Impact of The Quality of Financial Reporting Environment on the Organisational Foreign Direct Investment in the Arab Countries

Dr. Saidani Said Mohamed[1*], Dr. Adjila Mohamed[2], Dr. Ahmed Bekkay[3]

[1*] University of Laghouat, Algeria
[2] University of Ghardaia, Algeria
[3] Centre Universitaire Aflou, Algeria

Abstract

The study aimed at revealing the nature of the relationship between foreign direct investment and the quality of the Arab financial reporting environment after adopting IFRS during the period 2007 - 2018. To study this relationship, the paper uses panel cointegration with a corresponding vector error correction model (VECM) to investigate in three main areas: Business impact of rules on FDI, FDI based on technology transfer, Prevalence of foreign ownership, by using the Eviews.7 program. The results showed a long-run relationship between the quality of the Arab financial reporting environment and the foreign direct investment in all indicators and the same period. This is the first study that we are aware of to directly examine this relation in Arab Economies, thus, this paper provides new empirical evidence in Arab Economies for increased resource allocation efficiency.

Keywords: Globalization, Foreign Direct Investment, International accounting convergence, IFRS, Economic Consequences, Arab Countries.

1. Introduction

The globalization of the world's economy and markets lead companies and nations to become world players. More and more investments take place on a global level for expansion of businesses and set up new partnerships. This has been given impetus to increasing the debate on whether there is a need to be a global set of accounting standards like IFRS or not (Evans Ocansey et al, 2014; Kohler et al., 2021; Minga Negash, 2008). The differences in accounting reports do create problems of misunderstandings, inefficiencies, and uncertainties to participants in the global economy, accounting diversity can be a barrier to cross-border investment (Siregar et al., 2020; HABTOOR, et al.,2020). Regulators and proponents of IFRS have suggested that common standards would enhance comparability by the Investors, creating new opportunities for diversification and risk-sharing, and increase international investment flows (UNCTAD, 2005; McCreevy, 2005; KPMG, 2007; SEC, 2008; White, 2008; Adekoye, 2011; Odia et al, 2013, Michael Yeboah and Andras Takacs, 2018). It was argued that a common set of practices accounting will provide a "level playing field" for all companies worldwide. Currently, the business community has admitted that the IFRS is "the language of business". Because of that, the transition to IFRS has been made (Mihai Carpa et al., 2015).

According to traditional economic theory, in order for FDI to become productive in any country, the following conditions should exist: (i) the existence of a minimum threshold level of human capital, (ii) improved domestic infrastructures, (iii) and developed local financial systems. Out of all, the last prerequisite seems to have more weight in order for FDI to flow into any country and have a measurable impact on economic growth (Kenneth Enoch Okpala, 2012).

In 2017, Global foreign direct investment (FDI) flows fell by 23 percent to \$1.43 trillion from a revised \$1.87 trillion in 2016. The fall was caused in part by a 22 percent decrease in the value of cross-border mergers and acquisitions, the value of announced Greenfield investment also decreased by 14 percent. The global average return on foreign investment is now at 6.7 percent, compared to 8.1 percent in 2012. FDI flows to developing economies remained stable at \$671 billion, 47 percent of the total compared with 36 percent in 2016. Projections for global FDI in 2018 show fragile growth by about 5 percent, to \$1.5 trillion (UNCTAD, 2018).

In this study, we provide evidence on the validity of previous claims by examining the macroeconomic effects of mandatory IFRS adoption on foreign direct investment in Arab countries from 2007 to 2018. Our findings contribute to the literature in several ways. First, we show that changes in accounting methods precede changes in foreign investment, suggesting that the quality of accounting Principles and Rules impacts investment decisions; Second, understanding the factors influencing the quality of the financial reporting environment in Arab Economies. Third, our study suggests that reducing accounting diversity could reduce barriers to cross-countries investment; this contributes to the substantial

* Corresponding author Email: saidanimouha@gmail.com

debate regarding the benefits of international harmonization with IFRS. Fourthly, the findings of this study could be compared with other developing countries that share similar socio-economic environments as well as with other developed countries. Finally, to come up with some Results and recommendations that contribute to the advancement of Arab Economies and perhaps to clarify what must be done in the future.

The remainder of the paper is organized as follows. The next section explains the Theoretical framework and literature review, Section 3 explains the research methodology including sample selection as well as the development of hypotheses and empirical models. In section 4 we expose the empirical results obtained. The final section provides a summary of the results and conclusions.

2.   Theoretical framework and literature review

FDI has been defined in several ways. According to Kumar (2007), Kenneth Enoch Okpala (2012) FDI which involves building long-term relationships with enterprises in foreign countries can be made in several ways. First, and most likely, it may involve parent enterprises injecting equity capital by purchasing shares in foreign affiliates. Second, it may take the form of reinvesting the affiliate's earnings. Third, it may entail short or long-term lending between parents and affiliates. From his side, Garkovic and Lavin (2002), Jeffrey and Spaulding (2005), noted that the economic rationale for offering special incentives to attract FDI frequently is derived from the belief that foreign investment produces externalities in the form of technology transfer and the rise in domestic wages and the economic growth (Kenneth Enoch Okpala, 2012, p 77).

Arguments that support IFRS often start from two basic Hypotheses: (1) the comparability, and (2) increases transparency. In the context of the first argument, Comparability is defined as the quality of information that enables users to identify similarities in and differences between two sets of economic phenomena (FASB, 2008; IASB, 2008), also, are a characteristic of the relation between two or more items information. The FASB/IASB argues that comparability is the desired outcome of adopting a uniform set of accounting standards such as IFRS. Proponents of mandatory IFRS adoption argue that increased uniformity improves financial statement comparability because a major factor explaining why investors are reluctant to make cross-border investments is the high costs of acquiring and processing information about foreign companies, in addition to time and money, errors, and risks (Kang and Stulz, 1997; Bradshaw et al, 2004; McCreevy, 2005; Chan et al, 2005; Covrig et al, 2007). Similarly, investment professionals often argue that a major obstacle to cross-border investment is the time-consuming reconciliation of differences in accounting standards across countries (Morgan Stanley Dean Witter, 1998). Thus, improved financial statement comparability is expected to reduce information acquisition costs for foreign investors, thereby increasing their investment in foreign firms (Mark DeFond et al, 2010), we also predict that investors exhibit a preference for firms using accounting methods that conform to IFRS. This result suggests that IFRS conformity is an important factor in choosing to invest in firms, foreign investors demand better quality accounting to protect their investment within the firm (Bradshaw et al, 2004; Kee-Hong Bae et al, 2008;Thomas Jeanjean, Hervé Stolowy, 2008). In a similar analysis, McKinsey's 2002 survey of factors impacting international investment included the fact that 90% of global investors surveyed would prefer one set of global standards (Mark T. Bradshaw et al, 2004). Beneish and Yohn (2008) distinguish three types of information costs faced by foreign investors that are likely affected by IFRS adoption: (1) information processing costs, (2) uncertainty about the quality of financial reporting, and (3) uncertainty about the distribution of future cash flows. If IFRS is successful at reducing some of these costs, we expect to see an increase in the quality of accounting after adoption (Messod D. Beneish & Yohn, 2012).

The second argument is transparency, Leuz and Verrecchia (2000) argue that IFRS compliance necessitates changes in the firm's accounting system that are not easily reversed or imitated in compliance so that 'bad' firms will find it prohibitive to imitate. If this increase in transparency is strong enough then the 'true' type of the firm will be revealed, preventing 'bad' firms from mimicking good firms (Irene Karamanou & George P. Nishiotis, 2009). thus a common set of accounting standards could help investors to differentiate between lower and higher quality firms, thus, even if the quality of corporate reporting per se does not improve, it is possible that financial information will become more useful to firms and investors in lowering transaction costs, reduced allowable accounting alternatives, limiting agency conflicts through improved external monitoring, and required accounting measurement and disclosure that can better reflect a company's financial position and economic performance (Huifa Chen et al, 2010; Alison Fox et al, 2013).

Consistent with these arguments, the network externality theory and institutional theory provide some answers about whether or not IFRS has been useful to countries that have been attempting to integrate itself into the global economy, in other words, it is important to examine whether the gains from IFRS can ever be determined from the outside (Minga Negash, 2008). The two theories show some evidence that such comparability is improving under IFRS. which in turn could reduce information asymmetries and lower transactions costs among Markets, Countries, and Regions, which enhance cross-border listings and provide better investment opportunities and increase capital flows as it encourages the integration of domestic markets into world markets, which in turn accelerate economic growth under improved information efficiency and increased their perceived corporate governance, increase comparability of reported information (Hope et al, 2006; Thomas Jeanjean et al, 2008; Ramanna & Sletten, 2009; Bova & Pereira, 2012; Daske et al, 2013; Alison Fox et al, 2013; Klibi & Kossentini, 2014; Michael Yeboah et al, 2018; Kee-Hong Bae et al, 2008) .

In this context, Roberts, Weetman, & Gordon, 2002, Barth, Landsman, and Lang 2005, believes that international capital Markets also benefit from adopting IFRS by: (1) forcing domestic firms to upgrade their information disclosure policies and accounting systems; (2) providing investors with opportunities for portfolio diversification by the introduction of a greater variety of financial instruments; (3) increase efficiencies in the domestic financial system, which will enhance the competitiveness of the economy at large; (4) accelerating economic growth; (5) encourage international flows of capital across national boundaries by providing significant positive signals to international investors about quality of the financial reporting system across countries; (6) enhancing the integration of emerging markets into world capital markets (Ole-Kristian Hope et al, 2006, p 01-06).

However, some researchers have objections to the benefits of IFRS (Ali & Hwang, 2000; Ball, 2003, 2006; Ding et al, 2007; Thomas Jeanjean, 2008). IFRS do not automatically lead to higher-quality financial reporting, because the quality of financial reporting is not so much determined by the set of accounting policies, but also rather by the market forces and institutional factors (political forces, legal) that affect the incentives for the preparation of the accounting information in addition operating characteristics of firm. Prior literature suggests that weak country-level institutions can result in poor implementation of IFRS, which in turn can result in less credible financial reporting. Realistically, regional differences in all economies may not be adequately reflected in a common set of standards like IFRS; therefore, a single set of standards might not accommodate the differences in national institutional features and regional which caused divergent accounting systems to arise in the first place (Francesco Bova & Raynolde Pereira, 2011). Negash (2008) argues that the gains stemming from reducing international information asymmetry is of a diminishing nature. In other words, the gains cannot be limitless. The evidence so far presented in support of IFRS adoption is just short term. The long-term effects of accounting integration in globalising remain unclear, and how the gains and risks (if any) are shared is even more problematic. Minga Negash (2008) adds that the interesting question is not just showing aggregate gains but also, we need to indicate the winners and losers economic of liberalization and harmonization of financial information policy. In principle, the evidence from the accounting literature tall that the winners are largely big firms (Minga Negash, 2008). Also, future research needs to address several important questions: (1) whether the financial reporting quality of countries improves after the adoption of IFRS; and (2) the role/effects of regulatory oversight (i.e., enforcement) that promotes rigorous and consistent use of IFRS after adopted (Ole-Kristian Hope et al, 2006).

On the context of the Arab world, Growth in the Middle East and North Africa was weak in 2017, Where economic growth amounted to 1.9 % compared to 2.1 in 2016 and expected to 2.9 % reach the end of 2018 (Arab Monetary Fund, 2017, p 03) . Regarding FDI, inflows to Saudi Arabia slid by four-fifths to $1.4 billion, due to significant divestments and negative intercompany loans by foreign MNEs. For instance, Shell (United Kingdom–the Netherlands) sold its 50 percent interest in the petrochemical joint venture company (SADAF) to its partner Saudi Basic Industries Corporation (SABIC) for $820 million. FDI to the country has been contracting since the global financial crisis and, as a result, Saudi Arabia's share in total FDI inflows to West Asia has collapsed from 53 percent in 2009 to 27 percent in 2015 and a mere 6 percent in 2017. In contrast, FDI to six countries (Bahrain, Jordan, Lebanon, Oman, Qatar, and the United Arab Emirates) rose but not sufficiently to help the sub region overcome the decline. FDI to the United Arab Emirates rose by 8 percent to $10.4 billion in part due to rising cross-border M&A sales, the sub region's largest source of FDI in 2017. Inflows to Jordan and Qatar grew by 7 percent and 27 percent, reaching nearly $2 billion and $1 billion, respectively (UNCTAD, 2018).

FDI flows to North Africa were down 4 percent to $13 billion. FDI into Morocco was up 23 percent to $2.7 billion. By the end of 2017, the Moroccan Government had confirmed 26 auto industry investments worth $1.45 billion, including a deal with Renault (France) to increase local sourcing of components to 55 percent. In addition, Uber (United States) expanded operations in both Morocco and Egypt. Despite a decline in FDI of 9 percent, Egypt continued to be the largest recipient in Africa with $7.4 billion. Inflows were supported by a large increase in Chinese investment across light manufacturing industries. FDI flows to Tunisia remained flat at $0.9 billion, a 1 percent decline from 2016. Nonetheless, improved investment incentives following the promulgation of the recent investment law, as well as new legislation on public-private partnerships, supported inflows from Belgium's Wind vision into the country's renewable energy industry, as well as FDI in the electronics, software and IT industries from French and regional investors. FDI into Algeria, which depends heavily on investment in oil and gas, fell 26 percent to $1.2 billion, despite the bundle of incentives offered by the country's new investment law. Diversification was supported by FDI from Huawei (China) to help with Houari Boumediene Airport in Algiers and from Samsung (Republic of Korea), which opened its first smartphone assembly plant in the country. Proposed amendments to the energy law could increase foreign participation in the country's oil sector considerably in the future, if successfully implemented. FDI flows in the Sudan remained stable at $1.1 billion. The country is largely reliant on Chinese investment into its oil sector and the reaching of an agreement with South Sudan to access its once-productive oil fields. The lifting of United States sanctions on the Sudan in 2017 should help increase FDI (UNCTAD, 2018).

Recently, the question of studying the adoption determinants of the IFRS has been explored in the context of Arab countries, there are 12 Arab countries, and more than 15 Islamic countries require or allow companies to use the globally known IFRS, in addition, 2/3 of the Arab countries are members of the IASB. According to the Chairman of the IFRIC, Robert Garnett "with oil revenues being directed into large investments, the region is increasingly being seen as a potential partner". In spite the positive relationship between IASB and the Arab countries, they still don't have any role in the

issuance of IFRS. Arab countries were represented by 1 member (Mr. Rifaat Ahmed Abdel Karim (Bahrain)) only in the Standard Advisory Council (SAC) from 2001 tile 2005, and among 49 members of the SAC of the IASB, recently the Arab countries are not represented at all by any member! (Amged Abd El Razik, 2014); Based on these results and other, this paper trying to study the Foreign Direct Investment in the Arab countries after adoption IFRS by using of econometrics models by during the period 2007- 2018.

3. Research Methodology

3.1. Research Problem

In accordance with the above literature review, our paper intends to answer the following research question: -
What is the impact of adoption IFRS in Arab countries on levels of foreign direct investment during 2007-2018? In statistical terms: Is there any statistical impact to enhance the quality of the Arab financial reporting environment by adopting IFRS on the foreign direct investment during the period 2007-2018?
- **H_0**: There is no significant relation between the foreign direct investment and the quality of the Arab financial reporting environment after adopting IFRS during the period 2007 - 2018.

The study suggests the impact of enhancing the quality of the Arab financial reporting environment by adopting IFRS on the foreign direct investment as illustrated in Figure (01) as follows:
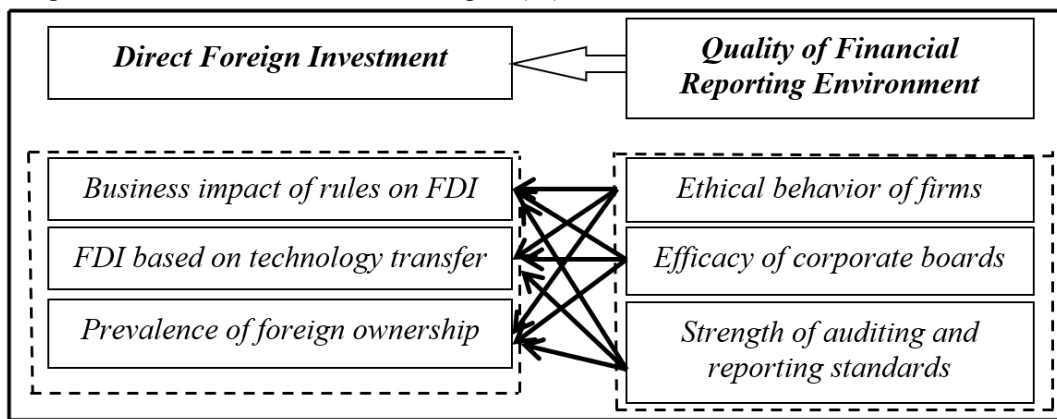

Fig. 1. Suggest the factors and variables of the study

Source: Prepared by the researcher

Based on the figure (01) we have the following problems:
- **H01**: Is there a long-term dynamic relationship between Business impact of rules on FDI BIFDI and the ethical behaviour in the Arab companies and/or the efficacy of corporate boards of the Arab companies and/or the strength of auditing and reporting standards during the period 2007-2018?
- **H02**: Is there a long-term dynamic relationship between the FDI based on technology transfer FDITT and the ethical behaviour in the Arab companies and/or the efficacy of corporate boards of the Arab companies and/or the strength of auditing and reporting standards during the period 2007-2018?
- **H03**: Is there a long-term dynamic relationship between the Prevalence of foreign ownership PFOW and the ethical behaviour in the Arab companies and/or the efficacy of corporate boards of the Arab companies and/or the strength of auditing and reporting standards during the period 2007-2018?

3.2. Research Hypotheses

Based on the previous figure, and for the purpose of this study, the researchers expect that the adoption of IFRS will result in an increase in the foreign direct investment, for that, the main Hypothesis is: -
The increase in the foreign investment around mandatory IFRS adoption is driven by increased financial reporting quality in Arab countries during the period 2007 - 2018, in statistical words, There is a statistically significant relationship between enhancing the quality of the financial reporting environment by adopting IFRS and the Foreign direct investment in Arab economies during the period 2007 - 2018.
- **H_1**: There is a significant relation between the foreign direct investment and the quality of the Arab financial reporting environment after adopting IFRS during the period 2007 - 2018.

The research hypotheses of this study can be formed as follows:

- **H$_{11}$**: There is a long-term dynamic relationship between the business impact of rules on FDI BIFDI and the ethical behaviour in the Arab companies and/or the efficacy of corporate boards of the Arab companies and/or the strength of auditing and reporting standards during the period 2007-2018.
- **H$_{12}$**: There is a long-term dynamic relationship between the FDI based on technology transfer FDITT and the ethical behaviour in the Arab companies and/or the efficacy of corporate boards of the Arab companies and/or the strength of auditing and reporting standards during the period 2007-2018.
- **H$_{13}$**: There is a long-term dynamic relationship between the Prevalence of foreign ownership PFOW and the ethical behaviour in the Arab companies and/or the efficacy of corporate boards of the Arab companies and/or the strength of auditing and reporting standards during the period 2007-2018.

3.3. Empirical Models and Variables Involved

We use the degree of cointegration and causal relationships between the foreign direct investment and Arab financial reporting environment variables of interest in the long-run starting with 2007, therefore, in order to empirically test the research hypothesis, The general model is:

Foreign direct investment BIFDI/FDITT/PFOW= Ethical behaviour of firms EBF + Efficacy of corporate boards ECB + Strength of auditing and reporting standards SARS + ε_i

$$\textbf{BIFDI}_i \textbf{ or FDITT}_i \textbf{ or PFOW}_i = \textbf{B}_0 + \textbf{B}_1 \textbf{ EBF}_i + \textbf{B}_2 \textbf{ ECB}_i + \textbf{B}_3 \textbf{ SARS}_i + \boldsymbol{\varepsilon}_i$$

The variables are defined as follows:
- **First**: the independent variables used are: (1) the ethical behaviour of firms EBF: this indicator reflects the evolution of the ethical behaviour in the Arab companies after adoption IFRS; (2) the efficacy of corporate boards ECB: This indicator reflects the effectiveness of the boards of the Arab companies after adoption of IFRS; (3) the strength of auditing and reporting standards SARS: this indicator shows the development of the Arab national accounting standards by adoption of IFRS during 2007-2018.
- **Secondly**: the dependent variable used is Foreign direct investment by using three indicators: (1) Business impact of rules on FDI BIFDI: the index reflects the trade effects of the legal rules governing foreign direct investment in the Arab countries during 2007-2018; (2) FDI based on technology transfer FDITT: this indicator reflects the foreign direct investment based on technological transfer in the Arab countries during 2007-2018; (3) Prevalence of foreign ownership PFOW: this indicator shows the prevalence of the foreign ownership in the Arab countries in period 2007-2018.

3.4. Sample, Selection, and Database

Data used in this study is a quantitative data. Samples collected in this study were 144 observations during the period 2007-2018 (12 years). Data source of 12 Arab countries such as Algeria, Egypt, Bahrain, Jordan, Kuwait, Tunisia, Oman, Mauritania, Morocco, Qatar, Saudi Arabia, United Arab Emirates, was taken from the Global Competitiveness Reports issued by the World Economic Forum: http://reports.weforum.org/global-competitiveness-index-2017-2018/downloads/, For years: 2007, 2008, 2009, 2010, ..., 2018. Subsequently, comparative data which are referred to the research were collected "by hand" and were transferred to spread sheets for processing.

4. Empirical Results

The results of the study can be addressed in the following order:

4.1. Panel Unit Root Test

First, the graph representation of time series showed that it is possible to say that there is significant relationship between the indicators of the Arab financial reporting environment after adoption IFRS and the foreign direct investment in the Arab countries during 2007-2018. Here we begin with non-stationary tests to identify the number of panel unit roots in each of our relevant variables: BIFDIt, FDITTt, PFOWt, EBFt, ECBt, SARSt, and we assume that all our six variables are integrated of same order, when the variables are integrated of same order, we can run the Cointegration test. The result of this test as follows:

Table 1. Summary Results of Panel Unit Root Test

	In level			First differences		
	Levin	ADF	PP	Levin	ADF	PP
BIFDI	0.0027	0.177	0.4435	0.0000	0.0000	0.0000
FDITT	0.0856	0.3255	0.099	0.0000	0.0000	0.0000
PFOW	0.2702	0.2765	0.150	0.0000	0.0000	0.0000
EBF	0.1115	0.1683	0.5261	0.0000	0.0000	0.0000

| ECB | 0.1205 | 0.3639 | 0.7006 | 0.0000 | 0.0000 | 0.0000 |
| SARS | 0.0027 | 0.177 | 0.4435 | 0.0000 | 0.0000 | 0.0000 |

Source : Based on Eview.7 program outputs

Decision: Based on table A, we observe from all tests such as Augmented-Dickey-Fuller (ADF), Phillips-Peron (PP) and Levin that all-time series are not stationary in level, because the P-value is large than 5 % (the majority Prob>5%), the majority of the methods are telling that BIFDIt, FDITTt, PFOWt, EBFt, ECBt, SARSt become stationary after first differenced, this means: BIFDIt, FDITTt, PFOWt, EBFt, ECBt, SARSt ~ I(1).

4.2. Cointegration Test

The results of this test by using Kao test (Engle-Granger) is:

Table 2. Summary Results of Cointegration Test

Prob	t- statistic	Test Summary
0.0644	-1.518718	ADF(BIFDI)
0.0047	-2.595174	ADF(FDITT)
0.0001	-3.697629	ADF(PFOW)
H0 : No Cointegration H1 : It is Cointegration		

Source: Based on Eview.7 program outputs

Decision: Based on table B, the cointegration test is aims to accept at least one causal relationship between: (BIFDIt and ECBt, EBFt, SARSt), (FDITTt and ECBt, EBFt, SARSt), (PFOWt and ECBt, EBFt, SARSt), because the P-value less or is approaching to 5%: Prob = (0.0644, 0.0047, 0.0001)⩽5%, therefore, , we refuse H0 (H0: No Cointegration) and accepted H1, in other words, there is a long term dynamic relationship between BIFDIt, FDITTt, PFOWt and the Arab financial reporting environment after adoption of IFRS in period 2007-2018, or all the variables such as (BIFDIt and ECBt, EBFt, SARSt), (FDITTt and ECBt, EBFt, SARSt), (PFOWt and ECBt, EBFt, SARSt) have long run associationchip.

4.3. Empirical Models

We can estimate the vector error correction models (VECM) in order follows:
- **Estimating models by using the business impact of rules on FDI**

Table C summarize the results of the estimation models as follows:

Table 3. Summary Results of Regression Models

Long run CointEq1						
		BIFDI (-1)	EBF (-1)		ECB (-1)	SARS (-1)
Coefficient		1.00000	0.8183		-4.9257	3.29
Std. Error		-	1.33182		1.22134	1.38982
t- statistic		-	0.61441		-4.033	2.3672
Error Correction (Short run)						
	Coefficient	Std. Error	t- statistic	Prob (t)	R-squared	F- statistic
CointEq1	-0.0334	0.0094	-3.5680	0.0004		
D(BIFDI(-1))	0.1224	0.1141	1.0728	0.284		
D(BIFDI(-2))	-0.1384	0.0974	-1.4201	0.1564		
D(EBF(-1))	0.2931	0.1145	2.5605	0.0108		
D(EBF(-2))	0.0364	0.1133	0.3215	0.748	20.07	3.1079
D(ECB(-1))	0.1753	0.1162	1.5082	0.1323		
D(ECB(-2))	-0.153	0.1070	-1.4307	0.1533		
D(SARS(-1))	-0.2426	0.1313	-1.8468	0.0655		
D(SARS(-2))	0.1325	0.1223	1.0833	0.2793		
Wald test						
Test Statistic		Value	Df	Prob	H0	
Chi-square C(4)=C(5)		6.989	2	0.0304	C(4)=C(5)=0	
Chi-square C(6)=C(7)		4.0695	2	0.1307	C(6)=C(7)=0	
Chi-square C(8)=C(9)		4.0912	2	0.1293	C(8)=C(9)=0	

Source: Based on Eview.7 program outputs

Based on table C, we can representation the results of relationship between Business impact of rules on FDI BIFDIt and the Arab financial reporting environment as follows:

Long run :

$$e_{t-1} = BIFDI_{t-1} + 0.8183\ EBF_{t-1} - 4.9257\ ECB_{t-1} + 3.29\ SARS_{t-1}$$

Short run :

$$\Delta BIFDI_t = -0.0334\ e_{t-1} + 0.122\ \Delta BIFDI_{t-1} - 0.1384\ \Delta BIFDI_{t-2} + 0.2931\ \Delta EBF_{t-1} + 0.036\ \Delta EBF_{t-2} + 0.1753\ \Delta ECB_{t-1} - 0.153\ \Delta ECB_{t-2} - 0.2426\ \Delta SARS_{t-1} + 0.1325\ \Delta SARS_{t-2}$$

From this model we can see that the Speed of adjustments towards long run equilibrium is negative and significant: C (1) =-0.0334 and P- value=0.0004< 5%, for that, we can confirm the long causality from the three independent variables such as EBF_t, ECB_t, $SARS_t$ to $BIFDI_t$, meaning that, EBF_t, ECB_t, $SARS_t$ heve influence on the dependent variable $BIFDI_t$ in the long run. In other words, there is long run causality running from EBF_t, ECB_t, $SARS_t$, to $BIFDI_t$, but she is weak (03.34 %). In the long term the Arab countries need 29.94 years (1÷0.0334=29.94) to return of the point equilibrium, which is evidence of the weak relationship between $BIFDI_t$ and EBF_t, ECB_t, $SARS_t$, therefore, the first correction of this model in the year 2037 and the second correction in 2067, and the speed of the logarithmic convergence is:

$$\mu = \frac{ln(1-TB)}{T} = \frac{LN(1-12(-0.0334))}{12} = 0.023 = 2.3\%,$$

This means that the foreign direct investment in the Arab economies returns in to balance point after any external shock or crisis in the Arab financial reporting environment at a rate of 02.3 % in the year, and the time required for the Arab countries to complete half of the gap that separates them from the stable situation in the long term are:

$$\mu = \frac{ln(2)}{\mu} = \frac{LN(2)}{0.023} = 30,$$

This means that the achievement of half the distance of accounting convergence between the Arab countries requires about 30 years, and this is not good.

To study the short-term causal relationship, we using Wald Test Statistics, the null Hypothesis of this test is: H0: C(4)=C(5)=0, H0: C(6)=C(7)=0, H0: C(8)=C(9)=0, if we accept H0, meaning that there is no short run causality running from EBF_t, ECB_t, $SARS_t$ to $BIDFI_t$. Based on the Wald test results in same table we can see P-value is: (0.0304<5%, and (0.1307, 0.1293)> 5 %, from these results we can reject H0 (C(4)=C(5)≠0) in the case EBF_t, and accept H0 (C(6)=C(7)=0, C(8)=C(9)=0) in the case ECB_t and $SARS_t$. Meaning, there is a short run causality running from EBF_t to $BIFDI_t$ and no short run causality running from ECB_t, $SARS_t$ to $BIFDI_t$.

- **Estimating models using the FDI based on technology transfer**
  In the same way, Table D summarizes the results of the estimation models as follows

Table 4. Summary Results of Regression Models

Long run CointEq1						
		FDITT (-1)	EBF (-1)		ECB (-1)	SARS (-1)
Coefficient		1.0000	-0.6564		-1.2043	0.8635
Std. Error		-	0.3074		0.2821	0.322
t- statistic		-	-2.1355		-4.2684	2.682
Error Correction (Short run)						
	Coefficient	Std. Error	t- statistic	Prob (t)	R-squared	F- statistic
CointEq1	-0.1777	0.0368	-4.8221	0.0000		
D(FDITT(-1))	-0.3292	0.0944	-3.4855	0.0005		
D(FDITT (-2))	-.2086	0.0861	-2.4227	0.0159		
D(EBF(-1))	0.313	0.1182	2.647	0.0084		
D(EBF(-2))	-0.0317	0.114	-0.2782	0.781	33.38	6.2013
D(ECB(-1))	0.0542	0.1225	0.4426	0.6583		
D(ECB(-2))	0.0506	0.1106	0.4574	0.6476		
D(SARS(-1))	-0.1316	0.131	-1.0052	0.3154		
D(SARS(-2))	-0.0561	0.1221	-0.46	0.6459		
Wald test						
Test Statistic	Value	Df	Prob		H0	
Chi-square C(4)=C(5)	7.0073	2	0.0301		C(4)=C(5)=0	
Chi-square C(6)=C(7)	0.4373	2	0.8036		C(6)=C(7)=0	
Chi-square C(8)=C(9)	1.3379	2	0.5122		C(8)=C(9)=0	

Source: Based on Eview.7 program outputs

Based on table D, we can representation the results of relationship between FDI based on technology transfer FDITTt and the Arab financial reporting environment as follows:

Long run :

$$e_{t-1} = FDITT_{t-1} - 0.6564\ EBF_{t-1} – 1.2043\ ECB_{t-1} + 0.8635\ SARS_{t-1}$$

Short run :

$$\Delta FDITT_t = -0.1777\ e_{t-1} - 0.33\ \Delta FDITT_{t-1} - 0.2086\ \Delta FDITT_{t-2} + 0.313\ \Delta EBF_{t-1} + 0.0317\ \Delta EBF_{t-2} + 0.0542\ \Delta ECB_{t-1} + 0.0506\ \Delta ECB_{t-2} - 0.1316\ \Delta SARS_{t-1} - 0.056\ \Delta SARS_{t-2}$$

From this model we can see that the Speed of adjustments towards long run equilibrium is negative and significant: C(1)=-0.1777 and P- value=0.000< 5%, for that, we can confirm the long causality from the three independent variables such as EBFt, ECBt, SARSt to FDITTt, meaning that, EBFt, ECBt, SARSt heve influence on the dependent variable FDITTt in the long run. In other words, there is long run causality running from EBFt, ECBt, SARSt, to FDITTt, but also are strong (17.77 %). In the long term the Arab countries need 5.627 years (1÷0.1777=5.627) to return of the point equilibrium, therefor, the first correction of this model in the year 2012 and the second correction in 2018, and the speed of the logarithmic convergence is:

$$\mu = \frac{ln(1-TB)}{T} = \frac{LN\left(1-12(-0.1777)\right)}{12} = 0.1263 = 12.63\%,$$

This means that the foreign direct investment in the Arab economies returns in to balance point after any external shock or crisis in the Arab financial reporting environment at a rate of 12.63% in the year, and the time required for the Arab countries to complete half of the gap that separates them from the stable situation in the long term are:

$$\mu = \frac{ln(2)}{\mu} = \frac{LN(2)}{0.1263} = 5.4867,$$

This means that the achievement of half the distance of accounting convergence between the Arab countries requires about 5.5 years, and this is good.

To study the short-term causal relationship, we use Wald Test Statistics, the null Hypothesis of this test is: H0: C(4)=C(5)=0, H0: C(6)=C(7)=0, H0: C(8)=C(9)=0, if we accept H0, meaning that there is no short run causality running from EBFt, ECBt, SARSt to FDITTt. Based on the Wald test results in same table we can see P-value is: (0.0301<5%, and (0.8036, 0.5122)> 5 %, from these results we can reject H0 (C(4)=C(5) ≠0) in the case EBFt, and accept H0 (C(6)=C(7)=0, C(8)=C(9)=0) in the case ECBt and SARSt. Meaning, there is a short run causality running from EBFt to FDITTt and no short run causality running from ECBt and SARSt to FDITTt.

- **Estimating models by using the Prevalence of foreign ownership**
In the same way, Table E summarizes the results of the estimation models as follows:

Table 5. Summary Results of Regression Models

Long run CointEq1				
	PFOW (-1)	EBF (-1)	ECB (-1)	SARS (-1)
Coefficient	1	-0.6708	-3.929	3.7024
Std. Error	-	1.189	1.0926	1.2495
t- statistic	-	-0.5641	-3.596	2.963
Error Correction (Short run)					
	Coefficient	Std. Error	t- statistic	Prob (t)	R-squared	F- statistic
CointEq1	-0.0422	0.0118	-3.5672	0.0004		
D(PFOW(-1))	-0.3396	0.1037	-3.2748	0.0012		
D(PFOW(-2))	-0.2122	0.1078	-1.9672	0.0499		
D(EBF(-1))	-0.0171	0.1252	-0.1365	0.8915	22	3.4894
D(EBF(-2))	0.0277	0.1215	0.2283	0.8195		
D(ECB(-1))	0.1307	0.1242	1.0523	0.2933		
D(ECB(-2))	-0.0374	0.1158	-0.3233	0.7466		
D(SARS(-1))	0.2219	0.1333	1.6645	0.0968		
D(SARS(-2))	0.0437	0.1239	0.3526	0.7246		
Wald test					
Test Statistic	Value	Df	Prob	H0	
Chi-square C(4)=C(5)	0.06284	2	0.9691	C(4)=C(5)=0	
Chi-square C(6)=C(7)	1.1588	2	0.5602	C(6)=C(7)=0	
Chi-square C(8)=C(9)	2.9396	2	0.23	C(8)=C(9)=0	

Source: Based on Eview.7 program outputs

Based on table E, we can representation the results of relationship between Prevalence of foreign ownership PFOWt and the Arab financial reporting environment as follows:

Long run:

$$e_{t-1} = PFOW_{t-1} - 0.6708\, EBF_{t-1} - 3.929\, ECB_{t-1} + 3.7024\, SARS_{t-1}$$

Short run:

$$\Delta PFOW_t = -0.0422\, e_{t-1} - 0.3397\, \Delta PFOW_{t-1} - 0.2122\, \Delta PFOW_{t-2} - 0.0171\, \Delta EBF_{t-1} + 0.0277\, \Delta EBF_{t-2} + 0.131\, \Delta ECB_{t-1} - 0.0374\, \Delta ECB_{t-2} + 0.2219\, \Delta SARS_{t-1} + 0.0437\, \Delta SARS_{t-2}$$

From this model we can see that the Speed of adjustments towards long run equilibrium is negative and significant: C (1) =-0.0422 and P- value=0.0004< 5%, for that, we can confirm the long causality from the three independent variables

such as EBF_t, ECB_t, $SARS_t$ to $PFOW_t$, meaning that, EBF_t, ECB_t, $SARS_t$ have influence on the dependent variable $PFOW_t$ in the long run. In other words, there is long run causality running from EBF_t, ECB_t, $SARS_t$, to $PFOW_t$, but she is weak (04.22 %). In the long term the Arab countries need 23.697 years (1÷0.0422=23.697) to return of the point equilibrium, which is evidence of the weak relationship between $PFOW_t$ and EBF_t, ECB_t, $SARS_t$, therefor, the first correction of this model in the year 2030 and the second correction in 2054, and the speed of the logarithmic convergence is: , this means that the foreign direct investment in the Arab economies returns in to balance point after any external shock or crisis in the Arab financial reporting environment at a rate of 03.41 % in the year, and the time required for the Arab countries to complete half of the gap that separates them from the stable situation in the long term are: , this means that the achievement of half the distance of accounting convergence between the Arab countries requires about 20.3 years, and also this is not good.

To study the short-term causal relationship, we using Wald Test Statistics, the null Hypothesis of this test is: H0: C(4)=C(5)=0, H0: C(6)=C(7)=0, H0: C(8)=C(9)=0, if we accept H0, meaning that there is no short run causality running from EBF_t, ECB_t, $SARS_t$ to $PFOW_t$. Based on the Wald test results in same table we can see P-value is: (0.9691, 0.5602, 0.23)>5%, from these results we can accept H0 (H0: C(4)=C(5)=0, C(6)=C(7)=0, C(8)=C(9)=0) in all variables. Meaning, there is no short run causality running from EBF_t, ECB_t, $SARS_t$ to $PFOW_t$.
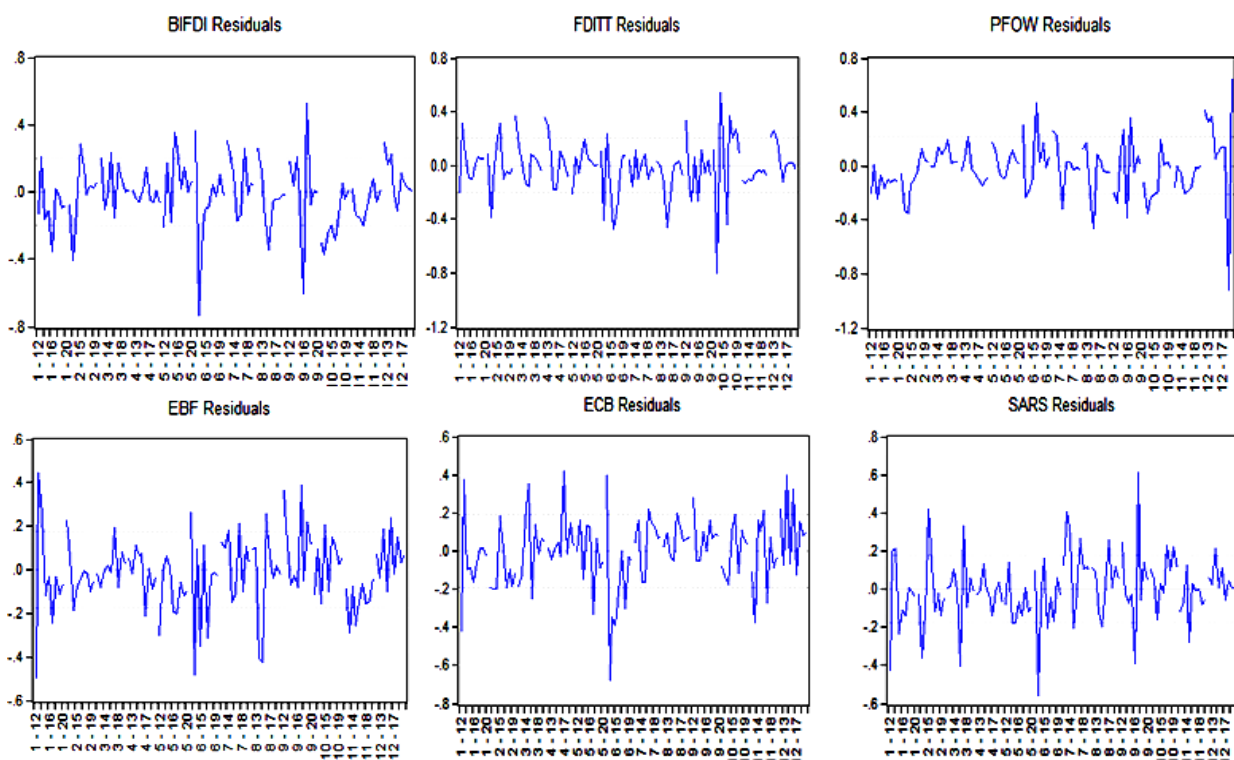

Fig. 2. Graphical representation of the residuals

Source: Based on Eview.7 program outputs

4.4. *Discussion of Hypotheses*

Based on the results of the test statistic using panel data, there is evidence that the hypotheses: H11, H12, H13 are supported. Meaning that there is a statistically significant relationship between enhancing the quality of the financial reporting environment by adopting IFRS and the foreign direct investment in all the variables BIFDIt, FDITTt, PFOWt during the period 2007-2018; With short run relationship running from EBFt to BIFDIt, FDITTt. In line with our hypotheses, there appears to be evidence that the shift from Arab GAAP to IFRS has rendered traditional financial statements more pertinent for evaluating investors, from these findings we can confirm the main hypothesis of the study that the increase in the foreign direct investment in the Arab economies is driven in part by increased financial reporting quality by adopted IFRS during 2007-2018, Where we can use the model to predict future changes in the foreign direct investment in the Arab region.

5. Conclusion

This paper examines whether and how high-quality financial reporting environment can push to optimize the capital investment choice of countries and international regions. This is a very important issue. For that, in this study we used econometric regression models in order to investigate the impact which the IFRS mandatory adoption had on the foreign direct investment as of 2007, The statistical results have confirmed the initial prediction regarding the increase of on the foreign direct investment after adoption IFRS. Our evidence suggests that the increase in on the foreign direct investment is more likely a result of improved financial reporting quality; we find that IFRS adoption has a significantly greater effect on the foreign direct investment in Arab countries. The research findings are summarized as follows: (1) There is a significant relationship between IFRS adoption by the Arab companies and the foreign direct investment in the Arab economies; (2) The adoption of IFRS is an effective tool for enhancing the Investment in the Arab economies; (3) There are still some challenges militating against the success adoption and implementation of IFRS in Arab countries.

6. Limitations of the Study and Outline for Further Research

As any other study of this kind of research, it is subject to several limitations. This study was conducted in the Arabs Economies; Therefore, caution is needed in generalizing the results to other countries, and more research should be undertaken in other developing economies. Future research could expand the framework of this study, as more data becomes available in future, to raise further explanation of the models and to reveal more generalized findings in Arab countries or others.

Notes:
1. For simplicity, this study uses the term IFRS to refer to both IFRS issued by the International Accounting Standards Board (IASB) and International Accounting Standards (IAS) issued by IASC.
2. ''Accounting quality'' can be defined as the extent to which the financial statement information reflects the underlying economic situation of firms.

References

AL-ABSY, M. S. M., ALMAAMARI, Q., ALKADASH, T., & HABTOOR, A. (2020). Gender diversity and financial stability: Evidence from Malaysian listed firms. *The Journal of Asian Finance, Economics and Business*, 7(12), 181-193.

Alison Fox and Gwen Hannah, Christine Helliar, Monica Veneziani (2013), The costs and benefits of IFRS implementation in the UK and Italy, Journal of Applied Accounting Research Vol14, n° 01, p 90.

Amged Abd El Razik (2014), Challenges of International Financial Reporting Standards (IFRS) in the Islamic Accounting World: Case of Middle Eastern Countries, Scientific Bulletin – Economic Sciences, Vol 08, p 01-05.

Francesco Bova, Raynolde Pereira (2011), The Determinants and Consequences of Heterogeneous IFRS Compliance Levels Following Mandatory IFRS Adoption: Evidence from a Developing Country, Journal of International Accounting Research, p 01-08.

Huifa Chen, Qingliang Tang, Yihong Jiang, Zhijun Lin (2010), The Role of International Financial Reporting Standards in Accounting Quality: Evidence from the European Union, Journal of International Financial Management and Accounting, Vol 21, n° 3, p 220-230.

Khalifa, H. K. H. (2020). Media Dependency during covid-19 Pandemic and Trust in Government: The Case of Bahrain. International Journal of Management, 11(11).

Irene Karamanou and George P. Nishiotis (2009), Disclosure and the Cost of Capital: Evidence from the Market's Reaction to Firm Voluntary Adoption of IAS, Journal of Business Finance & Accounting, Vol 36, n° (7) & (8), p 795- 800.

Kee-Hong Bae, Hongping Tan, Michael Welker (2008), International GAAP Differences: The Impact on Foreign Analysts, The Accounting Review, Vol. 83, n° 03, p 597.

Kenneth Enoch Okpala (2012), Adoption of IFRS and Financial Statements Effects: The Perceived Implications on FDI and Nigeria Economy, Australian Journal of Business and Management Research, Vol 2, n° 05, p 77-78.

Kohler, H., Pochet, C., & Gendron, Y. (2021). Networks of interpretation: An ethnography of the quest for IFRS consistency in a global accounting firm. Accounting, Organizations and Society, 95, 101277.

Mark DeFond, Xuesong Hu, Mingyi Hung, Siqi Li (2010), The Impact of Mandatory IFRS Adoption on Foreign Mutual Fund Ownership: The Role of Comparability, Journal of Accounting and Economics, Vol 51, n° 03, p 01-07.

Mark T. Bradshaw, Brian J. Bushee, Gregory S. Miller (2004), Accounting Choice, Home Bias, and US Investment in Non-US Firms, Journal of Accounting Research, Vol 42, N° 05, pp 01-08.

Messod D. Beneish, Brian P. Miller, Teri Lombardi Yohn (2012), The Impact of Financial Reporting on Equity versus Debt Markets : Macroeconomic Evidence on the Impact of Mandatory IFRS Adoption on Equity and Debt Markets, SSRN Electronic Journal : https://www.Researchgate.net/publication/228293416, p 04-10.

Michael Yeboah, Andras Takacs (2018), Information Environment of IFRS Adoption and Cost of Debt Capital: Evidence from South Africa, International Research Journal of Finance and Economics, Vol 169, p 02-08.

Mihai Carpa, Marilena Mironiuc (2015), The Impact of Reported Financial Information on the Transfer Prices of Securities, Comparative Empirical Study, Procedia Economics and Finance, n° 23, p 1428.

Minga Negash (2008), The effects of IFRS adoption: A review of the early evidence, SSRN Electronic Journal: http://ssrn.com/abstract=1154504, p 04.

Ole-Kristian Hope, Justin Jin, Tony Kang (2006), Empirical Evidence on Jurisdictions that Adopt IFRS, p 01-06, SSRN Electronic Journal: https://papers .ssrn.com/sol3/papers.cfm?abstract_id=751264.

Siregar, S. V., Djakman, C. D., Mita, A. F., & Ningrum, A. S. (2020). Perceptions of practitioners, auditors, and academics on IFRS convergence in Indonesia. In Advanced Issues in the Economics of Emerging Markets (Vol. 27, pp. 127–146). Emerald Publishing Limited.

The Arab Monetary Fund (2017), Prospects for the Arab economy, website: https://www.amf.org.ae/en/arab-economic-outlook, p 03.

Thomas Jeanjean, Hervé Stolowy (2008), Do Accounting Standards Matter? An Exploratory Analysis of Earnings Management Before and After IFRS Adoption, Article in Journal of Accounting and Public Policy, p 04.

United Nations Conference on Trade and Development UNCTAD (2018), World Investment Report 2018, United Nations, p 02-05, 40, 48, website: https://unctad. org/en/PublicationsLibrary/wir2018_en.pdf.

World Economic Forum, The Global Competitiveness Report, of years: 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, pp: 65, 93, 91, 85, 99, 103, 91, 93, 41, 45, website: https://www.weforum.org/reports, date: 14/12/2018.