British Journal of Economics, Management & Trade
8(3): 215-229, 2015, Article no.BJEMT.2015.112
ISSN: 2278-098X

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Globalization, FDI and the Links with Economic Growth: An Empirical Investigation for MENA Countries

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/BJEMT/2015/17112
Editor(s):
(1) Chen Zhan-Ming, School of Economics, Renmin University of China, Beijing, China.
Reviewers:
(1) Moyazzem Hossain, Department of Statistics, Jahangirnagar University, Bangladesh.
(2) Sergey A. Surkov, International Institute of Management LINK, Moscow, Russia.
(3) Nurulizwa bte Abdul Rashid, Faculty of technology and Technopreneurship, UTeM, Malaysia.
Complete Peer review History: http://www.sciencedomain.org/review-history.php?iid=1063&id=20&aid=9706

Original Research article

Received 26th February 2015
Accepted 26th April 2015
Published 11th June 2015

ABSTRACT

The present paper analyzes the impact of globalization and FDI inflows on economic growth in 14 MENA countries over the period 1995-2011, through the use of panel data analysis. The fixed effects specification reveals that globalization and FDI inflows seem to play a substantial role in explaining economic growth of the selected MENA countries. Likewise, governance and economic freedom act as catalysts for the MENA region's economic growth.

Based on these results, it can be concluded that MENA countries can improve their growth performance by opening their doors more widely to the process of globalization and stabilizing political situation. Moreover, the MENA region's decision-makers are committed to pursue investment-friendly policies and ensure well-functioning political and economic institutions. Further, contemporary and more comprehensive educational policies should be designed to emulate several technological trends.

Keywords: Globalization; FDI; economic growth; MENA Countries.

JEL Classification Numbers: F15; F21; O43; O50.

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1. INTRODUCTION

A borderless World is the mantra of globalization which dictates the need for a substantial liberalization through the dismantling of all restrictions in economic, political and cultural arenas, inspiring a greater cohesion and convergence. The global economy has been undergoing a sweeping process of mergers and acquisitions in recent years. Moreover, globalization has given developing countries a much greater stake in the world trade and FDI, opening up entirely new doors for these countries to maximize their growth potential; it has enabled countries around the globe to move ahead with economic development by removing trade and FDI barriers and inducing industrialization. By contrast, countries that were completely isolated from the world economy have missed prominent opportunities to improve growth prospects and failed to keep pace with modern technological advances [1,2]. Indeed, the influx of FDI also reflects the competitiveness of host countries and indicates how far behind high-performing globalizers they are [3]. Therefore, measures that restrict market access tend to scare away foreign capital and inhibit FDI inflows, and thus fuelling poverty and worsening living standards [4]. Additionally, advocates of globalization believe that the more the countries' involvement in globalization process, the more likely these countries are to enjoy affluence, democracy and peace [5]. It is also worthwhile to note that the large gains emanating from globalization require fundamental economic and institutional reforms.

More specifically, the MENA region[1] has begun to open their doors a bit more widely to the process of globalization as compared to the past. Economic reforms have been initiated with the hope of magnetizing FDI inflows, increasing production efficiency and stimulating exports, but most MENA countries have partially failed to undergo structural transformation and strengthen institutional platform, thence, the liberalization attempts have not had the desired results; however, the rapid pace of globalization reflects the inadequacy of efforts made, as well as, modest economic growth in most MENA countries can be traced to the failed attempts to cope with several facets of globalization. Another obvious fact is that the oil sector attracts the bulk of FDI inflows in most oil-rich MENA countries, whereas the non-oil sectors remain relatively less competitive, and it is worth noting that insecure property rights and burdensome business regulations continue to be a nightmare that terrifies foreign investors [6]. In spite of some deficiencies, the MENA region is endowed with substantial untapped natural resources which require high levels of technological capabilities to be fully and effectively exploited. Hence, FDI is considered the best solution that can serve this need and boost the region's growth prospects. Thus, the present study aims to test the impact of globalization and FDI inflows on economic growth in 14 MENA countries (Algeria, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Morocco, Oman, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Emirates and Yemen) over the period 1995-2011. For this purpose, the remainder of this paper is organized as follows:

Section 2 presents a theoretical and empirical review on globalization and FDI inflows and the links with economic growth, section 3 discusses the levels of economic growth, globalization and foreign direct investment inflows in the MENA region, section 4 introduces the data and analyzes the empirical results and finally section 5 concludes the paper.

2. THEORETICAL AND EMPIRICAL REVIEW ON GLOBALIZATION AND FDI INFLOWS AND THE LINKS WITH ECONOMIC GROWTH

Academicians, researchers and scholars have increasingly devoted their attention to the new wave of globalization which is doing its utmost to abolish all boundaries; this tremendous phenomenon has been variously defined in the literature. Giddens, A. [7] defined globalization as "the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice-versa". Similarly McGrew and Lewis [8] define globalization as "the multiplicity of linkages and interconnections between the states and societies, which make up the present world system". Robertson, R., [9] asserts that "globalization as a concept refers both to the compression of the world and the intensification of consciousness of the world as a

[1] The Middle East and North African (MENA) region which accounts for 6% of the world's population is a politically, socially and economically diverse area that encompasses approximately 22 oil-abundant and resource-poor countries (Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Syria, Sudan, Tunisia, Turkey, United Arab Emirates, and Yemen); most of them have been colonized by French and British forces in the past.

whole". According to Harris [10], globalization is "the increasing internationalization of the production, distribution, and marketing of goods and services", it is also defined by the Organization of Economic Cooperation and Development (OECD) [11] as "the phenomenon by which markets and production in different countries are becoming increasingly interdependent due to the dynamics of trade in goods and services and the flows of capital and technology". Waters [12] states that globalization refers to the "social process in which the constraints of geography on social and cultural arrangements recede and in which people become increasingly aware that they are receding". In a similar vein, Thomas Friedman [13] contends that "globalization is not a phenomenon. It is not just some passing trend. Today it is an overarching international system shaping the domestic politics and foreign relations of virtually every country, and we need to understand it as such". Furthermore, Axel Dreher [14] sheds light on the three following dimensions of globalization:

- Economic globalization which reflects the long distance flows of goods, capital, services as well as information and perceptions that accompany market exchanges.
- Political globalization which indicates to the diffusion of government policies.
- Social globalization that represents the spread of ideas, information, images and people.

Following from the above, it can be said that globalization has broken down all national boundaries and increased interconnectedness of the world. Admittedly, this stretching process has greatly facilitated cross-border movement of goods and services, international division of labor, transcontinental and intercontinental transport and reduced the costs of connectivity. The rapid growth in Internet use has further extended the scope of globalization by accelerating information flows [15]. In general, the global movement of goods, services, labor, capital and information has shaped the innumerable facets of globalization [16].

2.1 The Bright Side of Globalization

Globalization emphasizes that there is no self-sufficient country in the world and reveals the mutual interdependence between developing countries that need funds and technology and developed nations which lack raw materials [6]. In fact, international organizations have praised the merit of increasing access to the world economy through the prism of foreign direct investment [17]. Multinational companies are the main driver of FDI influx and are at the core of the new wave of globalization [18]; they seek to expand abroad and initiate new business or even relocate their operations for exploiting location-specific advantages such as resources, labor, market, etc. [3]. Additionally, cross-border mergers and acquisitions can foster the development of domestic companies which have been lagging behind in the developing host countries, by diffusing managerial skills, R&D, marketing and technical know-how [19].

The FDI-growth nexus has been extensively investigated in the globalization era; neoclassical and endogenous growth models have highlighted the prominent role played by FDI in the growth process through its associated technology spillover effect [20-22]. Further, endogenous growth models contend that FDI is more productive than domestic investment, since it can sophisticate the production function of the host countries by adding the effect of new technologies [23]. Indeed, FDI represents one of the major sources of external finance for developing nations and entails dissemination of advanced technology [18]; it can boost the potential growth rates by increasing productivity and stimulating domestic investments. It also provides local firms with an opportunity to expand the scope of their work through the created ancillary services [6]. These striking features of inward FDI make it more beneficial than domestic investment [24]. Especially that FDI's potential role in the development process may limit the host government's ability to pursue reckless policies [5]. As well as, the entry of MNCs may arouse governments to strengthen the rule of law and modernize infrastructure, it can also stimulate a race to the top in terms of labor quality [25]. Thus, it is widely recognized that FDI is often deemed a key engine for economic development and growth, and it can enrich or accelerate the transition process [26,3].

While FDI may contribute to growth in developing countries, benefits also may not always be equally distributed. The distribution of gains from FDI is also linked to some degree to the sectors in which FDI is directed [27]. FDI flows destined for unskilled- labor-intensive manufacturing processes entail different employment and

income effect than on FDI directed to more capital- and skill-intensive activities, for example, FDI in financial services requires skilled labor and offers relatively high wages [27], export-oriented FDI generates more positive economic consequences; it improves the balance of payments position, employment rates and tax receipts [6]. Whereas, positive spillover effects typically fail to occur with resource extractive FDI especially in the oil sector, where technology spillovers remain minimal or non-existent due to the use of capital- intensive technologies [28,5]. It is sobering to note that much attention is devoted to the past industrialization experience of the recipient country, especially in the case of FDI skewed towards the manufacturing sector [29]. In addition, the greater the technological lacuna between the host countries' local firms and those MNCs, the easier the foreign technology will be absorbed. Thus, it can be said that the impact of FDI inflows differ greatly within and between economies.

2.2 The Dark Side of Globalization

The controversy surrounding the globalization discourse remained a contentious one; some oppositional ideas imply that globalization has spurred global plunder [30]. Globalization opponents have unmasked MNCs' thirst for resources of developing countries and argued that the self-interest of these companies breaks down the development process [17]. Moreover, skeptics contend that globalization leads to massive capital flights and large emigration of skilled workers and hence severely undermines the growth potential of countries concerned, further, it contributes enormously to the spread of ideas which can bring tangible institutional changes, and this could harm economic growth prospects through the blind copying of institutions without taking into serious consideration the adaptation concerns [31]. Indeed, the sense of community and urban power structure were corroded by the powerful forces of globalization [32]. As well as, this growing worldwide integration has lowered wages, exacerbated poverty, inequality and social tensions, and led to environmental degradation [33,34]. FDI also has some adverse effects on domestic firms such as crowding out effects via local market competition, and the palpable unemployment resulting from more capital-demanding manufacturing operations [3]. However, the major caveat is that the developing countries should realize that the footloose FDI is not a magic stick or even a panacea for all economic problems; instead, it plays a crucial complementary role [28]. Furthermore, many countries have been plagued with crisis problems resulting from fast and excessive financial liberalization, because such a devastating crisis imposes enormous instability and overwhelming costs, thereby hurting economic growth [31]. It is a well known fact that the episodic collapses in growth rates often coincide with global financial crises and economic downturns [35]. Many developing countries like Argentina, Brazil and Indonesia suffered bitter results due to the wide range of openness in the penultimate decade of the 20th century [4].

It is unanimously accepted that ethical issues brought by the tidal wave of globalization have increased even further and its symptoms are spreading across LDCs. Unethical practices in international business act as a growth inhibitor in the host countries. Aldag and Stearns [36] defined business ethics as "a set of rules that stipulates how businesses and their employees ought to behave". According to Buller and McEvoy [37] ethical capability is "an organization's capability to identify and respond effectively to ethical issues in a global context". Unethical behavior has been encouraged by many MNCs that don't hesitate to resort to corruption, unfair competitive practices, discrimination, unfairness to employees, and breaches of laws and fundamental ethical principles [38]. Corruption is the most obvious phenomenon around the turn of the millennium; the process of international capital movement was not devoid of corruption, which is an intractable dilemma facing the developing countries [39]. It is also worthwhile to note that the global warming can be traced back to the abusive, illegal, and irresponsible use of environmentally unfriendly technologies which not only threaten human life but also deplete the Third World's natural resources [40]. Indeed, the weak institutional framework of host economies, which has several loopholes and weaknesses can left room for chaos and make these economies more vulnerable to predation by the MNCs' thirst for cheap labor and low costs. In fact, pro-equality voices from LDCs have brought the basic human rights such as the prohibition of child labor, fair and safe and working conditions to the front burner of MNCs' attention. The dire consequences of unethical practices can decay in the presence of strong code legislating against child labor, transparency, and accountability; also the entire implementation of international conventions against corruption and the

strengthening of international cooperation can doubtlessly help eradicate this pervasive scourge [41].

2.3 Factors that lead countries to enlightenment

Nevertheless, trade restrictions both at home and in host countries such as tariff and nontariff barriers, capital controls and exchange controls, etc. serve as impediments to trade and FDI flows, because they inexorably raise costs, thus, the powerful globalization wave has induced the capitalist class to exert pressure on their governments to open up wider to the outside world, but the infant sectors of the economy insist on keeping these restrictions due to their inability to withstand foreign competition. However, the balance is tipped towards coping with globalization that leaves no room for introversion [42]. Globalization's advantages per se are critically dependent on how governments are able to strengthen domestic policies and institutions [35], and it is worthwhile to note that the large gains emanating from FDI depend heavily on the recipient country's conditions such as the availability of well educated and skilled human capital, adequate infrastructure, sound institutions and reliable business environment, because these factors determine the host country's FDI performance, the level of absorptive capacity and the growth effects of FDI [28]. In this context, it is pertinent to note that economic freedom by enforcing property rights, ablating of asphyxiating controls and dismantling of all exchange restrictions, stimulates economic activity and thus contributes to human resource development [42]. More specifically, host countries should invest further in human capital development for reaping the fruits of FDI [43].

In general, the widening growth gaps across countries can be largely explained by differences in their degree of openness to international trade, capital and business, or rather their willingness and ability to cope with globalization [44]. In other words, globalization provides unparalleled opportunities for developing countries to attain fast and sustained economic growth [26], for example, China has benefited tremendously from globalization and associated FDI flows. It is not only a noteworthy example of a successful experience in the globalization discourse but also a perfect amalgamation of huge FDI inflows and partial capital market liberalization, and the whole secret lies in the wise management of the globalization process which is the most effective way to reap the maximum benefits from globalization and use them effectively to accelerate economic growth. In contrast, globalization under the auspices of international organizations such as the IMF and the WTO has shown its inefficacy [31].

The quantitative impact of globalization and FDI inflows on economic growth has received a great deal of research attention, and the Table 1. summarizes the empirical studies that have investigated this topic.

3. ECONOMIC GROWTH, GLOBALIZATION AND FDI INFLOWS IN THE MENA REGION

3.1 Economic Growth in the MENA Region

As seen in the Fig. 1, the GCC countries are being perceived as the locomotive for growth in the MENA region due to their insistence on joining the developed world, and the large infrastructure projects continue to speed up economic growth, at this point, it is worth mentioning that UAE and Qatar will host major events like the 2020 World Expo and 2022 World Cup [48]. In the last two years, the growth of MENA oil monarchies has witnessed a slight decrease due to the scaling back increment of oil production amid modest global hydrocarbon demand. In contrast, the MENA region's oil importers still strive to revive their growth rates, especially in light of the vexing political, economic and social problems that created a severely frustrating environment, these countries are still plagued by rising unemployment and mounting inflation, and the long overdue reforms have made matters worse. More specifically, Egypt's growth has been impeded by myriad of barriers to private sector activity. Social and economic disparities continue to hinder the contribution of many areas to Tunisia's overall growth. Inadequate public services and facilities remain the major growth inhibitors in Lebanon. Whilst, the Syrian case that can be likened to an explosive volcanic eruption after a long lull has undermined economic activity in all sectors. On the other hand, Yemen and Libya have badly mismanaged their oil wealth, wasting an opportunity to uphold economic growth that still suffers deep-rooted economic and social problems [49].

Furthermore, the inability of the oil-exporting MENA countries to diversify their economies, made them more vulnerable to predation by the 2008 financial crisis, as shown in the Fig. 2. It is also observed that the economic growth of GCC countries has been shrunk by the financial meltdown, because of these countries' close ties with global financial markets [50]. Over and above the serious infrastructure damage that has been inflicted on the Arab spring countries, this unexpected turmoil has engendered a mushrooming of informal activities. Moreover, the political uncertainty and abrupt drop in investment emanating from the tumultuous events of the Arab Spring have subdued the growth performance [48]. In general, economic diversification and the broadening of export base are still the core challenges outweighing the MENA region's economic growth. Notwithstanding these facts, IMF (2014) [50] claims that the MENA region's growth is projected to rise from 3.2 in 2014 to 4.5 in 2015.

It is worth to note that in order to boost the MENA region's long-term growth potential, close attention should be given to human capital improvement that provides the necessary backdrop for sustainable growth. MENA countries that depend on oil manna should enact wise policies to overcome the problems of economic diversification, and the first step is to

Table 1. Empirical evidence on the impact of globalization and FDI inflows on economic growth

Authors	Sample	Empirical Approach	Results
P. C. Nwakanma and R. C. Ibe (2014) [45]	Nigeria 1981-2012	OLS Technique, Johansen and Juselius Cointegration Test	There is a positive long- run relationship between globalization and economic growth.
Henryk Gurgul and Łukasz Lach (2014) [3]	10 new EU members in transition from the CEE region 1990-2009	AR-Based Models	Economic growth is significantly positively affected by the globalization process.
Saibu, M. O., and Akinbobola, T. O. (2014) [44]	12 African countries 1986-2004	VAR Technique	Both FDI inflows and globalization contribute positively to economic growth.
Delfim Gomes Neto and Francisco José Veiga (2013) [46]	139 countries 1970-2009	System-GMM Estimation	Foreign direct investment has a positive and significant impact on economic growth.
Rasaki .O. Kareem et al., (2013) [2]	Nigeria 1970-2008	OLS Estimation	Globalization index exerts a positive influence on economic growth.
Nuno Carlos LEITÃO (2012) [47]	Portugal 1990- 2008	The OLS Estimator, Random Effects (RE), Fixed Effects (FE), GMM System Estimator	Foreign direct investment and globalization index positively affect economic growth.
Axel Dreher (2006) [14]	123 countries 1970-2000	OLS Estimation, FE, GMM Dynamic Panel Estimation	The overall index of globalization appears to have a positive and significant impact on economic growth.

Source: Constructed By Authors

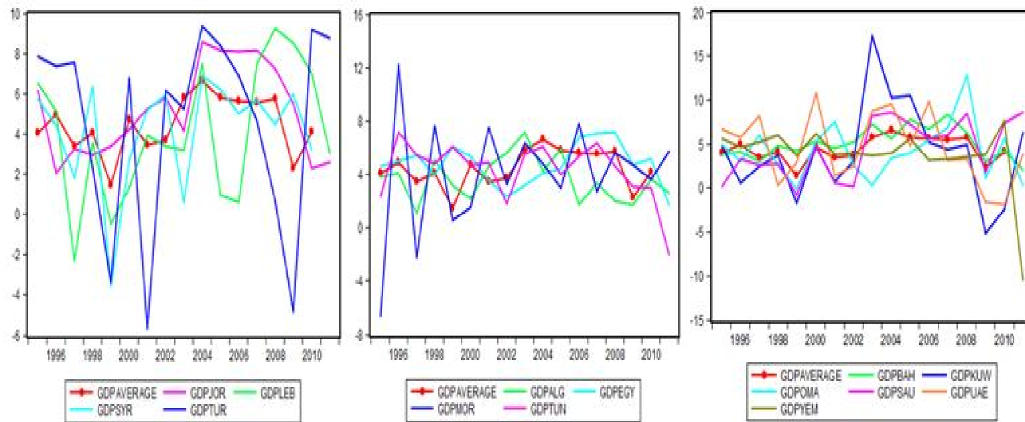

Fig. 1. Economic growth (The *annual percentage* growth rate of GDP) in MENA countries, 1995-2011

Source: World Bank, World Development Indicators, the data are available online at: http://data.worldbank.org (accessed 01/10/2014)

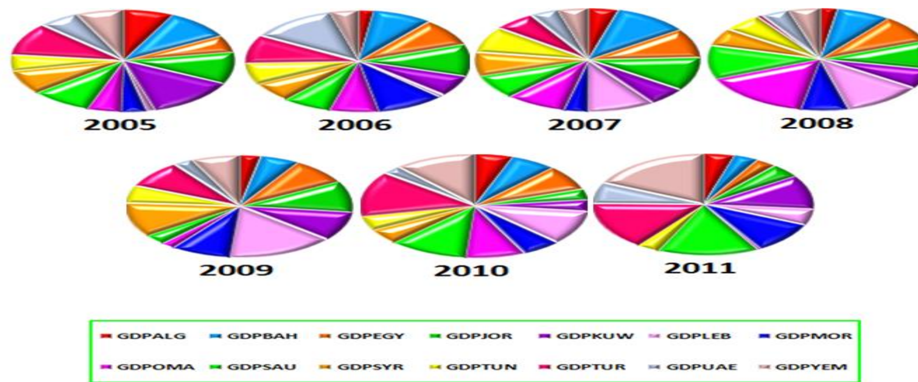

Fig. 2. Economic growth (The annual percentage growth rate of GDP) in MENA countries, 2005-2011

Source: World Bank, World Development Indicators, the data are available online at: http://data.worldbank.org (accessed 01/10/2014)

ensure an effective government spending. As well as, the elimination of cumbersome regulations and the fundamental reform of governance framework will act as catalysts for economic growth. Additionally, greater trade integration into the global economy and broad access to finance will further boost the region's growth prospects.

3.2 The Level of Globalization in the MENA Region

According to the Fig. 3, the globalization index reveals that the region's economies have begun to open their doors a bit more widely to the process of globalization as compared to the past. The MENA countries that occupy the foreground are UAE, Jordan, Kuwait, Bahrain, Turkey, Lebanon and Saudi Arabia, whereas, countries like Algeria, Yemen and Syria are at the bottom of the heap, whilst, the remaining countries are oscillating between the two groups, but they work hard to catch up with the first group of countries.

The GCC countries, Lebanon and Jordan enjoy higher levels of financial development, a modernized and efficient banking sector, because they have made significant strides forward in reforming and liberalizing their financial services, also some North African countries like Egypt, Morocco and Tunisia have taken initial steps to improve their financial systems, while the other countries are still lagging behind in this field. What can be

observed is that the high-income countries enjoy high levels of financial development and vice versa, since there is a great demand for good quality financial services in those countries.

Moreover, most non-GCC countries continue to impose constraints on foreign ownership of financial assets and repatriation of profits. Additionally, the obsolete nonbank financial sector and poor secondary markets had crucial roles to play in hampering growth prospects [51,52].

Most MENA countries have embarked on efforts to catch up with the world trend over the past three decades, but the rapid pace of globalization reflects the inadequacy of efforts made. Moreover, modest economic growth in most MENA countries can be traced to the failed attempts to cope with several facets of globalization.

Most MENA countries that began to move up the globalization ladder have adopted promising trade policies during last two decades, while, the other countries continue to enforce cumbersome restrictions on international trade, missing valuable opportunities to upgrade their economies. In fact, most MENA countries have partially failed to undergo structural transformation and strengthen institutional platform, thence, the liberalization attempts have not had the desired results. It is also worth noting that the use of information technology especially in the non-GCC countries has so far failed to live up to international standards, reflecting the slow take-up of new technologies.

In general, the MENA region is a latecomer to globalization; the main thrust of the liberalization measures was towards lowering barriers to international trade and investment such as tax reliefs and specific fiscal incentives, the ease of restrictions on profit repatriation, raising the allowance for foreign ownership, and the ratification of international convention on the settlement of investment disputes, etc. But these efforts were still not enough for a full integration into the global economy, and there are many challenges ahead.

3.3 Foreign Direct Investment Inflows in the MENA Region

The Fig. 4 clearly shows that the region's economies become more receptive to FDI inflows than in the past. In fact, specific MENA countries (Bahrain, Saudi Arabia, UAE, Egypt, Jordan, and Lebanon) attracted the bulk of FDI inflows during the past decade; more specifically the first three countries receive the lion's share of inward FDI in the region, and it is worth to note that this group of countries has made valuable efforts to provide the necessary requirements for foreign investors' entry such as the promotion of business environment and private sector activity, these countries also enjoy a vital tourism sector that plays a substantial role in attracting FDI [53], whilst the other MENA countries (especially, Algeria, Yemen, Syria) experience modest FDI inflows as compared to the previously mentioned countries due to restrictive business practices, inefficient financial system and slow reforms [54]. In general, there is a considerable difference between GCC countries and most of the remaining MENA countries as destinations for FDI inflows, and the main reasons for this gap are the various disincentives to openness in most non-GCC countries. Moreover, the MENA region enjoys substantial oil wealth; hence it receives large FDI inflows into the hydrocarbon sector, but the dependence on this fortune hampers economic diversification, hence, almost all MENA countries must develop their capital markets in order to attract more portfolio investments [55,56].

The 2008 financial crisis did not spare the MENA region as is clearly visible in the Fig. 5. and it has led to a reduction in inward FDI. Furthermore, the political turmoil that began in Tunisia in 2010 swept across the MENA region and inflicted serious damage (associated with increased uncertainty and violence) on Egypt, Syria, Yemen and some surrounding countries. The dire consequences of the Arab Spring have made foreign investors more reluctant to invest in such an unsafe business atmosphere where their profit earning capacity became gloomy and mysterious.

Further, the severe political instability still devastates the institutional environment and destroys several MENA countries' image, and thus expelling foreign investors and depriving these countries of opportunities to improve their growth performance and catch up with the global trend [57]. Therefore, most MENA countries' economic environment needs to be more stable, predictable and conductive to investment and growth.

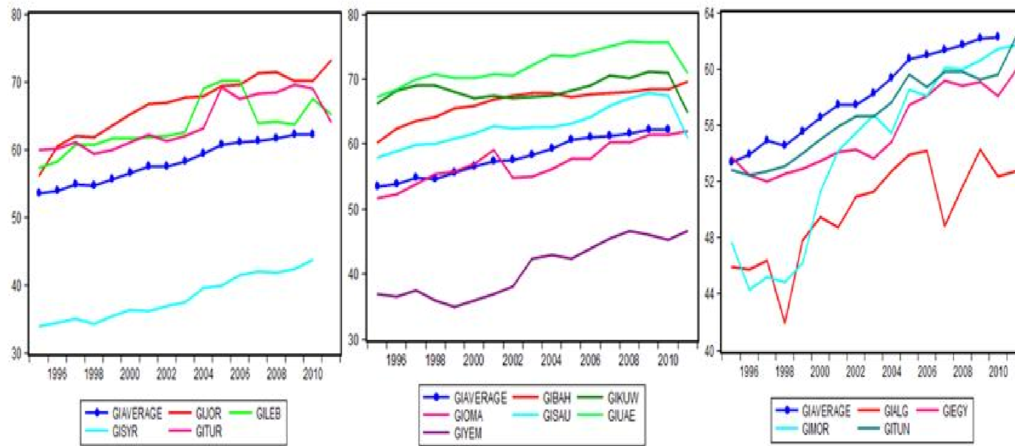

Fig. 3. The KOF index of globalization in MENA countries, 1995-2011

Source: Based on The KOF Index of Globalization, the data are available online at: http://globalization.kof.ethz.ch/ (accessed 01/10/2014)

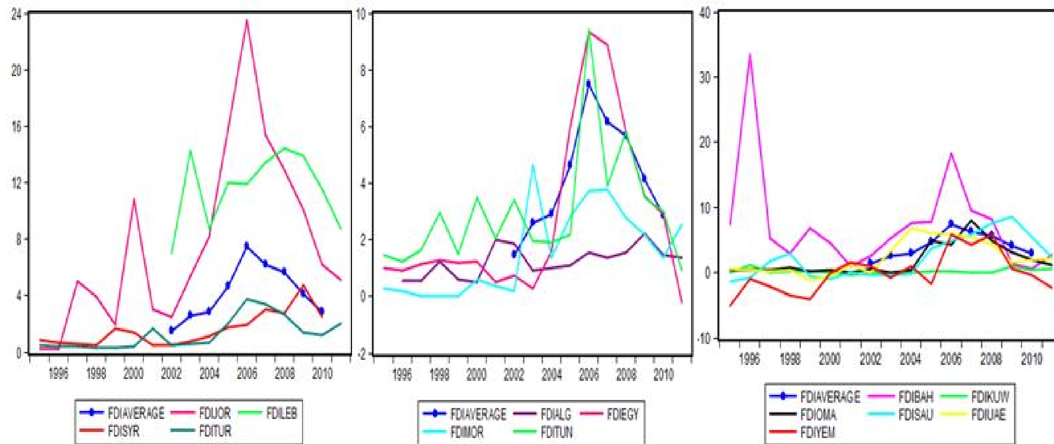

Fig. 4. FDI Net inflows (BoP, current US$) in MENA Countries, 1995-2011

Source: World Bank, World Development Indicators, the data are available online at: http://data.worldbank.org (accessed 01/10/2014)

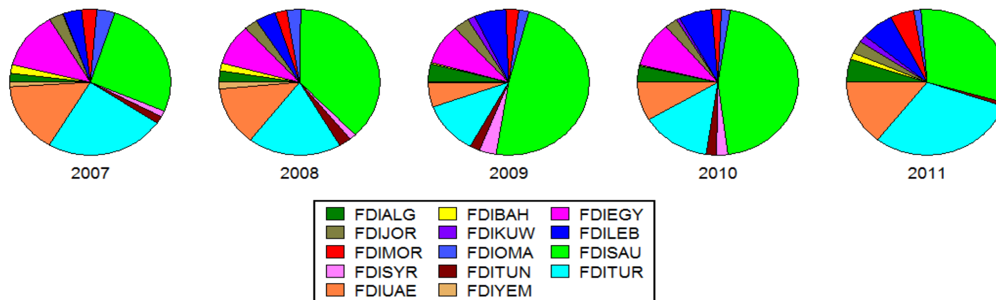

Fig. 5. FDI net inflows (BoP, current US$) in MENA countries, 2007-2011

Source: World Bank, World Development Indicators, the data are available online at: http://data.worldbank.org (accessed 01/10/2014)

In spite of some deficiencies, the MENA region enjoys many incentives that entice foreign investors, such as the enormous natural resource endowments and large domestic markets, and it is important to highlight the hopeful signs of change and reform aimed at displaying a friendlier investment climate. Furthermore, the diversification of export and productive bases through well targeted policies, substantial human resource development, the provision of infrastructural facilities and good governance remains the MENA region's top priority, also, MENA countries that suffer a semi-paralyzed private sector need to launch an ambitious privatization programme on a high note.

4. DATA AND EMPIRICAL RESULTS

4.1 Data

This study analyzes the effect of globalization and FDI inflows on economic growth in 14 MENA countries (Algeria, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Morocco, Oman, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Emirates and Yemen) over the period 1995-2011 using the following variables:

GDP: GDP per capita (constant 2005 US$) is used as a proxy for economic growth, it is the gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. The data are taken from the World Bank's world development indicators (WDI) (http://data.worldbank.org).

GI: The KOF Index of Globalization developed by Axel Dreher, it covers three sub-indices: economic, social and political globalization, and a positive sign is expected. The data are available online at: (http://globalization.kof.ethz.ch/)

FDI: represents the foreign direct investment net inflows (*% of GDP*), that are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors, and is divided by GDP. The data are taken from the World Bank's world development indicators (WDI) (http://data.worldbank.org).

EF: Economic Freedom introduced by Heritage Foundation, it is based on ten economic freedoms (property rights, freedom from corruption, fiscal freedom, government spending, business freedom, labor freedom, monetary freedom, trade freedom, investment freedom, financial freedom) each one is scaled from 0 to 100, where 100 represents the maximum freedom. This index is supposed to have a strong positive influence on economic growth. The data are taken from the Heritage Foundation's Index of Economic Freedom (http://www.heritage.org/index/explore?view=by-region-country-year).

GOI: The Governance Index which is calculated as a simple average the following six Worldwide Governance Indicators: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, control of corruption. This index is scaled between -2.5 and +2.5, where a higher score means better quality of institutions. The data are taken from the World Bank Governance Indicators (http://info.worldbank.org/governance/wgi/index.asp).

4.2 Data Analysis Tools

The panel data analysis is applied to examine the impact of globalization and FDI inflows on economic growth in 14 MENA countries using Eviews 8.0 software package. Because the panel data analysis has several advantages, such as controlling for both observed and unobserved heterogeneity, increasing the degree of freedom and reducing the collinearity problems, hence improving the efficiency of econometric estimates [58], and there are three main models as follows : *Pooled OLS Model, Fixed Effects Model, Random Effects Model*.

4.3 Analysis of Empirical Results

The Table 2 presents the summary statistics of the variables used in the empirical analysis, covering 14 MENA countries over the period 1995-2011. As can be seen from the data, GDP has an average of 10019.02 and a maximum

value of 47081.16, reflecting that specific countries in the region enjoy substantial economic growth. In addition, FDI have an average of 3.55 and a maximum value of 33.56, indicating that many countries in the region are less attractive for FDI inflows. Also the mean of globalization index (59.32) points out that the region as a whole has begun to open its doors to the process of globalization and partially abandoned isolation. While, the mean of economic freedom index (60.59) indicates that the region is classified as 'moderately free'. Whereas, the average of governance index (-0.24) means that almost all countries in the MENA region suffer from low-quality political institutions.

As is shown in the Table 3, the pooled OLS and fixed effects have revealed that all the explanatory variables display a significant positive impact on economic growth in the MENA region, except economic freedom that tends to be insignificant in the pooled OLS model. While, the random effects model indicates that only economic freedom and governance index exhibit a statistically significant positive influence on economic growth in 14 MENA countries. The next step involves applying the Hausman test which is worthy in choosing between the fixed effects and random effects approaches.

The Hausman chi-square test statistic (see Table 4.) is statistically significant at the 5% level of significance (Prob (0.0384< 0.01), indicating that the fixed effects model is the most consistent one, so we focus on it in this empirical study.

The fixed effects specification (see Table 5.) clarifies that the globalization index exhibits a significant positive impact on the MENA region's economic growth, and this is consistent with theory. As well as, the inward FDI has positive and highly significant growth effects in the selected countries. Moreover, economic freedom displays a positive and significant influence on GDP growth. Likewise, there is a statistically significant positive relationship between governance index and economic growth, because better governance and sound institutions designed to protect property rights and reduce uncertainty, are accountable for creating a viable and favorable economic environment that can boost growth prospects.

Furthermore, the R^2 value of 0.5422 denotes that 54.22% of the variation in economic growth is explained by the independent variables (GI, FDI, EF, and GOI). Also, the F-value is significant at the 1% level, confirming the model's fitness and the joint impact of explanatory variables on economic growth in the sample under consideration.

As is clearly visible in the Table 6., the correlation between each explanatory variable and the dependent variable is greater than the correlation between the independent variables; further, the second type of correlation is weak (Gujarati, 2006), and this reflects the absence of multicollinearity.

Moreover, we can test for the presence of autocorrelation in the model by using the Durbin Watson statistic that has a value of 1.92341; also the following informations n=17 and k (number of explanatory variables) =4 determine dl=0.78 and du=1.90. Further, the DW statistic is sandwiched between the values of du (1.90) and 4-du (2.1). Thus, we accept the null Hypothesis which indicates the absence of autocorrelation in the model.

Table 2. Descriptive statistics of the variables, 14 MENA countries, 1995-2011

	GDP	GI	FDI	EF	GOI
Mean	10019.02	59.32386	3.550803	60.59551	-0.240014
Median	3771.011	60.80142	1.973611	60.60000	-0.203219
Maximum	47081.16	75.72185	33.56602	77.70000	0.673526
Minimum	711.9649	34.33654	-3.468654	36.30000	-1.371923
Std. Dev.	11752.29	10.12614	4.728738	7.947702	0.476377
Skewness	1.632860	-0.692715	2.582694	-0.333814	-0.311483
Kurtosis	4.830467	2.706847	13.14861	3.291515	2.132556
Jarque-Bera	103.9485	14.87303	961.7605	3.936081	8.459054
Probability	0.000000	0.000589	0.000000	0.139730	0.014559
Sum	1783386.	10559.65	632.0430	10786.00	-42.72246
Sum Sq. Dev.	2.44E+10	18149.36	3957.890	11180.38	40.16753
Observations	178	178	178	178	178

Source: Author's computation using Eviews 8.0

Table 3. Regression results for 14 MENA countries

Dependent variable: GDP			
Coefficient estimates (P-value)			
Independent variables	**Pooled OLS model**	**Fixed effects model**	**Random effects model**
EF	205.0356	257.9208	208.2300
	(0.1079)	(0.0655)*	(0.0002)***
FDI	600.7808	730.9345	49.04677
	(0.0000)***	(0.0000)***	(0.2523)
GI	374.3632	421.0785	54.15200
	(0.0005)***	(0.0007)***	(0.2808)*
GOI	8665.220	7345.375	2848.217
	(0.0001)***	(0.0021)***	(0.0203)**
R-squared	0.526155	0.542286	0.076319
Prob (F-statistic)	0.000000	0.000000	0.207917

Significant at 1% (***), 5 %(**), 10% (*), Source: Author's computation using Eviews 8.0

Table 4. Hausman test

Correlated Random Effects - Hausman Test Equation: Untitled Test cross-section random effects			
Test summary	**Chi-Sq. statistic**	**Chi-Sq. d.f.**	**Prob.**
Cross-section random	10.121488	4	0.0384

Source: Author's computation using Eviews 8.0

Table 5. Fixed effects model

Dependent variable: GDP				
Method: Panel least squares				
Sample (adjusted): 1996 2011				
Periods included: 13				
Cross-sections included: 14				
Total panel (unbalanced) observations: 178				
Variable	**Coefficient**	**Std. error**	**t-Statistic**	**Prob.**
C	-26231.42	8837.285	-2.968267	0.0035
EF	257.9208	139.0737	1.854562	0.0655
FDI	730.9345	157.4646	4.641897	0.0000
GI	421.0785	122.5319	3.436481	0.0007
GOI	7345.375	2352.903	3.121835	0.0021
R-squared	0.542286			
Prob(F-statistic)	0.000000			

Source: Author's computation using Eviews 8.0

Table 6. Multicollinearity test

	GDP	**GI**	**FDI**	**EF**	**GOI**
GDP	**1.000000**	0.600496	0.672347	0.583530	0.666366
GI	0.600496	**1.000000**	0.336052	0.341233	0.229948
FDI	0.672347	0.336052	**1.000000**	0.211726	0.090057
EF	0.583530	0.341233	0.211726	**1.000000**	0.231566
GOI	0.666366	0.229948	0.090057	0.231566	**1.000000**

Source: Author's computation using Eviews 8.0

5. CONCLUSION

This study examines the impact of globalization and FDI inflows on economic growth in 14 MENA countries (Algeria, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Morocco, Oman, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Emirates and Yemen) over the period 1995-2011, through the use of panel data analysis, including Fixed Effects Model, Random Effects Model and Hausman test. The fixed effects specification is the most appropriate one; it states that globalization and FDI inflows seem to play a substantial role in explaining economic growth of the selected MENA countries. Likewise, governance and economic freedom act as catalysts for the MENA region's economic growth.

Based on these results, it can be concluded that MENA countries can improve their growth performance by opening their doors more widely to the process of globalization. Moreover, the MENA region's decision-makers are committed to enact favorable investment policies that will hearten foreign investors and ensure well-functioning economic institutions. As well as, the total withdrawal of restrictions on import of technology products and material inputs is an irreversible policy decision. Further, contemporary and more comprehensive educational policies should be designed to emulate economic and industrial advancement and several technological trends. It is also worthwhile to note that the diversification of export and productive bases through well targeted policies, the provision of infrastructural facilities and good governance remains the MENA region's top priority, noticing that these policy implications will yield better results if more attention is paid to stabilizing political situation and reducing inequality and poverty.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
http://www.sciencedomain.org/review-history.php?iid=1063&id=20&aid=9706