in human element, support & spread culture of quality, provide training programs, appreciate distinguished employees, enhance teamwork practices & employee participation, utilize advanced technology, provide smart & agile communication channels, empower employees, and take decisions based on reliable & valid information.

References

Abbas, J. (2020). Impact of total quality management on corporate green performance through the mediating role of corporate social responsibility. *Journal of Cleaner Production*, 242, 118458. <https://doi.org/10.1016/j.jclepro.2019.118458>

Ajmal, M. M., Tuomi, V., Helo, P. T., & Sandhu, M. A. (2016). TQM practices in public sector: Case of finnish healthcare organizations. *International Journal of Information Systems in the Service Sector*, 8(1), 34–44. <https://doi.org/10.4018/IJISS.2016010103>

Al- Saffar, N. A. G., & Obeidat, A. M. (2020). The effect of total quality management practices on employee performance: The moderating role of knowledge sharing. *Management Science Letters*, 77–90. <https://doi.org/10.5267/j.msl.2019.8.014>

Al-Dhaafri, H. S., Al-Swidi, A. K., & Yusoff, R. Z. Bin. (2016). The mediating role of TQM and organizational excellence, and the moderating effect of entrepreneurial organizational culture on the relationship between ERP and organizational performance. *The TQM Journal*, 28(6), 991–1011. <https://doi.org/10.1108/tqm-04-2014-0040>

Al-Dhaafri, H. S., & Alosani, M. S. (2020). Impact of total quality management, organizational excellence and entrepreneurial orientation on organizational performance: empirical evidence from the public sector in UAE. *Benchmarking: An International Journal*, 27(9), 2497–2519. <https://doi.org/10.1108/bij-02-2020-0082>

Alharthy, F. S., & Ajina, A. (2023). The Impact of Applying Quality Standards on the Internal Operations in the Public Sector in the Sultanate of Oman. *International Journal of Professional Business Review*, 8(5), e01608. <https://doi.org/10.26668/businessreview/2023.v8i5.1608>

Alshourah, S. (2021). Total quality management practices and their effects on the quality performance of Jordanian private hospitals. *Management Science Letters*, 11(1), 67–76. <https://doi.org/10.5267/j.msl.2020.8.029>

Anil, A. P., & K.P, S. (2019). TQM practices and its performance effects – an integrated model. *International Journal of Quality and Reliability Management*, 36(8), 1318–1344. <https://doi.org/10.1108/IJQRM-10-2018-0266>

Aquilani, B., Silvestri, C., Ruggieri, A., & Gatti, C. (2017). A systematic literature review on total quality management critical success factors and the identification of new avenues of research. *The TQM Journal*, 29(1), 184–213. <https://doi.org/10.1108/tqm-01-2016-0003>

Asif, M., & de Vries, H. J. (2015). Creating ambidexterity through quality management. *Total Quality Management and Business Excellence*, 26(11–12), 1226–1241. <https://doi.org/10.1080/14783363.2014.926609>

Aziz, R. Z. A., & Morita, H. (2016). National culture, organizational culture, total quality management implementation, and performance: an empirical investigation. *International Journal of Productivity and Quality Management*, 19(2), 139. <https://doi.org/10.1504/ijpqm.2016.10000151>

Babu, F., & Thomas, S. (2021). Quality management practices as a driver of employee satisfaction: exploring the mediating role of organizational image. *International Journal of Quality and Service Sciences*, 13(1), 157–174. <https://doi.org/10.1108/IJQSS-10-2019-0124>

Bahia, T. H. A., Abbas, B. A. H., & Idan, A. R. (2023). Total Quality Management as a Philosophy to Improve the Performance of the Academic Organization. *International Journal of Professional Business Review*, 8(1), e01157. <https://doi.org/10.26668/businessreview/2023.v8i1.1157>

Bakhshi, E., Gharagozlou, F., Moradi, A., & Naderi, M. R. (2019). Quality of work life and its association with job burnout and job performance among Iranian healthcare employees in Islamabad-e Gharb, 2016. *Journal of Occupational Health and Epidemiology*, 8(2), 94–101. <https://doi.org/10.29252/johe.8.2.94>

Barouch, G., & Kleinhans, S. (2015). Learning from criticisms of quality management. *International Journal of Quality and Service Sciences*, 7(2/3), 201–216. <https://doi.org/10.1108/ijqss-02-2015-0026>

Basinska, B. A., & Dåderman, A. M. (2019). Work Values of Police Officers and Their Relationship With Job Burnout and Work Engagement. *Frontiers in Psychology*, 10, 442. <https://doi.org/10.3389/fpsyg.2019.00442>

Bathaei, A., Awang, S. R., & Ahmad, T. (2021). An overview of organizational performance and total quality management. *Journal of Review in Science and Engineering*, 2021, 1–7.

Bazmi, E., Alipour, A., Yasamy, M. T., Kheradmand, A., Salehpour, S., Khodakarim, S., & Soori, H. (2019). Job Burnout and Related Factors among Health Sector Employees. *Iranian Journal of Psychiatry*. <https://doi.org/10.18502/ijps.v14i4.1982>

Bottini, S., Slowiak, J. M., & Kazee, A. (2024). Conceptualizing Job Burnout Through a Behavioral Lens: Implications for Organizational Behavior Management. *Journal of Organizational Behavior Management*, 1–24.

Bouranta, N., Psomas, E., Suárez-Barraza, M. F., & Jaca, C. (2019). The key factors of total quality management in the service sector: a cross-cultural study. *Benchmarking*, 26(3), 893–921. <https://doi.org/10.1108/BIJ-09-2017-0240>

Centobelli, P., Cerchione, R., Esposito, E., & Shashi. (2019). Exploration and exploitation in the development of more entrepreneurial universities: A twisting

learning path model of ambidexterity. *Technological Forecasting and Social Change*, 141, 172–194. <https://doi.org/10.1016/j.techfore.2018.10.014>

Chams-Anturi, O., Moreno-Luzon, M. D., & Escorcia-Caballero, J. P. (2019). Linking organizational trust and performance through ambidexterity. *Personnel Review*, 49(4), 956–973. <https://doi.org/10.1108/pr-07-2018-0239>

Cho, E., & Kim, S. (2015). Cronbach's Coefficient Alpha. *Organizational Research Methods*, 18(2), 207–230. <https://doi.org/10.1177/1094428114555994>

Clauss, T., Kraus, S., Kallinger, F. L., Bican, P. M., Brem, A., & Kailer, N. (2021). Organizational ambidexterity and competitive advantage: The role of strategic agility in the exploration-exploitation paradox. *Journal of Innovation and Knowledge*, 6(4), 203–213. <https://doi.org/10.1016/j.jik.2020.07.003>

Dahiya, R., & Raghuvanshi, J. (2023). Do values reflect what is important? Exploring the nexus between work values, work engagement and job burnout. *International Journal of Organizational Analysis*, 31(5), 1414–1434. <https://doi.org/10.1108/IJOA-02-2021-2608>

Daqar, M. A., & Constantinovits, M. (2020). The role of total quality management in enhancing the quality of private healthcare services. *Problems and Perspectives in Management*, 18(2), 64–78. [https://doi.org/10.21511/ppm.18\(2\).2020.07](https://doi.org/10.21511/ppm.18(2).2020.07)

Darmawan, D., Mardikaningsih, R., Sinambela, E. A., Arifin, S., Putra, A. R., Hariani, M., Irfan, M., & Hakim, Y. R. Al. (2020). The quality of human resources, job performance and employee loyalty. *International Journal of Psychosocial Rehabilitation*, 24(3), 2580–2592. <https://doi.org/10.37200/IJPR/V24I3/PR201903>

Do, M. H., Huang, Y. F., & Do, T. N. (2020). The effect of total quality management-enabling factors on corporate social responsibility and business

performance: evidence from Vietnamese coffee firms. *Benchmarking*, 28(4), 1296–1318. <https://doi.org/10.1108/BIJ-09-2020-0469>

Dranev, Y. I., 2020, organizational ambidexterity and performance: assessment approaches and empirical evidence, *Journal of the Knowledge Economy*, Vol.11, No.2., pp.676-691.

Elvina, E., Anggraeni, S., Sasongko, S. N., & Erlandian, A. Y. (2022). The Influence of Total Quality Management (TQM) on Quality Cost Efficiency and Managerial Performance and the Implications for Company Performance. *Indonesian Interdisciplinary Journal of Sharia Economics (IJSE)*, 5(2), 460–481. <https://doi.org/10.31538/ijse.v5i2.2161>

Fu, N., Flood, P. C., & Morris, T. (2016). Organizational ambidexterity and professional firm performance: the moderating role of organizational capital. *Journal of Professions and Organization*, 3(1), 1–16. <https://doi.org/10.1093/jpo/jov010>

Gallo, P., Balogova, B., Tomcikova, L., & Nemecek, J. (2019). The impact of the innovative Total Quality Management tool in small and medium-sized enterprises. *Marketing and Management of Innovations*, 4, 22–33. <https://doi.org/10.21272/mmi.2019.4-02>

Garousi Mokhtarzadedeh, N., Jafarpanah, I., & Zamani Babgohari, A. (2022). Knowledge management capability, entrepreneurial creativity, entrepreneurial intensity and firm performance: the mediating role of ambidexterity. *British Food Journal*, 124(7), 2179–2208. <https://doi.org/10.1108/bfj-08-2021-0942>

Gieske, H., Duijn, M., & van Buuren, A. (2020). Ambidextrous practices in public service organizations: innovation and optimization tensions in Dutch water authorities. *Public Management Review*, 22(3), 341–363. <https://doi.org/10.1080/14719037.2019.1588354>

Gieske, H., van Meerkerk, I., & van Buuren, A. (2019). The Impact of Innovation and Optimization on Public Sector Performance: Testing the Contribution of Connective, Ambidextrous, and Learning Capabilities. *Public Performance and Management Review*, 42(2), 432–460. <https://doi.org/10.1080/15309576.2018.1470014>

Giménez, J. A., Jiménez Jiménez, D., & Martínez Costa, M. (2023). Effects of the organizational culture and knowledge exploration and exploitation on results in the EFQM model framework. *Journal of Knowledge Management*, 27(6), 1607–1636. <https://doi.org/10.1108/JKM-11-2021-0868>

Galvez, I.E., Cruz, F.J.G. and Diaz, M.J.F., 2016, Evaluation of the impact of quality management systems on school climate, *International Journal of Educational Management*, Vol. 30 No. 4, pp. 474-492.

Glaveli, N., Vouzas, F. and Roumeliotou, M., 2022, The soft side of TQM and teachers job satisfaction: an empirical investigation in primary and secondary education, *The TQM Journal*, Vol. 34 No. 5, pp. 922-938. <https://doi.org/10.1108/TQM-11-2020-0269>

Hameli, K., Çollaku, L. and Ukaj, L., 2024, the impact of job burnout on job satisfaction and intention to change occupation among accountants: the mediating role of psychological well-being", *Industrial and Commercial Training*, Vol. 56 No. 1, pp. 24-40. <https://doi.org/10.1108/ICT-06-2023-0040>

Heldiana P., Agnesia C. S., Niken L., Damarendro H. P., Muhammad R. P., 2024, Identification of Employee Engagement driver: The Role of the Six Key Areas & Job Burnout in Digital Company. *European Economic Letters (EEL)*, 14(1), 1351–1362. (<https://www.eelet.org.uk/index.php/journal/article/view/1186>)

Jimoh, R., Oyewobi, L., Isa, R., & Waziri, I. (2019). Total quality management practices and organizational performance: the mediating roles of strategies for

continuous improvement. *International Journal of Construction Management*, 19(2), 162–177. <https://doi.org/10.1080/15623599.2017.1411456>

Kafetzopoulos, D. (2020). Organizational ambidexterity: antecedents, performance and environmental uncertainty. *Business Process Management Journal*, 27(3), 922–940. <https://doi.org/10.1108/bpmj-06-2020-0300>

Kassotaki, O. (2022). Review of Organizational Ambidexterity Research. *SAGE Open*, 12(1), 215824402210821. <https://doi.org/10.1177/21582440221082127>

Khalaf, M. A., & Salem, T. S. M. (2018). The moderating effect of structural barriers on TQM-performance relationship in Egyptian service organizations. *International Journal of Quality and Service Sciences*, 10(4), 349–365. <https://doi.org/10.1108/ijqss-04-2017-0035>

Kiesnere, A., & Baumgartner, R. (2019). Sustainability Management in Practice: Organizational Change for Sustainability in Smaller Large-Sized Companies in Austria. *Sustainability*, 11(3), 572. <https://doi.org/10.3390/su11030572>

Lapoint, P. A. (2022). Malcolm Baldrige National Quality Award winners: A quantitative analysis between strategic planning and human resource variables. *Quality Management Journal*, 29(4), 289–298. <https://doi.org/10.1080/10686967.2022.2112929>

Leitão, J., Pereira, D., & Gonçalves, Â. (2019). Quality of work life and organizational performance: workers' feelings of contributing, or not, to the organization's productivity. *International Journal of Environmental Research and Public Health*, 16(20). <https://doi.org/10.3390/ijerph16203803>

Lepistö, K., Saunila, M., & Ukko, J. (2022). Enhancing customer satisfaction, personnel satisfaction and company reputation with total quality management:

combining traditional and new views. *Benchmarking: An International Journal*, 31(1), 75–97. <https://doi.org/10.1108/bij-12-2021-0749>

Liu, H., Du, Y., & Zhou, H. (2022). The Impact of Job Burnout on Employees' Safety Behavior Against the COVID-19 Pandemic: The Mediating Role of Psychological Contract. *Frontiers in Psychology*, 13, 618877. <https://doi.org/10.3389/fpsyg.2022.618877>

Lizarelli, F. L., de Toledo, J. C., & Alliprandini, D. H. (2019). Relationship between continuous improvement and innovation performance: an empirical study in Brazilian manufacturing companies. *Total Quality Management and Business Excellence Business Excellence*, 32(9–10), 981–1004. <https://doi.org/10.1080/14783363.2019.1653178>

Lizano, E.L. and Barak, M.M., 2015, Job burnout and affective wellbeing: a longitudinal study of burnout and job satisfaction among public child welfare workers, *Children and Youth Services Review*, Vol. 55, pp. 18-28.

Lloria, M. B., & Burbano, L. (2024). Ambidextrous cultural values in the management of organisational ambidexterity. *British Food Journal*, 126(3), 1166–1182.

Lu, A.C.C. and Gursoy, D., 2016, Impact of job burnout on satisfaction and turnover intention: do generational differences matter? *Journal of Hospitality & Tourism Research*, Vol. 40 No. 2, pp. 210-235.

Moreno-Luzon, M., Gil-Marques, M., Lloria, M. B., & Salas-Vallina, A. (2023). Quality-oriented human resource practices (QHRP), ambidextrous culture and organizational ambidexterity: a study of green agro-food companies. *European Journal of Management and Business Economics*. <https://doi.org/10.1108/ejmbe-03-2023-0060>

Nafei, W. A. (2019). Organizational Success as a Mediating Variable of the Relationship between Organizational Learning and Organizational Excellence: A Study on Telecommunications Sector in Egypt. *International Journal of Business and Management*, 13(1), 244. <https://doi.org/10.5539/ijbm.v13n1p244>

Nguyen, T. L. H., & Nagase, K. (2019). The influence of total quality management on customer satisfaction. *International Journal of Healthcare Management*, 12(4), 277–285. <https://doi.org/10.1080/20479700.2019.1647378>

Nien-Te, K., Lin, L.-P., Chang, K.-C., & Cheng, Y.-S. (2024). How Emotional Labor and Job Stress Affect the Job Performance of Tour Leaders: Moderating Effects of Job Characteristics and Social Media Use Intensity. *International Journal of Hospitality & Tourism Administration*, 25(1), 30–58.

Palm, K., & Lilja, J. (2017). Key enabling factors for organizational ambidexterity in the public sector. *International Journal of Quality and Service Sciences*, 9(1), 2–20. <https://doi.org/10.1108/ijqss-04-2016-0038>

Peng, X., Prybutok, V., & Xie, H. (2020). Integration of supply chain management and quality management within a quality focused organizational framework. *International Journal of Production Research*, 58(2), 448–466. <https://doi.org/10.1080/00207543.2019.1593548>

Pertusa-Ortega, E. M., Tarí, J. J., Pereira-Moliner, J., Molina-Azorín, J. F., & López-Gamero, M. D. (2021). Developing ambidexterity through quality management and their effects on performance. *International Journal of Hospitality Management*, 92, 102720. <https://doi.org/10.1016/j.ijhm.2020.102720>

Pimentel, L., & Major, M. (2016). Key success factors for quality management implementation: evidence from the public sector. *Total Quality Management and Business Excellence*, 27(9–10), 997–1012. <https://doi.org/10.1080/14783363.2015.1055239>

Psomas, E., Vouzas, F., Bouranta, N., & Tasiou, M. (2017). Effects of total quality management in local authorities. *International Journal of Quality and Service Sciences*, 9(1), 41–66. <https://doi.org/10.1108/ijqss-04-2016-0035>

Roni, M. S., & Djajadikerta, H. G. (2021). *Data Analysis with SPSS for Survey-based Research*. In *Data Analysis with SPSS for Survey-based Research*. Springer Singapore. <https://doi.org/10.1007/978-981-16-0193-4>

Ross, S. M. (2017). *Introductory statistics*. Academic Press.

Sabella, A., Kashou, R., & Omran, O. (2014). Quality management practices and their relationship to organizational performance. *International Journal of Operations and Production Management*, 34(12), 1487–1505. <https://doi.org/10.1108/IJOPM-04-2013-0210>

Salas-Vallina, A., Alegre, J., & Ferrer-Franco, A. (2021). Well-being-oriented management (WOM), organizational learning and ambidexterity in public healthcare: a two wave-study. *International Public Management Journal*, 25(6), 815–840. <https://doi.org/10.1080/10967494.2021.1942341>

Salimian, H., Rashidirad, M., & Soltani, E. (2020). Supplier quality management and performance: the effect of supply chain oriented culture. *Production Planning and Control*, 32(11), 1–17. <https://doi.org/10.1080/09537287.2020.1777478>

Sfakianaki, E., 2019, A measurement instrument for implementing total quality management in Greek primary and secondary education, *International Journal of Educational Management*, Vol. 33 No. 5, pp. 1065-1081.

Shafiq, M., Lasrado, F., & Hafeez, K. (2019). The effect of TQM on organisational performance: empirical evidence from the textile sector of a developing country using SEM. *Total Quality Management and Business Excellence*, 30(1–2), 31–52. <https://doi.org/10.1080/14783363.2017.1283211>

Slåtten, T., Mutonyi, B. R., Nordli, A. J., & Lien, G. (2023). The role of ambidextrous leadership and employee ambidexterity in enhancing service quality of care and creativity - a study of health professionals. *BMC Health Services Research*, 23(1), 1252. <https://doi.org/10.1186/s12913-023-10275-3>

Snell, L., Sok, P., & Danaher, T. S. (2015). Achieving growth-quality of work life ambidexterity in small firms. *Journal of Service Theory and Practice*, 25(5), 529–550. <https://doi.org/10.1108/jstp-04-2014-0064>

Song, X., Xiang, M., Liu, Y. and Yu, C., 2020, Relationship between job satisfaction and burnout based on a structural equation model, *Journal of Occupational & Environmental Medicine*, Vol. 62 No. 12, pp. e725-e731.

Sweis, R. J., Sweis, N. J., & Elhawa, N. A. (2019). Total quality management practices and their impact on performance: case study of Royal Jordanian Airlines. *International Journal of Business Excellence*, 17(2), 245. <https://doi.org/10.1504/ijbex.2019.10018698>

Taba, M. I. (2018). Mediating effect of work performance and organizational commitment in the relationship between reward system and employees' work satisfaction. *Journal of Management Development*, 37(1), 65–75. <https://doi.org/10.1108/JMD-11-2016-0256>

Temiz, T. N. D., Kara, D., & Potas, N. (2021). Moderating Effects of Gender Relationship Between Quality of Work Life and Job Satisfaction: Total Quality Management Perceptions as a Mediating Factor. *Journal of Health Management*, 23(4), 696–714. <https://doi.org/10.1177/09720634211052358>