

# Competition in the Banking Industry, Market Power and Islamic Banking Performance: Evidence from MENA Countries

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This study aims to test market power theories and their role in explaining the performance of Islamic banks in the Middle East and North Africa MENA countries, based on data from 47 Islamic banks for the period 2017–18 by using standard forms. The study revealed that market power theories were unable to explain the returns of MENA Islamic banks. Therefore, these results deny the effect of either monopoly in the Islamic banking sector structure or traditional efficiency on this sector's performance. This sector is characterised by high competitiveness and market share dispersion. The future research should investigate the role of economic efficiency theories in explaining the returns of Islamic banking industry in the MENA.

**Key words:** *Competitiveness, Islamic banking, market power, Middle East and North Africa MENA countries.*

## Introduction

The Islamic finance and banking industry is modern and growing rapidly because it features many aspects of security and risk-reduction. The industry is expected to witness major developments, particularly concerning improving service quality and innovating new products to reach a broader customer base.

Due to the widespread nature of the Islamic banks and the big increase in the financial magnitude of their assets, which reached US\$2.5 trillion, with a growth rate of more than 92 per cent and rate of returns exceeding those achieved in traditional banks, we asked about the structure of the Islamic banking sector, and its relationship with the profitability of this sector. We also tried to ascertain the extent of market power effect in achieving these returns – in other words, do the returns achieved by the Islamic banking sector result from the



efficiency of Islamic banks and their ability to provide alternative and innovative products to meet the requirements of customers, or are they caused by the monopoly of this industry?

There are many competing theories attempting to explain the returns of banks; some of them believe that banks achieve their returns due to their concentration and monopoly of banking, thus determining non-competitive prices to raise interest rates on loans, and reduce rates on deposits, contributing to the high savings.

Another assumption is that banks' returns are due to their efficiency – the traditional efficiency hypothesis. The quality of banking services and early market entry give banks the advantage of obtaining a high market share that enables them to achieve high profits. While other assumptions have deeper analysis, they search for the role of cost and profit efficiencies in explaining bank returns (Hamdan, 2014).

Because the Islamic banking sector is considered to be the largest and most developed banking sector in the Middle East, it is necessary to study and analyse the structure of this market and its efficiency, which contributes to understanding it, and thus provides market organisers with information upon which decisions are made to support and develop this market on a clear scientific and methodological basis. We can determine the problem of the study by asking the following question: Is there an impact of market power variables (concentration or market share) in explaining the returns of Gulf Islamic banks?

This study aims to fill a research gap by explaining the increasing returns of the Islamic banking sector. We need to look critically into these returns by understanding the structure of banking market that led to them, so that these returns will not be a bubble that ends with the end of economic and financial boom. Also, real financial and service economy can be established which contributes to develop the Islamic banking and finance industry.

The significance of the study comes from the importance of its issue. Identifying the effects of market power and efficiency structure on the performance of Islamic banks will lead to recognize the performance levels and behaviours of Islamic banks in the Gulf countries, as well as their ability to withstand global competition. Consequently, this study will contribute to show the state of these banks in each country and whether the market power or efficiency can explain separately the returns of Islamic banks. This contributes to inform the banking administration and supervisory authorities about the situations of these banks, and then take the necessary actions to support the stability of these banks and consolidate their presence in the economy.

This study is organised in six parts: The first part includes the introduction, the research problem and its basic issues. The second part includes the theoretical framework of the

research study and hypothesis construction. The third part addresses the methodology of the study by showing the study population and its standard model, and measuring its variables. The fourth part aims to test the hypotheses of the study. Finally, the researcher summarises the conclusions of the study with suggestions for recommendations and issues for future studies.

### **Literature review and hypothesis construction**

Many economic theories compete to explain the structure of the banking market and its relationship to banking performance; the structure-conduct-performance and the traditional efficiency hypotheses are among the most common theories in economic literature. The first hypothesis explains the performance of banks as a result of monopoly and concentration of a limited number of banks in the banking market, while the second explains these returns as a result of effective management of these banks.

#### ***Definition of banking market structure***

The structure of the banking market is the distribution of banks in the banking system according to number, location and size. This gives rise to an argument that the structure of the market determines the competition degree in the market. It also gives rise to the argument that competition degree affects institutional performance in terms of service provided, quantity and efficiency (Amayreh, 2005: 50).

Traditional models explaining the performance of organisations indicate that monopolies have the market power to reduce the competition faced through a conglomerate of leading companies that allows them to determine prices, exceed marginal costs and thereby achieve high rates of profit. The common perception of the positive performance in banking industry is based on two criteria. The first criterion is related to the concentration of a limited number of banks (oligopoly), which caused alliances and dominance in the banking industry, and imposes non-competitive prices, leading to high levels of performance. The second is related to the efficiency of banks in reducing cost and profit inefficient levels by reducing costs and maximising profits, as well as diversifying banking services and processes. This helps banks to obtain a higher market share, which contributes to high performance rates (Alkour & Al-Fayoumi, 2007: 254).

#### ***Structure-conduct-performance hypothesis***

Bain (1951) notes in relation to the SCP hypothesis that, because of low competition due to alliances or monopolies, more concentrated markets lead to determining inappropriate pricing for consumers (for example, in the banking industry, there are high rates of interest on loans

and low interest rates on deposits compared with other competitive environments). This is known as concentration in the banking industry, and it contributes to high profits. According to this hypothesis, there are a few monopolistic companies that lead the remaining companies to set the highest prices and reduce costs, therefore achieving the highest profit levels at the expense of consumers (Al-Zu bi & Balloul, 2005; Chitra & Anu, 2018).

In the structure-conduct-performance (SCP) theory, structure refers to the characteristics of the banking market structure in terms of the number of banks, their concentration and their contribution to the market. Conduct refers to the banks' behaviour, which depends on each of the economic characteristics: the bank's management of costs, the trade-off between returns and risk, the efficiency of size, the efficiency of debts and obligations. Performance refers to the level of performance that is affected by both the structure of the banking market and the efficiency of management. Here, the bank's costs and profits must be compared with marginal costs and profits (Amayreh, 2005: 50).

The concentration of banks – along with other competition obstacles – creates an environment that affects the behaviour of banks and their performance in inappropriate ways from the perspective of society. This causes a social cost coupled with mispricing of banking services, resulting from banks' practice of their market power, which arises from increasing concentration levels according to the SCP hypothesis (Cor, 2011: 400). In other words, the banks' profits are caused by them joining together and establishing a monopoly over the banking market as they set high interest rates on loans and low interest rates on deposits, enabling them to achieve high savings. Bain (1951) theorises that the major benefits are caused by market concentration as the concentrated industry organisations are allied with each other in a way that avoids the destructive competition of prices and generates high returns (Alkour & Al-Fayoumi, 2007). The first hypothesis of the study can therefore be constructed as follows:

H1: There is a statistically significant effect of the market concentration on the performance of MENA Islamic banks.

### ***The Traditional Efficiency Hypothesis***

This hypothesis was presented by Demsetz (1973) and assumed that differences in organisations' efficiency and dispersion within the market create inequalities in market share. Higher levels of efficiency are associated with larger market share for a limited number of banks. This leads to higher levels of performance, and thus a positive relationship between market share and profit (Alkour, 2011: 24). This hypothesis suggests that more efficient companies can achieve a growth in their size and market share, thus increasing their ability to

generate high profits through focusing market share in a limited number of banks (Al-Zu'bi & Balloul, 2005).

In other words, the most efficient organisations generate higher profitability. Differences in the efficiency and dispersion of organisations within markets create inequalities in market share, so achieving a higher level of efficiency causes larger market shares for a limited number of banks, which in turn leads to a positive correlation between concentration and profit (Alkour & Al-Fayoumi, 2007). This is contrary to the SCP hypothesis, which assumes that monopoly in the banking industry contributes to achieve high profits for monopolies. Consequently, the second hypothesis of the study can be constructed as follows:

H2: The market share has a statistically significant effect on the performance of MENA Islamic Banks.

The first sub-hypothesis tests the effect of the market concentration of assets on the performance of Islamic banks in the Gulf according to the SCP model, while the second sub-hypothesis tests the effect of the market share of deposits on the performance of Islamic banks in the Gulf according to the traditional efficiency hypothesis.

### ***Previous studies and this study contribution***

The empirical studies on the market power and its relation to performance resonate with academics, professionals and those interested in the banking industry. These studies have yielded varying results; some of them assured the effect of concentration on banks' performance, while others assured the effect of market share on this performance. The results have varied in the same economic setting owing to the different methodologies used, and the time series and sample used, as well as the structure of the banking market in each country according to its other economic and social conditions. Al-Kur (2008) aimed to estimate inefficiency points not only in Jordanian commercial banks, but also in Islamic banks for the period 1993–2006. The results showed that there were severe deviations from the optimal efficiency and low levels of cost and profit efficiencies (standard and alternative). The results suggested that although Islamic banks enjoyed high levels of profit efficiency, they were far from enjoying the optimal cost efficiency. Hamdan and Attiyat's (2015) study aimed to compare the structure of the Islamic banking market and that of the conventional banking market in the Gulf Corporation Council (GCC) countries. The market power hypothesis included the SCP hypothesis and the traditional efficiency hypothesis.

Generally, the results of the analysis showed that Islamic banks in some countries are concentrated, but the advanced analysis of the relationship between concentration and performance has shown that traditional banks are those that benefit from their concentration

in achieving high returns. In general, Islamic banks have not used market concentration to impose non-competitive prices. The concentration of Islamic banks may be explained in view of the modernity of the Islamic banking market, compared with traditional markets, or in the light of their early entry into the market and occupying high market shares due to attracting a specific category of depositors and investors.

Hamdan et al. (2014) investigated the relationship between the structure of banking market and the profitability of banks in Bahrain and Kuwait. The study sample included 23 local banks in the period 2005–10. In general, the analysis results assured the effect of concentration according to the SCP hypothesis as an explanation of the relationship between the market structure and the profitability of Bahraini banks; however, these results did not assure the SCP hypothesis in the Kuwaiti banking market. Thus the hypothesis of alliance between the most concentrated banks was excluded and the traditional efficiency hypothesis in the Kuwaiti banking market was not confirmed.

Hamdan (2013) examined the structure of the banking sector in the UAE and the factors influencing its returns in terms of competition, monopoly and efficiency levels. The study sample included about 99 per cent of UAE banks (23 banks) for the period 2007–12. It found empirical evidence of the absence of the banking monopoly hypothesis in the UAE banking market, and indicated that it operated under full competition conditions. The results found other evidence confirmed that UAE banks were characterised by cost and standard profit efficiencies, which explains this sector's returns; this assured the absence of banking monopoly conditions in the UAE. The returns of the banking sector are explained through the structure of efficiency rather than the power of the market. The main recommendation of this study was to maintain the extant balance in the banking market in order to prevent concentration and monopoly by encouraging free market entry to encourage and support competition, enact legislation to limit the monopolistic practices, to stimulate and incite the management in national banks, and to take the necessary measures to reduce levels of inefficiency and to highlight efficiency as an important administrative requirement which contributes to eliminate inefficiencies in banking.

Recently, Al-Kur (2011) conducted a study on a sample of 14 Jordanian commercial banks, for the period 1993–2006, to test the effect of concentration according to the SCP hypothesis and the effect of deposits' market share (MS) according to the traditional efficiency hypothesis. The study was unable to show any effect of these two variables on the performance of Jordanian banks. This indicates that other factors have an effect on the concentration of Jordanian banks; these include social and political factors, as well as early market access, which helps a few banks to have high market share. As a result of the legislation strengthening competition in the Jordanian banking market, there were no

alliances between the most concentrated banks exercising the influence of market power over input and output prices within the Jordanian banking industry.

Al-Jarrah (2010a) conducted a study that aimed to test the relationship between the structure of the market and the profitability of Jordanian banks for the period 2001–05. The study results supported the hypothesis of the SCP hypothesis as an explanation of the relationship between market structure and profitability, while they supported the traditional efficiency hypothesis to a small extent. Moreover, Al-Jarrah's (2019b) study investigated competitiveness in the Jordanian banking sector. The study showed that the Jordanian banking market cannot be described as fully competitive or fully monopolised. In other words, Jordanian banks operate under conditions of monopolistic competition, thus earning their profits under circumstances similar to these conditions. The study also confirmed that large banks work in conditions that are more competitive than those of smaller banks. Mashharawi and Al-Zu'bi (2009) examined the determinants of the profitability of Jordanian banks for the period 1992–2006 and found that the concentration ratio – a traditional efficiency indicator – had an impact on banks' returns within this period.

On the other side, the results of Alkour and Al-Fayoumi's (2007) study, which was conducted on Jordanian banks for the period 1993–2004, were in favour of competition and did not support the SCP hypothesis. The Jordanian banks were considered the most concentrated away from non-competitive practices. The results added that Jordanian banks have high levels of efficiency, so concentration is not a random event, but rather is a result of the efficiency of banks, in addition to the role of laws and regulations which have enhanced and raised competition levels, and reduced the impact of market power on prices in the Jordanian banking industry.

In conformity with the results of Al-Kour's study (2011), the two hypotheses of market structure and efficiency level failed to explain the performance of Jordanian banks according to Al-Zu'bi & Balloul (2005), whereas Al-Fayoumi & Awad's (2003) study showed a relationship between the concentration and the performance of Jordanian banks during the study period from 1993 to 1999. This study measured concentration through market concentration on the assets of the three largest banks. Performance was measured through the returns on equity. The study model was supported by a set of control variables; one of these variables is the size of the bank, which was found to be one of the largest controlling variables affecting the yield of Jordanian banks. As can be seen from the previous discussion, the test of market power and efficiency impact has caused considerable debate. In the same environment, the results of studies were varied in supporting the impact of concentration or market share on the performance of banks. there is a fact that the variable of market share may also indicate to the power of the market (Shepherd, 1986), which assumes that performance is explained through efficiency, in addition to the residual impact of the market

share. It is therefore inappropriate to use the market share variable as an efficiency indicator without conceptualisation of direct efficiency concepts within the relationship models with banks' performance (Alkour 2006: 25).

Hamdan and Al-Ansawa's (2012) study examined the relationship between market structure and Saudi banks' profitability, applying to all local banks for the period 2005–10. The results supported the efficiency hypothesis as an explanation of the relationship between market structure and profitability. Saudi banks are also far from non-competitive practices. Efficiency is the main reason for their concentration and for their gain of high market share. The main recommendation of this study was for decision-makers in the Saudi banking system to expand liberalisation of the market in order to reduce concentration and enhance market competitiveness. In accordance with previous results, the study of Al-Khathlan and Abdul Malik (2010) showed that Saudi banks are efficient in managing their financial resources.

Abdulkader and Nourredine (1999) examined the impact of business risk, concentration, bank size and market share on the performance of Saudi banks, finding that business risk and bank size were the main factors determining the profitability of Saudi banks. In a comparative study of several Arab countries – Jordan, Saudi Arabia, Egypt and Bahrain – Al-Jarrah and Molyneux (2007) showed that the estimated efficiency average of cost was 95 per cent for the period 1992–2000 and the efficiency averages of standard and alternative profits were 66 per cent and 58 per cent respectively. The study showed that large banks are more efficient at cost and profit than small banks. The results also showed that Islamic banks are the highest of investment banks in terms of cost and profit efficiency. Banks working in Bahrain are more efficient than banks working in Jordan.

The market power resulting from concentration affects the bank's price and non-price competition. The higher the concentration in the US banking market, the higher the prices of banking services provided by the bank and the lower the quality of these services (Heggstad & Mingo, 1976). This concentration in the banking industry contributes to high returns for monopolised banks, which can be constrained by government ownership of banks (Short, 1979). However, this idea – a direct relationship between monopoly and return – has been dismissed by Smirlock (1985), who showed that high returns are realised by the high market share of the most efficient banks.

In Europe, Molyneux and Forbes (1995) supported the SCP hypothesis, showing that the concentration of European monopolised banks leads to high returns. In Pakistan, the banking market is characterised by concentration and monopoly by a few of the leading banks, which have owned the market and set prices to achieve the highest returns. The relationship between concentration and profitability is therefore positive, while it is negative between competition and profitability (Bhatti & Hussain, 2010).

## **Methodology of the study**

### ***Sampling and time series***

The study sample consisted of 47 selected Islamic banks from MENA countries. The time series included two years for the period 2017–18.

### ***Standard models of the study***

The performance of Islamic banks was mentioned as a concentration and market share function. A set of control variables was added to adjust the relationship between the independent and dependent variables, according to the following model:

$$Perf_{i,t} = \beta_0 + \beta_1 Conc_{i,t} + \beta_2 MS_{i,t} + \sum_{k=1}^n \beta_k Z_{itk} + \varepsilon_{i,t} \dots (1)$$

$Perf_{i,t}$  :Islamic bank's performance (i) in a year (t) .

$\beta_0$ : Constant value

$\beta_1, 2, k$  :Slope Market structure variables and control variables

$Conc_{i,t}$  : Bank's market concentration (i) in a year (t).

$MS_{i,t}$ : Bank's market share (i) in a year (t).

$Z_{it}$ : A series of control variables related to the characteristics of the bank, expected to have an impact on performance: facilities-to-assets ratio, shareholders' equity-to-asset ratio, bank's size and cost-to-income ratio.

$\varepsilon_{i,t}$ : Random error

### ***Measurement of study variables***

This study employs three basic variables to test its models. The dependent variable is the performance of banks; the independent variables are the concentration of different measures and market share; and the control variables are the determinants of the performance of banks, which is expected to have an impact on the performance of banks and contribute to the relationship between the dependent and independent variables and reduce the random error in the study model in order to reach a better representation of the relationship between performance and the Islamic banking market structure.

### ***Performance of Islamic Banks***

This variable was measured using the indicator of return on assets ROA. This indicator measures the management's effectiveness in using available resources and its ability to generate returns from various available sources. This indicator therefore reflects the impact of operating and financing activities in the company (Alkour, 2011).

### *Market Concentration*

In this study, the Herfindal-Hirshman Index (HHI) was used to measure the concentration of the market, which is calculated by the sum of the squares of the market shares of the assets of all banks according to the equation number (3) in which MS is the market share of assets of each bank.

$$HHI = \sum_{i=1}^n (MS_i)^2 \dots (3)$$

### *Market share*

This reflects the market share of deposits of each bank. It is calculated by dividing the deposits (credit facilities) of each bank on the total deposits of the banking sector. This indicator will be used to measure the traditional efficiency hypothesis according to equation (4).

### *Bank size (millions of dollars)*

This is measured by the natural logarithm of total assets. It is used to indicate the extent to which the bank achieves savings resulting from increasing its size and cutting costs.

### *Facilities-to-assets ratio*

This is measured by dividing the bank's credit facilities on total assets. This variable is used to measure the liquidity risk of the bank. The high rate of this variable is an indication of the bank's excessive lending, and consequent liquidity deficit. A decline in this indicator means excess liquidity (Mustafa, 2002).

### *Gross Domestic Product growth (GDP)*

The growth rate of GDP for each country and each year has been listed due to the popular belief that economic growth can have a significant impact on the banking sector's returns.

### *Market Value to Gross Domestic Product*

This ratio measures the extent of the financial market's contribution to GDP. It has been selected as one of the controlling variables because the increased financial market activity will lead to growing banking sector activity and affect it directly or indirectly. This variable data was collected from the world bank database.

### *Credit to GDP Ratio*

This ratio measures the extent of increased banking activity in the country and its contribution to GDP, which is one of the important control variables that distinguish one bank from another, one country from another and one year from another. This variable data was collected from the World Bank database.

### *Country*

The state has been listed as a control variable, whereas different economic conditions and other factors can have an impact on the relationship between the banking market structure and performance. Phantom variables were used to express this variable, given the number 1 for the variables of a given country and zero for otherwise.

### **Descriptive Statistics**

Table 1 shows the descriptive statistics of performance and market power indicators of the sample (concentration and market share). The average of return on assets of all Islamic banks in the sample countries was 4.51 per cent, while the concentration index was 3.1 per cent and the market share of Islamic banks was 5.1 per cent. So do these indicators differ from one country to another? To verify this, we used the parametric and non parametric tests of variances analysis.

**Table 1:** Descriptive statistics

| Variables                              | Mean      | SD        | One-way ANOVA |       | Kruskal-Wallis   |       |
|--|-----------|-----------|---------------|-------|------------------|-------|
|  |           |           | F-test        | Sig.  | Chi <sup>2</sup> | Sig.  |
| Islamic banking performance            | 0.045     | 0.062     | 6.244         | 0.000 | 7.845            | 0.000 |
| Concentration                          | 0.031     | 0.052     | 8.501         | 0.000 | 5.222            | 0.000 |
| Market share                           | 0.051     | 0.088     | 5.987         | 0.000 | 4.116            | 0.000 |
| <b><i>Control variables</i></b>        |           |           |               |       |                  |       |
| Bank size (USD \$ millions)            | 1,355,346 | 2,033,019 |               |       |                  |       |
| Facilities-to-assets ratio             | 0.875     | 2.010     |               |       |                  |       |
| GDP                                    | 0.045     | 0.041     |               |       |                  |       |
| Market value to gross domestic Product | 0.942     | 0.621     |               |       |                  |       |
| Credit to GDP ratio                    | 0.526     | 0.112     |               |       |                  |       |

Table 1 shows that there is a difference in the return of assets among the sample of MENA countries as an indicator of the performance of Islamic banks. This difference was statistically significant according to parametric and non-parametric tests. Regarding to the bank's concentration indicator, there is a difference in the Islamic bank's concentration ratio

in the sample of MENA countries; these differences were statistically significant by both the parametric test (F-test) and the non-parametric one Chi-square test. According to the second indicator of market power, which is the market share of Islamic banks; these differences were statistically significant according to both the parametric and the non-parametric tests.

## Testing of hypotheses

### *Selecting the Appropriate Method for Analysis and Testing the Validity of the Model*

The panel data model was used to test the relationship between market power and the performance of the Islamic banking industry. When time series and cross-section data are mixed, we collect the longitudinal data, which give more information with more variance, less correlation between variables, a greater degree of freedom and more efficiency (Gujarat, 2015).

The panel regression models are divided into the firm fixed-effect approach (FE) and the random-effect approach (RE). The distinction between the two previous methods depends on the result of the Hausman test; the null hypothesis shows that the capabilities of fixed effect and random effect models are no different. If the null hypothesis is rejected, it is evidence that the random model effect is inappropriate, and it is better to use the fixed effect model. The probability of Hausman chi-square test (Table 2) is not statistically significant, which means the capabilities of the random effects model (RE) are the best to represent the relationship. Thus, the results of the tests show that the Durbin Watson statistic of the two models is within the appropriate range of this test (1.5–2.5).

**Table 2:** Study results

| Variables                              | VIF   | Firm fixed-effect FE |       | Random-effect RE |       |
|--|-------|----------------------|-------|------------------|-------|
|  |       | t-test               | Sig.  | t-test           | Sig.  |
| Constant                               |       | -3.482               | 0.006 | -3.181           | 0.011 |
| Market power:                          |       |                      |       |                  |       |
| Concentration                          | 2.391 | -0.205               | 1.017 | 0.339            | 0.913 |
| Market share                           | 1.786 | -0.328               | 0.848 | -1.057           | 0.377 |
| <b>Control variables:</b>              |       |                      |       |                  |       |
| Bank size                              | 1.772 | 3.470                | 0.007 | 3.487            | 0.006 |
| Facilities-to-assets ratio             | 1.741 | 2.906                | 0.016 | 6.154            | 0.000 |
| GDP                                    | 3.493 | 1.540                | 0.191 | 1.480            | 0.206 |
| Market value to Gross Domestic Product | 3.324 | 3.043                | 0.009 | 1.777            | 0.121 |
| Credit to GDP ratio                    | 2.660 | 1.083                | 0.711 | 0.638            | 1.008 |
| F-statistic                            |       | 1.985                |       | 8.881            |       |
| Sig. (F)                               |       | 0.341                |       | 0                |       |
| Hausman test (Chi2)                    | 10.05 |                      |       |                  |       |
| Sig. (Chi2)                            | 0.188 |                      |       |                  |       |
| Durbin-Watson test                     |       | 3.853                |       | 2.300            |       |

Econometricians are reassured by their results when the calculated Durbin Watson value is close to 2, so they consider that the problem of autocorrelation is not acute; there is no indication of any autocorrelation. The power calculation for the general linear model GLM is based primarily on the assumption of independence of each independent variable. If this requirement is not met, the general linear model is unworkable and cannot be considered good for the parameter estimation process (Sevo et al., 2003). To achieve this, collinearity diagnostics are used to calculate the tolerance coefficient for each independent variable. Thus, the variance inflation factor (VIF) is found; it is considered a measure of the correlation effect among the independent variables. When the VIF value is greater than 5, a linear multiplicity problem of the independent variable concerned is indicated.

Therefore, the VIF results shown in Table 2 confirm that the general model of the study is valid and free of multicollinearity. The constant value of this model has a statistical significance of  $\alpha = 0.01$  in both the random and the fixed effect models. On the other hand, the Fisher test indicated that the random effect model was better than the fixed model to represent the relationship. All these indicators support the Hausmann test, which indicates that the random effects model is the best one to represent the relationship.

### ***Testing the Impact of Market Power on the Performance of the Islamic Banking Industry***

Based on the method of random effects in testing the hypotheses of the study (Table 2), we couldn't prove the impact of market power on the Islamic banking industry's performance in the MENA countries. The variables of market concentration and market share were not statistically significant in the study model; therefore, the first and second hypotheses are rejected. The theory of market power has not been able to explain the returns of Islamic banks in the MENA. These returns were not the result of either monopoly in providing Islamic banking services or acquiring a high market share.

It is noted that the control variables had an effect on the performance of Islamic banks in the MENA, including the size of the bank, which had a direct and statistically significant impact on the performance of the Islamic banking industry, as well as the facilities-to-assets ratio. GDP growth and other control variables did not have an impact on the returns of MENA Islamic banks.

### **Conclusions, Practical Applications of Results and Future Studies**

The Islamic banking industry has witnessed rapid growth in recent years. Its revenues and total assets have increased due to the high demand for Islamic financial services, especially after the resistance of Islamic banks to specific crises which were experienced by traditional banks. This is why we investigated the structure of this industry to discover the real reasons



for these returns. We have employed the SPC theory to define the returns of a particular industry and its relevance to monopoly or traditional efficiency that lead to a high market share and to examine how these variables affect the performance of this industry.

The study has constructed its standard model to examine the impact of market power on the performance of Islamic banks applying to four MENA countries, as we targeted all the Islamic banks listed in the financial markets of these countries (47 banks).

By applying a set of descriptive and practical standards, the study showed many results, including the difference in the extent of Islamic banks' concentration or monopoly among the sample countries. The most important result of this study is the inability of market power variables to explain the returns of Islamic banks in the MENA. These are positive results, which deny the claims that Islamic banks use monopolies to obtain their returns. They also refute that traditional efficiency is the prime mover of these returns, such as early market entry or otherwise.

The practical applications the results of this study lie in providing a guide for the banking system organisers in the MENA countries to achieve banking policy success in preventing monopoly in the banking market generally. It also contributes to enriching the Islamic banking literature and showing the structure of Islamic banking in an effort to propose the best ways forward.

Despite the importance of the results of this study, they must be disseminated to all Islamic banks with caution. These determinants open the way to further studies to confirm or reverse the results of this study by expanding the study sample to include the rest of the other Islamic countries. The failure of market power to explain the returns of the Islamic banking industry in the MENA countries invites us to investigate the advanced theories that explain the returns, most importantly the structure of economic efficiency, which includes cost efficiency and profit efficiency, and their impact on performance.



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