ANALYSING THE IMPACT OF SELECTED MACROECONOMIC VARIABLES ON PUBLIC EXPENDITURE IN THE UNITED ARAB EMIRATES (UAE)

ALDAHMANI HAMAD MOHAMMED ASAD ABULRAH

SULTAN IDRIS EDUCATION UNIVERSITY

2022

ANALYSING THE IMPACT OF SELECTED MACROECONOMIC VARIABLES ON PUBLIC EXPENDITURE IN THE UNITED ARAB EMIRATES (UAE)

ALDAHMANI HAMAD MOHAMMED ASAD ABULRAH

05-4506832 pustaka.upsi.edu.my Perpustakaan Tuanku Bainun Kampus Sultan Abdul Jalil Shah PustakaTBainun ptbupsi

THESIS PRESENTED TO QUALIFY FOR A DOCTOR OF PHILOSOPHY

FACULTY OF MANAGEMENT AND ECONOMICS
SULTAN IDRIS EDUCATION UNIVERSITY

2022

05-4506832 pustaka.upsi.edu.my Perpustakaan Tuanku Bainun Kampus Sultan Abdul Jalil Shah PustakaTBainun ptbupsi

UNIVERSITI PENDIDIKAN SULTAN IDRIS
SULTAN IDRIS EDUCATION UNIVERSITY

Please tick (√)
Project Paper
Masters by Research
Master by Mixed Mode
PhD

/

INSTITUTE OF GRADUATE STUDIES

DECLARATION OF ORIGINAL WORK

This declaration is made on the ....9.....day of....August....20..22..

i. Student's Declaration:

I, Aldahmani Hamad Mohammed Asad Abulrah, P20172002444, Faculty of Management and Economic (PLEASE INDICATE STUDENT'S NAME, MATRIC NO. AND FACULTY) hereby declare that the work entitled Analysing the Impact of Selected Macroeconomic Variables on Public Expenditure in the United Arab Emirates (UAE) is my original work. I have not copied from any other students' work or from any other sources except where due reference or acknowledgement is made explicitly in the text, nor has any part been written for me by another person.

Signature of the student

ii. Supervisor's Declaration:

I Dr. Awadh Ahmed Mohammed Gamal (SUPERVISOR'S NAME) hereby certifies that the work entitled Analysing the Impact of Selected Macroeconomic Variables on Public Expenditure in the United Arab Emirates (UAE) (TITLE) was prepared by the above named student, and was submitted to the Institute of Graduate Studies as a * partial/full fulfillment for the conferment of Doctor of Philosophy (PLEASE INDICATE THE DEGREE), and the aforementioned work, to the best of my knowledge, is the said student's work.

DR. AWADH AHMED MOHAMMED GAMAL
Senior Lecturer
Department of Economics
Faculty of Management and Economics
Sultan Idris Education University
35900 Tanjong Malim, Perak Malaysia

9th August 2022
Date

Signature of the Supervisor

UNIVERSITI PENDIDIKAN SULTAN IDRIS
SULTAN IDRIS EDUCATION UNIVERSITY

INSTITUT PENGAJIAN SISWAZAH /
INSTITUTE OF GRADUATE STUDIES

BORANG PENGESAHAN PENYERAHAN TESIS/DISERTASI/LAPORAN KERTAS PROJEK
DECLARATION OF THESIS/DISSERTATION/PROJECT PAPER FORM

Tajuk / *Title*: Analysing the Impact of Selected Macroeconomic Variables on Public Expenditure in the United Arab Emirates (UAE)

No. Matrik /*Matric's No.*: P20172002444

Saya / *I* : Aldahmani Hamad Mohammed Asad Abulrah

(Nama pelajar / *Student's Name*)

mengaku membenarkan Tesis/Disertasi/Laporan Kertas Projek (Kedoktoran/Sarjana)* ini disimpan di Universiti Pendidikan Sultan Idris (Perpustakaan Tuanku Bainun) dengan syarat-syarat kegunaan seperti berikut:-
acknowledged that Universiti Pendidikan Sultan Idris (Tuanku Bainun Library) reserves the right as follows:-

1. Tesis/Disertasi/Laporan Kertas Projek ini adalah hak milik UPSI.
   The thesis is the property of Universiti Pendidikan Sultan Idris
2. Perpustakaan Tuanku Bainun dibenarkan membuat salinan untuk tujuan rujukan dan penyelidikan.
   Tuanku Bainun Library has the right to make copies for the purpose of reference and research.
3. Perpustakaan dibenarkan membuat salinan Tesis/Disertasi ini sebagai bahan pertukaran antara Institusi Pengajian Tinggi.
   The Library has the right to make copies of the thesis for academic exchange.
4. Sila tandakan (√) bagi pilihan kategori di bawah */ Please tick (√) for category below:-*

☐	**SULIT/*CONFIDENTIAL***	Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub dalam Akta Rahsia Rasmi 1972. / *Contains confidential information under the Official Secret Act 1972*
☐	**TERHAD/*RESTRICTED***	Mengandungi maklumat terhad yang telah ditentukan oleh organisasi/badan di mana penyelidikan ini dijalankan. / *Contains restircted information as specified by the organization where research was done.*
☑	**TIDAK TERHAD / *OPEN ACCESS***	

(Tandatangan Pelajar/ Signature)

(Tandatangan Penyelia / *Signature of Supervisor*)
& (Nama & Cop Rasmi / *Name & Official Stamp*)

DR. AWAD MOHAMMED GAMAL
Senior Lecturer
Department of Economics
Faculty of Management and Economics
Sultan Idris Education University
35900 Tanjong Malim, Perak, Malaysia

Tarikh: 9th August 2022

Catatan: Jika Tesis/Disertasi ini **SULIT @ TERHAD**, sila lampirkan surat daripada pihak berkuasa/organisasi berkenaan dengan menyatakan sekali sebab dan tempoh laporan ini perlu dikelaskan sebagai **SULIT** dan **TERHAD**.

Notes: If the thesis is CONFIDENTAL or RESTRICTED, please attach with the letter from the organization with period and reasons for confidentiality or restriction.

ABSTRACT

The objective of this study is to evaluate the impact of selected macroeconomic variables on public expenditure in the UAE during the 1975-2020 period, based on the Wagner (1883) law of increasing state activities. The study employs several estimation techniques including the Gregory-Hansen cointegration approach, Autoregressive Distributed Lag (ARDL) bounds testing technique, the Canonical Cointegrating Regression (CCR), Fully Modified Ordinary Least Squares (FMOLS) estimators, the Non-linear ARDL (NARDL) method, and the Toda-Yamamoto causality procedure. The results of the cointegration tests demonstrate the presence of a long-term relationship between public expenditure and the selected variables. Further, the results of the different estimation techniques illustrate that oil price, tax burden, fiscal deficit, outward flow of money and FDI, and interest rate influence the level of public expenditure significantly both in the short-term and the long-term. Moreover, adopting the NARDL method, the results suggest that interest rate has an asymmetric effect on public expenditure, with positive and negative shocks influence public expenditure level differently. Following the Kuznets hypothesis framework, the results illustrate a significant inverted 'U-shaped' association between fiscal deficit and government expenditure. This suggests that an increase in fiscal deficit is associated with a rise in public expenditure till fiscal deficit attains a peak, and then a decline in public expenditure over and above the peak-point. Furthermore, the Toda-Yamamoto causality test results indicate a two-way causality from public expenditure to fiscal deficit (and oil price); a one-way causality running from outflow of money (and outward flow of FDI) to public expenditure; and a unidirectional causality from public expenditure to tax burden. The study recommends actions aimed at diversifying the UAE's public revenue, strict monitor of tax collection and blockage of tax leakages, reduction of fiscal deficit, elimination of unofficial remittance flows, promotions of investor-friendly trade policies, and the stabilisation of the interest.

Keywords: Public expenditure, oil price, fiscal deficit, tax burden, outflow of money, FDI outflow, interest rate, the UAE

ANALISIS KESAN PEMBOLEHUBAH MAKROEKONOMI TERPILIH TERHADAP PERBELANJAAN AWAM DI EMIRATES ARAB BERSATU (UAE)

ABSTRAK

Objektif kajian ini adalah untuk mengkaji kesan pembolehubah makroekonomi terpilih ke atas perbelanjaan awam di UAE dalam tempoh 1975-2020, berdasarkan kaedah peraturan peningkatan aktiviti Wagner (1883). Kajian ini menggunakan beberapa teknik anggaran termasuk pendekatan kointegrasi Gregory-Hansen, teknik ujian sempadan Autoregressive Distributed Lag (ARDL), Canonical Cointegrating Regression (CCR), penganggar Kuasa Dua Terkecil Biasa (FMOLS) yang diubah suai sepenuhnya, ARDL Bukan linear (NARDL) kaedah, dan prosedur kausaliti Toda-Yamamoto. Keputusan ujian kointegrasi menunjukkan wujudnya hubungan jangka panjang antara perbelanjaan awam dan pembolehubah yang dipilih. Seterusnya, keputusan teknik anggaran yang berbeza menunjukkan bahawa harga minyak, beban cukai, defisit fiskal, aliran keluar wang dan FDI, dan kadar faedah mempengaruhi tahap perbelanjaan awam dengan ketara dalam jangka pendek dan jangka panjang. Selain itu, penggunaan kaedah NARDL, keputusan analisis menunjukkan bahawa kadar faedah mempunyai kesan tidak simetri ke atas perbelanjaan awam, dengan kejutan positif dan negatif mempengaruhi tahap perbelanjaan awam secara berbeza. Manakala penggunaan rangka kerja hipotesis Kuznets, keputusan analisis menunjukkan perkaitan 'berbentuk U' terbalik yang ketara antara defisit fiskal dan perbelanjaan kerajaan. Ini mencadangkan bahawa peningkatan dalam defisit fiskal yang berkait dengan peningkatan dalam perbelanjaan awam akan berterusan sehingga defisit fiscal ini mencapai kemuncak, dan disusuri penurunan dalam perbelanjaan awam melebihi dan melepasi titik puncak. Tambahan lagi, keputusan ujian kausaliti Toda-Yamamoto menunjukkan kausaliti dua hala daripada perbelanjaan awam kepada defisit fiskal (dan harga minyak); kausalitas sehala bermula daripada aliran keluar wang (dan aliran keluar FDI) kepada perbelanjaan awam; dan kausalitas satu arah daripada perbelanjaan awam kepada beban cukai. Dapatan kajian ini mengesyorkan bahawa wujudnya tindakan untuk mempelbagaikan hasil pendapatan awam UAE, pemantauan ketat kutipan cukai dan sekatan kebocoran cukai, pengurangan defisit fiskal, penghapusan aliran kiriman wang tidak rasmi, promosi dasar perdagangan mesra pelabur dan kepentingan kestabilan.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ADF	Augmented Dickey-Fuller Unit root test
AIC	Akaike Information Criterion
ARCH	Autoregressive Conditional Heteroscedasticity
ARDL	Autoregressive Distributed Lag
AO	Additive Outlier
CBUAE	Central Bank of United Arab Emirates
CCR	Canonical Cointegrating Regression
CIT	Corporate Income Tax
CUSUM	Cumulative Sum of Recursive Residuals
CUSUMSQ	Cumulative Sum of Squares of Recursive Residuals
Dh.	United Arab Emirates Dirham
DIFC	Dubai International Financial Centre
ECM	Error Correction Model
EU	European Union
FCSA	Federal Competitiveness and Statistics Authority
FDI	Foreign Direct Investment
FE	Fixed Effects Model
FGLS	Feasible Generalised Least Squares
FMOLS	Fully Modified Ordinary Least Squares
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GH	Gregory-Hansen cointegration
GMM	Generalised Method of Moments

GNP	Gross National Product
IMF	International Monetary Fund
IO1	Innovation Outlier 1
IO2	Innovation Outlier 2
IRF	Impulse Response Function
KSA	Kingdom of Saudi Arabia
MENA	Middle East and North Africa
MWALD	Modified Wald
NARDL	Nonlinear Autoregressive Distributed Lag
OECD	Organisation for Economic Cooperation and Development
OFDI	Outward Foreign Direct Investment
OLS	Ordinary Least Squares
OPEC	Organisation of the Petroleum Exporting Countries
ORB	OPEC Reference Basket
PEKC	Public Expenditure Kuznets Curve
PCSE	Panel Corrected Standard Errors
PIT	Personal Income Tax
RE	Ricardian Equivalence
SIC	Schwartz Information Criterion
SUR	Seemingly Unrelated Regression
SVAR	Structural Vector Autoregressive
SWF	Sovereign Wealth Fund
TSLS	Two Stage Least Squares
TY	Toda-Yamamoto
UAE	United Arab Emirates

UK	United Kingdom
USA	United States of America
VAR	Vector Autoregressive
VAT	Value Added Tax
VECM	Vector Error Correction Model
WEF	World Economic Forum
WDI	World Development Indicators
ZA	Zivot-Andrews

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Be it capitalist or socialist economy, governments are set up with the particular aim of serving the citizens of the country (Kehinde & Felix, 2019; Shonchoy, 2010). Thus, the main attention of governments is improvement of the standard of living of the people in addition to stimulating economic growth, through appropriate economic policies and the direct participation in economic activities (Ebaid, 2016). These economic activities can include the delivery of production infrastructure and basic social services like education, healthcare, subsidies, etc.; and the provision of internal security, defence and general administration (Jibir & Aluthge, 2019). Others are the production and marketing of goods through established public enterprises; influencing or regulation of the level and direction of private economic activities and the redistribution of income and wealth (Ebaid, 2016; Kanano, 2006). However, the participation of governments in

such economic activities necessitates spending (Jibir & Aluthge, 2019). Therefore, one would define "public expenditure" or "government expenditure" as the expenses which governments, at all levels (central, state and local) incur in the course of governance, the improvement of people's welfare and providing basic amenities and infrastructures, including assisting other nations of the world (Dizaji, 2014; Du, 2015).

Over time, the rationale behind public expenditure has varied (Kehinde & Felix, 2019). The earliest approach was closely linked with the philosophy of laissez-faire, according to which the best government was the one that allowed almost all economic decisions to be guided by the invisible hand of the market forces of demand and supply (Algaeed, 2020). Whereas this approach limits the participation of the State to activities such as providing defence, law and order, justice, administration and social overhead, the failure of the market mechanism in many respect to bring about the desired outcome in the economy led to an increasing state's intervention and participation in the economy (Jibir & Aluthge, 2019; Kanano, 2006). The market forces were unable to solve "all economic problems, hence, bringing about inequitable distribution of income and wealth, and failure to tackle problems of unemployment, inflation and economic growth (Othman, Yusop, Andaman & Ismail, 2018). No doubt, this was key to the rapid expansion in public expenditure and public sector (Ebaid, 2016).

However, public expenditures are undertaken in different economies with diverse targets and objectives which may be economic, social and political in nature (Aregbeyen & Akpan, 2013). It may also depend on the prevailing circumstance that informed the spending and/or the stage and level of social, political, and development of the spending country (Kehinde & Felix, 2019). Yet, the general notion behind public

expenditure is for governments to sustain, stimulate and manipulate the desired level of economic activity and the allocation of scarce resources (Shonchoy, 2010). This is in order to stabilise the economy, foster economic growth and equity objectives, enhance production growth, as well as reduce poverty and unemployment.

Moreover, there is a general consensus amongst economists that large public expenditure, especially social expenditure (such as spending on education, health) and public infrastructures are essential for growth and development due in part to the role they play as the 'wheels,' or better still, engine of economic activity in developing countries (Kehinde & Felix, 2019; Shonchoy, 2010; World Bank, 1994). This is not unconnected to the argument that public expenditure increases sustainable and steady productivity and economic growth, which further translate to improved social wellbeing, alleviation of poverty, and sustainable development (Iiyambo & Kaulihowa, 2020; Kanano, 2006; Mehmood & Sadiq, 2010; Pfefferman, 2001). Hence, the tremendous increase in the size and structure of the public sector after the World War II with regards to its expenditure, both in advanced and developing countries, is therefore not surprising (Aregbeyen & Akpan, 2013; Kehinde & Felix, 2019).

Like in most countries, fiscal policy (public expenditure) in the United Arab Emirate (the UAE) – a young seven emirates federation comprising of Abu Dhabi, Ajman, Dubai, Fujairah, Ras Al Khaimah, Sharjah and Umm Al Quwain – has been expansionary in nature (Mestareehih, 2017). Particularly, since independence in the year 1971, the need to further provide basic social services to cater for citizens and critical infrastructures with growth potentials have ensured the continuous drive in the expansion of public expenditure in the UAE, both in absolute, relative and as a

percentage of the Gross Domestic Product (GDP) (Shukurov, 2015). In fact, as a primary tool used to influence economic performance, growing public expenditure in the country has been identified as the major catalyst in transforming UAE's poor economy, which was hitherto based on fishing, seafaring and pearl trade, to the second largest in the Arab world, behind Saudi Arabia (Katsaiti et al., 2017).

A critical look at available statistics from the annual reports of Central Bank of UAE (CBUAE) and UAE's Federal Competitiveness and Statistical Authority (FCSA) datasets during the period from 1975 to 2020 indicates that the country's public expenditure in absolute terms and as a percentage of the GDP has grown considerably over time. For instance, from Dh. 13.4 billion (equivalent to about US$ 3.37 billion) in 1975, public expenditure in the UAE maintained a steady rise to about Dh. 159.73 billion (equivalent to US$43.49 billion) in 2007. However, following the global financial and economic crisis of 2008/2009 which adversely affected the economy of the UAE, especially the booming construction and real estate sector of the economy, public expenditure further rose by 42.06 percent to Dh. 275.68 billion (equivalent to US$75.07 billion) in 2008, and even further by 29.45 percent to Dh. 390.79 billion (equivalent to US$106.41 billion) in 2009 (see Figure 1.1).

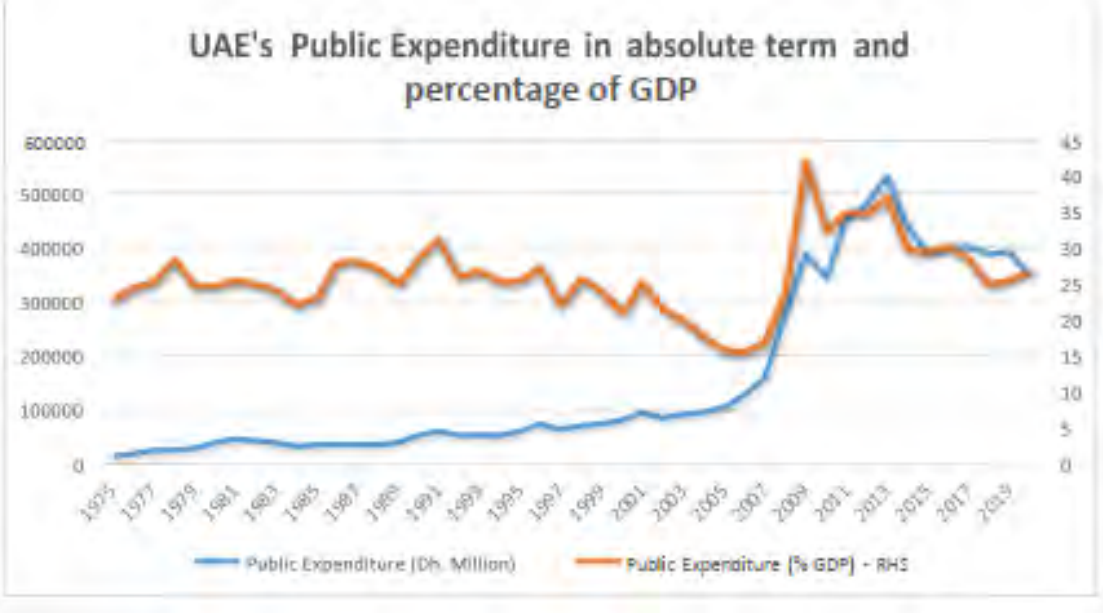

Figure 1.1. Trend of Public expenditure (in absolute term and as a share of GDP) in the UAE. Sources: Researcher's computation based on data from FCSA and CBUAE annual reports, 2020

Given that UAE is a major oil producing and exporting country, the rising trend of public expenditure in her may have been partly accounted for by rising oil prices (Shukurov, 2015). In fact, in 2013 when oil prices averaged at US$108.21 per barrel, public expenditure in the UAE responded significantly as it reached a peak of Dh. 533.13 billion (equivalent to US$145.17 billion) in 2013, the largest expenditure of the UAE government in a single year. However, following the crash in the price of oil which started in mid-2014 coupled with the global economic downturn following the not-so-novel Corona virus pandemic, public expenditure in the UAE took a downward trend to about Dh. 348.90 billion (equivalent to US$94.99 billion) in 2020.

Table 1.1

Gulf Cooperation Council (GCC) Countries Public Expenditure as Share of GDP

Year	UAE	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia
2000	21.95	16.21	21.48	21.48	19.67	25.86
2001	9.91	17.26	23.63	23.16	18.63	27.33
2002	10.15	17.67	25.28	23.65	16.72	25.95
2003	9.75	17.32	22.99	22.25	15.41	24.49
2004	8.75	15.44	19.86	22.42	13.07	22.86
2005	7.87	14.06	15.71	20.79	14.29	21.34
2006	6.92	12.71	13.89	18.63	14.72	22.04
2007	6.73	12.09	14.01	18.81	12.40	20.66
2008	7.29	11.29	13.39	14.16	10.18	17.70
2009	10.23	13.98	18.48	19.36	15.63	22.19
2010	10.03	12.93	17.13	18.69	13.98	20.20
2011	9.953	13.84	14.88	18.06	11.04	19.39
2012	9.73	15.44	15.06	19.59	12.25	19.97
2013	10.98	15.55	16.39	21.64	14.56	22.45
2014	10.93	16.13	17.76	24.83	15.47	26.06
2015	12.43	17.69	24.19	28.34	20.23	30.00
2016	12.53	17.11	25.71	29.99	19.54	25.82
2017	13.21	16.63	24.42	28.09	17.61	24.44
2018	11.82	16.36	23.05	24.73	16.28	24.62
2019	13.28	15.76	25.22	24.57	18.52	23.85

Source: Researcher's computation based on data from World Banks' World Development Indicators (WDI), 2021

Whereas UAE's public expenditure was on the increase in absolute terms, statistics suggest that UAE's public expenditure as a percentage of GDP was far lesser than that of fellow countries in the Gulf Cooperation Council (GCC) region, consisting of six countries including Bahrain, Kuwait, Oman, Qatar, Kingdom of Saudi Arabia, and the UAE, especially between 2000 and 2019 (see Table 1.1). For instance, data

from the World Bank's World Development Indicators (WDI) suggest that the Kingdom of Saudi Arabia's (KSA) public expenditure as a percentage of the GDP was in multiples of those of the UAE from 2001 through 2019. Moreover, the percentage of public expenditure in the GDP in Bahrain, Kuwait, Oman and Qatar also out-performed those of UAE between 2001 and 2019.

Although the information therein does not in any way imply that the aggregate public expenditure in the UAE is less than that of its counterparts in the GCC region, it suggests that the contribution of the government spending in the UAE's economy is smaller in comparison to other nations in the GCC region. Apart from the lower share of UAE's public expenditure in the total GDP, it was also characterised by fluctuations, increasing sometimes and declining in other periods (see figure 1.1).

While it is a norm for government worldwide to depend on tax and duties collection to financing their expenditure, the UAE, like most oil-exporting countries, is characterized by a culture of relying on the receipts from the sales of oil. In other words, the UAE's government does not literally tax its citizens or the expatriate community (Shukurov, 2015). In particular, prior to the introduction of the value-added tax (VAT) and excise tax in 2018 and 2017, respectively, the system of taxation in the UAE was such that personal income tax (PIT) was non-existent, whereas the corporate income tax (CIT) in place was only restricted to foreign banks and oil companies in the country (Kandil, 2016). Instead of taxing its people, the government used the receipt from the sales of its oil as the mainstay of her expenditure initiatives. Although the country has the most diversified economy in comparison with its regional peers, statistics illustrates that oil still accounts for over 50 percent of total export and more than 40 percent of its

public revenue, while revenue from tax contributes an average of a little above 7 percent to the income of the government (Federal Competitiveness and Statistics Authority [FCSA], 2020; Mahmah & Kandil, 2019).

Regrettably, the low revenue from tax in addition to the variation in oil price has subsequently ushered the country into series of fiscal deficits (FCSA, 2020). Put differently, the series of mismatch between public expenditure and revenue, ensured by oil revenue fluctuation and low tax revenue, have led to variations in fiscal balances from sizeable surpluses to deficits over the years. For instance, between 1975 and 2019, the UAE adopted deficit financed public expenditure for a period of thirty-three years – from 1982 to 2004, 2009 to 2017, and then in the year 2020 (FCSA, 2020), the highest being Dh. 156.31 billion (equivalent to US$42.56 billion) in 2009, estimated at about 17 percent of her GDP. Moreover, in 2015, due to the projected low oil prices and low revenue from tax, and the resultant persistent fiscal deficits, the UAE's authorities had to embark on series of economic diversification and fiscal consolidation strategies to adjust to the sustained negative shocks in the receipt from oil sales (Mahmah & Kandil, 2019).

Specifically, the government undertook significant examination of public expenditure and efficient fiscal management through: the increase in electricity and water tariffs; the elimination of energy/fuel subsidies by ensuring the pricing of gasoline and diesel are determined by the market forces; and the gradual consolidation/merger of government-controlled commercial entities which perform duplicate duties so as to cut the cost of governance and improve their efficiency (Mahmah & Kandil, 2019; Oxford Business Group, 2020). More so, in a bid to diversify

its revenue away from oil and other hydrocarbon products, in January 2018 the country implemented a five percent VAT on all goods and services. This is in addition to the earlier introduced excise tax on certain products (such as tobacco, alcohol and soft drinks) which the government feel have negative effect on humans and the environment in November 2017.

Coupled with the reluctance of the government of the UAE to impose tax to safeguard public revenue from oil shock, the low revenue from existing taxes in the UAE, which is predominantly made up of custom duties and other tax revenues, can be attributed to tax evasion practices among importers, retailer, wholesalers, and owners of companies which recruit foreign workers in the UAE (Edrees, 2016). Nearest to this, is the significant size of underground activities, which account for about 10.34 percent, 24.4 percent and 26.4 percent of the GDP, over the period of 1990-2010, 1986-2008, and 1991-2015, respectively, may also be responsible for the paltry tax revenue in the country (Elgin & Oztunali, 2012; Gamal & Dahalan, 2015; Medina & Schneider, 2018). In fact, the size of underground activities in the country coupled with the heavy reliance on foreign labour – accounting for about 88.52 percent of UAE's population, and almost half of the total workforce – have ensured the continuous leakage (outflow) of huge money from the economy over time (Edrees, 2016; Kaabi, 2016). In 2018, for instance, outward flow of money from the UAE increased from US$3.2 billion in 1997 to about US$44.4 billion (World Bank, 2020). Unfortunately, the outflow of money from the country in 2018, which made up about 10.7 percent of the UAE's GDP, was the second largest in the world, only after the USA, which sent out US$68.5 billion in 2018 (World Bank, 2020; 2021).

Similarly, it is a common knowledge that the UAE is the GCC and Middle East and North Africa's (MENA) major trade and investment hub (International Monetary Fund [IMF], 2011; U.S. Department of State, 2019). This feat was attributed to the significant expenditure in critical infrastructures, the stable economic and political atmosphere, rapid GDP and population growth, perception of the absence or low systemic corruption, fast-growing capital markets, and the presence of incentives such as the absence of personal taxes, presence of tax holidays, and exemption from currency restrictions and import duties, amongst others (Kandil, 2016; U.S. Department of State, 2019).

Outward flow of foreign direct investment (OFDI) from the UAE has also continued to grow steadily. For instance, while FDI inflow into the country rose from about US$95.1 million in 1982 to about US$14 billion (equivalent to Dh. 51.4 billion) in 2019, OFDI rose rapidly from just US$28.5 million (equivalent to Dh. 112.90 million) in 1975 and US$27.1 million (equivalent to Dh. 99.48 million) in 1982 to more than US$1.024 billion (equivalent to Dh 3.76 billion) in 2018 and about US$1.72 billion (equivalent to Dh. 6133 billion) in 2020 (Abbas, 2020; FCSA, 2020; World Bank, 2021). Although most of the outward FDI is credited to the Sovereign Wealth Funds (SWFs) owned by the country jointly and/or individually as an emirate (Mina, 2012), it is apparent that such large outflows from the system constitutes a significant adverse consequence for macroeconomic balance, monetary policy, external balance (balance of payments), and perhaps, fiscal policy (Ameer, Xu & Alotaish, 2017; Al-Sadig, 2013; Goh & Wong, 2012; Kokko, 2006; Masso, Varblane & Vahte, 2008; Mina, 2012).

The discussion so far clearly suggests that public expenditure in the UAE has been on the increase. This rising government expenditure is occasioned by the growing demand for public goods and services including roads, health, communication, power and education, amongst others (Mestareehih, 2017). However, the continuous increase in public expenditure in the country is not steady, and it is matched with inconsistency. In other words, increase in public expenditure in the UAE has been exhibiting intermittent rise and fall over the last few decades. Although Shonchoy (2010) argued that variations in public expenditure is only an issue in developing countries, the fact that export earnings and public revenue of the UAE are dependent on a primary product (oil and gas) whose price exhibits instability from time to time raises concern on the country's public expenditure.

Moreover, an "inconsistent" and "excessive" public expenditure is purported to be "the cause of many economic ills such as slow economic growth, large fiscal deficits, internal imbalances, and external imbalances both in developed and developing countries" (Aregbeyen & Akpan, 2013; Ukwueze, 2015). In fact, Yun (2020) is of the opinion that inconsistency in the growth of public expenditure may possibly strain public resources. Hence, understanding the factors which drives the growth of public expenditure is important since the information thereof is not only necessary for the effective manipulation and management of fiscal imbalances, but also the attainment of the desired goals and encouragement of stability in the economy (Aregbeyen & Akpan, 2013; Jibir & Aluthge, 2019).

To understand the causes of instability in the UAE's public expenditure growth, the identification of the factors which determine public expenditure and the scale of their impact is very crucial. Over time, economists and political scientists have involved themselves in understanding the factors responsible for changing levels of public expenditure. For instance, Wagner (1883), based on empirical findings, demonstrated that state activities tend to grow relative to national income growth in the long run. In other words, "increasing state activities is a precursor to an increased level of economic development and such increase in state activities is a causative factor for the growth of public expenditure" (Kehinde & Felix, 2019). However, the Wagner's law is conventionally interpreted as the sustained relative expansion in public expenditure as a result of the development process (Okafor & Eiya, 2011). In particular, given that Wagner (1883) was never explicit on whether his findings were based on relative or absolute terms, Musgrave (1969), for instance, decided to interpret the Wagner's law in relation to the public sector size. This indicates the tendency of the size of the public sector growing following (or as a consequence of) rising per capita income in a society.

Whereas Wagner (1883) did not examine the magnitude of the relationship, suffice to note that his analysis suggests that changes in the level of public expenditure are induced by political and economic factors (Okafor & Eiya, 2011), subsequent studies suggest otherwise. For example, Pryov (1987) and Thorn (1977) demonstrate that demographic, social and institutional factors also play significant role in influencing changes in the level of public expenditure levels. Also, Martin and Lewis (1975) argued that public expenditure is driven chiefly by the conception of the role of the state, much more than income level, while Musgrave (1961) opined that a country's public expenditure is affected by the demonstration effect of other countries.

Besides, from the standpoint of recent empirical literature, several studies have linked the rise and/or fall in the level of public spending to factors other than income. These include the openness of the economy, defence expenditure, demographic pattern, inflow of foreign aid, debt burden, fractionalisation or ethnic diversity, and the size of the economy. Others are the growth rate of country's population; urbanization, government's commitments to meet demands for social services, welfare activities, income elasticity of demand of public goods, increasing cost of government production, wars and social crises, international obligation, interest payments on foreign and domestic debt, public sector employment, civil service corruption and so on (Aregbeyen & Akpan, 2013; Kanano, 2006; Maluleke, 2017; Okafor & Eiya, 2011; Shonchoy, 2010).

However, despite the proliferation of studies regarding the public expenditure expansion to date, a-one-size-fit-all or a general agreement on the explanations for the fall or rise in public expenditure is non-existent (Aregbeyen & Akpan, 2013). Perhaps, this might be due to the differences in the public expenditure priorities and profile from one country to another. Another reason could be the existence of "profound divergence between how fiscal policy is conducted across countries based on their level of development" (Shonchoy, 2010).

However, it is glaring that factors which determine public expenditure would depend on individual country's peculiarities (Aregbeyen & Akpan, 2013).

Moreover, since the UAE depends largely on proceeds from oil production and export, external shocks (such as vagaries in the global oil price) remain an important determinant of economic activities in the country (Haouas & Heshmati, 2014). In fact, it has been claimed that one of such factors that have the tendency of affecting the level of public expenditure in such a country is the price of oil (Pazouki & Pazouki, 2014). This is particularly important because shocks in oil price are mainly a fiscal phenomenon, which has direct impact on public finances, and consequently resulting in a highly volatile revenue stream and often pro-cyclical public expenditures (Ebaid, 2016; El-Anshasy, 2009). In fact, volatility in oil price is usually transmitted into the economy through oil revenue which is the backbone of the public revenue of most oil-dependent economies (Abdel-Latif, Osman & Ahmed, 2018; Hamdi & Sbia, 2013; Kandil, 2016).

Typically, there is a tendency of public expenditure changing due to uncertainty surrounding future oil revenue following instability in the current revenues as it is not unexpected that the government would reassess its anticipated revenue stream (El-Anshasy, 2009). More so, oil-dependent countries such as the UAE often adopt pro-cyclical fiscal policy, as against countercyclical fiscal policies (Shonchoy, 2010). That is, the raising of public expenditure with positive shocks in oil revenue – whether it is perceived to be temporary or permanent – due to increase in oil price, and cutting down public expenditure or adopting deficit-financed public expenditure with decline in oil revenue resulting from negative oil price shocks (El-Anshasy, 2009).

Although Adedokun (2018) demonstrated that the magnitude of the effect of oil price shocks on public expenditure is very insignificant in the short term, it is apparent that by predicting the changes in oil revenue, the capacity of oil price to induce changes in the level of public expenditure in oil-exporting and oil-producing countries cannot be trivialized (Mourad & Hadadah, 2019). In fact, recent empirical studies have submitted that oil price is not only significant in predicting public revenue of oil-dependent economies, but also the growth and variation in public expenditure (Abdel-Latif et al., 2018; Dizaji, 2014; Farzanegan, 2011; Mourad & Hadadah, 2019).

Beside the evidence that changing UAE's public expenditure is typically caused by variation in oil price (Sillah & Al-Sheikh, 2012), an increase in oil revenue following sustained positive shocks in oil price often see government increasing the supply of public goods and services as well as more generous wage increase to civil servants. This has also played out in the emirate of Abu Dhabi prior to the recent economic crisis (Sillah & Al-Sheikh, 2012; Soto & Haouas, 2012). Interestingly, public expenditure in the UAE has been historically swinging in tandem with oil revenue and price movements (see Figure 1.2). Therefore, beyond reasonable doubt, it is clear that variations in the price of oil tend to have profound consequences on the public revenue, leading to changes in public expenditure in a country such as the UAE.

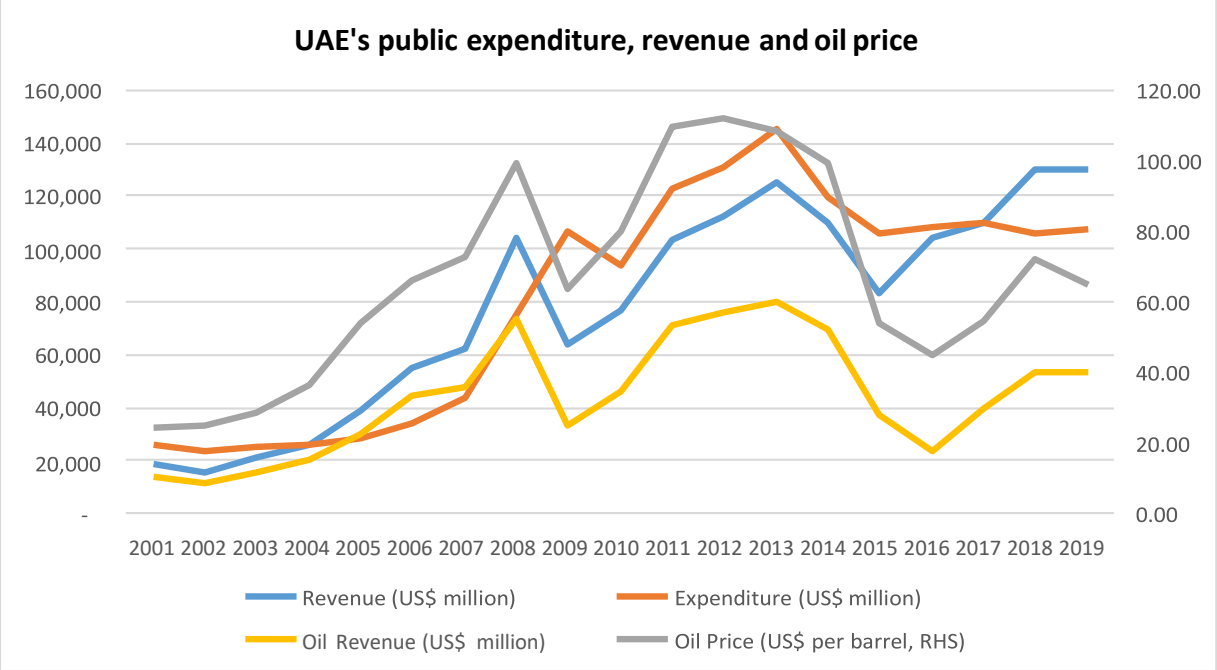

Figure 1.2. Public expenditure, revenue, oil revenue and oil price. Source: Researcher's computation based on data from Federal Competitiveness and Statistics Authority (FCSA), 2020

It is imperative to state that tax policy is broader than just the revenue aspect because it also affects economic agents (Lundberg, 2017; Miravete, Seim, & Thurk, 2018). In other words, the effect of tax policies is not only restricted to revenue, but also its influence on individuals and business on whom the tax is being levied[1]. For instance, in tandem with the argument of the Laffer curve, while increase in tax rate is expected to raise tax revenue, a higher tax rate (which translate to higher tax burden) beyond the optimal level may have an adverse consequence on the economy in terms of reduction in domestic investments, savings, demand and innovations, so much more that it even reduces prospective revenue of the government, and as a result lead to changes in the level of public expenditure (Amadeo, 2020; Tax Policy Center, 2020;

[1]According to Gamal and Dahalan (2016), the higher tax burden in UAE is exclusively levied on ompanies working in the Oil and Gas industry, which may push them to hide their true income to authority

Tucker, 2010). Hence, beyond the positive effect of tax revenue on public expenditure, it is possible for the increase (or decrease) in tax rate (and burden) beyond the optimal rate to trigger changes in the level of potential tax revenue, and then public expenditure (Lundberg, 2017; Miravete, Seim, & Thurk, 2018; Quiggin, 2012).

Additionally, it is possible that persistent fiscal deficits in the UAE may have been responsible for the variations in her public expenditure. For instance, theoretical argument based on the Buchanan-Wagner hypothesis suggests that higher public deficits tend to influence the level of public expenditure. According to the Buchanan and Wagner (1977), fiscal deficits would often produce higher levels of public spending because "deficit financing (which implies higher future taxes, because deficit which is financed either through debt or money creation would be recouped in the future through levying of higher tax) creates signals for taxpayers that public services have become relatively cheaper. Consequently, individuals will demand a shift (an increase) in the composition of real output toward publicly provided services (including transfers)." Although empirical studies have provided mixed results, several authors have consistently given credence to the Buchanan-Wagner hypothesis that pubic deficit is responsible rising public expenditure in many countries (Ashworth, 1995; Christopoulos & Tsionas, 2003; Craigwell, 1991; Eiya, 2011; Hondroyiannis & Papapetrou, 2001; Iiyambo & Kaulihowa, 2020; Okafor & Tridimas, 1992).

In addition, given the high level of underground economic activities as well as immigrant/expatriate workers in the UAE (which facilitate the leakage of money from the country) another significant factor which could have caused UAE's public expenditure to vary over time is perhaps money outflow. However, evidence on the

effect of the outflow of money on sending countries is sparse as studies which explored money outflow impact were from the perspective of the remittance receiving countries (Bachtiar, 2011; Edrees, 2016; Jannat, Khan, Proma, & Amin, 2018; Kaabi, 2016). Notwithstanding, there is growing empirical evidence which indicate that outflow of money possess an adverse effect on the economy of sending countries. Specifically, it has been steadily submitted that outflow of money puts pressure on exchange rate, foreign reserves, monetary policy, domestic investment, consumption, and deflationary pressure on the economy of sending countries (Alkhathlan, 2013; Hathroubi & Aloui, 2016; Naufal & Genc, 2012; Naufal & Termos, 2010; Rahmouni & Debbiche, 2017; Taghavi, 2012; Vargas-Silva & Huang, 2006).

The implication of these on public expenditure is not far-fetched. For example, due to the lessening role of outflow of money on investment and consumption levels, outflow of money tends to "put undue stress on the government to shoulder the burden of economic revival," thus expanding the outlay of the government (Al-Abri, Genc, & Naufal, 2018). In fact, evidence suggest that remittance inflow often raise the level of consumption, savings and investment in receiving countries, which thus reduce citizens' reliance and expectation on the government (Jannat, Khan, Proma, & Amin, 2018). This consequently leads to a reduction in the level of public expenditure and moderation in "the burden of political burden of political pressures off of the shoulders of governments" (Ebeke, 2011). Thus, it is not unexpected that increasing outflow of money will put more pressure on the government of the affected country to induce consumption and investment through increase in public expenditure.

Interestingly, Naufal and Termos (2009) even argued that the continuous outflow of money from an economy such as the situation in the UAE can seriously reduce the multiplier effect of public expenditure, and hence weakening the effectiveness of fiscal policy. Also, Hathroubi and Aloui (2016) discovered the existence of a bi-directional granger causality running from outflow of money and public expenditure. However, it is regrettably that if this increased pressure on public expenditure coincides with period in which public revenue is low, the expansionary fiscal policy of the government may result into budgetary issues (Al-Abri, Genc, & Naufal, 2018).

In similitude, it is also reasonable to argue that the huge outward flow of FDI from the UAE might be responsible for public expenditure variations in the country. Generally, most studies on FDI are skewed towards FDI inflow, with very few observing the role of FDI outflow in an economy (Othman et al., 2018). However, since FDI is a significant source of output growth and employment in an economy, it is logical to argue that a substantial outflow of FDI will have dire consequences on employment, productivity, and output growth, causing the government to intervene through increase in expenditure (Barrios, Görg, & Strobl, 2005; Le & Suruga, 2005; Moosa, 2002; Rayhan, 2014).

Furthermore, the possibility of changes in interest rate influencing public expenditure cannot be totally ruled out. For example, conventional models which suggest that public expenditure is an increasing function of output and investment through various channels often ignore the consequence of financing increase in public expenditure, in that they assume that the size of the multiplier of public expenditure is

not dependent on the financing method (Barry & Devereux, 2003). However, changes in public expenditure are more or less linked to variations in the level of public debt (rather than tax rate), and recent evidence demonstrate that the effectiveness of fiscal policy cannot be isolated from its financing consequences (Choi & Devereux, 2006; Obi & Nurudeen, 2009).

In essence, public expenditure level may be dependent on interest rates since changes in the rate of interest influence both the burden of future fiscal consolidation and the cost of financing public expenditure (Choi & Devereux, 2005). Through this channel, it can therefore be argued that low interest rates, for instance, will encourage expansion in government spending, particularly when it is deficit-financed expenditure and hence raising the outstanding public debt stock (Choi & Devereux, 2005, 2006). Given this line of argument, it is therefore plausible to assert that the low interest rate in the country which is predictable and stable, courtesy of the Central Bank of UAE's (CBUAE) moving interest rate close to the Federal funds, may be responsible for the rising deficit and public expenditure in the country (Taghavi, 2012).

The foregoing discussion therefore suggests that, beyond the several factors which the literature has attributed the rise and/or fall of public expenditure to, the trend and magnitude of oil price, tax burden, fiscal deficit, outflow of money, outward flow of FDI, and interest rate in the UAE may have been, directly or indirectly, responsible for the growth and instability in the country's public expenditure. Although the likelihood of holding these factors responsible for changes in public expenditure remains an empirical question, it is particularly worthy of note that there is absence of studies on public expenditure dynamics in the UAE. Interestingly, consensus evidence

on the factors responsible for the fall or rise in public expenditure is also lacking (Aregbeyen & Akpan, 2013).

Following the fiscal consolidation drive of the government of the UAE and the attempts to reduce the country's dependence on oil, it is clear that an empirical study geared towards understanding the factors responsible for the changes in her public expenditure is timely. Therefore, beyond complementing the efforts of the UAE's government the present study is significant and contributes to the growing literature on public expenditure in several ways. First, by exploring the effects of oil price, fiscal deficit, tax burden, FDI outflow, outflow of money and interest rate on public expenditure in the UAE between 1975 and 2020, the current study constitutes the very first attempt at investigating the dynamics of public expenditure in the region's most diversified economy. Second, the research also contributes to the literature by employing several estimation techniques including the Gregory-Hansen cointegration approach, the autoregressive distributed lag (ARDL) bounds testing technique, the Canonical Cointegrating Regression (CCR) method, the Fully Modified OLS (FMOLS) estimator, the non-linear ARDL bounds testing technique, and the Toda-Yamamoto causality test procedure. In addition, due to the paucity of research on public expenditure in the UAE, this study also intends to rekindle the debate or discourse on the dynamics of public expenditure in the UAE.

1.2 Problem Statement

Like most oil-dependent countries, the UAE's public expenditure has been increasing substantially in real terms over the past four decades (Al-Mejren, 2019; Mestareehih, 2017). According to available statistics from the FCSA, public expenditure (in absolute terms) rose from about Dh. 13.4 billion (equivalent to about US$ 3.37 billion) in 1975 to about Dh. 348.90 billion (equivalent to US$94.99 billion) in 2020.

Whereas public expenditure (in absolute terms) in the country has maintained a sustained increase over time, in terms of growth and as a percentage of the GDP, the country's public expenditure has been characterised by inconsistency, increasing sometimes and declining in other periods. For instance, from 22.92 percent in 1975, public expenditure as a share of the GDP rose to 25.16 percent in 2001, then declined to 16.86 percent in 2007, rising again to 41.97 percent in 2009, before falling to 37.21 percent in 2013 and further to 26.84 percent in 2020 (see Figure 1.1).

Although authors like Shonchoy (2010) argued that variation in public expenditure growth is common to developing countries, high income countries such as the UAE has reported instability in its public spending growth rate. This unstable growth in public expenditure has been blamed for slowing down economic growth, large fiscal deficits, internal and external imbalances in both developed and developing countries" (Ukwueze, 2015; Yun, 2020). Hence, it is important that policy makers understand the factors which account for the rise and fall of public expenditure (Aregbeyen & Akpan, 2013). Notwithstanding the absence of general consensus explanations for the fall or rise in public expenditure due to mixed results and profound

divergence in public spending profiles and priorities in respective countries, authors have identified important drivers such as macroeconomic, political, social and demographic factors (Kanano, 2006; Maluleke, 2017; Shonchoy, 2010). In the case of the UAE, the trend and magnitude of oil price, tax burden, fiscal deficit, outflow of money, OFDI and interest rate suggests that they may have, directly or indirectly, ensured the variations in the country's public expenditure.

For instance, as a major oil-exporting country, fluctuations in the global oil price do not only have significant implications for economic activities in the UAE but also her fiscal position – public revenue and expenditure (Haouas & Heshmati, 2014). This is true because the proceeds from the sales of oil and gas remain the major sources of the government income despite being the most diversified oil-exporting country (FCSA, 2020; Mahmah & Kandil, 2019). Of recent, following the fluctuation in the price of oil, the government of the UAE had to embark on series of fiscal consolidation strategies, including the elimination of fuel subsidies, increase in utility tariffs, and the merger of duplicative state-owned entities (Mahmah & Kandil, 2019). In the light of this, it is incumbent to argue that variations in public expenditure in the UAE might have been caused by oil price fluctuations. Thus, it is obvious that the uncertainty surrounding future oil revenues resulting from oil price shocks could even affect public expenditure level as the government re-evaluates its anticipated revenue stream (El-Anshasy, 2009).

Besides fluctuation in global oil price, tax revenue in the country has also been plagued with instability arising from the reliance of the government on revenue from oil sales, and exacerbated by tax evasion practices among importers, retailer,

wholesalers, and owners of companies that recruit foreign workers, alongside massive growth of underground economic activities in the country (Edrees, 2016; Gamal & Dahalan, 2015; Shah, 2013). No doubt, this was responsible for the introduction of VAT and excise tax in 2017 and 2018, respectively, and the strict monitoring of tax collection and possible closure of tax leakages, so as to counterbalance the shortfall in oil revenue and its effect on government developmental plans or expenditure (Mahmah & Kandil, 2019).

In addition, whereas the fluctuations in oil price and low tax revenue may have accounted for the rising trend in fiscal deficit in the UAE, due in part to the need to maintain the same level and momentum expenditure (Mahmah & Kandil, 2019), a cursory look at statistics illustrate that fiscal deficit and public expenditure move in the same direction. In other words, periods with high fiscal deficit frequently coincided with surge in the level of public expenditure (FCSA, 2020). This is in addition to the fact that UAE's interest rate which is predictable and stable, has been low at an average of 1.47 from 2007 until 2020 (Taghavi, 2012), thus, suggesting the likelihood of an association between variation in public expenditure and the level of fiscal deficit and interest rate.

Furthermore, during the period under review, huge amount of money also left the UAE's economy in the form of migrant remittances and outward flow of FDI. While the huge outflow of money from the economy is partly due to the heavy reliance on, just like fellow GCC countries, foreign labour as well as the significant presence of underground economic activities in the country, it is obvious that such leakages mean a lot for the government, especially with the shrinking of the treasury due to fluctuations

in oil price and low tax revenue (Gamal & Dahalan, 2016; 2019; Naufal & Termos, 2010). For instance, remittance flow out of the UAE rose from about US$3.2 billion in 1997 to about US$44.4 billion in 2018, accounting for about 10.7 percent of the GDP (World Bank, 2020). FDI outflow equally increased from just US$8 million in 1982 to more than US$15 billion in 2018 (Abbas, 2020; World Bank, 2021).

In this context, it is therefore imperative to argue that oil price, tax burden, fiscal deficit, outflow of money, OFDI and interest rate may have contributed to the variations in UAE's public expenditure.

Although studies which considered the influence of these macroeconomic variables on public expenditure are relatively sparse, majority were conducted outside of the UAE. The few studies which considered the impact of oil price and outflow of money on public expenditure and appears to be closely related to the UAE are cross-country or conducted in neighbouring GCC countries like Saudi Arabia (Abdel-Latif, Osman, & Ahmed, 2018; Mourad & Hadadah, 2019; Taghavi, 2012; Sillah & Al-Sheikh, 2012). However, these studies cannot be extended to the UAE for certain reasons. First, Athukorala and Sen (2004) argued that "cross-sectional studies are based on highly restrictive assumptions, which thus makes results from them lacking general acceptability". Also, the public expenditure pattern in the UAE differs from other GCC countries. In particularly, public expenditure of the UAE as a share of the GDP is far larger than those of its neighbours in the GCC region (Al-Mejren, 2019). In addition, the level of dependence on oil in the UAE also differs from its neighbours. For instance, while in the Kingdom of Saudi Arabia oil accounts for about 87 percent of total revenue, 42 percent of GDP, and 90 percent of export, oil in the UAE is attributed to roughly

66.1 percent of revenue, 33.3 percent of GDP, and 33.6 of total export (Abdel-Latif, Osman, & Ahmed, 2018).

Therefore, the present study is significant and contributes to the body of knowledge in a number of ways. First, to the best of the researcher's knowledge, the present study constitutes the very first attempt at evaluating the effects of oil price, fiscal deficit, tax burden, FDI outflow, outflow of money and interest rate on public expenditure in the UAE using annual time series data spanning from 1975 to 2020. Despite the rising trend of public expenditure in the UAE in addition to the fluctuations in the main revenue source of the government, researcher did not deem it important to examine the dynamics of public expenditure in the country. Second, the current study also contributes to the literature by employing several estimation techniques to estimate the relationship among the variables. These techniques include the Gregory-Hansen cointegration approach of Gregory and Hansen (1996), the ARDL bounds testing technique, CCR and FMOLS estimators, the non-linear ARDL bounds testing technique, and the Toda-Yamamoto causality test procedure.

Third, given the paucity of research on public expenditure dynamics in the country, the present research is also significant as it will rekindle the debate or discourse on the dynamics of public expenditure in the UAE. Lastly, due to the extent to which the country's economy and public revenue has been diversified away from oil dominance, it is expected that empirical outcomes from this study will be extended to both resource-dependent economies and non-resources dependent economies for policy guidance.

1.3 Research Questions

Based on the foregoing discussion, it is therefore imperative to address the following research questions:

1. Do oil prices, tax burden, fiscal deficit, money outflow, OFDI and interest rate influence public expenditure in the UAE?
2. What level of public expenditure could be attributed to fiscal deficit in the UAE?
3. Is there an asymmetric effect of interest rate policy on the public expenditure in the UAE?
4. Is there causal relationship between public expenditure in the UAE and its determinants?

1.4 Research Objectives

Against the backdrop of the questions raised above, the central purpose of this study is to analyse the dynamics of public expenditure in the UAE during the period 1970 to 2020. The specific objectives include:

1. To investigate the impact of oil prices, tax burden, fiscal deficit, money outflow, OFDI and interest rate on public expenditure in the UAE.
2. To estimate the magnitude of public expenditure that could be attributed to fiscal deficit in the UAE.

3. To analyse the asymmetric effect of interest rate policy on public expenditure in the UAE.
4. To test the causal relationship between public expenditure and its determinants in the UAE

1.5 Hypotheses of Study

The hypotheses in their null form are specified as:

H01: Oil prices, tax burden, fiscal deficit, money outflow, OFDI and interest rate do not influence public expenditure in the UAE.

H02: The specific level of public expenditure that could be attributed to fiscal deficit in the UAE is unknown.

H03: Interest rate policy does not have an asymmetric effect on public expenditure in the UAE.

H04: There exist no causal relationship between public expenditure and its determinants in the UAE.

1.6 Motivation and Significance of the Study

This study derives its motivation from the fiscal consolidation and economic diversification attempts of the government to check the incessant variation in the UEA's public expenditure that has led to persistence fiscal deficit in the country. Despite the

instability in the growth of public expenditure in the UAE, there appears to be dearth of empirical research on the factors responsible for this behavior of public spending.

Although the possibility of a factor influencing the level of public expenditure will typically depend on empirical outcome, a surface-level assessment of the trend and magnitude of oil price, tax burden, fiscal deficit, outflow of money, OFDI, and interest rate in the country suggest that they may have, directly or indirectly, accounted for the instability in public expenditure level. This argument is further underlined by the fact that factors which determine public expenditure often depend on individual country's characteristics occasioned by spending profile and priorities, and level of development, amongst others (Aregbeyen & Akpan, 2013; Shonchoy, 2010).

In this regard, the present study is motivated by several reasons. It is the first attempt at assessing the effects of oil price, fiscal deficit, tax burden, FDI outflow, outflow of money and interest rate on public expenditure in the UAE. Second, the current study determines the magnitude of public expenditure that can be attributed to fiscal deficit in the country. To achieve this goal, the study adopts the Kuznets hypothesis procedure. Third, this study is relevant given that is examines whether the effect of interest rate on public expenditure is asymmetric in nature, including exploring the causal relationship between public expenditure and the selected macroeconomic variables.

This study has shed more light on the role variables including price, tax burden, fiscal deficit, outflow of money, FDI outflow and interest rate play on public expenditure dynamics in the UAE. Also, the study has highlighted the effective

measures which could be undertaken by the UAE government and policymakers to address the fluctuations in the country's public expenditure growth. Lastly, given the paucity of empirical research on the drivers of public expenditure, it is anticipated that this study will rekindle the debate on the impact of oil price, tax burden, fiscal deficit, outward flow of FDI, outflow of money and interest rate on public expenditure in the UAE, which can then be extended to the GCC and MENA region, other oil-exporting countries and non-oil exporting countries.

1.7 Scope of Study

This study sets out to unravel the dynamics of public expenditure in the UAE. In particular, the study investigates the impact of oil price, tax burden, fiscal deficit, outflow of money, and FDI outflow and interest rate on public expenditure in the UAE. The choice of the UAE is guided by the familiarity of the researcher to the country's economy and government fiscal policy. In addition, the country was chosen due to the seeming instability in her public expenditure in both relative and absolute terms, as well as its share in the GDP over time. The study covers the 1975-2020 period and it employs method of analysis including Gregory-Hansen cointegration technique, ARDL and NARDL bounds testing techniques, CCR and FMOLS estimators, and the Toda-Yamamoto causality procedure. The period was chosen because it coincided with significant structural changes such as oil price shocks in the Middle East region which play significant role in influencing the level of public expenditure in the UAE.

1.8 Organisation of Study

The thesis is arranged as follows. The first chapter consists of the introduction, statement of the research problem, research questions, objectives of the study, hypotheses of the study, motivation and significance of the study, scope of the study, and organisation of the study. Chapter two considers the overview of the structure of the economy and public expenditure in the UAE, in addition to the in-depth review of theoretical and empirical literature. Chapter three is the research methodology, and it comprises of theoretical framework, model specification, justification of variables, method of analysis, and sources of data. Chapter four is for the presentation and discussion of results. Chapter five contains summary of major findings, implications of the findings for policy making, conclusion, limitations of the research and recommendations for future research.

1.9 Summary of Chapter

The oil-rich UAE has transformed to one of the world's wealthiest states from an association of Bedouin tribes in only about 50 years of her existence. Although the impressive and steady growth of the economy throughout the history of the country is attributed to the large oil deposit in the country (Shukurov, 2015), prudent policy-making by the government in providing proper guidance and use of such natural resource endowments cannot be overestimated (Delgado, 2016). In particularly, as the primary tool used to influence economic performance, the role of huge public expenditure coupled with remarkable renaissance in trade, tourism and transport in the

economy cannot be underrated. In fact, over the last five decades, the country owes the growth and development of her economy to the significant expansion in public expenditure in the country (FCSA, 2020). Nonetheless, public expenditure expansion in the country is also associated with inconsistency. More so, "the need to keep the same level and momentum in the growth of public expenditure" in the country has resulted to persistent fiscal deficits in the country (Mahmah & Kandil, 2019).

However, given that attempts of governments to cut down public expenditure in the face of persistent fiscal and dwindling oil prices are politically unpopular and detrimental to development (same as raising taxes would likely act as a disincentive to foreign investors, hence decline in economic growth and perhaps unemployment), it is therefore important to identify the factors which influence the dynamics and cause inconsistency in the growth of the country's public expenditure. Although from the literature, several factors have been identified to be responsible for the growing and inconsistent trends, the trend and magnitude of oil price, tax burden, fiscal deficit, outflow of money, FDI outflow and interest rate in the UAE suggest that they could have resulted to the changes in the country's public expenditure.

This study is particularly important because of the absence of "a-one-size-fit-all explanations" for the fall or rise in public expenditure and the dearth of empirical studies on the dynamics of public expenditure exclusive to the country. This is true despite the proliferation of studies on public expenditure. More to this, aside the very few studies which considered the impact of oil price, fiscal deficits and outflow of money, there is a conspicuous absence of research considering the importance of other

factors (tax burden, outward flow of FDI and interest rate) in influencing changes to public expenditure level in the UAE.