ASSESSING THE EFFECTS OF IFRS ADOPTION ON ECONOMIC GROWTH: A CROSS COUNTRY STUDY

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Abstract
A major driver for IFRS adoption by countries is the desire to integrate into the global economy. Some of previous research studies show that the adoption of International Financial Reporting Standards has a positive impact on the economic growth. In this paper, it is investigated whether the adoption of IFRS fosters countries’ economic growth. The research hypothesis is that the implementation of IFRS significantly improves economic growth rate. In this study, panel data regression analysis is used to test relationship between the adoption of International Financial Reporting Standards and economic development. The gross domestic product is used as an independent variable. The results yielded by the empirical analysis enable us to analyze the economic benefits of IFRS adoption in the global economy.

Keywords: International Financial Reporting Standards, Economic Growth, Accounting Policy

JEL Classification: G15, M4, M48, M49, F60, F63

Özet

Anahtar Kelimeler: Uluslararası Finansal Raporlama Standartları, Ekonomik Gelişme, Muhasebe Politikası

Jel Sınıflandırılması: G15, M4, M48, M49, F60, F63
INTRODUCTION

In today’s business climate, financial statements disclosed by firms have huge impacts on the society. Financial statements are heavily used by shareholders, creditors, labor unions and government authorities to assess a firm’s financial position, performance and viability. Past experiences show that the reliable and accurate accounting information enables financial market participants to make more rational decisions.

Ball (2008) stated that financial reporting is one of the most important economic activities. Li and Shroff (2010) reported that high-quality accounting information enables the management of a firm to make much more effective investment decisions, translating into high growth rate of economy. Barth et al. (2006) claimed that the quality of accounting information can be increased by the elimination of accounting practices that are ineffective in measuring firms’ financial performance and position. McNichols and Stubben (2008) and Biddle et al. (2009) support the assertion that information derived from financial statements can be used by the management of firms to determine high-return projects.

International Financial Reporting Standards (IFRS) play a vital role in the preparation of financial statements. The adoption of IFRS has a huge impact on the financial statement elements; assets, liabilities, equity, revenues and expenses. International Financial Reporting Standards contribute to create a business climate that enables investors to make more rational and accurate investment decision. Epstein (2009) claimed that IFRS adoption results in higher financial reporting quality. International authorities such as World Bank, International Monetary Fund, and International Organization of Securities Commissions (IOSCO) encourage the adoption of IFRS to advance effectiveness of financial markets, which in turn may spark the economic growth of adopting countries (Collins, 1989; Wyatt and Yospe, 1993).

As of 2005, firms operating in European Union should prepare their financial statements in accordance with International Financial Reporting Standards. IFRS adoption by European Union is a key step that increases the quality of financial reporting process. The adoption of IFRS by European Union makes IFRS the most widely accepted financial reporting standards in the world.
economy. Daske et al. (2008) stated that the adoption of IFRS by over 100 countries has led significant changes in the financial reporting process.

Gordon et al. (2012) claimed that IFRS adoption may lift the transparency of financial statements issued by firms and thus grab the attention of foreign businesses and investors. In other words, emerging countries can increase the volume of foreign investment through IFRS adoption. Ding et al. (2006) claimed that the implementation of IFRS increases the level of disclosures in financial reporting process compared to local accounting standards.

The adoption of IFRS has positive impacts on international trade and significantly enhances the comparability of financial statements prepared by firms from different countries. Samuels and Piper (1985) stated that the adoption of IFRS has a great potential to facilitate global trade activities.

The primary objective of this paper is to contribute the existing literature on the association between IFRS adoption and economic growth. Past experiences indicate that the enforcement of IFRS as important as the adoption of IFRS. Thus, government authorities and business organizations should make persistent efforts to enforce IFRS. Previous studies are critically important since these studies proved that there is a need to assess the impact of IFRS adoption on economic growth rate of countries.

The rest of the paper is organized as follows. Section 2 presents the past literature and develops research hypothesis. Section 3 provides the characteristics of the sample and research design. Section 4 discusses the findings of empirical analysis. In the final section of the paper, concluding comments and suggestions for future research studies are provided.

1. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

In this section, the past literature on the association between IFRS adoption and economic growth is reviewed. There has been an inconclusive debate about whether IFRS adoption contributes the economic development of a country. There are numerous research studies supporting the statement that IFRS adoption yields significant economic benefits and countries that have adopted IFRS experience sustainable
economic growth (Shroff and Li, 2010; Zaidi and Huerta, 2014; Okpala, 2012).

Daske (2006) investigated the impact of IFRS adoption on economic growth rate. He found that the adoption of IFRS does not directly lead to the economic benefits by using a sample that includes firms operating in Germany. Larson and Kenny (1995) employed partial least squares to investigate whether IFRS adoption has a positive impact on the economic development. By analyzing 27 emerging countries, they found that there is no significant relationship between IFRS adoption and economic development.

Daske et al. (2008) investigated the economic consequences of IFRS adoption around the world. They used a broad sample of firms from 26 different countries that adopted IFRS and employed panel data regression model. The results of panel data regression indicated that the adoption of IFRS significantly improves the market liquidity. Additionally, they claimed that the strength of enforcement of IFRS influences economic growth rate.

According to Epstein (2009), IFRS adoption facilitates cross-border trading activities and lowers the cost of capital. Ball (2006) stated that legal systems, effectiveness of corporate governance mechanisms, the independence of auditors and government role in economic activities influence the beneficial effects of IFRS adoption. Okpala (2012) examined the relationship between IFRS adoption and foreign direct investment in Nigeria. He found that IFRS adoption by Nigeria increases investor confidence in financial markets and the volume of foreign direct investment.

Zaidi and Huerta (2014) used ordinary least square and two stage least square regression to analyze the relationship between the adoption of IFRS and economic performance. Based on a sample that includes 51 countries that adopted IFRS and 51 countries that have not yet adopted IFRS, they found that IFRS adoption lifts the economic growth rate of the
country and countries that adopted IFRS gain much more economic benefits when there is a high level of enforcement.

Kibli and Kossentini (2014) investigated the effects of IFRS adoption and stock market development. The empirical data they use in the paper comes from 14 Middle Eastern and North African countries. The results of balanced panel data regression they employ revealed that IFRS adoption significantly promotes stock market development.

Zehri and Abdelbaki (2013) aimed to clarify the association between IFRS adoption and economic growth in emerging countries. They selected 37 emerging countries that adopted IFRS and 37 emerging countries that did not adopt IFRS for the logistic regression analysis. They reported that economic growth rates have been increased with the advent of IFRS adoption.

Leuz and Verrecchia (2000) analyzed the economic consequences of IFRS adoption by German firms. They stated that firms that prepare financial statements in accordance with IFRS get significant economic benefits. Beneish et al. (2012) provided evidence that IFRS adoption significantly increases the quality of financial statements disseminated by firms and the volume of foreign investment into the financial markets.

In the developing of research hypothesis, previous research studies are carefully analyzed. From previous research studies, it is possible to forecast that IFRS adoption facilitates economic growth for countries. Thus, the research hypothesis is formulated as follows;

H1: IFRS adoption leads to increase in economic growth of adopting countries.

2. RESEARCH DESIGN

This section provides the characteristics of research design. In the empirical analysis, panel data regression is employed to investigate the impacts of IFRS adoption on economic development across countries. In the selection of empirical variables, previous research studies (Beneish et
al., 2012; Cieslewicz, 2014; Klibi and Kossentini, 2014; Leuz and
Verrecchia, 2000; Daske et al., 2008; Zaidi and Huerta, 2014) are
meticulously considered to analyze the relationship between IFRS
adoption and economic growth, the following model is constructed:
\[ GDP_i = \alpha_0 + \alpha_1 ADOPT_i + \alpha_2 FDI_i + \alpha_3 LE_i + \alpha_4 TO_i + \alpha_5 ENF_i + \alpha_6 PS_i + \alpha_7 FINDEV_i \]

GDP is the gross domestic product growth rate for country \( i \) at time \( t \).

ADOPT is a dummy variable coded as 1 for countries that adopted
IFRS, otherwise 0.

FDI is the logarithmic value of foreign direct investment for country
\( i \) at time \( t \).

LE is the level of education for country \( i \) at time \( t \).

TO is the trade openness for country \( i \) at time \( t \) measured by
percentage of GDP.

ENF is the level of enforcement for country \( i \) at time \( t \) measured by
rule of law index created by the World Bank.

PS is the political stability for country \( i \) at time \( t \).

FINDEV is the financial development index for country \( i \) at time \( t \)
measured by stock market capitalization to GDP (\%).

The literatures of economic, finance and accounting utilize various
proxies for economic development. In this paper, growth rate of GDP is
used as a proxy for economic development. The established empirical
model includes the level of political stability, trade openness ratio, foreign
direct investment, level of education, rule of law and financial
development that may influence the economic growth of the country. The
exclusion of these variables yields biased results. All variables used in
empirical analysis were observed during the time period between 2005 and
2015. The sample consists of 41 countries that adopted IFRS and 29
countries that have not yet adopted IFRS.

Since the 1970s, the volume of foreign direct investment has
substantially increased in the world economy. Many countries offer tax
advantages and incentives to inflate the volume of foreign direct
investment. Past experiences have proved that foreign direct investment enables the host country to transfer high-technology knowledge or know-how that may foster economic development. Foreign direct investment is considered an important vehicle that accelerates the economic growth. Borensztein et al. (1998), Liu et al. (2002), Hermes and Lensink (2010) provided evidence that foreign direct investment positively affects the country’s economic growth.

Education is one of the main ingredients of human capital. Schultz (1992) stated that human capital is one of the most important factors in clarifying the differences in economic growth rates across countries. Barro (1997) claimed that education increases the people’s standard of living and efficiency of labor force in the society. Gylfason (2000) considered education an indispensable prerequisites for sustainable economic development. Undoubtedly, more and better education is expected to have positive effects on the countries’ economic development in the long-term. The level of education created by the United Nations is used in the panel data model.

Trade openness is among a key factors affecting the economic development. It boosts competition, productivity and innovation and enables countries to access to new markets. Trade openness, the sum of exports and imports of goods and services measured as a share of gross domestic product, introduces new product and technology that contribute to the economic development. Yanikkaya (2003) stated that trade activity contributes to the economic development through comparative advantage, technology transfers and economies of scale.

The high level of enforcement enables firms to get benefit from IFRS compliance. Past experiences have indicated that the enforcement of IFRS is as important as IFRS adoption. Rule of law index is included in the empirical model to capture the effects of enforcement of IFRS on the economic development. Rule of law index is created by the World Bank.
Alesina et al. (1992) stated that political instability may mitigate the investment and economic growth rate. Political stability should be present to create a competitive and efficient economic environment. In this study, political stability index created by the World Bank is used. It ranges from -2.5 to 2.5. Higher values of political stability indicate higher political stability.

Since McKinnon (1973), Dornbusch and Reynoso (1989), King and Levine (1993) and Pagano (1993), the increasing body of recent literature has confirmed that financial factors have a strategic importance in the economic development. Financial development of countries is measured by stock market capitalization to GDP (%). Stock market development is expected to facilitate reallocation of the capital to strategic industries (Dabla et al., 2010).

2.1. Descriptive Statistics

In this section of the study, the primary characteristics of empirical data are provided. For the purpose of analyzing the relationship between economic growth and adoption of IFRS, a large sample of countries is selected from the website of the IFRS foundation and the IASB (http://www.ifrs.org). There are 41 IFRS adopters and 29 Non-IFRS adopters in the sample. Table 1 reports the descriptive statistics for the variables of IFRS adopters and IFRS non-adopters from 2005 to 2015. The firm year observations in the empirical analysis is 770. The mean and standard deviation of each empirical variable have slight differences for IFRS adopters and IFRS non-adopters.

The objective of univariate analysis is to investigate whether there exists a difference between IFRS adopters and Non-IFRS adopters. Hence, Mann-Whitney u test is applied to compare empirical variables’ means. The results of univariate test indicate that gross domestic product, foreign direct investment, level of education, level of enforcement, political stability, trade openness and financial development are statistically
significant at the 0.05 level. Countries that have not adopted IFRS have higher GDP growth numbers than IFRS adopters.

As shown in Table 1, countries that have adopted IFRS are much more successful in attracting foreign direct investment than Non-IFRS adopters. This is primarily because, the majority of IFRS adopters have well-established legal system and economic infrastructure that can easily grab foreign direct investment.

The results of univariate analysis imply that countries that adopted IFRS are characterized by a higher level of education (0.724) compared to countries that have not yet adopted IFRS (0.484). In the globalized world, the education plays a prominent role in the accumulation of human capital that positively influences economic growth.

Undoubtedly, the high level of law enforcement is a vital factor that triggers IFRS compliance among firms. Countries that adopted IFRS have a higher level of enforcement than IFRS non-adopters. Higher IFRS compliance significantly increase the reliability and quality of firms’ financial statements.

There are significant differences in the means of IFRS adopters and Non-IFRS adopters at the 95% level for the political stability. This reveals that countries that have not adopted IFRS suffer from political instability that massively adverse influences the economic growth. It is expected that countries should effectively sustain political stability that have positive impacts on the economic growth. The results of pairwise comparison implies that IFRS adopters exhibit much higher trade openness measured by percentage of gross domestic product than Non-IFRS adopters. It is also worth mentioning that the financial development of countries that adopted IFRS is higher than that of countries that did not adopt IFRS. Additionally, empirical data exhibits large variation across the sample.
Table 1. Descriptive Statistics of Empirical Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IFRS Adopters</td>
<td>Non-IFRS Adopters</td>
</tr>
<tr>
<td>GDP</td>
<td>3.113</td>
<td>4.992</td>
</tr>
<tr>
<td>FDI</td>
<td>9.895</td>
<td>8.764</td>
</tr>
<tr>
<td>LE</td>
<td>0.724</td>
<td>0.484</td>
</tr>
<tr>
<td>ENF</td>
<td>0.566</td>
<td>-0.53</td>
</tr>
<tr>
<td>PS</td>
<td>0.207</td>
<td>-0.571</td>
</tr>
<tr>
<td>TO</td>
<td>1.905</td>
<td>1.833</td>
</tr>
<tr>
<td>FINDEV</td>
<td>78.308</td>
<td>14.659</td>
</tr>
</tbody>
</table>

Notes: GDP is the gross domestic product growth rate for country i at time t. FDI is the logarithmic value of foreign direct investment for country i at time t. LE is the level of education for country i at time t. ENF measured by rule of law index created by the World Bank is the level of enforcement for country i at time t. PS is the political stability for country i at time t. TO is the trade openness for country i at time t. FINDEV is the financial development index for country i at time t measured by stock market capitalization to GDP (%).

Variance inflation factors (VIF) are used to detect multicollinearity that decreases the reliability and accuracy of empirical results. The higher VIF means that multicollinearity effects are present. Neter et al. (1983) stated that a problem of multicollinearity is present if the factor is greater than 10. All VIFs are lower than 3.00, implying that multicollinearity does not exist among research variables.

Table 2. Variance Inflation Factors

<table>
<thead>
<tr>
<th>Variable</th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADOPT</td>
<td>1.87</td>
<td>0.5346</td>
</tr>
<tr>
<td>FDI</td>
<td>1.51</td>
<td>0.6626</td>
</tr>
<tr>
<td>LE</td>
<td>2.25</td>
<td>0.4451</td>
</tr>
<tr>
<td>ENF</td>
<td>2.82</td>
<td>0.3540</td>
</tr>
<tr>
<td>PS</td>
<td>2.6</td>
<td>0.3841</td>
</tr>
<tr>
<td>TO</td>
<td>1.3</td>
<td>0.7694</td>
</tr>
<tr>
<td>FINDEV</td>
<td>2.01</td>
<td>0.4975</td>
</tr>
<tr>
<td>Mean VIF</td>
<td>2.05</td>
<td></td>
</tr>
</tbody>
</table>
3. THE RESULTS OF EMPIRICAL ANALYSIS

The results of unit root tests are presented in table 3. Levin, Lin & Chu test and ADF test are used to detect the presence of unit root in empirical variables. According to the results of Levin, Lin & Chu test and ADF test, the null hypothesis that unit root is present in time series is rejected.

Table 3. Unit Root Tests for Panel Data

<table>
<thead>
<tr>
<th>Variables</th>
<th>Levin, Lin &amp; Chu Test</th>
<th>ADF Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>-3.1879***</td>
<td>45.905***</td>
</tr>
<tr>
<td>FDI</td>
<td>-7.8405***</td>
<td>36.273***</td>
</tr>
<tr>
<td>LE</td>
<td>-18.025***</td>
<td>59.318***</td>
</tr>
<tr>
<td>ENF</td>
<td>-8.937***</td>
<td>77.154***</td>
</tr>
<tr>
<td>PS</td>
<td>-25.681***</td>
<td>94.486***</td>
</tr>
<tr>
<td>TO</td>
<td>-14.506***</td>
<td>68.057***</td>
</tr>
<tr>
<td>FINDEV</td>
<td>-33.618***</td>
<td>54.853***</td>
</tr>
</tbody>
</table>

Notes:
* Statistical significance at the 10% level
** Statistical significance at the 5% level.
*** Statistical significance at the 1% level.

In the table 4, the results of poolability test, Breusch-Pagan test and Hausman test are provided. According to the poolability test, F test, the null hypothesis that the panel data can be pooled is rejected. Breusch-Pagan LM test rejects the null hypothesis and supports the existence of random effect. Hausman test is run in order to decide between random effects model and fixed effects model. According to the result of Hausman test, the p-value is above 0.05 then it is safe to use random effects model.

Table 4. Diagnostic Tests

<table>
<thead>
<tr>
<th>Test Statistics</th>
<th>Value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poolability test</td>
<td>24.54</td>
<td>0.00</td>
</tr>
<tr>
<td>Breusch-Pagan LM test</td>
<td>8.35</td>
<td>0.01</td>
</tr>
<tr>
<td>Hausman test</td>
<td>34.54</td>
<td>0.78</td>
</tr>
</tbody>
</table>

In table 5, the results of panel data regression are provided. All variables used in the panel data are observed during the period 2005-2015. Panel data are
well suited for identification of effects which are undetectable in time series data (Oliveria et al., 2010). Panel data regression enables researchers to clarify the important questions which cannot be addressed by using cross sectional data sets (Hsiao, 2003).

As can be seen from Table 5, the coefficients on level of education, trade openness and the level of enforcement are positive and statistically significant.

The coefficients on adoption of IFRS, foreign direct investment, political stability and financial development are not statistically significant. Yet, these statistically non-significant variables in the panel data model can be regarded as prominent predictors at the aggregate level.

Prob > F statistics is used to test the overall significance of panel data regression model. The value of Prob > F indicates that the constructed panel data model is statistically significant. The result of Durbin-Watson test indicates that autocorrelation that makes regression coefficients inefficient does not exist. The R-squared of the constructed panel data model is 13.05%. It is worth noting that the R-squared in panel data models is generally low.

Most notably, it is found that the adoption of IFRS has played a pivotal role in the economic development of sample countries. This is a supportive argument that IFRS enhances economic efficiency, capital allocation and financial stability by helping policymakers to accurately identify opportunities and risks in the country economy. The empirical findings suggest that the policymakers of countries that have not yet adopted IFRS should take necessary actions toward the adoption of IFRS that will result in higher economic growth rate. This result confirms the findings of Daske et al. (2008), Okpala (2012), Zaidi and Huerta (2014) and Zehri and Abdelbaki (2013). The positive association between foreign direct investment and economic growth suggests that an increase in the volume of foreign direct investment attracted by sample countries accelerates economic growth. This finding is consistent with Borensztein et al. (1998), Hermes and Lensink (2010) and Iamsiraroj (2016). The positive coefficient on the level of education means that countries with a high level of education are likely to achieve better economic performance than countries with a low level of education, namely countries that suffer from low economic growth rate should take necessary actions to expand their human capital capacity. This result is parallel with the findings of Gylfason (2000) and Schultz (1992). The results of panel data regression analysis reveal that financial development is one
of the keys to economic development. The well-functioning financial markets significantly contribute to the economic growth in underdeveloped countries.

Considered altogether, findings from panel data regression yield empirical support for the research hypothesis that IFRS adoption leads to increase in economic growth of adopting countries and all variables included in the empirical model have massive impacts on the economic development of a country. Surely, factors that a country cannot directly manage also influence the economic development. The results of panel data regression seem to suggest that the international organizations such as World Bank, OECD, IMF, and European Union should encourage countries to adopt IFRS that sparks economic development.

Table 5. The Results of Panel Data Regression

\[ GDP_{it} = \alpha_0 + \alpha_1 ADOPT_{it} + \alpha_2 FDI_{it} + \alpha_3 LE_{it} + \alpha_4 TO_{it} + \alpha_5 ENF_{it} + \alpha_6 PS_{it} + \alpha_7 FINDEV_{it} \]

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Std.Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>5.481***</td>
<td>1.487</td>
</tr>
<tr>
<td>Adoption of IFRS</td>
<td>0.872</td>
<td>0.803</td>
</tr>
<tr>
<td>Foreign Direct Investment</td>
<td>1.062</td>
<td>0.972</td>
</tr>
<tr>
<td>Level of Education</td>
<td>5.136***</td>
<td>1.395</td>
</tr>
<tr>
<td>Trade Openness</td>
<td>2.548***</td>
<td>0.094</td>
</tr>
<tr>
<td>Level of Enforcement</td>
<td>3.482**</td>
<td>1.686</td>
</tr>
<tr>
<td>Political Stability</td>
<td>1.573</td>
<td>1.915</td>
</tr>
<tr>
<td>Financial Development</td>
<td>0.917</td>
<td>0.716</td>
</tr>
</tbody>
</table>

F test 21.74***
Prob>F 0.000
Adjusted R-squared 0.130
DW test: 2.145

Notes:
* Statistical significance at the 10% level
**Statistical significance at the 5% level.
*** Statistical significance at the 1% level.
CONCLUSION

Today, International Financial Reporting Standards have been adopted by more than one-hundred countries. International Financial Reporting Standards have massive impacts on the dynamics of the business environment. Although, the IFRS has drawbacks, IFRS adoption is a necessity of rapidly changing business environment. Undoubtedly, the reliability and quality of financial statements prepared by firms have been increased with the advent of International Financial Reporting Standards.

Using a sample of 41 IFRS adopters and 29 Non-IFRS adopters over a ten year period from 2005 to 2015, this paper aims to shed some lights on the impact of IFRS adoption on countries’ economic growth. It is hypothesized that IFRS adoption facilitates economic growth of adopting countries. To test this hypothesis, panel data model is estimated. The results of panel data regression reveal that IFRS adoption has significantly increased countries’ economic growth. Therefore, the research hypothesis is supported. Surely, the adoption of IFRS is not the sole factor affecting countries’ economic growth rate. Other factors such as education policy, human capital, geographical factors, and political structure influence the economic development rate.

This study has some policy implications on countries with low economic growth rate. In order to achieve sustainable economic growth, it is important to adopt IFRS, attract foreign direct investment, increase the level of education, sustain political stability, improve the rule of law, financial markets and integrate into the global economy.

Empirical findings reached by this paper extend the literature in accounting that examines the association between IFRS adoption and economic growth. Future studies could yield further evidences on impacts of IFRS adoption on countries’ economic growth. With more advanced statistical models and a greater number of factors that may influence countries’ economic growth, it is highly possible to establish a more accurate empirical model.

REFERENCES


