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INVESTIGATING THE RELATIONSHIP BETWEEN ENTREPRENEURIAL ACTIVITY AND ECONOMIC GROWTH: A CASE OF MIDDLE EAST

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Abstract. The current research is aimed at investigating the relationship between entrepreneurial activity and economic growth, more specifically, in the context of Middle East countries. Entrepreneurial activities are professed to improve the economic development of the country through employment generation, increase in the rate of gross domestic product (GDP), increased productivity levels, poverty alleviation, and so on. Based on the possibility of these positive aspects, economic growth is considered to be driven through increased entrepreneurial activities, in the context of developing countries. To investigate this relationship between research variables, quantitative data was collected using the World Bank database of 8 Middle Eastern countries for the period 2009-2016. Based on the correlation and regression results, the study finds a significant positive impact of entrepreneurial activity (measured as new businesses registered) on economic growth (GDP growth) in the Middle East. Therefore, it is important for states in the Middle East to focus on promoting entrepreneurial activity, which influences economic growth.

Keywords: entrepreneurial activity; economic growth; Middle East; new businesses registered

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JEL Classifications: O1, O3

1. Introduction

Later in the decade of the 20th century, associations between entrepreneurship and economic development have been studied extensively (Savrul, 2017). It is to be noted that the main concern of such studies concerning the impact of entrepreneurial activity on economic performance is linked with industry or firm level, while there is a dearth of its contribution at country level. Notably, entrepreneurial activity is professed to improve the economic growth of the countries. Based on this premise, small businesses are given immense significance in the economy of the country (Gerçeker, Özel, & Ay, 2014). Ivanović-Djuki et al. (2018) argue that the rising share of entrepreneurs and small and medium-sized enterprises (SMEs) have substantially changed the perception of economists with regards to driving factors of economic growth.

Fundamentally, entrepreneurship is distinguished as the instigation of new economic activities along with the improvement in the existing activities by introducing new products, processes, as well as markets (Gerçeker et al., 2014). It is also stated that entrepreneurial activities involve such functions that are aimed at transferring the country's resources from low-productive areas to such areas where economic productivity is even higher. In addition, the positive economic attributes such as employment creation, poverty alleviation, increased growth in income per capita, competitive growth, along with societal welfare are linked with entrepreneurial activities (Ivanović-Djuki et al., 2018; Ribeiro-Soriano, 2017). In this consideration, it is widely asserted that entrepreneurship largely contributes to the economic growth of countries by increasing their GDP rates which consequently enhance the quality of lives.

Furthermore, in context of developed countries, SMEs and other entrepreneurial activities demonstrate a positive influence on economic development, however, the impact of entrepreneurship in the economic growth of developing countries lacks the empirical evidence which needs to be determined (Sautet, 2013). Doran, McCarthy, and O'Connor (2018), in this concern, mentioned that importance of entrepreneurship greatly varies across middle or low-income and high-income countries. Ács et al. (2014) also claimed that entrepreneurial activities do not receive sufficient treatment in the context of a country-level phenomenon and its impact on economic development. Devece, Peris, Ortiz, and Armengot (2016) contends that entrepreneurial activities are mostly necessity-based in developing countries.

Furthermore, as a result of entrepreneurial activities, competition among existing companies is largely increased which, in turn, improves the productivity levels and thereby, economic outputs. Savrul (2017) further claims that in the absence of entrepreneurial activities, economic growth is likely to be reduced. Moreover, with the evolution of knowledge-intensive businesses, entrepreneurship has seen a rise, wherein, small businesses play a pivotal role in improving economic growth. More precisely, entrepreneurship is referred to as the mechanism of 'creative destruction' as innovation efforts of entrepreneurs enable the companies to present new and improved inventions which, in turn, make existing technologies and products obsolete. Presumably, Kritikos (2014) mentioned that albeit 1 to 2% of the workforce instigate businesses in any particular year, despite the fact, innovative entrepreneurship is critical to the competitive economy and creation of new jobs in both short and long run.

2. Literature Review

Entrepreneurial Activity

Broadly speaking, Entrepreneurship is referred to as the phenomenon which embraces entrepreneurial activities. More precisely, this phenomenon is related to the creation of jobs, management of inequalities as well as environmental issues (Boutillier and Uzunidis, 2016). In accordance with the definition presented by OECD (2015), entrepreneurship greatly varies in its activities and therefore, generates varying results which are not necessarily related to wealth creation. OECD has identified three main constituents involved in this phenomenon which include entrepreneurs, entrepreneurship, and entrepreneurial activity. More precisely, entrepreneurs are the business owners who intend to create value by improving their economic activity by means of seeking and exploiting innovative products, processes as well as markets. However, entrepreneurial activity is signified as the human actions which are aimed at creating value by undertaking those economic activities. Link (2017) recognizes 'entrepreneurial activity' as activities that are pertinent to creation, management, development, and death of small independent companies. It was also mentioned that entrepreneurial activity may be the outcome of either necessity or opportunity.

Additionally, to seek and take advantage of business opportunities is imperative for entrepreneurs. With the help of these opportunities, entrepreneurs are capable of either developing new companies or bring improvement in the existing ones. Amiri and Marimaei (2012) state that entrepreneurship is the capacity of individuals to realize

innovation and creativity in the business to achieve a competitive advantage. Juturu (2018) further mentioned that in order for a country to create wealth, address socioeconomic issues and to promote the status of a nation in a globalized scenario, it is indispensable to improve its entrepreneurial activities. Boutillier and Uzunidis (2016) mentioned that the Global Entrepreneurship Monitor (GEM) is utilized as a tool to study entrepreneurship activities at international level. This entails both qualitative and quantitative indicators. In particular, qualitative indicators include profiles of entrepreneurs, their aspirations, methods of creation, fear of failure, etc., whereas, the list of an established business is one certain qualitative indicator of entrepreneurship.

Role of Entrepreneurial Activity in Economic Growth

As stated earlier, entrepreneurial activity is the driving force within country's economy, more specifically, due to innovative nature of entrepreneurs who proactively seize business opportunities in order to gain economic benefits (Dahliwal, 2016; Antonie, Feder and Munteanu, 2017; Doran et al., 2018; Ribeiro-Soriano, 2017). Additionally, the construct of 'entrepreneurship' is professed to increase the competitiveness, create employment opportunities, bring innovation to improve productivity, and thereby improving the economic growth of the country (Amaghouss & Ibourk, 2013). Savrul (2017) supports the stance that economic growth can be achieved by means of entrepreneurship capital which boost the number of firms and thereby competition is raised in the market. In addition to this, not merely the number of enterprises is enhanced but also, a variety of enterprises are established using this capital. Thus, it can be said that entrepreneurial activities can play a significant role in enhancing economic growth.

Increased GDP Growth

It is to be noted that, economic growth of any country is measured through its GDP rate which is distinguished as the monetary value of country's goods and services during one-year period excluding the price range or monetary value of goods and services which are consumed during the process of production (Yusuf and Albanawi, 2016). Presumably, the impact of entrepreneurial activity on the economic development of a country substantially differs based on the stage of economic development where a country lies (Ferreira, Fayolle, Fernandes, & Raposo, 2017). In this context, economic development in developed and developing countries also differ, and thereby, the effects of entrepreneurial activities also differ. In this regard, the study of Aubry, Binnet, and Maissant (2015) assert that domestic productivity produced by entrepreneurial activities in developing countries is different as compared to developed countries. For instance, countries such as Canada, USA, Australia have high economic growth based on the fact that these countries place a high value on entrepreneurship and actively support and assist the entrepreneurs in formation, expansion, and growth of the business (Ogunlana, 2018).

In addition, governments also finance their start-up business activities through venture capital. Study of Castaño-Martínez et al. (2015) has suggested that increased investments in Research & Development, and education related to entrepreneurship is likely to enhance the economic performance of the country. Moreover, Fariyibi (2015) established that approximately 8.4 million SMEs operate in Nigeria which greatly contributes to the national output. More particularly, the entrepreneurial activities of these small businesses contribute about 75% in the revenues. This implies that increased financial investment in the entrepreneurship activities may significantly improve the GDP growth of countries. Afolabi (2015) further affirms this finding stating that Nigeria's economic growth has been increased continually based on the governmental initiatives to foster the growth of SMEs. Furthermore, Bampoky et al. (2013) analyzed the entrepreneurship data of both developing and developed countries over the years 2003-2011. Their study found that since less developed countries lack entrepreneurship have lower economic growth, in contrast, high-income developed countries, entrepreneurship activities are optimum which enhances their economic growth.

Employment Creation through Entrepreneurial Activity

Entrepreneurship is accentuated as significantly related to the economic development of countries and therefore, is referred to as a notable source of employment creation. Undoubtedly, both large corporations and SMEs create

jobs for people as a large number of firms are established due to increased competition. Cieřlik (2014) claimed that most of the jobs are created by small firms, in particular, it was suggested that 66% of the employment in US economy was generated by SMEs which had staff less than 20. While 16% of the jobs were the creation of enterprises comprised of 20 to 99 people. In accordance with the Kritikos (2014), in circumstances when economic growth becomes stagnant and the unemployment rate is high, entrepreneurial activities can help improve economic growth. This is due to the fact that entrepreneurs who leverage from business opportunities and create new markets, demand for the workforce is boosted to develop innovative products.

Consequently, job opportunities are increased while unemployment is substantially reduced. It is to be noted that opportunity entrepreneurship is more likely to generate employment as it is professed to have a high potential to grow (Fairlie & Fossen, 2018). Moreover, the major entrepreneurial factors involved in job creation include the size of firm, training, available resources, alongside the history of entrepreneurship (Rey-Martí et al., 2016). Regarding this, Kucel (2016) has mentioned the active role of government in investment in entrepreneurial education with the purpose to achieve self-employment and employment generation.

Elimination of Income Inequality

Evidently, entrepreneurial activities are anticipated to bring along the positive returns in terms of profit, income generation by the integration of innovative business practices. Martin, Picazo, and Navarro, (2010), in this regard, opined that the capitalist approach is restricted so as to mitigate income inequality while encouraging equal income distribution. Albeit, entrepreneurial activities are regarded to reduce unemployment rates, nevertheless, Lecuna (2014) has suggested that there lies a positive and linear relationship between entrepreneurial activity and income inequality. Consistent with the disequalizing model, it is assumed that income inequality is increased over the succeeding generations. Moreover, entrepreneurs are considered to accumulate more income as compared to workers, which in turn, concentrates the wealth amid entrepreneurs in developed countries. Furthermore, Kwark and Ma (2016) stated that an expanding economy which assists entrepreneurship activities is likely to create opportunities for entrepreneurs. Study of Gutiérrez-Romero and Méndez-Errico (2017) found that although necessity entrepreneurship increases in number due to increase in inequality, however, it is also likely that entrepreneurial activity will reduce due to this inequality as businesses would not be created.

Since entrepreneurship contributes in the economic development of the country by creating jobs, enhancing value-added as well as per capita incomes, in this regard, increased inequality can be detrimental on entrepreneurial activity in case the huge proportion of individuals will be prevented to take up profitable investments. Amorós and Cristi (2010) also mentioned that necessity-based entrepreneurship that is prevalent in developing countries is linked with human development as well as inequality income in these countries. This income inequity further urges individuals to instigate entrepreneurial venture to reduce this inequality and promote economic growth.

3. Research Methodology

Research Approach

Widely used research approaches are deductive and inductive. In particular, the deductive approach is referred to as the process of developing hypotheses and theory (Quinlan, 2019). In this approach, the researcher collects and interprets data in relation to theories and proposed hypothesis. However, in the inductive approach, a theory is developed after analysis of data. In the current study, the researcher has adopted the deductive approach based on its appropriateness that relates to the research topic that is to investigate the relationship between entrepreneurial activity and economic growth.

The researcher has adopted the top-down approach to gain insights on aspects of economic growth which are impacted by entrepreneurial activities. In the context of the philosophical stance, this research has selected quantitative approach wherein researcher rely on numerical data analysis to present the coherent findings that

could be generalized (Anderson et al., 2015). In this study, the researcher has attempted to generate logical findings through numerical data obtained for assessing the impact of entrepreneurial activity on economic growth in Middle East countries.

Research limitation

Economic growth is affected by myriad of factors. In this research we make an assumption that other factors do not distort the relationship between entrepreneurial activity and economic growth.

Research Design

Research design is referred to as the framework of the entire study that assists the researcher to achieve established research aims and objectives. Rubin and Babbie (2016) have mentioned different research designs that are widely used by researchers which include descriptive, experimental, case study, correlational and so on. In the current research, the purpose is to examine the impact of entrepreneurial activity on economic growth. Concerning this, the correlational research design is considered to be more appropriate as it facilitates the researcher in examining the relationship between variables of economic growth and entrepreneurial activity (Hair et al, 2015). Besides, the correlational design is helpful in assessing the strength of the relationship between proposed research variables using varied statistical techniques. Furthermore, this design is helpful in examining the influence of entrepreneurial activity on economic development as there is a dearth of empirical findings pertinent to this association in the context of countries.

Data Collection

Collection of data is the crucial stage in research work. This data collection process facilitates the researcher in gathering valuable information so that reliable and valid findings could be generated. O'Connor (2015) states that the methods of data collection also vary with respect to the research approach and design. As stated earlier, current research adopts a quantitative approach and correlational research design, data were collected from secondary sources. Secondary data are considered to be a valuable evidence source (Hoffmann, 2017). In the present research, the researcher has used secondary quantitative data available on the World Bank database. The sample size of the study includes 8 Middle Eastern countries, where the data relates to the period 2009-2016. Therefore, a total number of observations is 64. Utilizing this data, the researcher critically analyses the influence of entrepreneurial activity on the economic growth of Middle East countries.

Data Analysis

It is the process in the research wherein the researcher is required to carry out a meticulous analysis of gathered data. This stage involves the interpretation of data so as to convert it into valuable information and findings that can be generalized (Creswell, 2017). In general, data analysis largely depends on the type of data (quantitative and qualitative data). As the current research has undertaken quantitative data, statistical tools are utilized to analyze the numerical data. The data analysis tools specifically used for the study are descriptive statistics, correlation and regression analysis. In particular, descriptive statistics help in summarizing the data. Correlation analysis assists in assessing the relationship between entrepreneurial activity and economic growth, whereas regression assesses the impact and the nature of this relationship between the proposed variables. Certain control variables are also included: inflation, gross capital formation, and labor force.

Following formula will be used to assess the relationship between entrepreneurial activity and economic growth of Middle East countries.

$$GDPG = \beta_0 + \beta_1 NRB + \beta_2 GCF + \beta_3 LF + \beta_4 INF + \epsilon$$

Where;

GDPG, NRB, GCF, LF, and INF represents GDP growth, new registered business, gross capital formation, labor force, and inflation respectively.

Findings and Analysis

Based on the aforementioned methodology, the extracted data from the World Bank has been entered in SPSS software. This section of the paper particularly sheds light upon the findings from the data available for 8 of the Middle Eastern Countries. Out of the total 16 Middle Eastern states (categorized on World Bank Database), only 8 were considered as part of the study based upon the availability of the complete data set during the period 2009 till 2016. The analysis of the collected information is divided into three parts; Descriptive Analysis, Correlation Analysis, and Regression Analysis.

Descriptive Statistics

For the identification, the mean value of the four research variables of the study based on the selected countries, the following Table 1 is formulated using SPSS custom tables feature. The results from the same indicate that the average GDP growth of Jordan remained the highest with 6% average growth in the number of registered businesses over the span of 9 years. Cyprus, on the other hand, reflect the lowest economic growth (average) as well as negative growth seen in terms of the entrepreneurial activities. Moreover, Oman is seen to have been the most prominent place for investment as it reflects the highest average growth in the entrepreneurial firms in the country.

Table 1. Mean Variables on the basis of different Countries

<i>Mean Variables on the basis of different Countries</i>	GDP Growth	New businesses registered (% GROWTH)
	Mean	Mean
United Arab Emirates	2%	14%
Cyprus	-4%	-5%
Iraq	5%	-2%
Israel	5%	1%
Jordan	7%	6%
Oman	2%	27%
Saudi Arabia	4%	10%
Turkey	2%	12%

Overall, Table 2 show that the Middle Eastern countries reflect an average growth of 3.02% (0.0302) with the annual inflation rate (average) remaining as high as 2.68%. The average growth in Gross capital formation and labor force of the Middle East region is 3.16% and 4.25% respectively. Furthermore, the number of firms registered over the span of 9 years in the Middle Eastern Region revealed 7.78% average growth. Though the entrepreneurial activities in the Middle East are seen to have deviated from the mean value by 22.73% overall.

Table 2. Descriptive Statistics (Middle East)

<i>Descriptive Statistics (Middle East)</i>	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic
Gross capital formation (% growth)	64	-0.39	1.15	0.0316	0.23291
GDP Growth	64	-0.24	0.34	0.0302	0.12213
Labor force (% growth)	64	0.00	0.14	0.0425	0.03177
Inflation, consumer prices (annual %)	64	-2.19	8.89	2.6873	2.75750
New businesses registered (% GROWTH)	64	-0.46	0.86	0.0778	0.22731
Valid N (listwise)	64				

Correlation between Entrepreneurial Activity and Other economic indicators Table 3 show that Entrepreneurial Activities are the major source of boosting the overall economic growth of the developed regions. In the case of developing countries however, the results reflect a negative relationship between the two variables (Piotr & Rekowski, 2009).

In order to assess the relationship between the current research variables, Pearson Correlation has been used. The results from the same indicate that their lies a positive relationship (0.249) between the entrepreneurial Activities (Number of registered businesses) in the Middle East region with correlation coefficient remaining significant at 0.05 level of significance. In addition to this, the other control variables except for labor force reflects a significantly positive association.

Table 3. Correlations

Correlations		Gross capital formation (% growth)	GDP Growth	Labor force (% growth)	Inflation, consumer prices (annual %)	New businesses registered (% GROWTH)
Gross capital formation (% growth)	Pearson Correlation	1	.529**	0.060	0.131	.280*
	Sig. (2-tailed)		0.000	0.640	0.304	0.025
	N	64	64	64	64	64
GDP Growth	Pearson Correlation	.529**	1	0.081	.268*	.249*
	Sig. (2-tailed)	0.000		0.523	0.032	0.048
	N	64	64	64	64	64
Labor force (% growth)	Pearson Correlation	0.060	0.081	1	0.075	.363**
	Sig. (2-tailed)	0.640	0.523		0.555	0.003
	N	64	64	64	64	64
Inflation, consumer prices (annual %)	Pearson Correlation	0.131	.268*	0.075	1	0.174
	Sig. (2-tailed)	0.304	0.032	0.555		0.168
	N	64	64	64	64	64
New businesses registered (% GROWTH)	Pearson Correlation	.280*	.249*	.363**	0.174	1
	Sig. (2-tailed)	0.025	0.048	0.003	0.168	
	N	64	64	64	64	64

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

Impact of entrepreneurial activity on Economic Growth (with control variables).

While assessing the influence entrepreneurial activities on the overall economic growth of the Middle Eastern countries, the linear regression has been performed using GDP growth as a dependent variable while entrepreneurial growth as an independent variable. Inflation (annual %), the Labor force (% growth) and the Gross capital formation (% growth) has been taken as the control variables. Table 4 shows that the results from the fitted regression model reflect an R-square value of 0.327. This indicates that the fitted model is able to explain 32.7% variation in the economic growth of the Middle East region of the world, due to changes in the independent variables.

Table 4. Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.571 ^a	0.327	0.281	0.10357

a. Predictors: (Constant), the Labor force (% growth), Gross capital formation (% growth), Inflation, consumer prices (annual %), New businesses registered (% GROWTH)

Table 5 show that The F test value of 7.152 is also seen to be significant at 0.01 level of significance reflecting the combined effect of all the independent variables on the economic growth of the region.

Table 5. ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	0.307	4	0.077	7.152	.000 ^b
1	Residual	0.633	59	0.011		
	Total	0.940	63			

b. Dependent Variable: GDP Growth

c. Predictors: (Constant), the Labor force (% growth), Gross capital formation (% growth), Inflation, consumer prices (annual %), New businesses registered (% GROWTH)

However, when assessing the individual impact of each of the 4 variables, the coefficient in table 6 below indicates that the entrepreneurial activity shows an insignificant impact when all of the 3 control variables are included in this model, despite the positive significant relationship found in the correlation analysis. Hence, in order to be sure about the results, the researcher has performed another regression analysis entering only inflation as the control variable in the next model.

Table 6. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	-0.006	0.025		-0.222	0.825
New businesses registered (% GROWTH)	0.041	0.065	0.076	0.632	0.530
1 Gross capital formation (% growth)	0.253	0.059	0.482	4.313	0.000
Inflation, consumer prices (annual %)	0.008	0.005	0.191	1.757	0.084
Labor force (% growth)	0.041	0.441	0.011	0.093	0.927

a. Dependent Variable: GDP Growth

Table 7 shows that the results from the same indicate that the fitted regression model is significant at 0.05 significant level and data provides sufficient evidence to conclude 11.4% impact of the independent variables on the dependent variables.

Table 7. Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
2	.338 ^a	0.114	0.085	0.11682

a. Predictors: (Constant), Inflation, consumer prices (annual %), New businesses registered (% GROWTH)

Table 8 shows that the individual impact of both inflation and entrepreneurial activities is observed to be positively influencing the overall economic growth of the region. The beta coefficient of the EA reflects that a 100% increase in the number of new businesses in the countries will enhance the GDP of the countries in the Middle East by 11.2%. In addition to this, inflation only reflects 1% influence on the economic growth of the region. The results from both the beta coefficients are indicating significant results at a 0.10 level of significance. The aforementioned results are found to be aligned with the results of Van Stel, Carree & Thurik, (2005), which has identified that the impact of the entrepreneurial activity on the economic growth remained significantly positive for rich countries.

Table 8. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	-0.006	0.021		-0.299	0.766
2 New businesses registered (% GROWTH)	0.112	0.066	0.208	1.700	0.094
Inflation, consumer prices (annual %)	0.010	0.005	0.232	1.897	0.063

a. Dependent Variable: GDP Growth

Conclusion

Since there are limited studies found which tested the impact of entrepreneurship on the economic growth in the context of the Middle East. Hence, for the current research, the study analyzed GDP, GCF, Labor force, Inflation rate and Entrepreneurial activities registered for the period of 8 years starting from 2009 to 2016, particularly of the 8 Middle Eastern countries.

The descriptive results reflect that Jordan tends to have the highest economic growth average with 6% EA growth. The study also critically presented a significant positive relationship between the entrepreneurial activities in the Middle East and its overall economic growth. The current findings suggest that there lies a positive relationship between the two variables. Moreover, the economic growth of the region has indicated to have a weak yet significant influence of the entrepreneurial activities, inflation rate, and gross capital formation. In other words, our analysis reflects that new firms play a crucial role in benefiting from the externalities in the region, and hence the rise in entrepreneurship may result in a huge contribution to the economic growth.

Based on these findings, the countries in the Middle East are suggested to focus more on increasing the entrepreneurial activities as this will not only help in increasing the employment rate but also help in raising the overall growth of its economy.

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