

# Investigating the Critical Success Factors of Excellence Model Implementation in the Public Sector “Egypt Government Excellence Award”

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## Abstract

The purpose of this paper is to outline the structure of the Egypt Government Excellence Award, as well as to investigate the role of adopting an excellence framework in developing public sector work nature and improving public services, as well as to attempt to identify and propose solutions to the practical problems and challenges posed by excellence awards.

The paper will highlight and investigate critical success factors (CSFs) that influence the success of the excellence model's implementation and adoption in the Egyptian public sector. A qualitative method will be used to build a model for CSF.

The paper has summarized potential CSF that has been analyzed in previous literature that developed different models with different methodologies according to industry context. The majority of literature has discussed and analyzed CSF regarding TQM principles, with very little literature having discovered CSF of Excellence Models.

The paper uses a qualitative narrative approach for an exploratory purpose. The data has been collected and analyzed using human interactive data sources by using unstructured interviews with experts in excellence from Egypt and other countries that have a similar context to EGEA.

The results have shown that the main top five CSF, which are considered the main factors that will help any public organization in Egypt to successfully implement excellence models, are leadership, human assets, culture, excellence model, and performance management system.

**Keywords:** critical success factors, excellence model, leadership, performance, EGEA, culture

## 1. Introduction

In order to cope with recent developments, changes, and advancements in the external environment, particularly in public sector performance, the Ministry of Planning and Economic Development took the initiative in 2018 to design a national award for organizational excellence performance tailored for governmental entities.

The award's main goal is to encourage competitiveness and excellence among public sector employees and entities, in addition to honoring the outstanding performer morally and financially, by consolidating the values of giving, belonging, and excellence, and motivating everyone to raise performance levels and adhere to quality and excellence standards. (EGEA, 2019).

The government excellence model was created with world-renowned criteria as the foundation for performance evaluation, and it consists of three primary pillars:

1. Vision achievement
2. Innovation
3. Enablers



Figure 1. EGEA Excellence Model (2019)

The research used the Nine elements model/framework by Elsafty (2018, 2019, 2020, 2021) to analyze the context and has been used in several research papers (Elsafty, Elsafty, & Shaaban, 2020; Elsafty & AlNawaly, 2020; Elsafty & Ragheb, 2020/2021; Elsafty & Abadir & Sharawy, 2020; Elsafty, A., Elbouseery, I., & Shaarawy, A., 2020; Elsafty, A., & Elzeftawy, A., 2021; Elsafty, A., & Elshahed, M., 2021; Elsafty, A., & Osman, M., 2021). According to (Elsafty, 2018) who propose the 9 elements model for analyzing and defining the organizational context as shown in figure 2 , the model is deployed to analyze and understand the EGEA context.

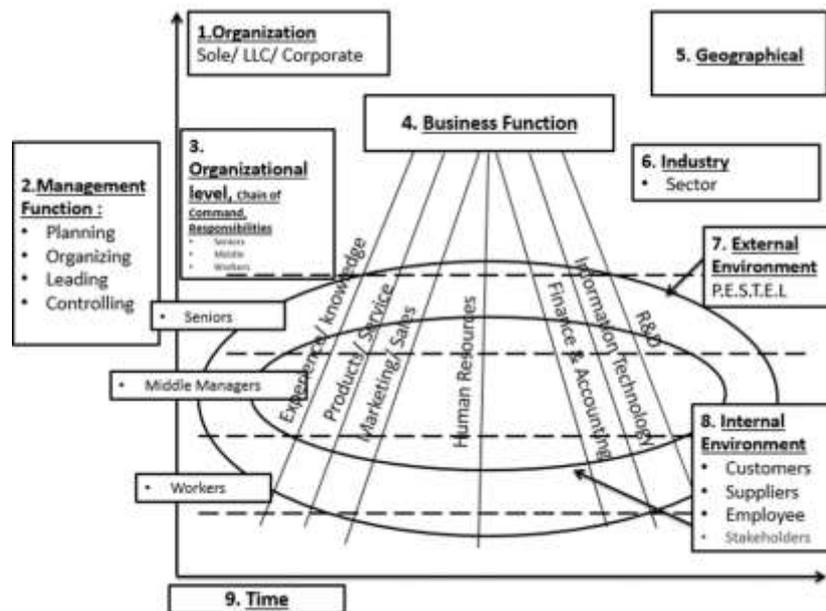


Figure 2. Business Anatomy: The 9 Elements Model Proposed by Elsafty (2018)

1.1 Organization

According to a Memorandum of Understanding (Memo of Understanding, 2018) between Egypt's Ministry of Planning and Economic Development and the United Arab Emirates' Prime Minister's Office as a collaboration protocol in the sphere of government performance development.

In 2019, the cabinet of ministers issued a decree designating EGEA as an associated entity of the cabinet of ministries, subject to the supervision and oversight of the ministry of planning and economic development (Ministerial decree, 2019).

1.2 Management Function

According to (EGEA QMS, 2021), the major functions of the EGEA management team include the following main processes:

1.2.1 Main Process

Which includes criteria design and development procedure, assessment procedure.

### 1.2.2 Supporting Process

Which includes operation and logistics procedure, communication and marketing procedure, training procedure, customer complaints procedure, purchasing and outsourcing procedure.

### 1.2.3 Quality Assurance Process

Which includes document control procedure, quality manual, management review procedure, corrective action procedure, objectives procedure, crisis and change management procedure, performance measurement an improvement procedure, internal audit procedure.

According to (Ministerial Decree, 2019), the cabinet of ministries has decided that participation in the selected governmental entity categories is mandatory. As a result, the EGEA team has created the following award categories, each of which includes specific types of organizations that can compete.

Each award category has its own set of evaluation criteria that are tailored to a specific type of government entity. The table below details the design and scope of each award category.

Table 1. EGEA Award Categories and nominated Entities (2021)

Award	Description	Entities Category	Assessment Criteria	Design and Development of Criteria	References
<b>Leading Entity</b>	This award is given to a government institution.	Local government units Educational institution (Universities)	EGEA Excellence Model (Egypt Government Excellence Manual, 2018)	SKGEP and EGEA Team	GEM
<b>Leading Entity in public service provision</b>	This award is given to outstanding public service organizations.	Post offices. Notary Public offices. Health offices. Food subsidy offices. Citizen service enters. Social rehabilitation offices for people with special needs.	EGEA public service Excellence Model (EGEA public service excellence model, 2019)	EGEA Team	Global seven star ranking system for services
<b>Website award in government service provision</b>	All interactive government websites have been subscribed to.	Any official government websites with ( .gov.eg ), ( .edu.eg ) or ( .eg ) domains	EGEA websites Excellence Model (Website Quality & Excellence manual, 2019)	EGEA team	Emirates website quality model
<b>Organizational creativity and innovation Award</b>	The award is given to an institution's creative/innovative ideas or efforts that have already been implemented.	Any institution of the government	EGEA innovation and creativity Excellence Model (Creativity and Innovation manual, 2019)	EGEA team	Emirates innovation and creativity model
<b>Individuals Awards</b>	The award is given to the following: Senior management. Middle management. Employee Tem work	Only for government employees	EGEA leadership Excellence Model (Leadership/ Individual/Team work manual, 2019)	EGEA team and SKGEP team	Emirates leadership excellence quality

### 1.3 Organizational Level

The award's organization is made up of three primary divisions that oversee all of the award's specified functions. The assessment department is in charge of all functions linked to the assessment process, which is considered the major business process. The operations and communication departments are regarded supporting business processes and provide all support functions to the assessment department.

### 1.4 Business Function

The EGEA team has established a documented management system (EGEA QMS, 2021) in order to systematically record and enhance all aspects of EGEA's business function in accordance with international standard ISO 9001:2008; thus, the discussion of business function will be in light of these procedures.

#### 1.4.1 Service

The business functions are grouped into three key processes, according to (EGEA QMS, 2021).

The assessment team is formed and selected using the (EGEA Assessors Competencies manual, 2021), and the assessment process is governed using the EGEA governance manual (EGEA Governance Manual, 2019).

So far, two cycles of assessments have been conducted, with the information and outputs from the two cycles presented in the table below (EGEA Summary Report, 2021).

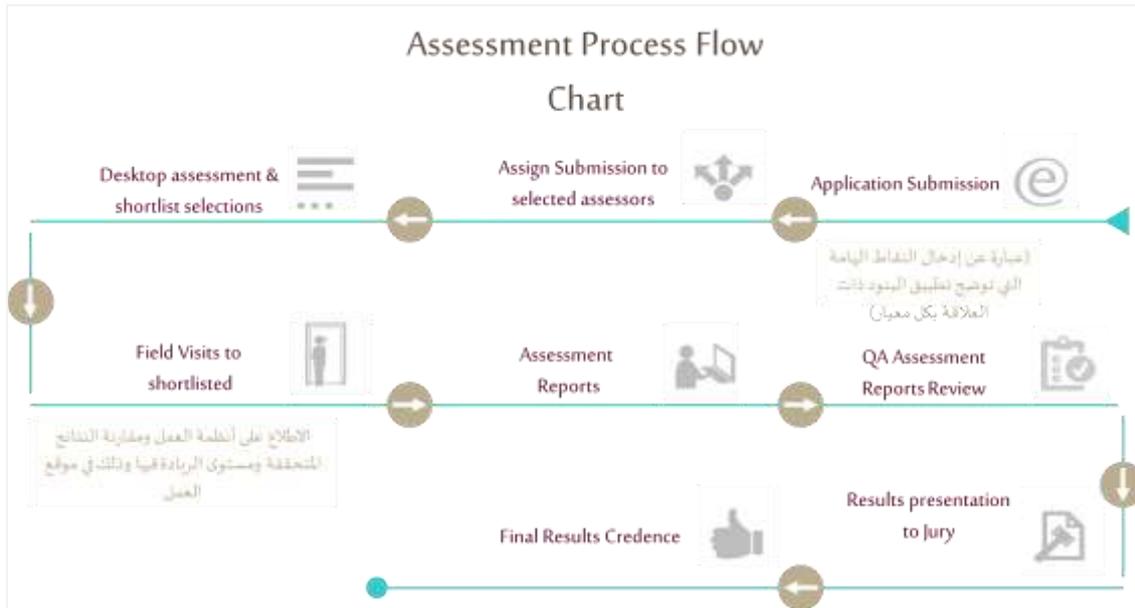


Figure 3. Assessment Process Flowchart (2019)

Table 2. EGEA Summary Figures (2021)

Award Category	Entity Category	2019 Round Submissions No.	2020 Round Submissions No.
<b>Leading Entity</b>	Universities	290	448
	Centers	141	162
	Cities	31	48
	Villages	15	20
	Districts	64	89
<b>Leading Entity in service provision</b>	<b>Post offices</b>	<b>226</b>	<b>610</b>
	Notary Public offices	64	91
	Citizen service enters	158	160
	Social rehabilitation offices for people with special needs	19	232
	Health offices	NP	310
	Food subsidy offices	NP	50
<b>Website award in government service provision</b>	<b>Any</b>	<b>118</b>	<b>100</b>
<b>Organizational creativity and innovation Award</b>	Any	229	122
<b>Individuals Awards</b>	<b>Sector Head</b>	<b>39</b>	<b>30</b>
	General Directorates	99	66
	General Manager	333	152
	Department Manager	274	126
	Employee	NP	161
	Teamwork	NP	93
<b>Assessment Statistics</b>	<b>Quality Assurance Team</b>	<b>13</b>	<b>20</b>
	Team Leaders Team	9	12
	Participated Assessors	79	104
	Nominated Assessors	101	136

Total Assessment Hours	46,629 hr.	89,460 hr.
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#### 1.4.2 Experience and Knowledge

EGEA's knowledge management system is carried out in a variety of ways between EGEA and its stakeholders, using various methods of knowledge transfer.

Mutual sharing of Excellence Models, Assessors, Team Leaders, Quality Assurance, Jury, Assessment cycle planning and management, Best practices, and Benchmarking (Feedback Reports, 2019/2020) is considered the main output of the assessment process through which the entities can define their maturity level in terms of excellence performance.

EGEA also conducted several awareness seminars, workshops, webinars, and training sessions for all government agencies; table 3.1 shows some statistics on training and awareness (EGEA Summary Report, 2021).

Table 3. Training and Learning statistics ( EGEA 2021)

	2019 Round No.	2020 Round No.
<b>No. of trainees</b>	3699	6660
<b>No. of Trainers</b>	4	35
<b>No. of total Training Hours</b>	30,000 hr.	107,000 hr.
No. of Webinars	NA	13
No. of Registered in Webinars	NA	1585
No. of participation via Facebook	NA	2100
No. of viewers via Facebook	NA	20712

#### 1.4.3 Marketing

EGEA's marketing and communication are administered in collaboration with the ministry's media and communication unit, through which EGEA's marketing is carried out in accordance with the marketing and communication procedure EGEA-S02 (EGEA QMS, 2021).

#### 1.4.4 Human Resources

The ministry of planning and economic development's human resources department oversees all human resource operations and activities.

#### 1.4.5 Finance and Accounting

All financial and accounting tasks and operations are overseen by the ministry of planning and economic development's finance department, with budget and contract coordination by EGEA's operation and logistics department.

#### 1.4.6 Information Technology

The award had fully electronically transformed from manual submission and assessment to fully automated process through a tailored design platform for submission, assessment, jury, and final reports to all awards categories and participating entities, as the award had fully electronically transformed from manual submission and assessment to fully automated process through a tailored design platform for submission, assessment, jury, and final reports to all awards categories and participating entities.

#### 1.4.7 Research and Development

EGEA's quality and assessment department is fully responsible for all award criteria updates and design, having developed the following manuals for each award category: (Egypt Government Excellence Manual, 2018), (EGEA public service excellence model, 2019), (Website Quality & Excellence manual, 2019), (Creativity and Innovation manual, 2019), and (Leadership/ Individual/Team work manual, 2019).

### 1.5 Geography

EGEA only applies to Egyptian government institutions in Egypt, regardless of their size or nature, and is confined to the categories listed above unless new categories are established.

Egypt's administration sector employs about 4 million people, with the award's long-term goal of covering all public sectors, including 33 ministries, 63 economic authorities, 107 service authorities, 27 governorates, and 27 universities (Masrawy, 2018).

### 1.6 Industry

Only Egypt's public / governmental sector is forced to take part in the award.

### 1.7 External Environment

#### 1.7.1 Political

As excellence is regarded as a sustainable development goal, it cannot be realized without political stability and support in Egypt.

#### 1.7.2 Economic

Because the EGEA is overseen by the Ministry of Planning and Economic Development, the award has a slight advantage in terms of economic sustainability due to direct contact with high-level commands who facilitate any financial support for the award.

#### 1.7.3 Social

EGEA faced numerous challenges, including government employee resistance at the outset and the incorporation of an excellence culture within government institutions, which is progressing slowly but steadily and has shown significant improvement in round two.

Because the lack of certified, experienced Egyptian assessors is critical to the award, EGEA has published a competency manual for assessor selection (EGEA Assessors Competencies manual, 2021) as well as launched a capacity building programme for Egyptian assessors to increase the pool of selection in upcoming rounds.

#### 1.7.4 Technological

EGEA has taken the lead in this area, and the award has worked from the start to implement and adopt technology in all of its activities, such as an assessment platform and a shared point / cloud for internal processes. Additionally, EGEA has full access to the most recent benchmarking initiatives (Memo of understanding, 2018).

#### 1.7.5 Ecological

The pandemic had a very positive effect on EGEA, as the implementation of technology was widely accepted, and EGEA took advantage of the opportunity to build its technological infrastructure in a very advanced manner; however, the pandemic has a negative effect on the rescheduling of the entire assessment plan and final ceremony as well.

#### 1.7.6 Legal

EGEA is required to follow all public administration legislation in terms of contracting and outsourcing, including Law No.182-2018 for the management of purchasing and contracting of public institutions (Law182 for the management of purchasing and contracting of public institutions, 2018), as well as any programmes or recommendations from the Ministry of Planning or the Cabinet of Ministries.

### 1.8 Internal Environment

#### 1.8.1 Customer

Government entities are considered the primary customers who receive the majority of EGEA's service output, which includes training, awareness, reports, and awarding of winners.

#### 1.8.2 Supplier

EGEA has contracts with many service providers to improve service delivery outcomes for EGEA customers. Service providers offer services for website assessment, individual awards assessment, assessment platform, mystery shopper assessment to compare actual service with the target service for service provision award.

#### 1.8.3 Employees

Employees are a mix of governmental and contracted workers, resulting in a diverse range of experience and knowledge about excellence and government work methods.

#### 1.8.4 Stakeholder analysis

After each assessment cycle, the assessment teams should complete a lesson learned report (EGEA Lesson Learnt Report, 2019) from the assessment cycle, which is delivered to the EGEA management team, which includes assessors, team leaders, and quality assurance. For example, one of the recommendations from round one is to modify the criterion for public service award, which is implemented directly in the second round through (EGEA public service excellence model, 2019).

An interview is conducted with (M. Mohamady, personal communication, August 23, 2021) director of quality and assessment about his personal perspective on the main CSFs that determine excellence implementation in public sectors, as he declared the following CSFs.

[1] leadership, [2] human assets, [3] Reliable data, [4] culture, [5] excellence model, [6] digital infrastructure, [7] governance framework, [8] performance metrics, [9] trust, [10] partnership.

The EGEA operation team conducts surveys in order to collect the voice of the customer and relative stakeholder; the customer satisfaction barometer was around 85 percent, which is considered acceptable by the EGEA management team; additionally, the survey contains different opinions regarding award activity and service delivered, either positive or negative (EGEA Customer satisfaction survey, 2021), positives such as electronic submission, training and awareness, communication, teamwork, etc.

1.9 Time

EGEA is conducted on an annual basis, with two assessment rounds deployed thus far in 2019-2020, each round encompassing all activities such as training, assessment, and ceremony.

2. Literature Review

2.1 Excellence and National Quality Awards Overview

The primary goal of government excellence awards is to rank competing entities based on how far they excel in performance against certain criteria, so that the difference between two excellent entities can be measured and identified objectively (Ahrens, 2013).

EFQM is a well-known and widely used excellence model in both the private and public sectors around the world, but the model was primarily designed by and for the private sector and has been widely adopted by the public sector as well (Ahrens, 2013). Nonetheless, despite widespread acceptance, there are several claims that the model is not properly configuring with the nature of public sector work in terms of political issues, regulation, governance, and "non-financial performance measurement" (Ahrens, 2013, p.579). As a result, EGEA has decided to adopt the 4G excellence model, which was designed by the Emirates government after many years of implementing the EFQM excellence model in the public sector.

The main advantage of the 4G excellence model is that it suits government work types by encouraging the public sector to develop innovative solutions within the boundaries of the law in order to enhance and customize public service. The model also motivates entities to develop benchmark tools to standardize and modernize their scope of work and service provided to public citizens (Ahrens, 2013).

According to Lasrado and Uzbeck (2017), national quality awards implemented by governments around the world have increased capacity for performance improvement in the public sector and have significantly improved overall country performance and competitive indices over others.

2.2 Critical Success Factors in Literature

2.2.1 Critical Success Factors in Empirical and Conceptual Papers

Aquilani, Silvestri, and Ruggieri (2017) attempted to comprehend all CSF that were mentioned in every literature from peer-reviewed articles of Ebscohost, JSTOR, and Springer link database and provide an analysis of the CSF for TQM that described three different clusters of papers "identification papers", "implementation papers", and "impact on performance papers" (p. 184) .

CSFs in our study (2016)	Total number of occurrences (total 103)	CSFs in Sila and Ebrahimipour (2002)	Total number of occurrences (total 76)
1. Leadership/top management commitment/role of top management	93	1. Top management commitment and leadership	67
2. Customer focus/satisfaction	70	2. Customer focus	53
3. Training and education	66	3. Information and analysis	53
4. Measurement or metric systems/data information and analysis/quality data and reporting	59	4. Training	50
5. Supplier collaboration/management/ supplier quality (management)	52	5. Supplier management	47
6. Process quality management	48	6. Strategic planning	38
7. Continuous improvement	46	7. Employee involvement	32
8. TQM as a strategic issue/planning/role of quality department	40	8. Human resource management	26
9. Employee commitment and attitude/ involvement	39	9. Process management	26
10. Organizational culture/quality culture/ organizational climate/learning	37	10. Teamwork	22

Figure 4. A benchmark of most important CSFs (Aquilani,Silvestri and Ruggieri, 2017)

Thiagarajan and Zairi (1997) identified TQM CSF through implementation case studies supported by quality gurus and the writer's opinions and concepts, where he emphasised four main CSF: [1] leadership, [2] internal stakeholder management, and [3] policy and strategy.

Terziovski ,Sohal and Samson (1996) identified CSF for TQM in eight Australian manufacturing and service organization as [1] leadership and quality based vision, [2] employee participation and unions, [3] identification of customer expectation and measurement of perception, [4] strategy.

Sila and Ebrahimpour (2003) understood and analysed 76 empirically validated TQM CSFs in various contexts across multiple countries, despite differences in "cultures, religions, education level, information technology, government regulation, and the extent of industrialization" (p. 237). Some CSFs have been successfully implemented in various countries with varying variables; the CSFs are depicted in Figure 5.

TQM factor	No. of studies in which the factor was extracted	No. of country categories in which the factor is present
Top management commitment and leadership	67	23
Customer focus	53	21
Information and analysis	53	17
Training	50	19
Supplier management	47	17
Strategic planning	38	16
Employee involvement	32	18
Human resource management	26	16
Process management	26	13
Teamwork	22	9
Product and service design	21	11
Process control	21	8
Benchmarking	16	12
Continuous improvement	16	10
Employee empowerment	16	6
Quality assurance	15	12
Social responsibility	10	9
Employee satisfaction	9	6

Figure 5. Most commonly extracted CSF across 67 studies and the 23 country categories (Sila and Ebrahimpour, 2003)

Karuppusami and Gandhinathan (2006) developed a methodology for identifying and categorising CSFs based on criticality on TQM by using rigorous statistical reliability and validity tests for identification and "Pareto Analysis" for criticality categorization; ultimately, 56 CSFs were extracted from an extensive literature review, with 14 factors considered to be "Vital Few" (p. 376). According to the Pareto analysis, which represents 80% of the total, and the remaining 42 factors represent 20% of the total "useful many" (Karuppusami & Gandhinathan, 2006).

The vital few factors are leadership and quality policy, supplier management, customer focus, training, employee relation, product & service design, quality data, role of quality department, human resource management, design & conformance, cross function quality teams, benchmarking, information & analysis.

So, after reviewing concept or empirical paper availability in order to survey all CSFs that have been modelled and initiated throughout literature (Aquilani et al., 2017), we have concluded that the most fundamental CSFs that have been initiated and theorized through different literatures are top management commitment & leadership, customer focus, information & analysis, training & education, supply chain management, strategic planning, employee involvement, human resource, process management, teamwork, employee relation , product/service design.

### 2.3 Critical Success Factors in Applied Research Papers

AlZawati et al. (2020) stated that there are 46 CSFs of Ems that determine its implementation after an extensive literature review, the ISM and Fuzzy MICMAC has been used through Delphi method and structured brain storming with subject matter experts in different fields where the selection of 28 most renowned factors from different points of view are agreed in order to suit the context of the research, the model has been developed with relation according to the figures below.

AlZawati et al. (2020) used an ISM-based model to draw relationship between different CSFs with each other as shown in figure 6, where "The bottom level factors are strong inputs, whereas the top-level factors are strong outputs". The factors at the bottom are the root causes of achieving top consecutive levels.

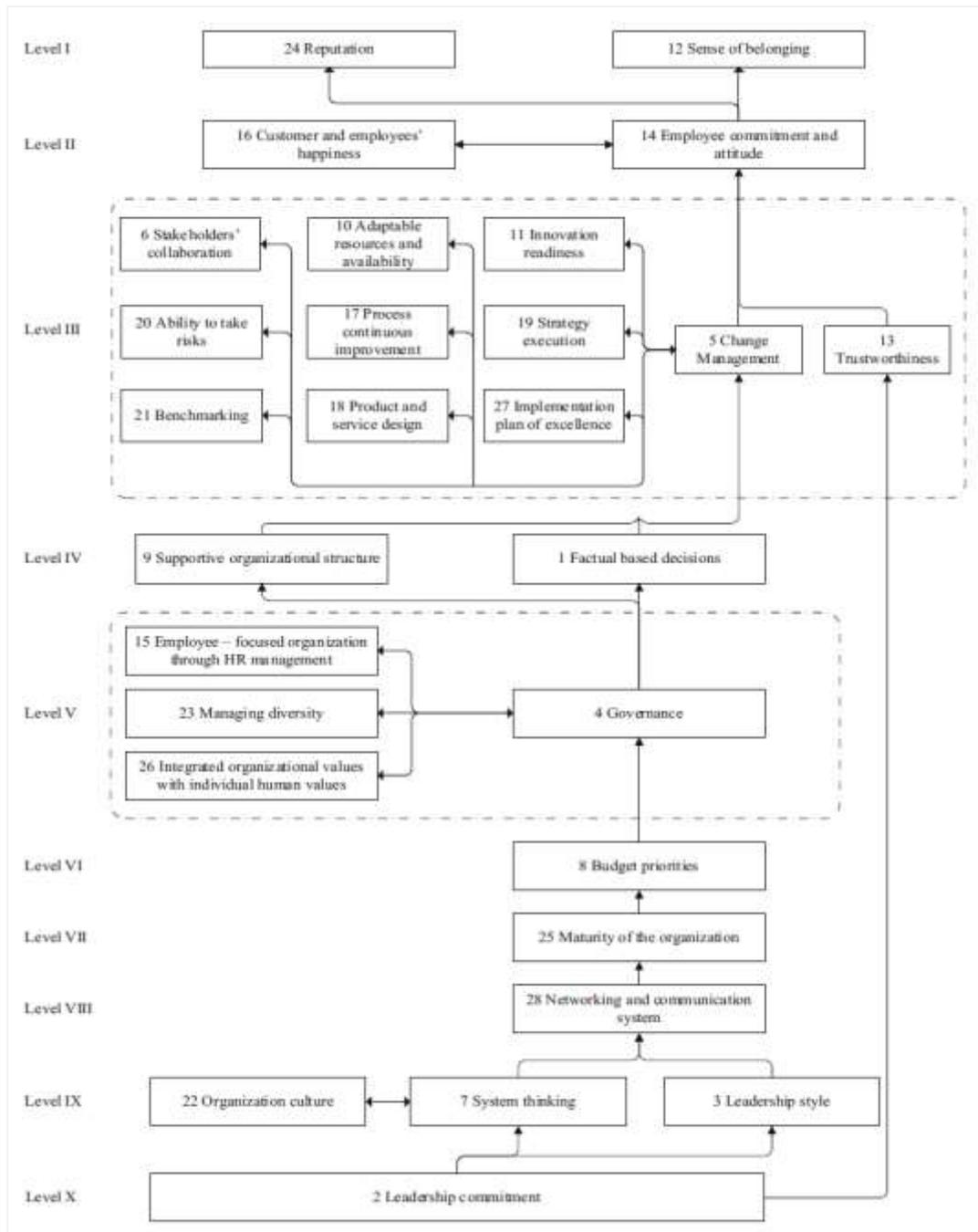


Figure 6. ISM –based Model for CSFs (AlZawati, Bashir & Alsyouf, 2020)

Lasrado and Uzbeck (2017) studied award-winning organisations in the UAE, particularly those that participated in DQA, to identify key practises, best practises, and their journey toward excellence through national awards.

The study had concluded that the following CSFs have a positive relationship with excellence implementation and performance success: leadership styles, Innovative culture, employee empowerment, Top management commitment, organizational structure, stakeholder involvement, resource allocation continuous improvement, self-assessment, employee satisfaction, organization culture, integrated management system adoption (ISO standards), Employee rewarding system, Training and awareness, Employee competencies, Benchmarking, Technological advancement.

Arumugam, Mojtahedzadeh and Malarvizhi (2011) discussed CSFs that affect automotive organization performance through TQM philosophy implementation, as shown in the below figure 7.

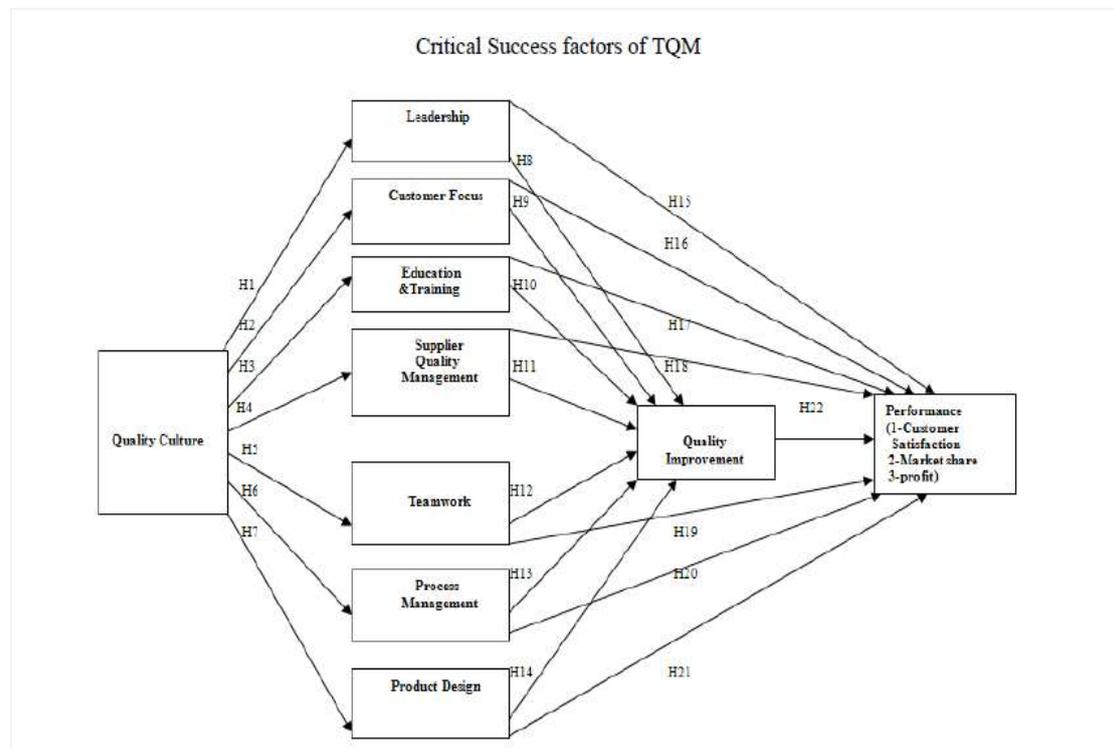


Figure 7. CSF of TQM (Arumugam, Mojtahedzadeh & Malarvizhi, 2011)

Jain and Ajmera (2019) investigated the CSF that influence the implementation of lean manufacturing concepts in health care organizations. They concluded that the main, top priority, and most critical CSF that have the greatest influence and impact on lean implementation are goal specificity, lean leadership, clarity of organizational vision, financial capability, professional organizational culture, lean training, competency & expertise, value addition, patient's involvement in quality program, employee engagement, teamwork & interdepartmental cooperation, time constraint for lean implementation, employee resistant to lean culture, communication & goal results, follow up & evaluation.

Moheel, Alkatheri, AlSukhayri and AbdulAziz (2019) investigated the following CSF that influence TQM implementation in software:

Top management commitment and leadership, Client/customer focus, Organizational culture, Process quality management, Quality measures, Human resource management, Employee empowerment, Employee commitment and attitude, Continuous improvement, Benchmarking, Infrastructure and facilities, Risk management, Communication, Cycle time reduction, Strategic quality planning / policy, Supplier management, Simplicity, Prototyping / evolutionary development, The role of quality department, Product design process.

According to (Kumar & Sharma, 2017), after studying CSF that affect TQM implementation in seven multinational companies and receiving expert intervention and conducting an extensive literature review, the final number of CSF is 14 as follows:

Product and manufacturing leadership, Development of competitive strategy, Continuous quality improvement, zero defect, Customer satisfaction and customer service, Integrated HR practices, Reduction in product cost, Cycle time improvement and short lead time, Feedback system, Employee training, Invest more in new product development, TQM tools and techniques, Organizational culture and Teamwork.

Ismail (2009) studied CSF for TQM implementation in SMEs and their impact on overall performance, though he divided the CSF into three main categories strategic factors, tactical factors, and operational factors with a total of 24 factors, where he concluded that the most critical factors are the strategic ones that have the greatest impact on TQM implementation besides their impact on other non-strategic factors, tactical factors are less critical than strategic factors, and operational factors are less critical than strategic factors, the following factors have been mentioned:

**Strategic Factors:** Includes Leadership, Organizational culture, Top management support, Continuous improvement and Benchmarking.

**Tactical Factors:** Includes Quality goals and policy, Team building and problem solving, Employee empowerment, Employee involvement, Employee training, Use of information technology, Supplier quality, Supplier relationships,

Assessment of performance of suppliers and Operational Factors.

Product and service design: Includes Enterprise performance metrics for TQM Process control, Customer orientation, Management of customer relationships, Resources value addition process, Realistic TQM implementation schedule, Customer and market knowledge, Resources conservation and utilization, Inspection and checking work.

### 3. Methodology

#### 3.1 Theoretical Framework

The research will use a qualitative narrative approach for an exploratory purpose. The data will be collected and analyzed by using human interactive data sources by means of unstructured interviews. The research will be conducted under a very extensive literature review in order to define, enumerate, and determine the CSFs that contribute to and determine the implementation of excellence models in the public sector in different government contexts, and then exploratory questions will be subject to experimentation. As illustrated in (AlZawati et al.), the proposed theoretical framework focuses solely on independent factors and linkage factors that influence independent factors.

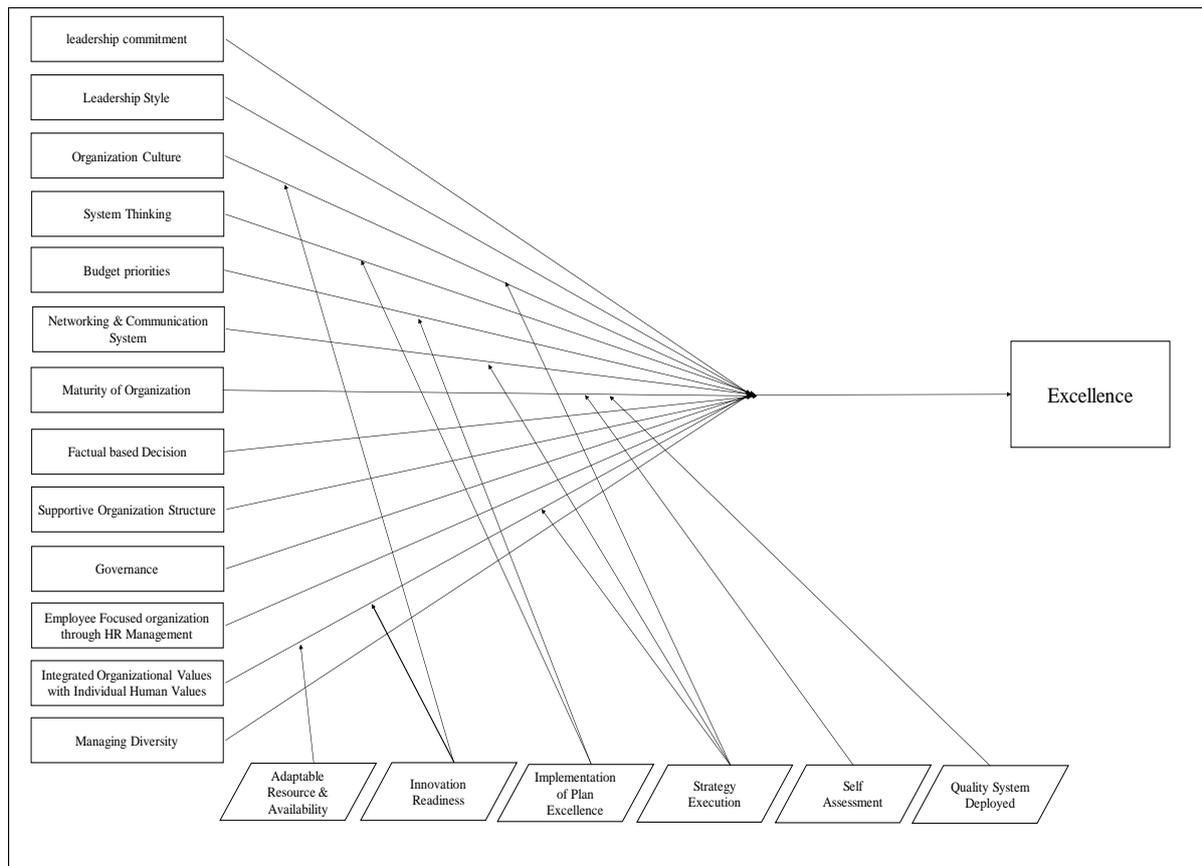


Figure 8. Theoretical Framework

#### 3.1.1 Dependent Variable

**VAR (Y):** Excellence implementation: the application of the EGEA government excellence model criteria in Egyptian public sector organizations in order to improve performance and public services.

#### 3.1.2 Independent Variable

**VAR (X1):** leadership Commitment: the overall direction of the organization's top management toward excellence, as well as the role of top management in providing adequate resources, strategies, and policies for the implementation of excellence. (Government Excellence Model Manual-GEM 2.0, 2020).

**VAR (X2):** leadership Style: leadership traits that play significant role in deriving change and fostering excellence culture and performance in the organization. (Government Excellence Model Manual-GEM 2.0, 2020).

**VAR (X3):** Organization Culture: beliefs and values that are deeply inherited within the organization and have a direct

impact on excellence adoption and implementation.

**VAR (X4):** System Thinking: the integration of excellence within the DNA of the organization's process and daily routine, using process as a default practice in all business functions inside the organization.

**VAR (X5):** Budget priorities: refers to budget allocation and appropriation for designed activities in order to increase the efficiency of the organization.

**VAR (X6):** Networking & Communication System: Internal and external communication with relevant interested parties within the organization. The organization shall identify its proposed stakeholders and design suitable methods of communication appropriate for each in order to disseminate excellence culture.

**VAR (X7):** Maturity of the Organization: The maturity level of the organization in the continuum of excellence will shape the excellence framework inside the organization as elaborated in the excellence maturity continuum.

**VAR (X8):** Factual Based Decisions: refers to a decision-making process that is based upon data and information related to performance rather than subjectivity.

**VAR (X9):** Supportive Organization Structure: chain of command, roles and responsibilities in the organization to avoid any overlapping or delay in delivery which shall affect negatively performance and excellence (Government Excellence Model Manual-GEM 2.0, 2020).

**VAR (X10):** Governance: refers to the way by which the power and authority is exercised, (Government Excellence Model Manual-GEM 2.0, 2020). Fulfilling the accountability, integrity, and transparency principles toward human resources, stakeholders, and the community in areas related to performance and compliance with the legislation set by the government.

**VAR (X11):** Employee Focused Organization through HR Management: Nurturing the human capital that refers to all individuals working at the government entity, who are performing jobs and exerting efforts to complete projects related to the entity's services (Government Excellence Model Manual-GEM 2.0, 2020).

**VAR (X12):** Integrated Organizational Values with Individual Human Values: Capitalizing on win-win partnerships that optimize the mutual benefits whereby both parties can leverage the essential capabilities to achieve the desired outcomes, generate innovations, promote efficiency and complement knowledge and skill sets (Government Excellence Model Manual-GEM 2.0, 2020).

**VAR (X13):** Managing Diversity: The difference in culture, attitudes, and objectives should be comprehended by the organization in order to create an internal environment that facilitates the full involvement of all employees' performance and excellence decisions.

### 3.1.3 Moderating Variables

**VAR (M1):** Adaptable Resource & Availability: implementing systems, programs, processes and policies that are compatible with best practices in ensuring the optimum utilization of resources. This includes financial planning and budgeting, internal control, monitoring and reporting, audit processes (Government Excellence Model Manual-GEM 2.0, 2020).

**VAR (M1):** Innovation Readiness: instills a culture of innovation to approach the challenges unconventionally, cease the practice of outdated functions and steer away from building an innovation enabling system towards building a creative mindset that exists everywhere in the everyday tasks and functions (Government Excellence Model Manual-GEM 2.0, 2020).

**VAR (M1):** Implementation of Plan Excellence: ensuring timely and quality execution of strategies and policies with the optimal use of resources and adequate tools to achieve positive impact (Government Excellence Model Manual-GEM 2.0, 2020).

**VAR (M1):** Strategy Execution: providing a comprehensive framework throughout planning, implementing, and monitoring and evaluating to assess impact, the framework requires; aligning strategies with the country's long-term vision and the national agenda (Government Excellence Model Manual-GEM 2.0, 2020).

**VAR (M1):** Self-Assessment: a systematic process or activities that are implemented inside the organization to determine points of weakness or strength in order to design proper development plans and strategies to support organizations in implementing excellence.

**VAR (M1):** Quality System Deployed: Organization adoption refers to an organization's adoption of any quality management systems standards or methods to improve performance and enhance excellence, such as ISO standards, six sigma, lean methods, and TQM.

### 3.2 Research Questions

#### 3.2.1 Major Questions

**MjRO 1:** What are the most influenced CSFs effects implementation of excellence in public sector?

#### 3.2.2 Minor Questions

**MinRQ1:** How top leadership commitment effects on excellence implementation?

**MinRQ2:** How leadership Style effects on excellence implementation?

**MinRQ3:** How Organization Culture effects on excellence implementation?

**MinRQ4:** How System Thinking effects on excellence implementation?

**MinRQ5:** How Budget priorities effects on excellence implementation?

**MinRQ6:** How Networking & Communication System effects on excellence implementation?

**MinRQ7:** How Maturity of the Organization effects on excellence implementation?

**MinRQ8:** How Factual Based Decisions effects on excellence implementation?

**MinRQ9:** How Supportive Organization Structure effects on excellence implementation?

**MinRQ10:** How Governance effects on excellence implementation?

**MinRQ11:** How Employee Focused Organization through HR Management effects on excellence implementation?

**MinRQ12:** How Integrated Organizational Values with Individual Human Values effects on excellence implementation?

**MinRQ13:** How Managing Diversity effects on excellence implementation?

**MinRQ14:** How Adaptable Resource & Availability influence the relationship between Integrated Organizational Values with Individual Human Values and excellence model implementation?

**MinRQ15:** How Innovation Readiness influence the relationship between organization culture and excellence model implementation?

**MinRQ16:** How Innovation Readiness influence the relationship between Employee Focused Organization through HR Management and excellence model implementation?

**MinRQ17:** How Implementation of Plan Excellence influence the relationship between system thinking and excellence model implementation?

**MinRQ18:** How Implementation of Plan Excellence influence the relationship between budget priorities and excellence model implementation?

**MinRQ19:** How Strategy Execution influence the relationship between Integrated Organizational Values with Individual Human Values and excellence model implementation?

**MinRQ20:** How Strategy Execution influence the relationship between Integrated networking & communication system and excellence model implementation?

**MinRQ21:** How Strategy Execution influence the relationship between organization culture and excellence model implementation?

**MinRQ22:** How Self-Assessment influence the relationship between employee maturity of organization and excellence model implementation?

**MinRQ23:** How Quality system deployed influence the relationship between maturity of organization and excellence model implementation?

### 3.3 Proposition

**P1:** There are 19 CSF that have most influenced CSFs effects implementation of excellence in public sector.

**P2:** There is a relationship between leadership commitment and excellence implementation.

**P3:** There is a relationship between leadership Style and excellence implementation.

**P4:** There is a relationship between Organization Culture and excellence implementation.

**P5:** There is a relationship between System Thinking and excellence implementation.

**P6:** There is a relationship between Budget priorities and excellence implementation.

**P7:** There is a relationship between Networking & Communication System and excellence implementation.

- P8:** There is a relationship between Maturity of the Organization and excellence implementation.
- P9:** There is a relationship between Factual Based Decisions effects and excellence implementation.
- P10:** There is a relationship between Supportive Organization Structure and excellence implementation.
- P11:** There is a relationship between Governance and excellence implementation.
- P12:** There is a relationship between Employee Focused Organization and excellence implementation.
- P13:** There is a relationship between Integrated Organizational Values with Individual Human Values and excellence implementation.
- P14:** There is a relationship between Managing Diversity and excellence implementation.
- P15:** There is a relationship between Adaptable Resource & Availability does influence the relationship between Integrated Organizational Values with Individual Human Values and excellence implementation.
- P16:** There is a relationship between Innovation Readiness and does influence the relationship between organization culture and excellence implementation.
- P17:** There is a relationship between Innovation Readiness does influence the relationship between Employee Focused Organization through HR Management and excellence implementation.
- P18:** There is a relationship between Implementation of Plan Excellence does influence the relationship between system thinking and excellence implementation.
- P19:** There is a relationship between Implementation of Plan Excellence does influence the relationship between budget priorities and excellence implementation.
- P20:** There is a relationship between Strategy Execution and does influence the relationship between Integrated Organizational Values with Individual Human Values and excellence implementation.
- P21:** There is a relationship between Strategy Execution does influence the relationship between Integrated networking & communication system and excellence implementation.
- P22:** There is a relationship between Strategy Execution and does influence the relationship between organization culture and excellence implementation.
- P23:** There is a relationship between Self-Assessment does influence the relationship between maturity of organization and excellence implementation.
- P24:** There is a relationship between Quality system deployed does influence the relationship between maturity of organization and excellence implementation.

### *3.4 Data Collection*

The primary data will be gathered through a human interactive source, an unstructured interview with 7 experts in excellence from Egypt and other countries with contexts similar to EGEA. The experts will be chosen based on the following criteria:

15-20 years of experience in excellence/quality and governance domains, master's or PhD in management / production engineering domains, participated in assessment of national / private excellence awards in various roles as team member / team leader / quality assurance / jury

#### *3.4.1 Code of Conduct of Data Collection Through Interview*

An agreement has been reached and approved between the interviewer and the interviewee in which terms pertaining to the code of research ethics are listed and recognized prior to the interview, as the purpose of the interview is for scientific research only and the experts' names will not be mentioned in the research, but their titles have been greedily to be mentioned in order to elaborate on their experience contribution in the topic.

According to the narrative approach with the use of unstructured questions to explore potential CSFs in the Egyptian context, the questions will focus on exploring all potential CSF, prioritizing the most critical or important one, and exploring interrelationships between those CSF and proposed overlapping. The following are the narrative guiding questions:

1. In your opinion, what are the CSF that contribute to the proper and successful implementation of excellence models in the public sector in the Egyptian context? Please list all possible CSF and provide a brief description for each.
2. What are the most dominant, important, critical, or essential factors that management should prioritise when

implementing excellence models in their organisation, based on question No. 1?

Table 4. Details of Experts List

Expert No.	Current position	Education	Area and years of expertise	Role In Assessment Teams
1.	Excellence consultant in the UAE Ministry of Interior	PhD in Quality Management	24 years of experience in the field of quality and excellence	Team member, team leader, Quality assurance positions in different local and global excellence awards
2.	Professor of engineering in alfayoum university	PhD in engineering mechanics	37 years of experience in quality and excellence domains	Team member, team leader and Jury
3.	Director of Assessment and Quality at EGEA	Master in quality management	17 years of experience in the field of quality and excellence	Team member, Team leader In many excellence awards
4.	Director of strategy and excellence in Sheikh Hamdan Excellence Award	Higher Diploma in Quality Management	37 years of experience, 22 years in the field of excellence	Team member, Team leader, Quality assurance in many Awards such as EGEA, DGEP, SKGEP.
5.	International consultant and expert for quality and excellence in united nation	PhD in strategic management. PhD in of quality management.	18 years of experience in the field of quality and excellence	Team member Team leader. Quality Assurance. Jury
6.	CEO of management integrated solution for consultation.	PhD in human resource management	30 years of experience in the field of quality and excellence	Team member. Team leader
7.	CEO of Creative Technology and Exclusive representative of African excellence forum	Bachelor of Commerce	23 years of experience in the field of quality and excellence	Quality assurance in EGEA

Table 5. Expert collective and concluded Responses

Experts	Responses	
	Q1	Q2
1	Management commitment, Resources availability, Promoting and awareness of excellence culture, Change management.	The most influential factor is management commitment.
2	Top management commitment, Human resources competencies and capabilities, Motives and benefits, Handling laws and regulations, Management system deployment (ISO standards), Internal awards system, Innovation readiness, Excellence cultures, Governance, Technology adoption.	Top management commitment., Human resources competencies and capabilities, Motives and benefits, Governance, Technology adoption.
3	Leadership, Human assets, Reliable Data, Culture , Excellence model, Digital infrastructure and transformation, Governance framework, Performance metrics, Trust, Partnerships.	Leadership, Human assets, Performance metrics.
4	Self-assessment, System thinking of excellence, Excellence culture, Leadership, Benchmarking and best practices, Competent team works, Resources efficiency, Management systems ISO, Governance framework, Innovation readiness, Partnerships.	Leadership, Self-assessment, System thinking of excellence, Excellence culture.
5	Vision, Top management commitment, Planning, Resource availability, Motivation and rewarding system, Training and education, Integrated excellence and quality culture, Customer orientation, Internal communication system, Resistance to change, Performance management system, Human resources competencies, Empowerment and delegation.	Top management commitment, Integrated excellence and quality culture, Internal communication system, Resource availability, Vision, Training and education, Performance management system.
6	Leadership, Employee training and awareness. Continuous improvements, Performance measurement and accountability system and culture, Sense of belonging and citizenship.	Leadership, Training and awareness, Continuous improvement plans.
7	Availability of resources, Awareness and body of knowledge of excellence, Leadership, Humanity, Team work for excellence initiatives, Customized excellence model, Process design and improvements, Employee rewards and recognition.	Leadership, Awareness and body of knowledge of excellence.

#### 4. Results & Discussion

By using MAXQDA software we were able to perform the following steps:

- Collect qualitative data from expert's interviews
- Create coding categories systems either parent codes or sub codes

- Extract relationships between data and codes
- Extract reports from MAXQDA
- Create single case model to determines most frequent codes

We created 22 codes with 13 subcodes for specific parent codes in order to determine the most frequent parent codes and most frequent subcodes that indicate proper definitions of parent codes from the perspective of experts and researchers, and the figures below show the code frequencies.

Color	Code	Cod. seg. (all documents)	% Cod. seg. (all documents)
●	Leadership	40	27.59
●	Human Assets	21	14.48
●	Culture	10	6.90
●	Excellence Model	9	6.21
●	Performance Management System	8	5.52
●	Rewards & Recognition	6	4.14
●	Resource Availability & Efficiency	6	4.14
●	Governance Framework	6	4.14
●	Innovation Readiness	4	2.76
●	Change management	4	2.76
●	Digital Infrastructure & transformation	4	2.76
●	Data Reliability & Intelligence	4	2.76
●	Benchmarking & Best practice management	4	2.76
●	Process Design & Improvement	4	2.76
●	Self Assessment	3	2.07
●	Internal Awards System	3	2.07
●	Communication system	2	1.38
●	Trust	2	1.38
●	Partnerships	2	1.38
●	Sense of belonging	1	0.69
●	Laws & Regulation Management	1	0.69
●	Customer Focus & Orientation	1	0.69

Figure 9. overview of parent codes frequencies

As shown in Figure 9, the most frequently mentioned or mentioned CSF main codes represent collectively more than 61 percent of code frequencies across all other factors. These factors are leadership, human assets, culture, excellence model and performance management system.

As illustrated in Figure 10, which identifies the most common sub codes for each main code in order to provide a clear definition and meaning for main codes or CSF.

According to the findings, the most common subcodes in the leadership main code are management commitment and leadership.

The most common subcode in the human assets main code is competencies framework, and the most common subcode in the culture main code is excellence culture. The most common subcode in the excellence model main code is management system, and the most common subcode in the performance management system main code is performance metrics.

Color	Parent code	Code	Cod. seg. (all documents)	% Cod. seg. (all documents)
●	Leadership	Management commitment	14	9.66
●	Leadership	Leadership	12	8.28
●	Human Assets	Competencies Framework	8	5.52
●	Culture	Excellence culture	8	5.52
●	Human Assets	Training & Awareness	7	4.83
●		Rewards & Recognition	6	4.14
●		Resource Availability & Efficiency	6	4.14
●	Excellence Model	Management System ISO	6	4.14
●		Governance Framework	6	4.14
●	Leadership	Role Model	5	3.45
●	Human Assets	Human Assets	4	2.76
●		Performance Management System	4	2.76
●	Performance Management System	Performance metrics	4	2.76
●		Innovation Readiness	4	2.76
●		Change management	4	2.76
●		Digital infrastructure & transformation	4	2.76
●		Data Reliability & Intelligence	4	2.76
●		Benchmarking & Best practice management	4	2.76
●		Process Design & Improvement	4	2.76
●		Self Assessment	3	2.07
●		Excellence Model	3	2.07
●		Internal Awards System	3	2.07
●	Leadership	Empowerment and Delegation	3	2.07
●	Leadership	Inspirational Leadership	2	1.38
●		Communication system	2	1.38
●		Culture	2	1.38
●		Trust	2	1.38
●	Leadership	Vision	2	1.38
●	Leadership	Planning	2	1.38
●		Partnerships	2	1.38
●	Human Assets	Employee Satisfaction	1	0.69
●	Human Assets	Cascading Organizational Objectives	1	0.69
●		Sense of belonging	1	0.69
●		Laws & Regulation Management	1	0.69
●		Customer Focus & Orientation	1	0.69

Figure 10. overview of sub codes

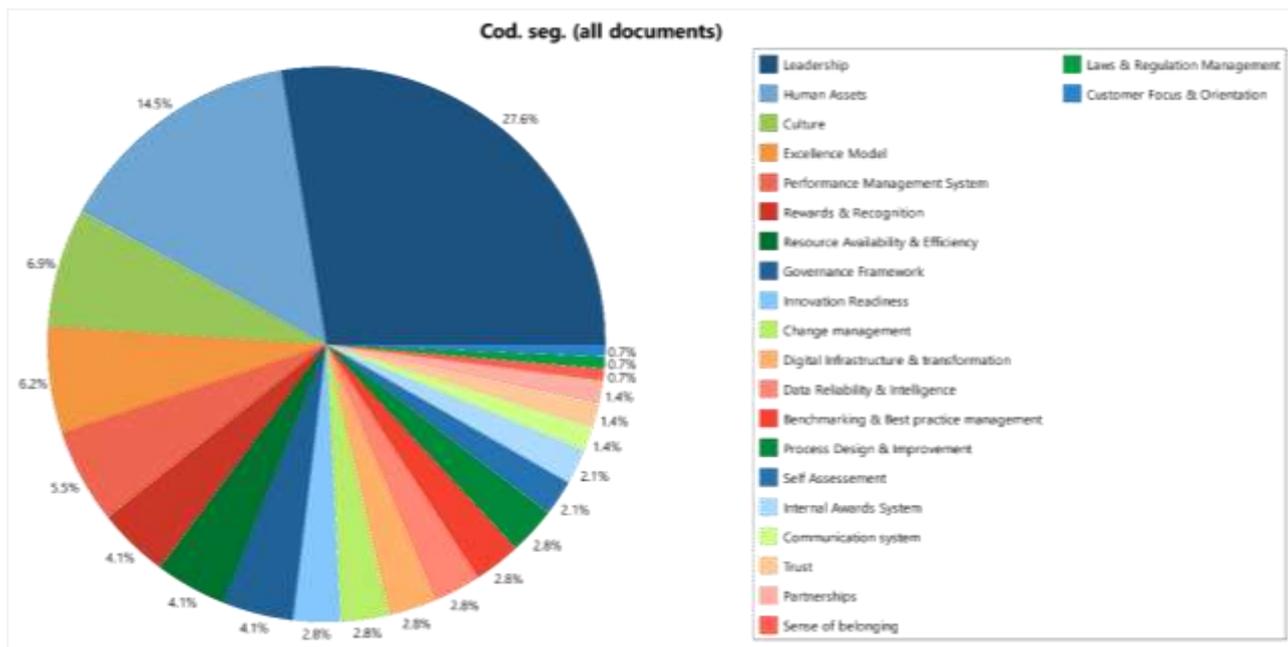


Figure 11. Parent codes percentages

As shown in Figure 11, leadership accounts for approximately 28 percent, human assets account for approximately 15 percent, culture accounts for approximately 7 percent, excellence model accounts for approximately 6.5 percent, and performance management system accounts for approximately 5.5 percent, with all accounting for more than 60 percent of

code frequency.

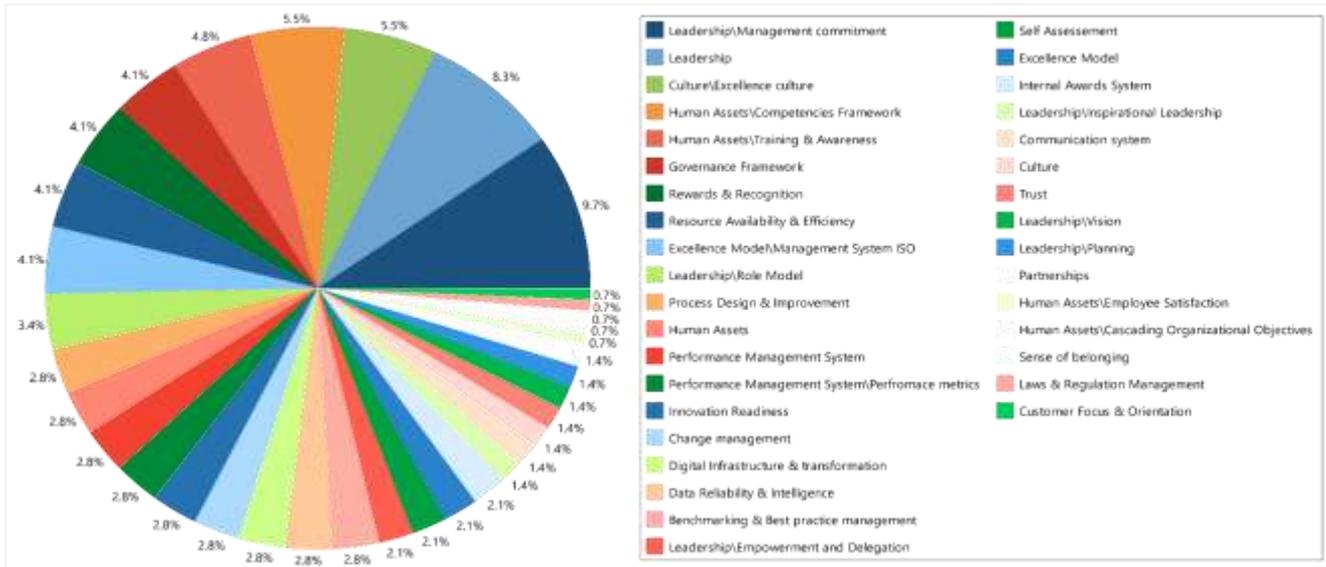


Figure 12. Sub codes percentages

As shown in Figure 12, management commitment accounts for approximately 9 percent, excellence culture accounts for approximately 5.5 percent, and competence framework accounts for approximately 5.5 percent.

Then, after merging subcodes to parent codes, we were able to draw the most frequent codes related to excellence implementation using single case model analysis.

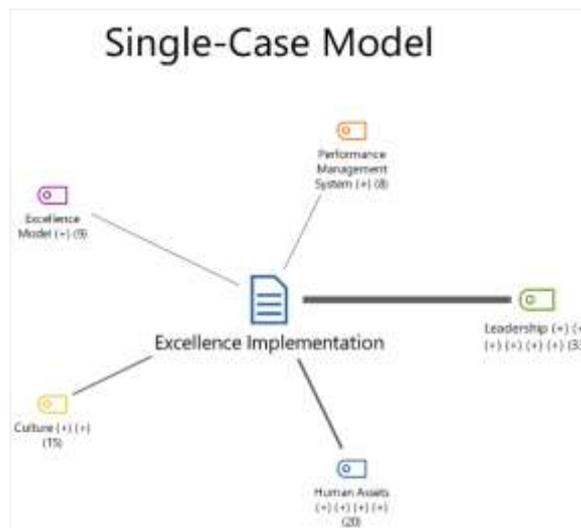


Figure 13. Single Case Model- Top 5 Parent Codes

The next step was to detect any relationships between codes based on interview data and MAXQDA Code relation analysis, which is depicted in the figure below and briefly mentioned in the conclusion.

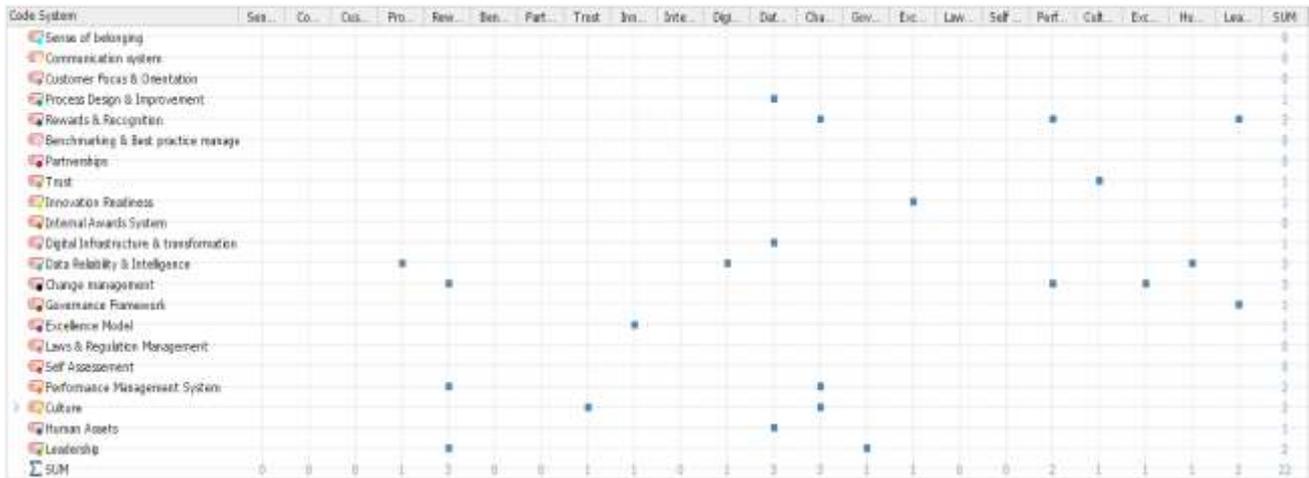


Figure 14. Codes Relations

**5. Conclusion**

According to the qualitative analysis, there are 22 potential CSF that influence the implementation of excellence in the public sector in Egypt within the context of the EGEA, with leadership, human assets, culture, excellence model, and performance management system being the most prominent, critical, frequent, or important factors that any public entity should begin or rely on.

The main and most important component of leadership is management commitment.

The main and dominant component of culture is excellence culture.

Competencies framework is the main and dominant component of human assets.

The framework of competencies is the most important and dominant component of human assets.

As a result, the research can create appropriate definitions for each critical factor, as follows:

*5.1 Leadership*

It is regarded as the primary motivator because it includes many levels of leadership.

Level 1: Management commitment is regarded as the foundation of leadership.

Level 2: Empowerment, delegation of authority, and decentralization of decision making are currently examples of advanced leadership.

Level 3: Leadership maturity is defined as being a role model or leading by example.

Level 4: the highest level of leadership, characterized by inspirational leadership

*5.2 Human Assets*

It includes the criteria and process for selection and recruiting.

Competencies framework: Cascading organization vision to all levels of hierarchy where employees can link their ordinary tasks with their impact on overall organization vision and performance by assessing and analyzing the gap between current competencies and required competencies and developing methods and tools to fill the gap.

*5.3 Culture*

means the raw form of culture, which includes various aspects such as organizational culture, excellence culture, and performance culture, among others. Culture includes leadership mindfulness of culture importance, assessment of current dominant culture strengths and weaknesses, and finally the design of a plan and actions for long-term culture improvement.

*5.4 Excellence Model*

In order to ensure long-term excellence performance, there must be a valid, reliable methodology and framework in place, such as excellence models like EFQM, Malcom Baldrige, management system ISO as a valid methodology and best practice, or others.

### 5.5 Performance Management System

Defined as creating quantitative or qualitative measurements or metrics that will be measured by indicators, particularly during process design and improvement, in order to improve and develop overall organizational performance.

According to MAXQDA code relation analysis, the research has drawn a simple relationship between some CSFs that may have a synergistic effect on excellence implementation in public sector organizations, such as the following:

- There is a relationship between process design & improvement and data reliability & intelligence.
- There is a relationship between rewards & recognition and change management.
- There is a relationship between rewards & recognition and performance management system.
- There is a relationship between rewards & recognition and leadership.
- There is a relationship between trust and culture.
- There is a relationship between innovation readiness and excellence model.
- There is a relationship between digital infrastructure& transformation and data reliability& intelligence.
- There is a relationship between change management and excellence model.
- There is a relationship between data reliability& intelligence and human assets.
- There is a relationship between change management and culture.
- There is a relationship between leadership and governance.

### 6. Further Research Recommendation

In the future, the study may include a large-scale quantitatively analyzed survey that includes EGEA's participating entities and assessors in order to verify and validate the appropriateness and importance of factors that have emerged from expert interviews, as well as to draw and confirm relationships between different CSFs derived from MAXQDA analysis results.

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