

Developing the Performance of Business Incubators to Increase the Percentage of the Contribution of SMEs in the Saudi GDP to Achieve Vision 2030

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Abstract: Recently, Small & Medium Enterprises (SMEs) have been an important pillar for the growth and revitalization of the economy. However, the small business failure rate is larger than the rate of establishment. Business incubators (BIs) have been structured to support new ventures in order to raise the chance of success. This paper aims to discuss the impact of BIs on the performance of entrepreneurs and the national economy through forecasting the contribution of SMEs and private sectors in the Saudi Gross domestic product (GDP) in 2030 based on the data of General Authority of Statistics in Saudi Arabia from 2016 to 2019. Vision 2030 includes the specific targets that the government will establish more effective BIs to increase the contribution of SMEs in the total GDP from 20% to become 35 percent and increase the contribution of private sectors from 40% to 65%. It argues that although the forecasting contribution of SMEs and the private sector in the total Saudi GDP can surpass the targets of Vision 2030 by 39% and 67% respectively, the contribution of BIs in these goals is insignificant according to studies published in Saudi Arabia but it suggests that BIs may have a positive impact on the national economy in terms of increasing the number of jobs and GDP.

Keywords: Business Incubators, SMEs, Forecasting, GDP, Saudi Vision 2030, General Authority of Statistics

I. INTRODUCTION

Recently, the challenges faced by individuals and governments in the local and global economic systems have become significant. An individual wants to diversify sources of income by establishing businesses, and, at the same time, a government wants to create sustainable national economies in an increasingly competitive global economic system. As a result, in such conditions, entrepreneurs who are enhancing the economy by turning creative ideas into real businesses fail because of the difficulties they face in the market, especially in the first stages of their business activity. For example, in the EU, one-third of small businesses do not last in their first two years. This encourages governments to support small business owners through BIs to help improve national economics. BIs can be defined as “a dynamic process of business development. This term covers a wide range of processes that help companies' lower failure rate in the initial phase and accelerates the development of those that have the potential to become generators of jobs and wealth” [1].

In Saudi Arabia petrol is the most important economic aspect with the petroleum activity contributing approximately 80% of national budget revenues and 90% of export income. Saudi Arabia's economy has significant pressure after economic changes which lead to the low price of oil. The significant impact of the economic crisis on unemployment, production and government spending rates have led to seeking for income sources to diversify the Saudi economy. In this situation, the Saudi government has encouraged people to start their own business in order to develop the national economy through the Small & Medium Enterprises General Authority which was established in 2016. Joining Saudi Arabia into the World Trade Organization (WTO) lead to an increase in the role of SMEs [2]. Saudi Arabia is among those countries that sought to launch a National Plan for Science and Technology [3]. That plan aims to transform the Saudi economy into a knowledge-based economy [4]. SMEs play an important role in this transformation. For example, Malaysia considers SMEs as the driving factor in the transformation of the local economy [5]. The National Plan for Science and Technology, Saudi Arabia launched several initiatives for national technology business incubators in Saudi Arabia. Furthermore, Saudi Arabia aims to spread the initiative of technology incubators to reach 80 incubators by 2025 in order to attract local SMEs to high technology areas through incubators [6].

In general, it appears that BIs can be an important method for individuals and organizations. On the other hand, a study reported the result of the survey distributed among entrepreneurs measuring their satisfaction with services provided by BIs, and it showed that 55.1% of entrepreneurs benefited from enrolling in BIs, whilst 44.9% showed that they did not benefit from enrolling in BIs [7]. Also, another study examined 950 BIs, 19,000 of incubated start-ups, and a control group of unincubated businesses [8]. Overall, this study concluded that business incubation increases the employment and GDP while lowering the expected lifespan of incubated businesses.

As indicated above, BIs tend to be a controversial type of organization that will always strive towards being beneficial by providing a variety of business services. Saudi Arabia has pointed to the importance of SMEs in the Vision 2030 strategy, which includes the specific targets that the government will establish more effective BIs to increase the contribution of SMEs in the total GDP from 20% to become 35%. Also, increase the contribution of the private sector in the total GDP from 40% to 65%. Thus, the purpose of this paper is to identify the influence of BIs on the national economy of Saudi Arabia through promoting SMEs and compare the SMEs contribution in the GDP for the previous four years in Saudi Arabia with the current situation considering the contribution of SMEs and private sector in the total GDP as inputs. Moreover, future contribution and participation of SMEs will be predicted considering strategy in Saudi Vision 2030.

The following will be included: statement of the problem shows the importance and needs of the research, objectives show what will be accomplished after the research, the literature reviews show what has been done in other researches about this topic, methodology shows how the objectives will be achieved to reach to the final results, results of the study will be shown along with its discussion and finally conclusion and recommendations.

Statement of the Problem

BIs support SMEs which are among the most important causes of economic growth in three main areas: creating new jobs, supporting innovation, and increasing exports. Recently, some countries have found the importance of BIs in terms of the development of the national economy by creating and sponsoring many SMEs. For example, in developed countries, SMEs contribute 70 percent of GDP, which is an indicator of the total value of services and products that a country produced in a particular

year. Whereas in Saudi Arabia, SMEs contribute only 20 percent of the GDP in 2016 [3]. In order to solve this issue, Saudi Arabia has pointed to the importance of SMEs in the Vision 2030 strategy, which includes the specific targets that the government will establish more effective BIs to increase the contribution of SMEs in the total GDP to become 35 percent. Also, increase the contribution of the private sector in the total GDP from 40% to 65%. Although it can be argued that BIs will play a significant role in changing the economic status of Saudi Arabia through sponsoring SMEs, the actual performance of SMEs in Saudi Arabia needs more clarity. In another word, the extent to which SMEs and private sector of Saudi Arabia contributed to the GDP and when the vision goals will be achieved. Also, if the goal will be achieved there is a limitation of studies that shows the percentage of contribution of BIs in developing SMEs. Moreover, the performance of BIs according to some research is negligible. Therefore, this study will be conducted to develop BIs in Saudi Arabia.

Objectives

1. Identify the impact of BIs on and the national economy through supporting SMEs.
2. Compare the SMEs contribution to the GDP for the previous four years in Saudi Arabia with the current situation.
3. Predict the future SMEs contribution to the GDP considering strategy in Saudi Vision 2030 using Time-series forecasting.

II. LITERATURE REVIEW

Business Incubators

Start-ups assistance organizations have radically changed the thinking of starting a business. One type of these organizations is BIs, which is sponsored by governments, universities and profit or non-profit organizations to support entrepreneurs with business knowledge, shared operation spaces and financing to accelerate the development of small new enterprises [9]. In 1950, after many factories had closed in the USA, the concept of BIs was supported by the US government to overcome challenges related to some companies [10]. As a result, the first BI was opened in New. Although many BIs have been created in the 1950s, this industry did not start to grow rapidly until 1980 [11]. An NBIA study indicated that between 1985 and 1995 the number of BIs in the USA increased from 40 to over 600, which means BIs have gained more popularity [1]. Since that time, BIs have been one of the most controversial business development topics in terms of whether they could be of benefit for both individuals and governments [12].

In 1990, Tim Berners released a web browser, which let millions of people have access to the internet [13]. This has boosted the presence of e-commerce, which has contributed to facilitating starting businesses [14]. Subsequently, youths have been encouraged to start their own business through BIs because of famous companies today, such as Dropbox and Airbnb who graduated from BIs. In contrast, there are considerable achievements made by start-ups, such as Uber and Amazon who have succeeded in a short time from the founder [15]. Therefore, determines that the difficulty of whether entrepreneurs could be successful without the support of BIs has been recognized, and this is the basis of the debates against BIs.

Recently, entrepreneurship has become one of the most important growth factors for some economies and it has many benefits for both individuals and organizations. An entrepreneur is defined as someone who practises the creative activity of turning an original idea into a real business [16]: the person who keeps trying to identify potential opportunities in the market and applying useful ideas to fill the gap called entrepreneurs [17]. For example, almost one out of every eight American adults are the owner of a small firm or is actively engaged in creating a business [18].

However, a study indicated that one-third of European start-ups do not survive in their first year of existence [19]. To solve the issue of the high failure percentage of small and medium-sized enterprises, a study suggests that start-ups should enrol in BIs because of their useful services, which are knowledge, capital, office space, networking, and mentoring support. BIs are an innovative system, which helps entrepreneurs to build their own business in creative ways in order to develop the world economy and support innovation. It is generally accepted that BIs can have some positive influences on entrepreneurs and the national economy, but BIs can also be a controversial topic when it comes to their impact on employment and GDP to help increase the national economy. For example, some research indicates that there are more than 7,000 BIs around the world and some of them fail to help improve the national economy in terms of the GDP and number of jobs [20]. Furthermore, reliability and high equity impacts are additional issues to consider when building the trust of entrepreneurs in BIs. Therefore, the controversy about the impact of BIs on entrepreneurs and the national economy may need a deep discussion to evaluate their current situation.

Business Incubators in Saudi Arabia

The General Authority for Small and Medium Enterprises is called (Monshaat) which is established in 2016 and Monshaat aims to support and enable SMEs through cooperation with the public and private sectors. Also, to achieve vision 2030 target which includes the specific targeted that the contribution of SMEs in the GDP should increase from 20% to 35%. [3]. According to the Global Competitiveness Report in 2019, the rank of Saudi Arabia is up 17 places since the previous year in the indicators of "financing small and medium enterprises" and "availability of venture capital". The Authority has in the past period prepared a draft of new regulation for organizing business incubators in Saudi Arabia to regulate the sector of entrepreneurship which includes business incubators, accelerators, and coworking spaces through studying the local market, making international comparisons and taking the opinions of experts and come up with the best proposals [21].

The General Authority for Small and Medium Enterprises aims to:

- Create a suitable environment for investment.
- Expand to support innovation and entrepreneurship.
- Increased investment by the government and private sector in supporting business incubators.
- Attracting local and foreign investors to invest in incubated companies.
- Motivating existing business platforms to expand and provide further services.

The new regulation from Monshaat aims:

- Supporting the growth and efficiency of micro and small enterprises.
- Providing an attractive environment for entrepreneurs.
- Facilitate starting a business and reducing costs.

- Supporting innovation.
- Stimulating investment in the business incubator sector.
- Stimulating investment in small and medium enterprises.

Request a license for the business incubators. The license requires the following requirements and conditions:

- A. The applicant for the license must be a company, university, government agency, private institution or any other sectors determined by the board directors of the authority.
- B. Submit a business plan that includes the following:
1. Feasibility study.
 2. Description of the business incubator activities and services.
 3. Determine the targeted sectors.
 4. The policy of entry and exit from the incubator.
 5. The capacity for the number of entrepreneurs.
 6. Description of interior design showing offices and coworking spaces.
 7. Self-evaluation periodic and external plan of procedures for BIs and entrepreneurs.
 8. Curriculum vitae of the founders and staff of the incubator.
 9. The founders of the incubator submit the form of a fit form that is prepared by the authority.

The following is required from the business incubator site:

- A. The site must be in a position commensurate with its objectives, and appropriate for the purposes and activities for which it was established.
- B. The site must not be less than (250) square meters and should provide allocated areas for common facilities and services, which include: corridors, a meeting room, a reception desk, and waiting areas.
- C. The site should be independent in a commercial street, or a street of at least 30 meters in width or be in any of:
1. Governmental facilities.
 2. Commercial facilities.
 3. Educational facilities.
 4. Agricultural facilities.

Basic services of business incubators. The business incubator must provide the following basic services:

- A. Workspaces for entrepreneurs.
- B. Hall Meetings.
- C. Receptionist.
- D. Telecommunications and Internet services.
- E. Printing, copying, electronic scanning and office equipment.

Optional services of business incubators

After fulfilling the basic requirements and licenses of the business incubator, it can provide the following services:

- A. Feasibility studies and work plans
- B. Administrative, consulting, legal, accounting and mentoring services.
- C. Finance and investment services.
- D. Technical support.
- E. Specialized tools (studios, 3D printer, cooking station...).
- F. Laboratories licensed by the concerned authorities for specialized incubators such as (food, industrial, ...).
- G. Secretarial services.
- H. Organizing events and workshops.

Any other services suitable for incubator activities and the authority may set classification for business incubators according to the optional services they provide.

III. METHODOLOGY

General Authority of Statistics in Saudi Arabia will be the source to collect relevant data which are:

- Gross domestic products for Saudi Arabia from 2016 to 2019.
- Gross domestic products for the private sector from 2016 to 2019.
- Gross domestic products for SMEs from 2016 to 2019.
- The percentage of the contribution of SMEs sector in the GDP.

These data will be analyzed using Regression Analysis to forecast the future GDP of the non-oil sector. Minitab software will be used to get the best-fit regression equation and the results will show the forecasted values for 2030.

IV. RESULTS*Total GDP*

Table 1: GDP of Saudi Arabia

Year	Quarter	# in M
2016	Q1	576,101
	Q2	600,754
	Q3	605,080
	Q4	636,573
2017	Q1	634,717
	Q2	624,766
	Q3	644,513
	Q4	678,202
2018	Q1	699,191
	Q2	738,851
	Q3	745,062
	Q4	766,354
2019	Q1	718,543
	Q2	740,032
	Q3	745,369
	Q4	769,681

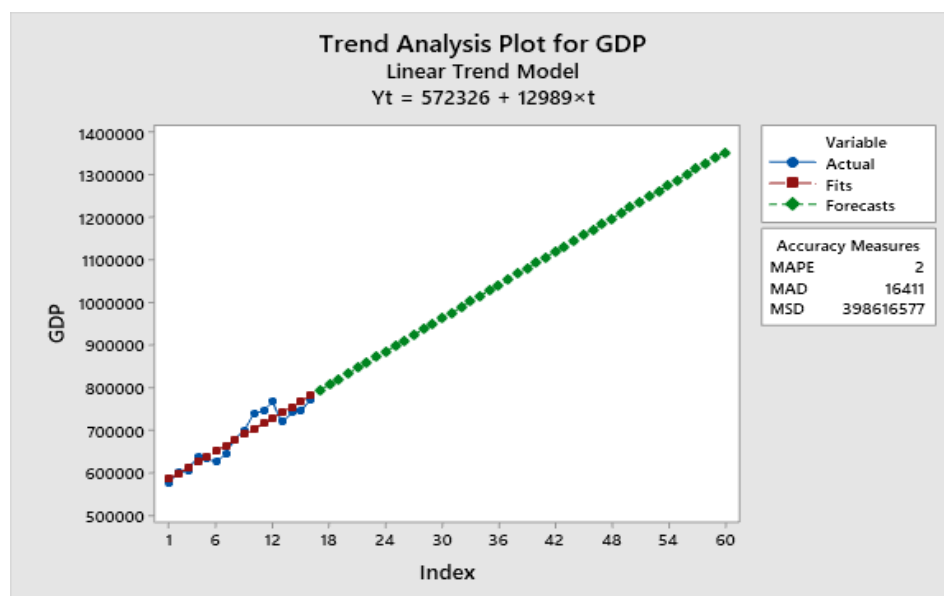


Figure 1: Plot of the actual total GDP

As shown in figure 1 the data is the trend so, trend analysis was conducted using Minitab software to generate the rest periods forecast for the years 2020 to 2030 as shown in the following table:

Table 2: Forecasting for the GDP from 2020 to 2030

Year	# in M
2020	3250526
2021	3458358
2022	3666190
2023	3874020
2024	4081852
2025	4289684
2026	4497516
2027	4705348
2028	4913179
2029	5121010
2030	5328842

GDP of private sector

Table 3: GDP of private sector

Year	Quarter	# in M
2016	Q1	312662.6235
	Q2	302495.2834
	Q3	307284.0405
	Q4	305091.7851
2017	Q1	314833.4598
	Q2	305095.4893
	Q3	315612.3586
	Q4	311917.6147
2018	Q1	324973.7478
	Q2	318812.8537
	Q3	328491.6682
	Q4	328577.3556
2019	Q1	331712.5575
	Q2	332412.5144
	Q3	344066.6412
	Q4	346129.8025

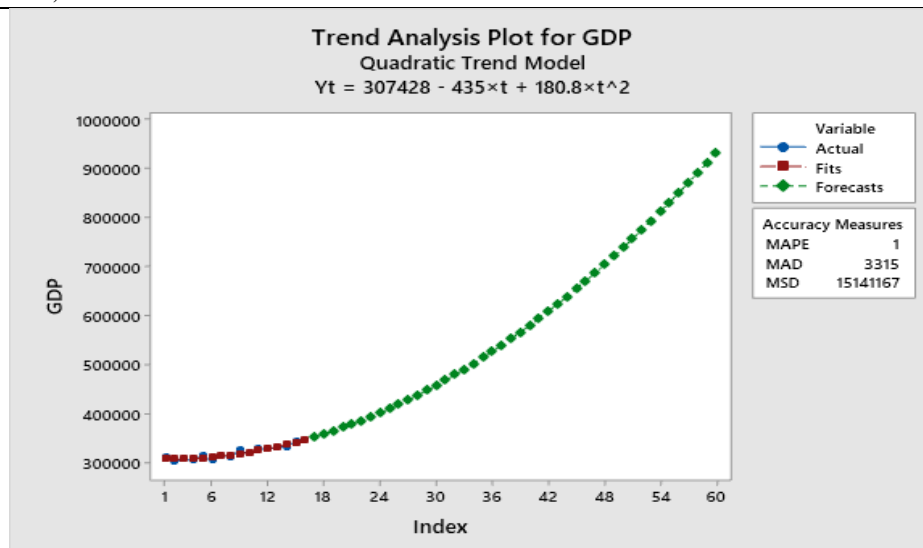


Figure 2: Trend plot for the GDP

As shown in figure 2 the data is the trend so, trend analysis was conducted using Minitab software to generate the rest periods forecast for the years 2020 to 2030 as shown in the following table:

Table 4: Forecasting for the GDP of the private sector from 2020 to 2030

Forecasted GDP			
Year	Total GDP	GDP of private sector	Percentage
2020	3250526	1445943	44.5
2021	3458358	1557586	45.0
2022	3666190	1692371	46.2
2023	3874020	1850298	47.8
2024	4081852	2031366	49.8
2025	4289684	2235576	52.1
2026	4497516	2462929	54.8
2027	4705348	2713422	57.7
2028	4913179	2987057	60.8
2029	5121010	3283835	64.1
2030	5328842	3603752	67.6

GDP of SMEs

Table 5: Contribution of SMEs sector in the GDP

Year	Percentage
2016	20
2017	21
2018	22
2019	28.75

Table 6: GDP of SMEs

Year	Quarter	# in M
2016	Q1	115220.2912
	Q2	120150.747
	Q3	121016.0971
	Q4	127314.5329
2017	Q1	133290.4719
	Q2	131200.7818
	Q3	135347.8036
	Q4	142422.5183
2018	Q1	153821.9575
	Q2	162547.118
	Q3	163913.5323
	Q4	168597.9033
2019	Q1	206581.1536
	Q2	212759.1417
	Q3	214293.683
	Q4	221283.3941

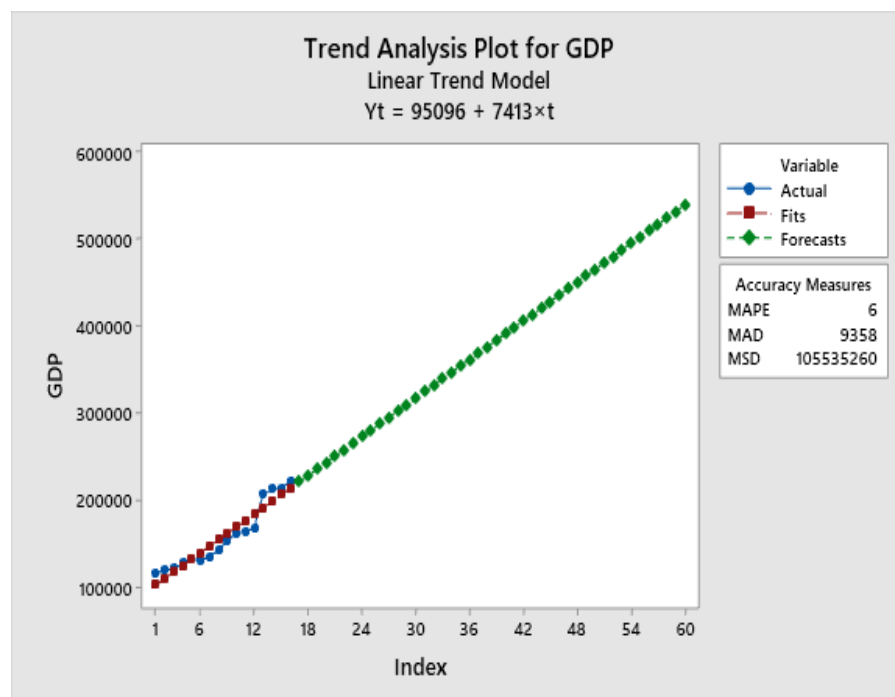


Figure 3: Trend plot for the GDP

As shown in figure 3 the data is the trend so, trend analysis was conducted using Minitab software to generate the rest periods forecast for the years 2020 to 2030 as shown in the following tables.

Table 7: Forecasting for the GDP of SMEs from 2020 to 2030

GDP Forecasted			
Year	Total GDP	GDP of SMEs	Percentage
2020	3250526	928975	28.6
2021	3458358	1047589	30.3
2022	3666190	1166203	31.8
2023	3874020	1284817	33.2
2024	4081852	1403431	34.4
2025	4289684	1522044	35.5
2026	4497516	1640659	36.5
2027	4705348	1759272	37.4
2028	4913179	1877887	38.2
2029	5121010	1996500	39.0
2030	5328842	2115114	39.7

V. DISCUSSION

The results of forecasting in the pervious chapter indicate that the total GDP of Saudi Arabia in 2030 will be 5,328,842 Trillion SAR and the contribution of private sector in the total GDP will be 67% and the contribution of SMEs in the total GDP will be 39% based on the data that published from General Authority of Statistics in Saudi Arabia. These forecasted numbers show that Saudi Arabia will surpass the targets in Vision 2030 as shown in the following table:

Table 8: Summary of forecasting

Sector	The target of contribution percentage in Vision 2030	Forecasted percentage
Private	65%	67%
SMEs	35%	39%

These forecasted numbers show that Saudi Arabia will surpass the targets in Vision 2030. The Vision desire to increase the contribution of SMEs in total GDP from 20% to 35% and the contribution of the private sector in total GDP from 40% to 65%. This is because in 2017 Saudi Arabia established the Small and Medium Enterprises Authority (Monshaat), which has taken a lot of initiative that supports the Saudi economy. Monshaat is implementing its strategic plans and launching its diverse programs to translate Vision 2030 into the SME sector on the ground by supporting innovation, facilitating business processes, enabling growth, developing capacity and creating suitable employment opportunities for citizens across the Kingdom by supporting entrepreneurship through better regulations, easier financing and more international partnerships for local firms than government procurement and competition.

VI. CONCLUSION

In conclusion, as of recently, the effectiveness of BIs have been a controversial topic because they are an important tool in developing the contemporary economy. This paper has evaluated the benefits of BIs by analyzing the two important aspects, which are the contribution of SMEs and the private sector in the GDP using the regression model. These aspects have played a major part in clarifying the extent to which BIs can be beneficial for the regional and global economy.

It appears from the evidence that the performance of entrepreneurs can be enhanced because of the contribution of BIs. Moreover, the GDP of Saudi Arabia can be increased by the impact of BIs and

Monshaat initiatives on the national economy. The results show that the country will surpass the targets which are the contribution in the GDP will be 39% from SMEs and 67% from the private sector in 2030 but there is a debate over these finding because of the current situation of coronavirus and the drop in oil prices, which is the most important source of income in Saudi Arabia, to 32 dollars per barrel. This means there is a significant need to further research in order to determine the impact of the virus on the national economy, the actual role of BIs after the end of the pandemic and when the goals of the vision will be achieved.

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