MEASURING THE STRUCTURE OF PRODUCTION DIVERSIFICATION AND ITS IMPACT ON PUBLIC REVENUES FOR THE PERIOD
(2006-2019)
(APPLIED TO A SAMPLE OF ARAB COUNTRIES)

قياس هيكل تنويع الإنتاج وأثره في الإيرادات العامة للفترة (2006–2019)

(بالتطبيق على عينة من الدول العربية)

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المستخلص : يدرس هذا البحث الأدلة ذات الصلة بهيكل تنويع الإنتاج في دول مجلس التعاون الخليجي المكون من (المملكة العربية السعودية ، قطر ، الإمارات العربية المتحدة ، البحرين ، الكويت ، عمان) (عينة من الدول العربية) للمدة (2006_2019) ، والغرض من هذه الدراسة هو تحليل الى اي مدى هذه البلدان قد فهمت أهمية هيكل تنويع الإنتاج في إجراءات نمو الإيرادات الحكومية. وهكذا تبني طرق العرض لتحسين الإيرادات الحكومية واستناداً إلى الأدلة ، تواصل الدراسة تحديد محددات هيكل تنويع الإنتاج في عينة الدول العربية. تم استخدام نظريات النمو الحديثة والأساليب الإحصائية في هذه الدراسة لاختبار العلاقة العملية المتعلقة بهيكل تنويع الإنتاج والإيرادات الحكومية من حيث مساهمة الناتج المحلي الإجمالي لعينة من الدول العربية. أشارت النتائج التي تحققت من تحليل البيانات إلى وجود علاقة قوية بين هيكل تنويع الإنتاج والإيرادات الحكومية في تلك العينة من الدول العربية. تدعم هذه النتيجة فرضية النمو الداخلي ؛ على الأقل لهذه المجموعة من البلدان. تشترك دول مجلس التعاون الخليجي في سمات اقتصادية مهمة. وهي تعتمد بشكل استثنائي على قطاع النفط والغاز ، كما كشفت عن مؤشرات اقتصادية كلية غير مهمة في عام 2014 ، حيث بلغت الإيرادات الاقتصادية المرتفعة 84٪ وحوالي 69٪ من إجمالي عينة صادرات الدول العربية. وعلى الرغم من الفائض المالي الهائل المتراكم وعينة من استثمارات الحكومات العربية في اقتصاداتها ، إلا أن النتائج لم تحقق الأهداف المتفق عليها مع رؤاها المحلية ، مع استمرار تحديات هيكل تنويع الإنتاج. سيكون الاهتمام العام على صعوبات الاختلاف في العلاقات إلى التنظيم التكتيكي ، صياغة الإستراتيجية ، التطبيق ، وأفضل التطبيقات على مستوى العالم تم تقدير هذه الدراسة لتقييم استراتيجيات التباين الحالية بشكل حاسم والتأكيد على بعض الافتراضات الرئيسية التي يمكن ، في مرحلة مبكرة ، أن ترشد إلى تحسين نمط جديد من التباين في سياق عينة من البلدان العربية.

الكلمات المفتاحية: *تكوين رأس المال ، هيكل التغير في الإنتاج ، مجلس التعاون الخليجي، مؤشر الانتروبيا ، الإيرادات الحكومية ، النمو الاقتصادي.*

Abstract

This research studies the related evidence of the production diversification structure in GCC, composed of (KSA, Qatar, UAE, Bahrain, Kuwait, and Oman) (a sample of Arab countries) (2006_2019).The purpose of this paper is to analyze how far these countries have understood the significance of the production diversification structure in the growth procedure of government revenues. Thus show methods are adopted to improve government revenues. According to evidence, the paper continues identifying the determinants of the production diversification structure in the sample of Arab countries. Modern growth theories and statistical methods are used in this paper to test the practical relationship concerning the production diversification structure and government revenues in terms of GDP contribution to a sample of Arab countries. The results achieved from data analyses indicated a strong relationship between the production diversification structure and government revenues in that sample of Arab countries. This outcome supports the premise of internal growth; at least for this countries group. GCC countries share particular important economic features. They are exceptionally reliant on the oil and gas sector, as revealed insignificant macroeconomic signs in 2014, with high economic revenues accounting for 84 % and about 69 % of the total Arab countries' export sample. Despite the enormous accumulated fiscal surplus and a sample of investments of Arab governments in their economies, the results did not meet the targets agreed with their local visions, while the challenges of the production diversification structure preserve. The overall attention is going to be on the difficulties of variation in relations to tactical organization, Strategy formulation, application, and best applications over the world. This study is estimated to crucially assess current variation strategies and emphasize some of the key hypothetical on the impact of product diversification structure on public revenue.

Keywords: *Capital Formation, the production variation structure, GCC, Entropy Index, Government Revenue, Economic Growth*

1. Introduction

Increasingly, the climate-change-prone countries accomplished production diversification structure plans, whose financial matters are mainly motivated by climate-changing sensitive sectors and reduction policies, for example, tourism, arboriculture, cultivation, fisheries, and production of energy. In this respect, states increase their economies by growing into new manufacturing divisions or by supporting acclimation measures in unprotected divisions to raise flexibility within those divisions. Traditionally, the production diversification structure has been wonted as a method to modify the thrift from a solitary to numerous income sources distributed as main, secondary, and post-secondary divisions, which include huge population segments. The goal always has been to develop the financial performance to achieve sustained progress and high earnings in government revenues; Such as building flexibility against variations in a financial activity outside the region (Nourse , 1968:8), decreasing weakness of income loss due to product value instability in the global market, job creation, and poverty alleviation.

KSA initiated personal income, increases of capital, and company taxes in 1950 on both citizens and non-citizens as a means of increasing government revenue. However, during six months of application, the law of duty was amended for dismissing citizens, and in 1975, earnings taxes were suspended on non-nationals. Kuwait imposed a business tax in 1955, followed by other samples from Arab countries. The United Arab Emirates (UAE)

imposed duties in the mid-1960s, and the Sultanate of Oman imposed taxes in the early 1970s. However, business duties in the sample of Arab countries were significantly reduced during the first decadal period of the current century to encourage overseas direct investment. Free zones and introduced tax exemptions have been established in Most states, thereby decreasing active tax rates on overseas firms. There is no income tax on wages for both citizens and non-citizens. Though, two countries - Saudi Arabia and Qatar - have very narrow taxes wages on non-Arab countries - citizens who engage in business or professional activities.

Recognizing that production diversification structure positively shares in financial performance, great in the quantity of the sustainable growth and economic policy discussion is about the improvement of policies considered to induce a larger production diversification structure (Hackbart, 1975:28). Researchers are continually conducting studies to understand the complexity, linkages, and performance of the implementing structure of production diversification policies, including the development and testing of reliable experimental methods for measuring the production diversification structure; realizing the performance of several determinants driving the production diversification structure; Recognize the impact of several strategies on sustained improvement (such as the effect on the labor marketplace, job creation, and export progress). However, because of the complication caused by different local circumstances, definitive policies are not recommended; there are just teachings gained from the knowledge to be examined and tracked.

Differences between the countries and the sectors impact the variety of bilateral economic relationships (Amurgo-Pacheco and Pierola, 2008:15)(Navarro and García, 2016:24). These factors are considered to be the greatest related and powerful factors of import and export diversity, as soon as GDP per capita is organized (Parteka and Tamberi, 2008:93). The results become stable with a previous report that presented that the contribution through the GDP, total capital formation, exports and imports by different sectors (through two-sided and many-sided trading engagements, i.e. trade liberalization) is vital factors of variation (Dutt et al., 2009:45).

2. Literature Review

In the Literature many researchers discussed the importance of diversification and its impact on many factors such as products diversification, according to Al-Marhubi (2000), showed that the long-term economic development by growing inter-sectoral growth. He points out that as countries manufacture a wider variety of goods, they inevitably need, inspire, and create a larger workforce.a wide range of products inputs, learn-by-doing, and capabilities, including a wide range of skills. These are the methods and technologies used in the manufacture of a commodity.Among these impacts is government revenue. In the literature there is no rigid study that includes all the Arabic countries in one study. For this reason, our study considers an attempt to fill this gap by including as much as possible of the available data in one study.

2.1 Government Revenue

Governments of the sample of Arab countries have been depending basically on oil incomes to fund their expenses. Incomes of oil accounted for 50% to 90% of the whole income of government through 2012–15 through the 6 countries compared to a mean of 24 % for a countries comparator group. Non-oil duty incomes are around only 1.7 % of GDP (nearly 3 % of non-oil GDP) for a similar time. The huge and fast drop in oil revenues values has led to sharp cuts in governments of sample of Arab countries spending and a slowing in financial action ever since 2015. In spite of this hard work and expected reforms, the economic shortage for sample of Arab states is expected to expand from 11% in 2016 and to remain just above 4 % of GDP in 2021.Given this fiscal deficit, and given the probability that oil values will remain low, the sample of Arab countries have begun appropriately to expand financial changes to include diversification of budget incomes. Primary efforts concentrated on increasing some fees in 2015-2016 as preparations for reform and expansion of tax structures intensified. These efforts led negotiations between a sample of Arab countries and governments of two aspects: 1)on the implementation of value-added tax,2) indirect taxes on tobacco and sugar-based drinks. Additionally, states have been discovering many procedures to use duties and taxes to raise additional revenue, containing the introduction or the application expansion of the commercial profit duty, duties of transfer, duties of income, wages paid to foreign workers, and financial transactions taxes.

The Centre in the Gulf region for international business is UAE, that possesses strong global trade rank and massive state-run share fund spent in real and economic assets. Greater values of petroleum, bigger government expenditure and a remarkable recovery in tourism, transportation and trade have participated to the growth in the economy.Moreover; bringing stability to the market has been achieved through the positive reorganization of duties owed by outstanding firms, harmony among UAE, and concessional monetary and fiscal policies. the UAE's economic has not been influenced by Political confusion in North Africa and Middle East, since it is considered to be one among the best stable political and safe states in the area and it is relatively a very safe place for investment and tourism.

In fact, all national companies and individuals in Sample of Arab countries are subjected to Zakat, as it is taxed with 2.5 % of net wealth. All sample of Arab countries excluding Bahrain impose taxes on non-petroleum corporate income. This is ranging from 10 % in Qatar to 20 % in KSA and applies only to non-local companies, except for Oman, as the duty applies at a 12 % rate on dutiable income (over a threshold) for both local and

foreigner companies. Tax releases for reductions and tax incentives are delivered to foreign companies which decreases the real duty rate. The duty of petroleum and natural gas extraction-related companies ranges from 15 % in Kuwait to 85 % in KSA and UAE (regardless of nationality). Bahrain and Saudi Arabia charge fees each month on foreign laborers to cover training for nationals. The Sultanate of Oman has the same system, but the fee is determined as a percent of the overseas worker wage bill. UAE carry out semiannual work permit charges, though Kuwait charges a duty on yearly net revenues of Kuwaiti corporations listed on the stock marketplace to fund training. Qatar is the single state that does not impose any charges or duties on wages for the training of local labor force.

2.2 Structure of products diversification

On the way to figure flexibility for opposing influences of the response measures application, production diversification structure has been contained within the development plans of the Gulf Cooperation Council (sample of Arab countries) (Shediac, 2008:31). The consideration about influences of the reaction indications implementation is larger for states that own a slight export profile and have Avery weaken response to measures owing to new loads or values from distributers. In this study, production diversification structure is unavailable for consideration at states that show the following characteristics:

i. If large amount of the whole exports is focused on a small number of products or facilities (concentration ratio);
ii. ii. As a consequence of climate-change mitigation methods; products or services likely demand declines in other countries (affected by response measures).

Production diversification structure is influenced by many influences more than the impact of the response measures implementation. These factors need to be understood holistically, because they act simultaneously. Moreover, the factors may differ by local conditions and are much measurable factors at the corporation level. The World Bank studied numerous factors of production diversification structure in several reports and classified those factors into three groups: financial improvements, factors of structural, and macroeconomic variables. A new paper issued for 212 exporting companies categorized the motives as interior and exterior; interior motives including export obligations and the experience level of staff and the human resources structure; however exterior motives contain intensity of competitive and spaces concerning export corporations and marketplaces (Navarro and García, 2016:22).

Also, structural factors, including the population of the country, institution quality, and human capital positively impact the production diversification structure. Diversification rises with population growth as local firms access greater marketplace and accordingly get advantage from scale economies. Human resource permits economies to modify their specialty designs from main supplies to more Intense awareness industrial products. Business assurance and encourage the improvement for new work actions are enhanced through political and financial institutions forming a friendly investment environment. Generally, the indicators can be categorized into two sets: one set considers absolute specialization of country(e.g. Ogive index, Herfindahl-Hirschmann index, Gini index, entropy index, and diversification index); and another set considers economic structure of country from an orientation set of manufacturing (e.g. Relative Gini index, Thiel index, and inequality in productive divisions).Indicators that determine entire specialty refer to the

country specialization level(for example, if a few industries display great segments of total work in the country or country revenue). As an example, Italy specifies in weaves, while most of the samples of Arab countries in petroleum products, Scandinavian countries in tissue and paper fabrication, and most rising countries in agriculture and food products. Therefore, this study employs the absolute specialization of the country using the entropy index as a measure.

2.2.1 The Contribution of the Economy Sector on GDP

Studies to prove income relevance to variation have always been found in writings. Though, a nonlinear relationship was announced for the first time in 2003 by IMPS and Wacziarg(2003), which considered the phases of diversification over standard economic analyses. The study revealed an upside-down U-shaped statistical curve between product diversification and per capita GDP. The results shown that countries with low-income have a greatly specific production structure. As states' per capita GDP grades rise, the distribution based on sectors of economic activity varies. This varied inclination is decreasing with growing per capita GDP and after a revolving point occurring at an extremely high-income level, the distribution based on sectors shows re-specialization. The shift point between specialty and variation was found in general near the $10,000 per capita income level in 1985.

Studies for setting up the income relevance to variation have been present in the literature for long time. Though, a first introduced nonlinear relationship concerning them was found in 1976 byBall et.al (1976) whoinvestigated the relationship betweenincome variation over balance sheet compositions. The report distinguished an upturned U-shape statistical curve among the variation of produces and the gross domestic product (GDP) per capita. The results showed the occurrence of unexpected income changes. In addition, thisstudy established various properties of the informational decomposition measures.

Later, many researches concentrated on reviewing this bond using diverse data groups, commonly by retreating export focus and GDP per capita, and established identical trend (Imbs and Wacziarg, 2003:387)(Klinger and Lederman, 2006:55)(Cadot et al., 2011:77). There is a similar trend concerning the fresh export produces number and GDP. These researches have essential consequences for a sample of Arab countries. As referred in a combined research led by the UN and the Organization for Economic Co-operation and Development (OECD) on African economy, these outcomes increase value to the variation item and work as a attention in contradiction of the specialty hurried pursuit when financial growing stages are not satisfactorily high (OECD and United Nations, 2011:584). A high portion of resources deal, as a ratio of GDP, has an optimistic effect on variation.

Trade liberalization (i.e. less, or elimination of government regulations and restrictions, mainly on economic activities among countries) simplifies struggle and deal and participates to jobs creation and arise in revenue (OECD, 2011:31). Trade liberalization or easy accessibility to marketplaces is commonly stately as a percentage of exports and imports to GDP. Trade liberalization profits clients for having products at a low cost. Additionally, companies have more chances for exporting as a benefit. These comprise short-term achievements through financial dilemma. Long-term achievements arise from the rearrangement of labor resources through segments and from labor growing efficiency (OECD, 2011:63). Additionally, accessing open marketplaces has progressive effects on the whole efficiency, thus raising the total of businesses that are competent of exporting

and hence give the prospective for improved export diversification (Agosin, 2012:57) (Melitz, 2003:39). A latest research using a sample of steady state detected that trade accessibility had a progressive influence on exporting performance in OECD member countries (Ratnaike, 2012:19).

2.2.2 Exports by Sector

Corporations are mixed regarding their efficiency stages and just the maximum effective ones turn into exporters (Melitz, 2003:30). Once companies start to export, they originally stand up to greater costs as a result of their awareness and know-how shortage. During this period their production drops. Finally, as the export market diversification has moved outside a beginning grade and investments accumulate, export marketplace growth produces lesser ordinary costs for the long-term and therefore, higher efficiency. This formulas a upside-down U-shaped statistical curve concerning export change and firm efficiency (Xuefeng and Yaşar, 2016:54).Production diversification structure affects diverse sectors in a different way based on the investor choices in selecting the sector through foreign direct investment (FDI). The transformation of exportation structure is fast-tracked by encouraging variation in vital low-tech businesses like agriculture manufacturing business and fabrics industry and increases the middling value of industrial exports. Though, there is solid proof that FDI impacts the sectional configuration ofindustrial employment and rises the horizontal variation of exports (Mold, A. ,2003). The real amount of the influence varies significantly through countries on the basis of the present stock and the phase of diversification, making increase to an almost upturned U-shaped statistical relationship. Terms of trade are illustrated by the relation of the selling goods overseas value and services (index of export prices) to bring in goods price and services (index of import prices). High terms of trade may increase export focus as causes of manufacture are shifted to the uncommon key segments where production charges have increased. Meanwhile, high terms of trade could raise export profitability and raise diversification.

Export variability is also affected by the size of exports in the monopoly race scenario. The share of exports to GDP is straight related to the relation of exports to local consumption or sales. Hence, the exports capacities also have impact on export diversification. The production diversification structure, non-extractive sector growth, and financial competition are vital developing goals for rich countries in the mean of resources and many developed banks, containing the World Bank.Though, there is no comprehensive description of diversity and no standard measures for its measurement. International organizations monitor and disseminate the values of the diversification index to nation states all over the world. Experimental analysis on worldwide trade, global specialty patterns, and focusing indicators remains and uses a wide range of arithmetical tools, from simple expressive gauges to composite econometric procedures. However, there is no agreement on the greatest indicator, even though the experimental outcomes depend largely on the analytical methods and measures used.

Finance accessibility is indicated as the local credit share in the privately owned division's credit share of GDP. The rate can be derived from the World Bank's World Development gauges database. Firms with economic services have optimistic effects on export variation. Finance accessibility by SMEs has been recognized as a solid restriction and many strategies and motivations are being executed to improve access (IFC, 2013:21)(EC, 2016:33). Many developing countries are excessively dependent on exporting of few types of goods (for example, many LDCs depend on diverse agricultural supplies, several

countries in Africa, and a sample of Arab countries that count on resource). The state is influenced if those sectors (i.e. agricultural and resource sectors) economically suffer resulting in measures response in key target markets. As a summary, contain export divisions that may be affected of conventional petroleum and gas response measures and coal fuel; sustainable energy technologies; consumer goods subject to environmental markings and principles, including agricultural segment products; high energy-consuming and trade-prone goods (aluminum, iron, steel, concrete, substances, pulp, and paper); Airfreight; tourism; and sea-borne products, including loose agricultural commodities such as cocoa.

2.2.3 Imports by Sector

UAE has been listed by the World Trade Organization (WTO) as the 25th importer globally based on UAE imports of AED 752.35 billion (US$205 billion) in 2011, 1.1 % of the world's imports of US$18.38 trillion. UAE's specific policies to open new markets resulted in continued growth in trade, engage fresh trading companions, and increase the structure of production diversification. An official statement issued by the Emiratis National Bureau of Statistics highlights that in the first ¾of year 2012, non-oil trade increased from AED 684.9 billion in the same interval from 2011 to AED 782.7 billion in 2012, an increase of 10.5%. Exports rose 61% from AED 84.4 billion to AED 136.6 billion and imports rose 12.3% (from AED 439.9 billion to AED 494.5 billion) in the same interval, then exports rebounded 5% to AED 152.6 billion. Non-Arab Asian countries (45 %) have sustained their place as a prominent partner in UAE non-oil trade, the EU ranked second (23 %), America third (9.3 %), and the fourth Arab sample (8). Gold tops both imports and exports with diamonds leading the re-export. The vital elements of the Dubai economic development model are: 1) Development led by government, 2) fast decision-making "fast track", 3) a elastic workforce through the import of expatriates.

Beblawi (2011) provides useful discrimination by dividing the industrial segment into two groups: Petroleum-based industries and import-replacement industries. Besides oil and gas mining, these include refinery-based industries, the broad petro-chemical division, and energy-intense industries like aluminum. As the study indicates, petroleum-based industries are generally significant, capital-consuming projects, and thus are generally owned by state. Alternative import activities include a variety of actions, most regularly food processes and building materials manufacturing. The latter include cement production, steel, aluminum window frames, building trim, etc. These manufacturing processes are typically small, our extensive laboratories are often privately owned. Variation over the creation of import-substitution industries is likely to be much closer to the main target of oil disposal. They also have a recovering chance of existence after the petroleum era, if the business is used to functioning under market circumstances during the petroleum era; which means if work does not depend on suitable production conditions given by the spreading of petroleum money in society. But, this is not the case. However, variation in the petroleum division, through the expansion of petroleum-based industries, has the most significant outcome of work in the Gulf countries. It was quite easy for countries to do so, giving excess wealth and a central authority structure, as was the case with national-owned cement plants, etc. The maximum difficult type of industry to promote was the individual import substitution division. This cannot be formed by decree but requires business leadership and individual risk.

2.2.4 Total Fixed Capital Formation based on Sector

In the literature among the Arabic countries UAE is Uniquenessin analyzing the structure of investment distributed across various sectors, it was noted that the non-oil sector played a vital role in the composition of the overall fixed configuration, which corresponds to the contribution of these sectors to GDP. Total fixed capital formation in the UAE dropped to AED 29,6297.26 million in 2016 from AED 340110.84 million in 2015. The median of the UAE is AED 209,518.22 million from 2001 to 2016, reaching an all-time high of AED 340,110.84 in 2015 and a record low of AED 100,944.50 million in 2001. FDI can have impact on progress and improvement directly by contributing to the creation of total fixed capital and, over numerous indirect channels, the external factors linked with FDI. The FDI station does not prefer other types of investment and will not justify expensive motivations to attract it deprived of giving the same motivations for local direct and foreign investment in the portfolio. But, through secondary channels, it is often said that FDI affects further different parts of the host economy, thereby stimulating growth.

Funding for a prospective added local portfolio can be an encouraging external factor that leads to congestion, however it might also have undesirable economic crowding impacts on local investment when national economic resources are rarely supplied. Similarly, when FDI brings a product that has been produced in the national marketplace, the overseas affiliate enters a reasonable position with local industry and may gathering in some request for national investment. Despite matters of effectiveness and competition, this would damage national static capital formation. The opposite state of the crowd also can be true if FDI enters a fresh product in the host economy and generates a demand for nationally formed intermediate products that previously did not occur.

## *2.3 The Impact of Production diversification structure on Government Revenues*

Through different perspectives, a large volume of literature had studied a sample of the production diversification structure in Arab countries (Luciani, 2012:56). The move from petroleum dependency to the production diversification structure in the Arab countries sample confirms the financial hazards linked to the leased state theory (Bablawi1987) and the Dutch disease theory. These argue that unexpected gains in normal resources usually weaken other divisions because of currency appreciation and extraordinary earnings in the resource sector. The Dutch disease financial risks support an analysis in which oil returns tend to crowd out any other financial work quickly; variation is thus a means of monitoring risk in a sample of Arab countries (HVDT, 2013:38). For a sample of Arab countries, the production diversification structure target is not just reducing the undesirable effect of petrol value variations; it is necessary also because a varied economy inclines to be extra steady and has the ability for creating tasks, however less prone existence to the boom and bust in petroleum and gas values. This need for diversification has been at the heart of economic planning and development strategies ever since mid of 1990s (Fasano & Iqbal 2002:66). This is obvious in local visions, that every sample of Arab countries confirms the weight of promoting entrepreneurship, supporting, and growing the individual segment role in the financial improvement process.

 Diversification proof can be realized in the petroleum and gas share failure in GDP from 41 % in 2000 to 33 % in 2013 and the bigger expenditure on manufacturing

arrangement throughout the area. Expenditure in the UAE has increased by more than 400 %, mainly in the aeronautics field, space, and security over the earlier3 years (Davidson 2011). Also it is reflected in the increasing share of GDP in the facilities and economic divisions, in addition to massive education investments, health care, water, infrastructures, transport, tourism, and other non-hydrocarbon divisions. In the division of energy, variation is enabled by investment on sustainable energy and other energy base such as solar, carbon capture and storage, and clean technology. In the area of nutrients security, the sample of Arab countries enhanced their agricultural safety by acquiring large farming land areas outward their local borders and spending greatly in major farming plans in Ethiopia, Sudan, Egypt, Ukraine, Turkey, Kazakhstan, the Philippines, and Brazil (WOertz 2013:32)(Al Obaid, 2010:85).

However, the production diversification structure faces major challenges throughout the region. Nearly all Arab countries have power less organizations, absence of management among policy-making and application, small and incompetent individual sector, shortage of invention and narrow investment in research and development, and weak national manpower unable to meet private sector requirements. Incompetent regulatory and legal systems and shortage of responsibility and clearness. Additionally, the analysis shows serious implementation problems in education, employment and trade divisions, as well as the main faults in the sample financial structure of the Arab countries, have a negative impact on the structure of diversification of production (courtesy & Dave 2010:25). What is still significant here not whether variation will flourish or fail, but how a sample of Arab countries will state the main challenges of diversification.

To visualize the theoretical background, this study finds the links between government revenues and the production diversification structure as a go-ahead variable and independent variable respectively. The production diversification structure is measured in 6 countries of the context (KSA, Oman, Bahrain, Kuwait, Qatar, and UAE) as (GCC)with the economic sector's contribution to GDP, the exports sector, the imports sector, and the total fixed capital formation based on sector (the Antrobia Index). Figure 1 below shows the theoretical framework for the study.
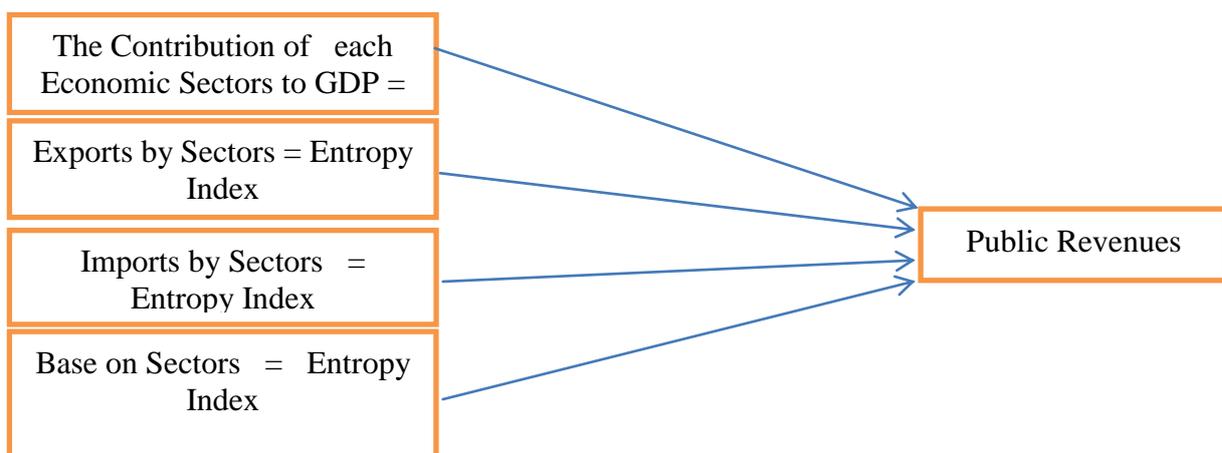
3. Methodology

Regional economists have made numerous studies that have tried to improve gauges of financial diversity and test through statistics whether the regional manufacturing construction/changes are linked to its financial constancy and performance. To review these

theories, diverse numeric scales have created by examiners for regional economic diversification using different economic theories. In the same way, different gauges of financial performance and also diversity has been established. Regional exports, imports, and fixed capital formation are among the greatest common gauges of financial stability, while job loss and per capita real growth of income is commonly used to calculate regional financial performance.

Economic different theories have a tendency to show in different concepts, terms, and gauges of the economic variety. According to Theory of Industrial Organization, a more varied subdivision (i.e., not much focused) is supposed to be extra inclined (Scherer, 1980:22). Zone of a larger number of segments and/or even a more economic activity distribution links with larger variety (Malizia and Ke, 1993:77). Counted on this meaning, focus gauges relations, just like the indexes of Entropy, work as gauges of financial variation. This theory supposes that a country manufacturing sector organization considers its stage of production diversification structure. Larger quantities of segments in a country represent fewer market-focused which means greater diversification. More varied segments (i.e. focused little) are extra competing (Scherer, 1980:52). Entropy index, the index of ogive, the index of Gini, and the Herfindahl-Hirschmann index are the public practical procedures under this theory, which gauge the entire specialty. In this study, an entropy index is active. The index of entropy, similarly named the Shannon entropy index (SEI), adjusts the spreading of present financial activity among industrial activities in a country with an equivalent relative distribution, and is regarded as the undesirable summation of employ shares reproduced by the natural log of occupation shares of each industry, as follows:

$$\text{⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚} = \sum_{i=1}^{n} Si ln(1/Si) = -\sum_{i=1}^{n} Si ln(\text{⬚⬚})$$

Considering n is the sector number, Si is the financial activity share in the it business and ln is the natural logarithm. Bearing in mind that financial activity with equally distribution is observed more different, upper values of index of Entropy indicates relative larger variation, while lower values indicate relative greater specialty. If hiring new employees is used as a gauge of financial activity, the identical distributed employment between all businesses will end in a greater index of entropy. The value nil would happen if work were focused in one field(i.e. extreme specialism).

4. Results and Analyses

This chapter discusses the empirical evidence on the association between government revenue and production diversification structure in six countries (KSA, UAE, Oman, Qatar, Kuwait, and Bahrain) present in the GCC (SAMPLE OF ARAB COUNTRIES). The linear regression analysis result was reported in the case of each country.

In this study, R2 is used often to examine the goodness-of-fit of the model. Hair et al., (2006) and Pallant (2007) stated that the higher the value of the R2, the greater the fit of the model. The significance of the fit of the regression model is evaluated using F value. The significance of the fit model using the F-value can be evaluated in two ways: first, by comparing the F-value with the table value; secondly, by using the significant value and comparing the value with the alpha value, which is set at 0.05<0.10in this study. In order for the model to be supported, the significant value should be less than or equal to 0.10 level of significance (Pallant, 2007:34).

Based on the regression result of the production diversification structure in Bahrain as presented in Table 1, the coefficient on GDP revealed a significant negative sign with a value of -1.413 and z-value of -0.96. This result of a negative sign of the gross domestic product (GDP) means the government revenue reduced by 0.355. Hence, GDP presence increases the abundance of government revenue. Also, the coefficient of exports by sector (EXP) revealed an optimistic and significant sign at 95% of value 0.544. This implies that the level of exportation within different sectors significant and thereby has a good outcome on the government revenue of listed companies in Bahrain. The import of sector (IMP) showed a positive and significant coefficient (0.263) and z values of 0.44. That is, a one percent increase in the importation will lead to 0.669increases in government revenue. Concerning fixed capital formation (FCF), the coefficient (-0.418) is negatively significant at one percent level of significance (-0.960).

Table 1

Regression analysis of production diversification structure in Bahrain

	Coef.	Robust Std. Err.	T	P>|t|	95% Conf. Interval	
GDP	-1.413194	1.468256	-0.96	0.355	-4.612249	1.785861
EXP	0.5443536	0.229858	2.37	0.036	0.0435368	1.04517
IMP	0.2630639	0.599770	0.44	0.669	-1.043723	1.569851
FCF	-0.4182099	0.4334205	-0.96	0.354	-1.362552	0.5261324
_cons	5.895196	2.718588	2.17	0.051	-0.0280973	11.81849

Furthermore, Table 2 presents the Regression analysis of the production diversification structure in UAE. The coefficient result on GDP in UAE revealed a significant negative effect with a coefficient of -427667.60and z-value of -4.77. This result suggests that the presence of the gross domestic product (GDP) reduced the government revenue value by 0.000. Hence, GDP presence makes no significant change of government revenue. The coefficient on exports by sector (EXP) of value 78862.42 revealed an active and important sign at the level of 95%. This implies that the presence of exportation in the UAE has a significant effect on government revenue. The import by sector (IMP) showed a positive and significant coefficient 139398.3) and a z value of 0.85. That is, a one percent increase in the importation will lead to 0.414increases in government revenue in UAE. On the other hand, fixed capital formation (FCF) has a coefficient of-166019.7which is negatively significant at one percent level of significance (-0.95).

Table 2

Regression analysis of production diversification structure in United Arab Emirate

	Coef.	Robust Std. Err.	t	P>|t|	95% Conf. Interval	
GDP	-427667.6	89645.59	-4.77	0.000	-622988.6	-232346.7

EXP	78862.42	30637.98	2.57	0.024	12107.98	145616.8
IMP	139398.3	164850.8	0.85	0.414	-219780.9	498577.4
FCF	-166019.7	173926.1	-0.95	0.359	-544972.1	212932.7
_cons	1051483	449909	2.34	0.038	71215.48	2031750

As stated by the regression result in Table 3 that shows the production diversification structure in Kuwait. The coefficient of GDP is revealed to be -0.815which shows that the relationship is significantly negative and z-value of -2.82. This result shows that the value of GDP in Kuwait reduced the government revenue by 0.016. Hence, GDP if present would have improved the amount of generated revenue by the government. The coefficient on exports by sector (EXP) revealed an active and important sign at 95%. This implies that the presence of sectors that export goods and services have a significant effect on government revenue generated from listed companies in Kuwait. The importation from sector (IMP) showed a positive and significant coefficient (0.590) and z values of 2.09. That is, a one percent increase in the importation services will lead to 0.016increases in revenue generated from imported goods to Kuwait. With respect to fixed capital formation (FCF), the coefficient (0.2769) is positively significant at one percent level of significance (0.90).

Table 3

Regression analysis of production diversification structure in Kuwait

	Coef.	Robust Std. Err.	T	P>|t|	95% Conf. Interval	
GDP	-.8149753	0.2893264	-2.82	0.016	-1.445363	-0.1845872
EXP	1.004933	0.3407538	2.95	0.012	0.2624945	1.747372
IMP	0.5900344	0.2825236	2.09	0.059	-0.0255317	1.205601
FCF	0.2769202	0.3085703	0.90	0.387	-0.3953968	0.9492372
_cons	4.501402	.6414167	7.02	0.000	3.103875	5.898929

As stated by the regression result in Table 4, the coefficient on GDP revealed to be significant and negative with a coefficient of -0.885and z-value of -3.20. This result suggests that the presence of negative signs for the gross domestic product (GDP) means a reduction in government revenue by 0.008 in Oman. Thus, the GDP of Oman has reduced over the year. However, the coefficient on exports by sector (EXP) revealed an optimistic and significant relationship with government revenue at the level of 10% with the values of 1.106 for coefficient and 2.91 for z-value. The import by sector (IMP) showed an active and unimportant coefficient (0.123) and z values of 0.376. That is, a one percent increase in the sector importation will lead to 0.750 decreases in government revenue. Concerning fixed capital formation (FCF), the coefficient (-1.242) is negatively significant at 95% level of significance. This implies that the presence of fixed capital has a significant effect on government revenue in Oman.

Table 4

Regression analysis of production diversification structure in Oman

	Coef.	Robust Std. Err.	T	P>|t|	95% Conf. Interval	
GDP	-0.8850178	0.276992	-3.20	0.008	-1.488531	-.2815041
EXP	1.106423	0.3801663	2.91	0.013	.2781121	1.934735
IMP	0.1226858	0.3762507	0.33	0.750	-0.697094	0.9424656
FCF	-1.242383	2.570225	-0.48	0.638	-6.842421	4.357656
_cons	5.479291	2.109316	2.60	0.023	0.8834865	10.0751

As stated by the regression result of the production diversification structure of Qatar in Table 5 below, the coefficient of GDP revealed a significant negative sign with a coefficient of -0.269and z-value of -0.38. This result suggests that the gross domestic product (GDP) reduced the value of government revenue over the years by 0.714. Hence, the increase GDP indicates the improvement in government revenue. The coefficient of exports by sector (EXP) revealed a negative and significant effect. This implies that less exportation was made enough to have no significant effect on the government revenue in Qatar. The import by sector (IMP) showed a positive and significant coefficient (1.319) and z values of 0.20. That is, a one percent increase in the importation will lead to 0.843 increases in government revenue. Concerning fixed capital formation (FCF), the coefficient (-1.044) is negatively significant at one percent level of significance (-1.90).

Table 5

Regression analysis of production diversification structure in Qatar

	Coef.	Robust Std. Err.	T	P>|t|	95% Conf. Interval	
GDP	-0.2696008	0.7177487	-0.38	0.714	-1.833441	1.294239
EXP	-0.4725553	0.5267789	-0.90	0.387	-1.620308	0.6751973
IMP	0.2669648	1.319511	0.20	0.843	-2.608003	3.141933
FCF	-1.044189	0.5496782	-1.90	0.082	-2.241834	0.1534575
_cons	7.229891	4.080307	1.77	0.102	-1.660334	16.12012

Based on the regression result in Table 6, the coefficient on GDP revealed a significant negative sign with a factor of -0.04and z-value of -1.15. This result indicates that the presence of the gross domestic product (GDP) reduced the value of government revenue by 0.272. The coefficient of exports by sector (EXP) revealed an active and important sign at the level of 10%. This implies that exportation affects government revenue significantly. The import by sector (IMP) showed a positive and significant coefficient (0.183) and z values of 0.69. That is, one percent rise in imports will lead to 0.502 increases in

government revenue. Concerning fixed capital formation (FCF), the coefficient (-1.426) is negatively significant at one percent level of significance (0.046).

Table 6

Regression analyses of production diversification structurein Saudi Arabia

	Coef.	Robust Std. Err.	t	P>|t|	95% Conf. Interval	
GDP	-0.0400159	0.0347694	-1.15	0.272	-0.115772	0.0357402
EXP	0.1185284	0.1133789	1.05	0.316	-0.128503	0.3655599
IMP	0.1837865	0.2657211	0.69	0.502	-0.39517	0.7627431
FCF	-1.426458	0.6403193	-2.23	0.046	-2.821594	-0.0313219
_cons	8.003449	1.78228	4.49	0.001	4.120195	11.8867

5. Conclusion and Recommendation

Some of the results showed that the coefficient on GDP revealed a significant negative sign which indicates that the presence of the gross domestic product (GDP) reduced the value of government revenue dramatically the coefficient of exports by sector (EXP) revealed an active and important sign at the level of 10%. This implies that exportation affects government revenue significantly. In addition to that there is a negative effect on the country's wealth at risk of indications response if it counts on exporting a small products' range and is influenced by indications response taken to combat economic stagnation. In order to improve the government revenue A diversified structure is one of the methods in which capacity can be made to overcome the destructive effects of government revenues and policies implemented to mitigate economic stagnation. In the beginning, poor states vary along with their growth, however, they begin to specialize as soon as they gain greater revenue levels. Therefore, poor countries have a greater diversity than high-income countries. For the government to plan for diversification of exports and imports, an efficient plan is needed with a mixture of wide and intensive margins. The broad margin helps with the improvement of sustained products at an upcoming phase since variation is more inspired by the broad boundary, while growth of export is more motivated by the intense boundary.

No pure common consent of the necessary measures to reach a production diversification structure. The greatest important step can be taken by a government is to concentrate on getting the fundamentals right; in other words, maintaining macroeconomic stability through the fixed capital formation, export, import, GDP, infrastructure investment, business climate improvement, and promotion of private investment and deals of private investors, principally in education at all levels. Altogether, the truth is that most of the countries in this study have well diversified businesses that have been a powerful imitation of more advanced economies' technology. All of these countries have expanded their export and import basket by looting technology. Meanwhile, the economic sector of GDP is one of the prerequisites for good development governance. Now, the encroachment of developed countries' imports and exports is being struggled more strongly than ever.

This illustrates that supportive technology transfer as well as skills improvement is an essential aspect of the production diversification structure that is not allowed to be ignored.

Recommendations

Over the long term, global sponsorship can be obtained as a public sector investment. Practically every single regime is already making investments and care is typical for Organization Designation Authorization (ODA)programs. Surely more attention is required, regarding the outcomes of any analytical evaluation, and should be concentrated on countries week to the influences of response measures. More investigations are needed to analyze the importance of products diversification on different aspects of country economies. More factors needed to be investigated further beside the one we had in our study to have a comprehensive view on how the diversification can contribute positively on the economic. National circumstances have to be the base of planned policies, on an individual case basis, considering geographic place and existing skills, technology, resources, etc. In brief, it is a must conducting more region-oriented studies to sector-specific for supporting developing countries in production diversification structure initiatives.

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