Enhancing Economic Sustainability: An Empirical Study in Banking and Finance Sector in Oman

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The present paper analyzes the relationships between economic sustainability and productivity, capitalization and profitability in banking and finance sector in the Sultanate of Oman. The data was collected from the annual reports of 35 banks and financial institutions listed on Muscat Securities Market for a period of five years from 2011 to 2015. The data was analyzed using panel data regression. The regression results show that there is a statistically significant effect of market capitalization and productivity on economic sustainability. Further, the R^2 value supports the significance of the regression model as dependable. Also, profitability does not have an impact on economic sustainability at 1% level. This means that the banks and finance institutions in Oman prefer to capitalize their profit.

Introduction

Private companies have different missions and objectives which are reflected in their strategies. Some of their major objectives are size, growth, profitability and recently sustainability/economic sustainability. There is a long debate as to which factor size, growth or profitability becomes the major source of increase in economic sustainability. Several studies have been done to conclude this debate. Traditionally, as far as growth is concerned, it is a very critical factor for the success of the companies. Moreover, it is also the source of evolution and development of a country's economy (Asimakopoulos *et al*., 2009). According to the modern debates, two factors have more importance as the source of evolution and development of a company, sector and a country's economy. These two factors are productivity and capitalization. Of course, these two factors are not new, but the issue is the importance of these with regard to the economic sustainability of the banking and finance sector.

Economic sustainability and profitability has been a subject of long controversial debate among the researchers. According to the classical theories in economic, accounting and finance, the main objective of the firm is to achieve profit. Recently, firms and society have made a lot of effort to move towards sustainable development. Sustainable means that firms

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will develop corporate strategies that include goals that go beyond just maximizing shareholders' interests and include social, environmental, educational in addition to economic goals. Attention is directed towards the demands of a wider group of stakeholders, since the firm's success depends on stakeholder's satisfaction (Lopez and Sheu, 2007).

Many previous studies have examined the association between economic sustainability and financial performance in terms of profitability, productivity and capitalization. Most of these studies have yielded mixed results. Some studies indicated a positive association, others a negative association, while several studies failed to find any correlation. A few studies have examined the association and effects of financial performance, productivity and capitalization on economic sustainability in the Middle East, particularly in the Sultanate of Oman.

In this study an attempt has been made to investigate and analyze the association and effects of profitability, productivity and capitalization on economic sustainability of Omani companies in finance and banking sector for the period 2011-2015. The study aims to get at the answer to the question: What is the effect of profitability, productivity and capitalization on economic sustainability of the Omani banking and finance sector? Economic sustainability is measured through the GDP of Omani finance and banking companies, profitability is measured by the Return on Assets (ROA), productivity is measured by the relationships between revenues and number of employees, while capitalization is measured by total market value of shares.

The study is structured as follows: it discusses the theoretical issues related to the main concepts of the study (economic sustainability, productivity, capitalization and profitability), followed by a review of the related literature and formulation of hypotheses. Subsequently, the model, data and methodology used in the study are discussed, followed by a discussion of the results. Finally, the conclusion is offered.

Literature Review

Empirical investigations of the link between sustainability and profitability through market capitalization and productivity have been relatively limited in Middle East countries, especially, the GCC region. Theoretically, the relationship between stock market development and economic sustainability and profitability has been a subject of controversy. Previous studies carried out have hardly come to a unanimous conclusion on the causal linkage between them. While some studies maintain that sustainability drives profitability, others are of the view that it stifles profitability.

Adam *et al*. (2010) examined the impact of sustainability on financial performance. They used the Dow Jones Sustainability US Index (DJSI US) during 2008-09. The result of the study indicates that sustainability contributed positively to shareholder value of the firm.

Perera *et al*. (2011) in their study tried to answer the question: Do sustainability practices influence the results of the company? The results revealed that sustainability did not make any significant changes in the profitability of the company.

Eccles *et al.* (2011) investigated the effect of corporate sustainability on organizational processes and performance in a sample of 180 US companies. The findings indicated that there is a positive relationship between sustainability and accounting profitability.

Nollman (2013) analyzed the relationship between sustainability initiatives and productivity. The study found a positive relationship between these variables.

Chen (2015) examined the association between sustainability and company performance. The study found a positive association between these two variables.

Dabo (2015) found that a positive relationship between market capitalization and economic growth is an indicator of economic sustainability.

Owusu (2016) examined the relationship between stock market evolution and sustainable economic growth in Nigeria. The results revealed that sustainability has a mixed effect on economic growth.

Muñoz *et al.* (2016) analyzed the impact of different aspects of sustainability (socioeconomic characteristics, environmentally respectful practices, and innovation) on profitability. They concluded that sustainability has positive effects on economic performance.

Nnaemeka *et al.* (2017) evaluated the effect of sustainability accounting on the financial performance of listed manufacturing firms in Nigeria for the period 2010-2014. The results showed that sustainability reporting has positive and significant effect on financial performance.

It becomes especially worthwhile to examine the productivity, market capitalization, profitability and economic sustainability in Oman since there is a huge interest in these concepts in this country. Thus, this study tries to examine the relationships between economic sustainability and productivity, capitalization and profitability in listed Omani banks and finance companies.

Formulation of Hypotheses

Productivity and Economic Sustainability

Economic sustainability has many relations and effects on many variables in the companies. It can raise benefits in the long run, namely, through improved relations with stakeholders and reduced cost of conflicts with them, reputation creation, value creation and productivity. In relation to productivity, many studies have demonstrated the relation between productivity and sustainability in general and economic sustainability in particular. Lourenço *et al.* (2012) explained that companies can increase the sustainability by enhancing the skills of their employees and human resources management system. Capper and Bauman (2013) stated that productivity is a mechanism to achieve sustainability through proper use of the resources.

According to Pekuri *et al.* (2011), productivity means "a relationship between output produced by a system and quantities of input factors utilized by the system to produce that output." OECD (2001, p. 11) defined productivity as "a ratio of volume measure of output to a volume measure of input use." Productivity is closely connected to the use and availability

of resources. Productivity will increase if the company properly uses the resources and vice versa. On the other hand, productivity is closely connected to the creation of value. High productivity is achieved when activities and resources in the process add value to the products or services produced by the company (Tangen, 2002).

Productivity is one of the most important issues in the Gulf Cooperation Council (GCC) countries because it is a vital indicator of the performance of their economic system. Also, productivity has a strong relation with sustainable development. Now, most of GCC countries, especially in the Sultanate of Oman, are trying to invest outside the oil and gas field. In Oman, up to mid-2014, there were 1,468 industrial projects with 4.2% growth rate. On the other hand, the amount of growth rate of the size of investment in the industrial sector amounted to 27%.

In the banking and finance sector, the total assets for all banks working in Oman were $66.99 bn at the end of 2016 with notable increases in the products of these banks. Also, Omani government gave the private sector more freedom as most of services were provided by this sector. This is because the Omani government depends on economic diversification principle since the collapse of oil and gas in 1986 and it encourages the establishment of new projects in all economic fields outside oil and gas sector (Rabobank Country Report Oman, 2016). In general, it is noted that the contribution of this sector to economic growth in Oman has increased.

Productivity in banking and finance sector relates to the various products such as accounts, drafts, exchange remittances, checks, traveler's checks, credit cards, debit cards, services for guarantees, various kinds of loans like housing loan, education loan, car loan and so on. In addition, in the Islamic banks, many other products should be considered in the measurement of productivity such as *Modarabah*, *Morabaha*, and *Musharakah*.

In this study, to avoid any practical problems, the productivity accounting model is used. This model was introduced by H S Davis in 1955, in a book, in which he presented a productivity index model. This model is dependent on the accounting information provided by accounting system which isolates all other external information such as price inflation. Therefore, the first hypothesis framed is:

H_1: High level of productivity will increase the level of economic sustainability.

Market Capitalization and Economic Sustainability

The capital market in any country is one of the major backbones of long-term economic growth and development. The market serves a range of users including different levels of government, corporate bodies, and individuals inside and outside the country. According to Khrawish *et al*. (2010), market capitalization is the total of market value of shares obtained by multiplying the price of the share by the number of shares outstanding.

Market capitalization and economic sustainability move together. Until the late 1980s, business leaders typically employed the term 'sustainability' to mean a company's ability to increase its revenues steadily in the long term. Recently, the concept of sustainability encompasses every dimension of the business environment, including the social, economic

and natural resource utilization by the company. This direction is appropriate with the idea of market capitalization in achieving the growth in the long term. Mittal (2014) pointed out that market capitalization enhances economic growth and growth of market value of shares.

Thus, an increase in the market share of a public limited liability company through the sales of its shares increases its capital base and encourages expansion leading to a higher level of growth, productivity and economic sustainability (Oluwatoyin and Gbadebo, 2009). Therefore, the second hypothesis framed is:

H_2: High level of market capitalization will increase the level of economic sustainability.

Profitability and Economic Sustainability

Adam *et al*. (2010) state that sustainability reputation should allow a firm to achieve above average profitability and increase shareholder wealth maximization. Economic sustainability efforts also serve to signal both the capital markets and consumer markets of the overall quality of a firm's products and services. As a result of this signaling hypothesis, not only consumers but the capital market's participants may be expected to pay a premium for the shares of high-sustainability firms.

There are a number of analyses that demonstrate how the implementation of more sustainable practices can improve profitability. Chen (2015, p. 41) analyzed the association between profitability and sustainability. He found that "the good GRI indicators were also more likely to perform well financially, particularly in terms of ROE."

Therefore, the third hypothesis framed is:

H_3: High level of profitability will increase the level of economic sustainability.

Data and Methodology

Sample Selection

The population of this study is the banking and finance sector in Oman. In this sector, there are 36 companies including 8 banks, 6 insurance companies, 6 finance companies, 12 investment companies, 3 fund companies and 1 real estate company. The study excluded 1 company because of insufficient data. Therefore, the final sample subjected to analysis during the period of study consists of 35 companies. In this study, all data was collected from annual reports of financial companies and banks in Oman for a period of five years from 2011 to 2015. This means the total number of observations in the study is 175. Also, some data was collected from Muscat Securities Market Report published in 2016 for the same period. This type of data was collected for the variables such as market capitalization, productivity and profitability, while the data related to sustainability was collected from World Development Indicators (2017).

Variables

There are three main independent variables in this study. The first one is market capitalization. This variable was measured as the total market value of shares for all companies in the sample.

Second variable is productivity which is measured by the relationship between revenues and number of employees, while the profitability was measured by ROA. All these three variables are independent variables, whereas economic sustainability which is measured by real GDP is the dependent variable. Table 1 presents the definition of variables used in this study.

Table 1: Variables' Definition

Variable	Abbreviation	Formula
Independent Variables		
Productivity	*P*	Total revenues/Number of employees
Market Capitalization	*MC*	Logarithm of total market value of shares
Profitability	*ROA*	Return on Assets
Dependent Variables		
Economic Sustainability	*ES*	Logarithm of Real GDP

Model Specification

This study examines the impact of three independent variables (productivity, capitalization and profitability) on economic sustainability. The study employs a regression model to be analyzed through pooled ordinary least squares method. The following equation was estimated:

$$ES_{it} = \alpha_0 + \beta_1 P_{it} + \beta_2 MC_{it} + \beta_3 ROA_{it} + \varepsilon_{it} \quad ...(1)$$

where

ES = Economic Sustainability
P = Productivity
MC = Market Capitalization
ROA = Return on Assets
α = Constant
β's = Beta Coefficients
ε = Error term
i = i^{th} firm
t = t^{th} period

The annual reports for the sample were checked and then the values of all variables were calculated for testing using the Statistical Package for the Social Sciences (SPSS) software.

Results and Discussion

Multicollinearity Test

It is very important to ensure that the independent variables in a regression analysis are not influenced by each other. Table 2 indicates that multicollinearity is not a problem, as the correlations between all independent variables are insignificant. Thus, the model is reliable.

Table 2: Correlation Matrix						
			MC	***ROA***	***P***	***S***
Spearman's rho	***MC***	Correlation Coefficient	1.000			
		Sig. (2-tailed)	–			
	ROA	Correlation Coefficient	–0.229	1.000		
		Sig. (2-tailed)	0.185	–		
	P	Correlation Coefficient	0.207	0.125	1.000	
		Sig. (2-tailed)	0.233	0.473	–	
	ES	Correlation Coefficient	0.588**	–0.123	0.214	1.000
		Sig. (2-tailed)	0.000	0.482	0.218	–
Note: ** Correlation is significant at 0.01 level (2-tailed).						

Regression Analysis

Regression analysis using the pooled ordinary least squares method is used to test the hypotheses. Table 3 shows the correlation coefficients between the dependent variable and independent variables.

Table 3: Correlations in the Model				
Sample	**Variables**	***MC***	***ROA***	***P***
Model 1	*ES*	0.588**	–0.123	0.214
Note: ** Correlation is significant at 0.01 level (2-tailed).				

It is observed from Table 3 that the correlation between the dependent variable *ES* and independent variable *MC* in the model is positive and significant at 0.01 level. On the other hand, the correlations between *ES* and *ROA* and *P* are insignificant at 0.01 level.

Table 4 shows that R^2 is 0.526, which implies that independent variables included in the model explain 52.6%. The computed coefficient of determination (R^2 = 0.526) shows that 52.60% of the total variation in the dependent variable (*ES*) is accounted for, by the explanatory variables, namely, *MC* while 47.40% of the total variation in the dependent variable is attributed to the influence of other factors not included in the regression model.

Table 4: Model Summary				
Model	***R***	***R²***	**Adjusted *R²***	**Std. Error of the Estimate**
1	0.725[a]	0.526	0.480	0.16694
Note: [a] Predictors: (Constant), *MC, ROA, P.*				

Table 5 presents the regression results. These results showed that *F*-ratio is 11.451 for the model which is significant at 0.01. The results of the model statistically support the significance of the regression model.

Table 5: Regression Results					
Model	**Sum of Squares**	**df**	**Mean Square**	***F*-Value**	**Sig.**
Regression	0.957	3	0.319	11.451	0.000b
Residual	0.864	31	0.028		
Total	**1.821**	**34**			

Note: Predictors: (Constant), *MC, ROA, P*; and Dependent Variable: *ES*.

It is observed from Table 6 that *MC* and *P* are significant variables in the regression model (Sig. < 0.01). Based on these results, the model supports hypotheses H_1 and H_2. This means that *ES* is influenced by market capitalization and productivity. High level of capitalization and productivity will increase the level of economic sustainability. Further, these results show that the banks and finance companies prefer to capitalize value of shares and increase their productivity, which in turn will enhance their economic sustainability and improve the contribution of banking and finance sector in Oman to the GDP. On the other hand, the results reveal that profitability is not compatible with economic sustainability in this sector and hence hypothesis H_3 is rejected. This is because the managers and investors in this sector believe that banks and finance companies should maintain a balance between dividends in the short term and invest their profit in the long term, which will enhance productivity and capitalization instead of distributing all profits to the shareholders, but this is very difficult for them.

Table 6: Coefficients of the Model			
Variables	***B***	***t*-Value**	**Sig.**
Constant	–1.270	–5.310	0.000
MC	0.248	5.624	0.000
ROA	0.192	0.545	0.590
P	0.128	2.878	0.007

Note: Dependent Variable: *S*.

The results reveal that efforts to enhance economic sustainability should be done by increasing productivity and capitalization. This means that Omani banks and finance companies should increase their investments in productivity and capitalization and reduce the dividends for stockholders.

The findings regarding profitability and economic sustainability are consistent with the results of Perera *et al*. (2011) and Owusu (2016). One of the interpretations for this result is that the investors in this sector prefer to consider the sustainability cost as an investment, which means that profit will be reduced in the short term.

Also, the results of the study are consistent with that of Dabo (2015) regarding the effect of market capitalization on economic sustainability. Muscat Securities Market (MSM) as an emerging market is trying to expand its stock markets in order to improve the ability to mobilize resources and efficiently allocate them in order to enhance economic growth.

Finally, the results of the study are also consistent with that of Nollman (2013) regarding the association between productivity and economic sustainability, as he suggested that increasing productivity will improve the level of economic sustainability.

Conclusion

In this study an attempt has been made to investigate and analyze the association and effects of profitability, productivity and capitalization on economic sustainability of Omani companies in finance and banking sector for the period 2011-2015.

One of the important findings of the study is that market capitalization and productivity have positive and significant effects on economic sustainability. This means that banks and finance companies tend to increase the productivity and capitalize the profit through market capitalization to increase economic sustainability. Banking and finance sector in Oman should introduce more investments in both productivity and capitalization because this will increase the contribution of this sector to GDP.

The results of the present study show that profitability does not have any effect on the economic sustainability in this sector for this sector believes that they should maintain a balance between dividends in the short term and invest their profit in the long term, but this is very difficult for them.

The present study contributes to the extant body of literature by providing additional evidence on the relationship between economic sustainability and productivity, capitalization and profitability from one country in the Middle East. The main recommendation of this study is that banking and finance sector in Oman should increase the productivity and market capitalization to increase their level of contribution to GDP.

Policy Implications: Several policy implications can be drawn from the results of the study. The banking and finance sector should enhance economic sustainability to increase the GDP. The study provides evidence to the investors and managers in this sector with regard to the studied variables' impact on the economic sustainability, so that they can analyze these variables and formulate the appropriate strategy for economic sustainability. Also, the policy makers in this sector should think carefully about the role of this sector in the Omani economy and this is can be done by increasing the contribution of this sector in productivity and market capitalization to make the economy more diversified instead of focusing only on the oil economy. Finally, the decision makers in MSM should provide a sustainability index for all companies listed in this sector and other sectors as well.

Limitations and Scope for Future Studies: Like other studies the present study is also not free from limitations. First, the study used mixed sources of data. Some data were collected from annual reports of the sample (accounting data), while others were collected from MSM database (market data) and economic reports (economic data). Second, the period of study is only five years from 2011 to 2015 because reports of only these years were available on the websites of these companies and MSM. Therefore, further research testing other variables in the other sectors in Oman and GCC countries needs to be done. Another area of further research is

exploring the possible reasons explaining the differences between sectors concerning the economic sustainability. Finally, economic sustainability is measured by using GDP despite the presence of several other indicators that can be used. ■

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