ASSESSMENT OF INNOVATION CAPABILITIES IN SELECTED GOVERNMENT ORGANISATIONS IN UAE

BY

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ABSTRACT

This research aims to develop an innovation maturity model for government organisations in the United Arab Emirates (UAE) and seeks to explore the current challenges facing the UAE government in innovation. The UAE government currently does not have a unified way to measure innovation but rather the use of international excellence models and international standards which are more suited for the private sector. The research was conducted using a qualitative method, gathering data from different governmental sectors in the UAE, such as health, space, technology, education, water, energy, and transportation. The data sources of this research included semi-structured interviews, document reviews, and observations. The researcher interviewed 24 participants several times, analysed 43 public and private documents, and conducted 2 observations. The data that was transcribed and analysed thematically resulted in constructing a model called the "Government Innovation Capability Maturity Model" that has eight dimensions (Strategy, Leadership, Culture, Collaboration, KM, System, HR, and Finance), implemented in seven organisations and validated by four experts in government innovation through three rounds of the Delphi method. The analysed data also identified challenges in innovation for the UAE government in nine areas: strategy, HR, culture, collaboration, R&D, process, financing, marketing, and innovation concept. The research contributed to the theory by closing the gap of limited studies of UAE innovation, and practical contribution by designing an innovation maturity models for government organisations to use. COVID-19 and geographical constraints were some of the limitations of this research but were overcome by gathering the data through online methods such as Zoom© and Google Meet©. Finally, its recommended for future research to further analyse and empirically test the eight dimensions and their relations within the UAE and other countries in the region.

خلاصة البحث

يهدف هذا البحث إلى تطوير نموذج نضج الابتكار، للمؤسسات الحكومية في دولة الإمارات العربية المتحدة. إضافة إلى أنه يسلط الضوء على التحديات الحالية، التي تواجه حكومة الامارات في مجال الابتكار.لا تستخدم حكومة دولة الإمارات الحالية نظام موحد لقياس الابتكار وإنما تستخدم معاير نماذج التميز العالمية والمعايير الدولية والتي تتناسب مع القطاع الخاص وليس الحكومي. وعن منهجية البحث، فقد تم استخدام المنهجية النوعية، من خلال جمع البيانات، من مختلف القطاعات الحكومية في دولة الإمارات : كالصحة، والفضاء، والتكنولوجيا، والتعليم، والمياه والطاقة، والنقل. علما بأن مصادر البيانات لهذا البحث تضمنت : المقابلات شبه المنظمة، مراجعات الوثائق، وعمليات المراقبة. هذا وقد أجرى الباحث مقابلات مع أربعة وعشرين مشاركا ،وحلل ثلاثاً وأربعين وثيقة عامة وخاصة.~~كما~~ ،وأجرى عمليتي مراقبة. وقد أدت البيانات التي تم توثيقها وتحليلها بشكل موضوعي، إلى بناء نموذج يسمى: "نموذج نضج قدرات الابتكار الحكومية"، والذي يحتوي على ثمانية محاور (الاستراتيجية، القيادة، الثقافة، التعاون، ادارة المعرفة، الانظمة، الموارد البشرية، الموارد المالية) وتم تطبيقه على سبع مؤسسات، والتحقق منه من قبل أربعة خبراء في ثلاث جولات من خلال تقنية ديلفي (Delphi)، في مجال الابتكار الحكومي. كما بينت البيانات التي تم تحليلها التحديات الرئيسة في مجال الابتكار، في عشر مجالات: الاستراتيجية، والموارد البشرية ، والثقافة المؤسسية، والتعاون، والبحث،والتطوير ،والعمليات، والتمويل، والتسويق، ومفهوم الابتكار.نظريا اسهمت الدراسة في سد فجوة محدودية الدراسات المتعلقة باللابتكار في الإمارات. ومن الناحية العملية اسهمت الداراسة في ~~الخروج~~ تصميم نماذج نضج ابتكارية لتستخدمها الجهات الحكومية. كانت ازمة فايروس كورونا والحد الجغرافي بعضًا من صعوبات هذا البحث وتم التغلب عليها عن طريق جمع البيانات من خلال برامج عبر الإنترنت مثل Zoom وGoogle Meet. ينصح للدراسات المستقبلية ان يتم دراسة المحاور الثمانية ودراسة العلاقة فيما بينهم احصائيا في دولة الامارات ودول اخرى مجاورة.

APPROVAL PAGE

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DECLARATION

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

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To the soul of my heart, Hadeel

To the pearl of my eye, Rakan

To the wings that lifted me, My Family

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LIST OF ABBREVIATIONS

DGEP	Dubai Government Excellence Program
EFQM	European Foundation of Quality Management
GII	Global Innovation Index
HR	Human Resources
ICMM	Innovation Capability Maturity Model
IP	Intellectual Property
KM	Knowledge Management
KPI	Key Performance Indicators
MM	Maturity Models
NIS	National Innovation Strategy
PDCA	Plan-Do-Check-Act
R&D	Research and Development
UAE	United Arab Emirates

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Innovation has been identified as an essential catalyst for enterprises, economies, and systems development in any given country (Charmes et al., 2018). Although studies on innovation emerged centuries ago, the concept of innovation is still debatable (De Vries et al., 2016). Over the years, research focuses on innovation in the private sector (Borins, 2001), and innovation in the public sector seems to have been given less attention.

According to Organization for Economic Cooperation and Development (OECD) (2018), public sector innovation has enabled various countries to deliver better public values and outcomes to society. It has been on the agenda of governments around the world. As such, more researches are needed to be diverted towards this sector (Agolla & Van Lill, 2017). The United Arab Emirates (UAE) is among the first countries in the Middle East region in the early 1990s to step towards innovation and quality management in the public sector. This study will be exploring various aspects of innovation in the government sector in the UAE, including innovation capabilities, measurement methods, and challenges facing organisations to achieve innovative outputs.

1.1.1 The UAE

The United Arab Emirates was formed on 2nd December 1971 as a federation country with seven emirates, namely Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al Quwain, Fujairah, and Ras Al Khaima (Sarker & Al Athmay, 2018). Before 1971, the emirates were known as the trucial states and were under British power.

The UAE president is Sheikh Khalifa bin Zayed Al Nahyan ruler of Abu Dhabi, and the Vice-President is Sheikh Mohammed bin Rashid Al Maktoum. Both the president and the vice-president of UAE and the other five rulers of the other emirates constitute a council called The Federal Supreme Council. This council is the highest constitutional authority in the UAE. The executive branch of the UAE is the UAE cabinet. This cabinet consists of 32 members with some unique positions, such as minister of happiness and welfare, minister of artificial intelligence, and ministry of possibilities. The final council is the Federal National Council, which establishes relationships between the federal government and the local governments (National Media Council, 2018).

Oil was first discovered in UAE in the late 1960s, and this discovery has resulted in a substantial economic boom in the 1970s (Anthony, 2002). The UAE has a total population of around 9.2 million, with the vast majority of expatriates. The official language of the UAE is Arabic, but English is widely spoken throughout the country (Sarker & Al Athmay, 2018). The country's Gross National Product (GDP) was previously depended heavily on oil in the country's early years; in fact, 40% of the GDP in 2014 was on oil and gas (National Media Council, 2014). However, the UAE has been able to diversify its economy in recent years, and oil and gas only contributed only 29.5% to GDP in 2017 (National Media Council, 2018).

The UAE has shown the world that it can lead to innovation in a short period, although the country was faced with an economic crisis from 2007 to 2010 that left the country in a bad situation (Dubai stock alone needed to refinance nearly $4bn worth of debt). Facing this difficulty, yet the UAE was ranked 27th in World Competitiveness Ranking out of 137 countries in 2018 (WEF, 2018).

1.1.2 UAE and Government Excellence

The UAE government has adopted the European Foundation of Quality Management (EFQM) framework as the excellence model adopted by all government organisations (Mohamed, 2013). This model was adopted in 1992 by the Dubai Quality Awards, aiming to recognize public sectors' achievements in improving and monitoring quality performance (Lasrado & Uzbeck, 2017). In 1997, the Dubai Government Excellence Program (DGEP) was established based on EFQM, and other emirates later imitated the initiative. After its initial development, the program was modified twice to focus on important areas, such as Emiratisation (McAdam et al., 2013).

The EFQM model focuses on nine criteria in two classification capabilities and results. The capabilities and results both have the same weight of 50%. The Capabilities criteria are leadership, strategy, people, partnership, and process. While the Results criteria are customer results, people results, society results, and business results. All these criteria were evaluated using a tool called RADAR: Results, Approach, Deploy, Assess, and Refine (Lasrado & Uzbeck, 2017).

In 2015, the UAE government initiated its decision to develop its tailored excellence model, called the 4G (4^{th} generation, since it is the fourth change in the model since 1997), specifically for public organisations as against the EFQM that is general and applicable to both public and private organisations. As shown in Figure 1.1, the

new model consists of three main criteria with sub-criteria. The first criterion is “Vision achievement” with 60% weight; this criterion includes plan, main functions, seven-star services, and smart government. The second criterion is “enablers” with 25% weight; this criterion covers human capital, resource management, and governance. The last criterion is “innovation” with 15% weight, and it consists of shaping the future and innovation management. The assessment method is different from the EFQM, where each criterion is assessed in both capabilities and results (dgep.gov.ae).

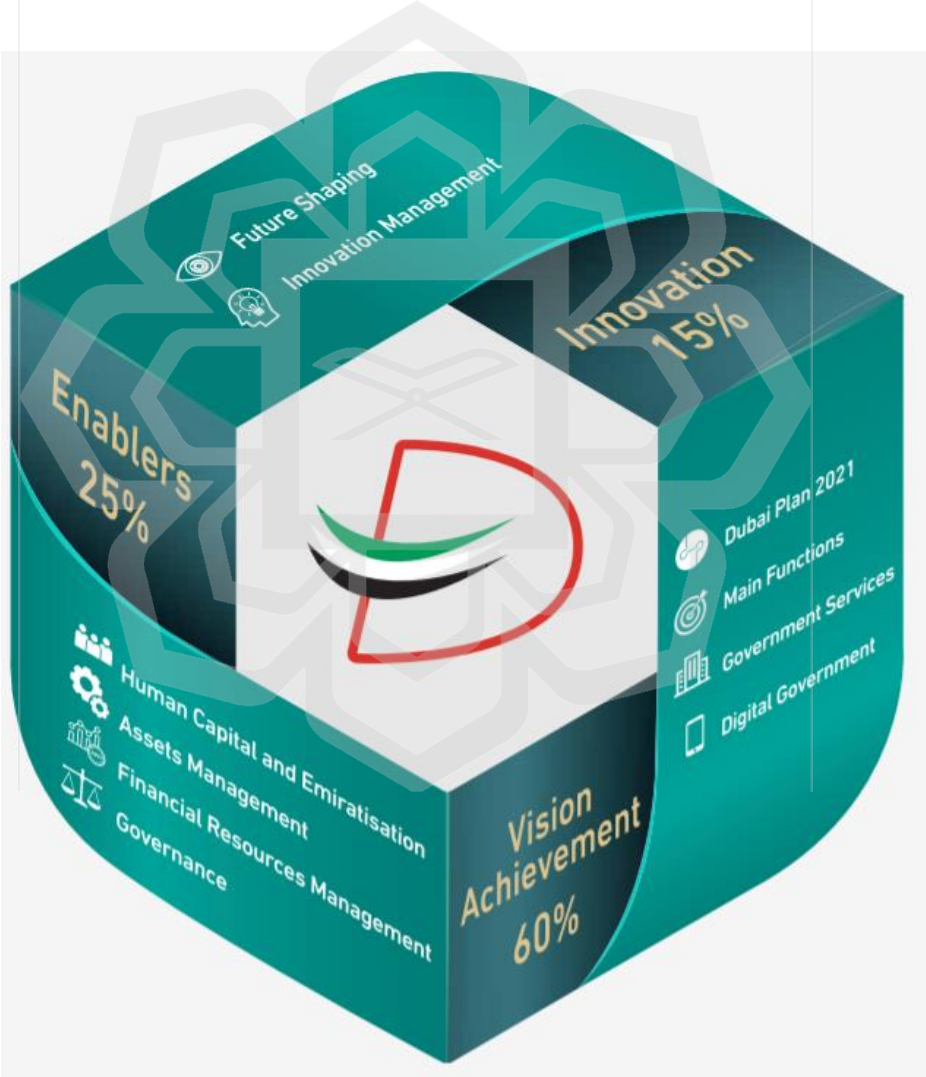

Figure 1.1 DGEP 4G Model
(dgep.gov.ae, 2021)

The model does not only look at the organisation as a whole when doing the assessment but many other category awards. There are 22 categories in the DGEP, covering employees, departments, and service centers. Figure 1.2 shows the different categories in the DGEP.

The DGEP focuses only on Emirate of Dubai, but its concept was later adapted (only modifying weights and other aspects of criteria) by Abu Dhabi, Sharjah, Ajman, and Ras Al-Khaimah in accordance with their vision.

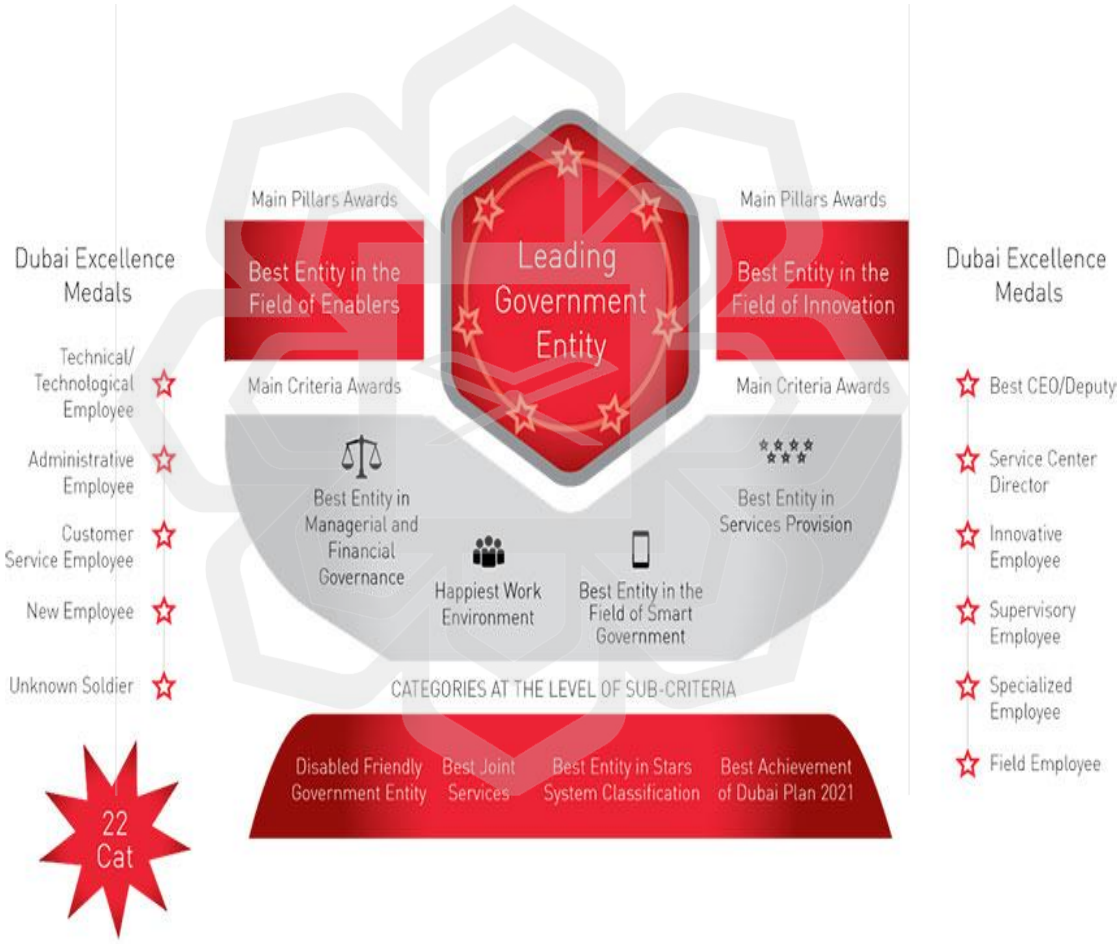

Figure 1.2 DGEP 4G Award Categories
(dgep.gov.ae, 2019)

1.1.3 UAE and Innovation

In recent years, innovation is seen as a vital ingredient in the future development of UAE. This is stressed by various UAE leaders in speeches as well as policy documents. For instance, Mohammed bin Rashid Al Maktoum, the Vice President of the UAE once said while announcing the innovation week in 2015:

> *"Innovation is what defines our status among nations and the value we add to the world around us."*

In 2014, the government announced its Vision 2021

> *"In a strong and safe union, knowledgeable and innovative, Emiratis will confidently build a competitive and resilient economy. They will thrive as a cohesive society bonded with identity and enjoy the highest standards of living within a nurturing and sustainable environment"* (GoUAE, 2014).

Vision 2021 has put innovation as a cornerstone to economic competitiveness and resiliency. The country has taken a further step by launching its first innovative strategy in 2015, which was to broaden the Vision 2021 in such that it will reposition the UAE to be among the most innovative nations in the world. The strategy cut the chase of different definitions of innovation by clearly defining innovation at the beginning of the document and stating the reasons behind any nations' motivation to innovate. The strategy also focuses on specific sectors where innovation is considered important. These sectors are transportation, technology, education, health, water, space, and renewable energy. The strategy maintains that innovation champions are three: individuals, companies, and government (GoUAE, 2015).