Determinants of Profitability in Tourism Industry: Evidence from Turkey

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ABSTRACT

Tourism industry has become one of the key and main sectors in Turkish economic improvement in the last years. The strong bilateral relationship between the economy and tourism has led Turkey to achieve a remarkable rank of 6th in the world Tourism Organization Statistics. This research investigated the effect of internal, external and macroeconomic factors on the profitability of tourism industry considering the five large Turkish tourist companies from 1998 to 2011. With respect to the results of the regression analysis, it is concluded that the internal factors are more related to profitability than the other variables. In this case, capital adequacy (equity over the total asset ratio) and logarithm of size have a significant impact on ROAA (Return on Average Asset) and ROAE (Return on Average Equity), which appear as the indicators of profitability. It can be said that the profitability and financial performance of tourism industry is not affected significantly by the macroeconomic factors.

Keywords: Profitability, Financial Performance, Tourism Industry, internal factors

ÖZ

Turizm endüstrisi son yıllarda Türk ekonomik gelişiminde en önemli ve ana sektörlerden birisi haline gelmiştir. Ekonomi ve turizm arasındaki güçlü iki yönlü ilişki Türkiye'nin Turizm Organizasyon İstatistikleri'nde dikkate değer 6. Sıraya ulaşmasının yolunu açmıştır. Bu araştırma 1998 yılından 2011 yılına kadar 5 büyük Türk turist firmasını dikkate alarak turizm endüstrisindeki karlılık üzerine iç, dış ve makroekonomik etkenlerin etkisini araştırmıştır Regresyon analizi sonuçlarına göre iç etkenlerin karlılıkla diğer değişkenlere göre daha ilişkili olduğu söylenebilir. Bu durumda sermaye yeterliliği (tam değer oranı üzerine eşitlik) ve ölçü logaritması ROAA (ortalama değere dönüş) ve ROAE (ortalama eşitliğe dönüş) üzerinde önemli bir etkiye sahiptir ki bu da karlılığın belirtisi olarak ortaya çıkmaktadır. Denilebilir ki turizm endüstrisinin karlılık ve finansal performansı makroekonomik etkenler tarafından önemli ölçüde etkilenmemektedir.

Dedicated to my family

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LIST OF ABBREVIATIONS

GDP	Gross Domestic Product
ROAA	Return on Average Assets
ROAE	Return on Average Equity
EQTA	Equity over Total Assets ratio
OER	Cost-Income Ratio
LSIZE	Logarithm of firm's Total Assets
ETR	Effective Tax Rate
GROWTH	Real GDP Growth
OLS	Ordinary Least Square
E-views	Econometric views
SPSS	Statistical Package for Social Sciences

Chapter 1

INTRODUCTION

Business and Industry always try to get positive gain or profit by subtracting all their expenses. But the ability to generate the profit is the most important point of an enterprise's survival. The combination of the two words, profit and ability, formed the word profitability. The term ability shows the financial and operational power of a business to earn profits, and it is called the earning performance. The profit figure reports the amount of earning and the efficiency of a business during a special period, but it cannot bring us an exact idea of the change in the performance of the enterprise alone. So, profitability differs from the profit. It is a measurement in terms of the return on the asset, but it is not measured in terms of money. Actually, profitability cites to the business ability, to grow in the future and obtain additional profit. Also, it is a far better tool that can make it easy and straightforward to choose between the possible actions.

Profitability is influenced by many factors that are classified in three main parts: enterprise-specific or internal factors (i.e. operational efficiency, enterprise size and age, capital ratio), industry-specific or external factors (i.e. ownership and concentration), and macroeconomic (i.e. inflation and cyclical output). Also, pricing, offering discount and commission on product and services and tax rate lead to change in profit. In addition, enterprise can be distinguished with respect to its process innovation, growth of loans and funding costs. Other factors that can impact

on profitability are time-varying, leverage ratio, financial risk, business model, lagged profit and economic environment.

In terms of relative importance, lagged profit, size, operational efficiency, discount and commission, price, growth of total loans and funding costs has the largest effect on profitability. Also capital ratio, loan-loss provisions and expense control might be the principal factors for incrementing the profitability.

Although the market pressures in today's economy have significant impact on the profitability of most business and industry, a large number of institutions act as the financial mediator and have an important effect on the operation of an economy. Also, most of enterprises' international operations help to integrate the world economy and to improve the efficiency. In addition, without profitability, businesses cannot be survived for a long period. So, it can be said that profitability is the most important factor to be considered in directing a business. But enterprises are subject to limitations that affect their profitability. In other words, profitability is varying because of some situations such as: seasonal and climate conditions, government policies, economic instability, inflation, taxes, privatization, etc. The above show the importance of research on determinants of the profitability. Indeed, studying these factors has become essential not only for the profitability and business's survival, but also for the economic development.

The profitability of tourism industry has been examined thoroughly in past research. Actually many studies consider tourism as a major element of the economic expansion. According to the literature (Belloumi, for Tunisian, 2010; Akinboade, Braimoh, for South Africa, 2010; Brida, Risso, for Chile, 2009; Brau et al., 2003) an

increasing number of tourists to the countries leads to the development of Gross Domestic Product and the reduction of the unemployment rates. Although tourism sector contributes to improve the economy of many countries, economic conditions can have a considerable impact on this industry. In the case of Fiji, Tonga, Solomon Islands and Papua New Guinea (Narayan et al., 2010) for African countries (Lee and Chang, 2008) and for Cyprus (Katırcıoğlu, 2009) showed a one way temporary relevance ranging from the economic growth to travel industry. Actually the economic climate has less effect on the performance than the profitability of industry (Bodie et al., 2008). Thus, the view of tourism sector is very associated with the economic segment.

It is well accepted that tourism industry has become one of the largest sources of income and foreign exchange for many developed and developing countries. This industry is one of the most profitable service industries, which is widely regarded as a key driving force in today's global economy. Moreover the corporate performance in tourism industry relies on the economic condition. It means that the profitability rises up when the economy is good, but reduces strongly as soon as the economy turns bad. In fact, both economic and tourism industry act as complementary to each other. This industry, due to the nature of service and the type of clients, is affected by seasonal changes. Therefore, the peak sales of tourist services are closely associated with holidays and the suitability of the climate. In addition, there are many hidden costs to tourism, which can have negative effects on the profitability. Actually there is no doubt that profit and performance in tourism industry is sensitive to climate changes, economic conditions and other factors. So, the variability of profitability and the significant role of tourism in economic improvement make it important to study about the determinants of profitability in this sector.

1.1 The Aim of the Thesis

The objective of this research is to estimate and forecast the profitability of the tourism industry. This sector is subject to various components such as: food and beverages, place of attractions and recreational activities, lodging and transportation. Whereas the hotels provide many of the services listed above, it can be said that hotel industry acts as one of the most important supplier of services for tourism. Also the higher fixed costs than variable costs in hotels make them more sensitive to the state of economy (Ming-Hsiang Chen, 2009).

In addition during the recent years, tourism has become a very large and important sector for Turkey's economic development. In fact, with regard to incessant change in word tourism trends, Turkey is becoming a tourism country in the Mediterranean region. According to the World Tourism Organization Statistics, this country gets a rank of 6^{th}, which is very significant. Consequently, tourism industry has a remarkable influence on the GDP of Turkey.

Turkey has various climate types, because it is centrally located between Asia and Europe. Thus, having many ancient civilizations, natural assets and variation in climate conditions makes this country more attractive for tourists.

On one hand, tourism industry has a key role in Turkish economy that can improve it more than the other industries. On the other hand, hotel performance has the greatest impact on tourism growth. Therefore, this research examines the determinants of the profitability in tourism industry by using data from the large hotels in Turkey.

1.2 The Structure of the Thesis

The chapters in this study are organized as follows:

Chapter 2 focuses on the previous and theoretical studies that are related to this research. Chapter 3 explains the history of tourism industry in Turkey. Chapter 4 describes the variables, methods and models which are employed in this study. Chapter 5 discusses the results obtained by the regression analysis. Chapter 6 concentrates on the conclusion of the study and gives some recommendations based on the results and analysis.

Chapter 2

LITERATURE REVIEW

There is a large volume of published studies describing the role of enterprise's profitability in economic growth. Relative to other institutions and industries, tourism sector has become a growth pole in the process of economic development during the recent years. Seasonality is one of the challenges for this industry, which leads to instability in profitability. This variation makes it important to study about the determinants of profitability.

Profitability could present a more accurate view of firm's performance (Velnamby and Nimalathasan, 2009). Pandy (1979) confirms the authenticity of many economists that the profitability is one of the important indicators for the efficient operation of an enterprise.

Numerous researches have attempted to explain the determinants of profitability in manufacturing (Schmalensee, 1989). To determine the factors of profitability, Australian manufacturing firms (McDonald, 1999) applied a set of data of firm performance during the period of 1984-1993. This research confirms that lagged profitability is one of the significant determinants of current profit margins which mean that industry concentration has a positive impact on profit margins.

A recent study by Kambhampati and Parikh (2003) involves that trade reforms lead to a decrease in competition which can affect the profitability negatively. Also, results from this analysis prove that profit margins are affected significantly by liberalization. In addition, it can be concluded from this research that capital and managerial capabilities are not related to the profitability.

There have been very few studies to assay the determinants of profitability and the performance of insurance companies in developed and developing countries. In an analysis of profitability, Chen et al. (2009) found that the increase in equity ratio leads to a reduction in profitability of insurance companies. Although the profitability does not affected by the financial status of insurers, there is a significant relationship between the public coverage and profitability (Sloan and Conover, 1998). It has been suggested that levels of size, investment and liquidity are the most important factors of the financial health of insurance firms (Chen and Wong, 2004). Greene and Segal (2004) proved that cost inefficacy impacts on the profitability of US life insurance sector in a negative way. In 2008, Shami investigated the determinants of profitability of 25 insurance companies during the period of 2006 to 2007. He found that the firm size had a significant impact on profitability in a positive way. The volume of capital was insignificant variable which influenced profitability positively and the age of firm did not have any effect on profitability.

Several studies were performed to investigate some of the main determinants of bank profitability (Short, 1979, Bourke, 1989). A number of studies tried to analyze the bank profitability in a single country (Berger, 1995, Angbazo, 1997, Guru, Staunton & Balashanmugam, 1999, Ben Naceur, 2003, Mamatzakis & Remoundos, 2003, Kosmidou, 2006, Athanasoglou, Brissmis & Delis, 2006). Researches by Molyneux

& Thorton (1992), Demirguc-Kunt & Huizinga (1999), Abreu & Mendes (2002), Staikouras & Wood (2004), Hassan & Bashir (2003), Goddard, Molyneux & Wilson (2004) concentrated their investigations in groups of countries.

Actually, internal and external variables are factors which involved in measuring the profitability of a bank. Bank management, can control and effect on the internal determinants. Many researchers use bank size, credit risk, and equity as internal variables in their studies. External determinants represent the effect of macroeconomic environment on the profitability of a bank. Although profitability, is one of the most important subject in recent researches, no analysis for this factor has been done in tourism industry until now.

It has conclusively been shown that tourism growth has a significant effect on some potential economic benefits like the foreign exchange earnings, income, employment and taxes (Archer, 1995, Balaguer & Cantavella Jorda, 2002, Dritsakis, 2004, Durbarry, 2002). That is why many governments decided to develop tourism as a determinant of the economic improvement (Mill & Morrison, 2002, Sahli & Nowak, 2007). To investigate the relationship between the economic growth and tourism development, most of the researchers have used time-series models as the research methodology. Despite using the same methods in this process, mixed and conflicting results are obtained.

On one hand, Katırcıoğlu (2010) proved that tourism industry had a long-term impact on the economic development in Singapore from 1960 to 2007, which supports tourism-led growth hypothesis. Also a one-way relationship between tourism and economic improvement was reported in Tunisia (Belloumi, 2010). His research was

done by employing the annual data from 1970 to 2007. Through Johansen co-integration test and the Granger causality test (Brida and Risso, 2010), Belloumi found a unidirectional relationship between tourism and real GDP in South Tyrol and Italy, so the tourism-led growth hypothesis is confirmed. In 2010, Akinboade and Braimoh demonstrated that incomes of tourism industry increase the real Gross Domestic Product in short periods. They did their analysis by using the Granger causality test in South Africa. Using Johansen technique and the Granger causality test, Brida et al. (2009) studied the direction of relevance between tourism and GDP from the early 1990's until 2006. This investigation shows that tourism expenditure has a one-way influence on real per capita GDP. In their research of tourism-led growth hypothesis, Brida et al. (2008) found a one-way causal flow from travel spending to real GDP. In 2005, Oh assayed the relation between GDP and tourism growth in Korea through bivariate Vector Auto regression model. The results indicate that economic expansion causes a short-run increase in tourism sector.

On the other hand, via causality analysis, Dritsakis (2004) tested the role of international tourism on the long-term economy in Greece and confirmed a bidirectional relationship between tourism expansion and economic development. But with respect to the results, it is confirmed that the impact of tourism earnings on the economic progress is stronger than the effect of economic increase on tourism growth. Through co-integration and causality testing, Balaguer and Cantavella-Jorda (2002) confirmed that economic development has a long-run relation with tourism development in Spain. Kim et al. (2006) investigated that tourism has a direct effect on economic outreach in Taiwan. A long-term a bi-directional relationship is shown in this research.

There are many reasons for this discrepancy in results. The difference may be a reflection of the imagine of tourism as a single industry. In fact, tourism is a set of individual industries, which cause distinct relationship between this sector and the economic expansion. In other words, the dependency of the economic growth and the performance of individual industries, have an important role in determining the correlation between economy and tourism. Actually tourism related industries include hotels, restaurants, airlines, and travel agents, etc.

The direct effect of tourism growth on a tourism firm's earnings is proved by Chen and Kim (2006). Also they argue that tourism development leads to improve the corporate earnings more than their stock performance.

To investigate the causality from economy to tourism industry growth in Taiwan, Chen (2009) considered the corporate performance measurement as return on asset (ROA), return on equity (ROE) and stock return. In 2009, Chen also argued that GDP and tourism arrivals are the main factors of the stock performance.

A long-term relevance exists between the four major of industries (hotels, airlines, restaurants and casinos) which are related to the tourism and Gross Domestic Product (GDP) in the US (Tang and Jang, 2009). Therefore, numerous studies attempted to forecast the performance of tourism related industries (Choi, 1999, 2003, Wheaton at al., 1998), (Guzhva at al., 2004).

It is proved that the US stock prices of tourism related companies are affected significantly by expected inflation rate, money supply, domestic consumption, interest rate and industrial products (Barrows and Naka, 1994).

In 2010, Chen found a bilateral relationship between tourism and hotel industry. In other words, the ability of hotels in expanding the economic situations and the performance of tourism related firms make it one of the most major segments of the tourism industry.

In 2005, Chen et al. tested how the economic factors and none-economic events are associated with stock returns of the hotels in Taiwan. In their major study, Chen et al. (2005) demonstrated that money supply growth rate and changes in unemployment rate as financial economic items have impact on hotels' stock yields of Taiwan. In addition, items like wars, presidential elections, natural disasters, terrorist attacks which are appeared as non-economic events, have an important relationship with hotel stock returns in China (Chen 2007c).

There were a lot of researches done to determine the economic, macroeconomic factors which are relevant to expand the tourism industry and tourism firms' efficiency. This study therefore determines a number of main factors which play an important role in tourism industry profitability.

Chapter 3

THE TOURISM INDUSTRY IN TURKEY

Turkey is one of the major tourist areas which has been achieved a considerable success in attracting the international visitors in the past two decades. Government support with a variety of other factors accelerates the growth of the tourism sector and in other sectors that are related to this industry. Black sea, Mediterranean Sea and Aegean Sea surround Turkey from north, south and west. This situation leads to a variety of climate in this country's different regions. For example, because of the existence of the Black sea, many of the north regions have a rainy climate, whereas, the south of this country experiences the subtropical Mediterranean climate. These diversify of climate makes this country a suitable place for growing any types of flowers and plants, which is one of the tourist attractions. In addition, hospitality culture, beautiful nature, memorable Mediterranean beaches, exciting sceneries and ancient civilizations make this country to become a very interesting touristic destination especially for the western European vacationers. Over the recent decades, the travel sector had a remarkable impact on the economic development of Turkey. In 2009, this industry was responsible for 10.2 % of GDP, and also it generated 7.2% of the total employment.

3.1 Tourist Arrivals, Tourism Revenue

Tourism industry plays an important role in the economic growth by decreasing the unemployment, boosting up the national GDP and improving country's balance payments.

Figure 3.1.1 below shows that the numbers of international tourists vising Turkey and their receipts have been rising significantly over the recent decades. It can be said that the Turkish tourism industry is expanding faster than other considered countries. In addition, the amount of Turkish tourism arrivals has been increased from 1.1% to 2.7% during the period of 1990 to 2008.

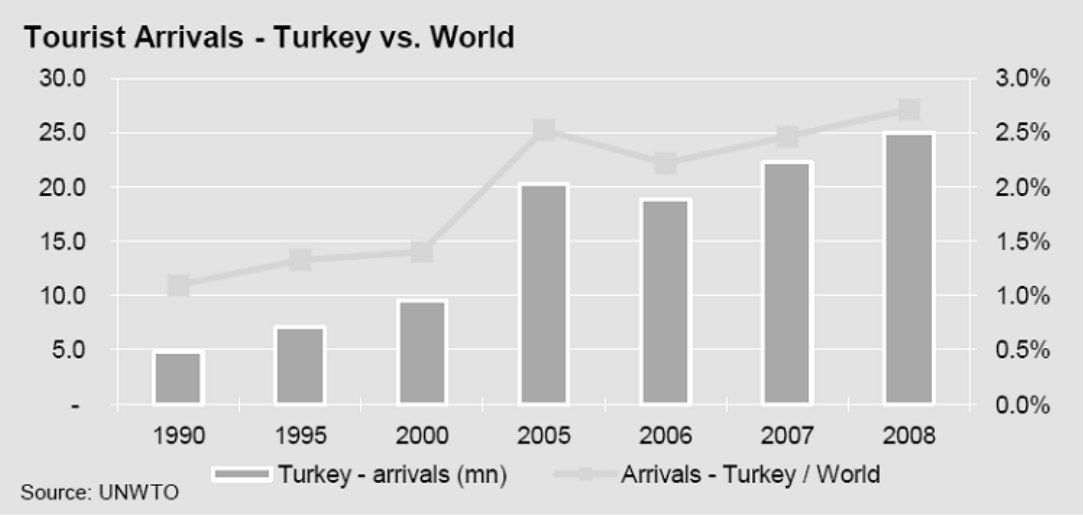

Figure 3.1.1. Tourist arrivals: Turkey vs. World

Regarding Figure 3.1.2, it seems that this industry has been grown since 2000 until now. But during this period of time, a reduction is observed in 2006, because of the effect of World Cup in Germany. In 2008, the number of tourists reached to its peak of more than 30 million. In other words, Turkey experienced its best year within the tourism sector in 2008. Also in this year, an increase of 13.6% in tourism arrivals and 18.5% in tourism receipts can be observed with respect to the average receipt $708 per arrival.

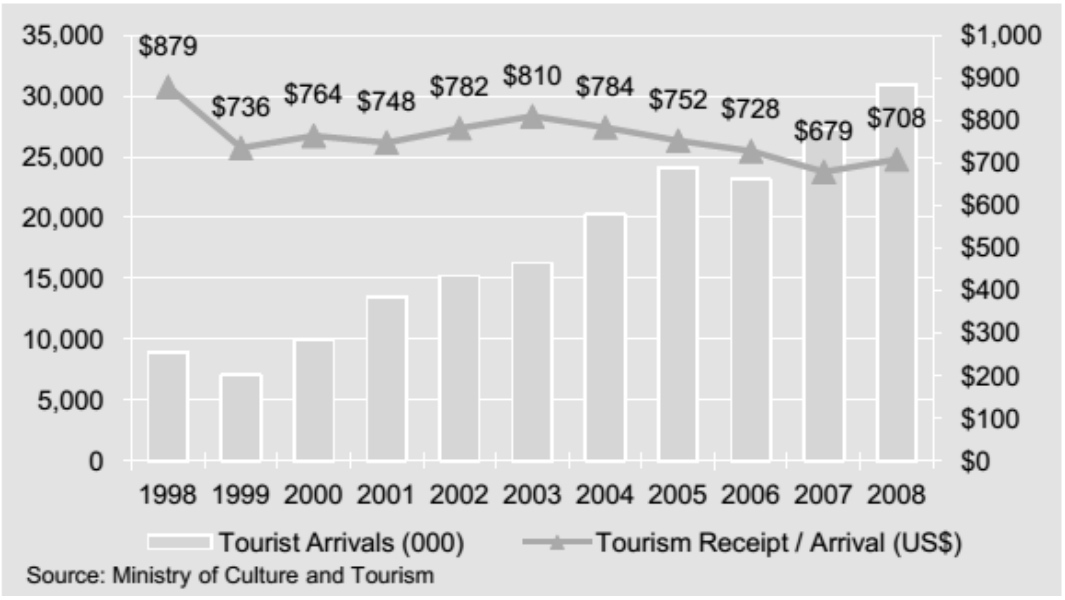

Figure 3.1.2. International Tourist Arrival

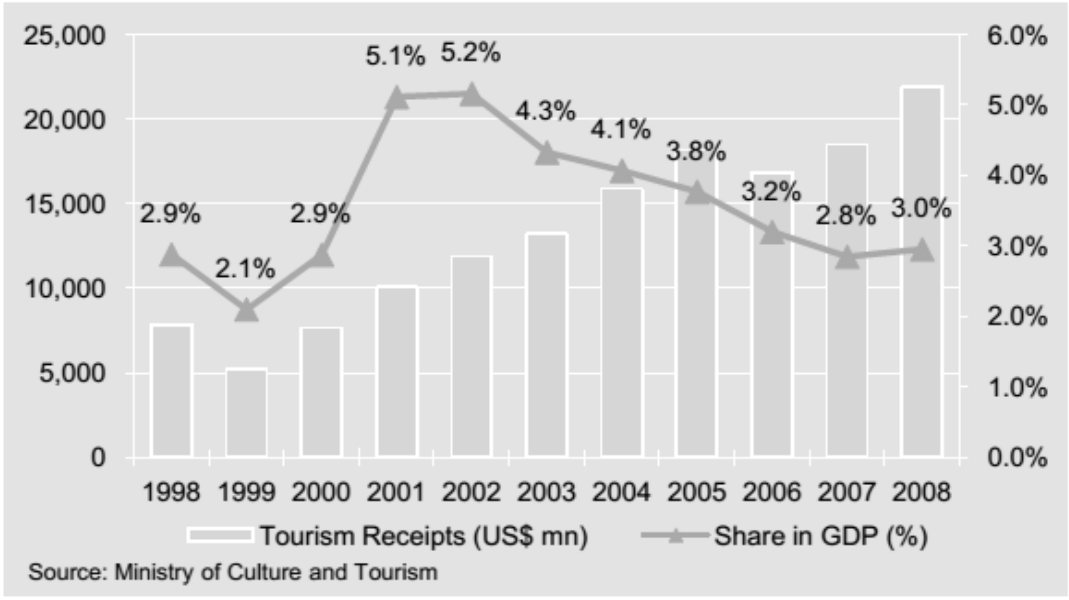

Figure 3.1.3. International Tourism Receipt

3.2 Turkish Hotel Industry

Antalya, Muğla and Aydın have an important role in hotel market of Turkey. However, the attractive tourist areas are mainly located in Istanbul, Ankara and Izmir as three leading cities. The figure 3.2.1 indicates that in 2008 the bed capacity of

Turkey is about 567,470. Also many hotels which are not ready to operate have the additional capacity of 258,287 beds.

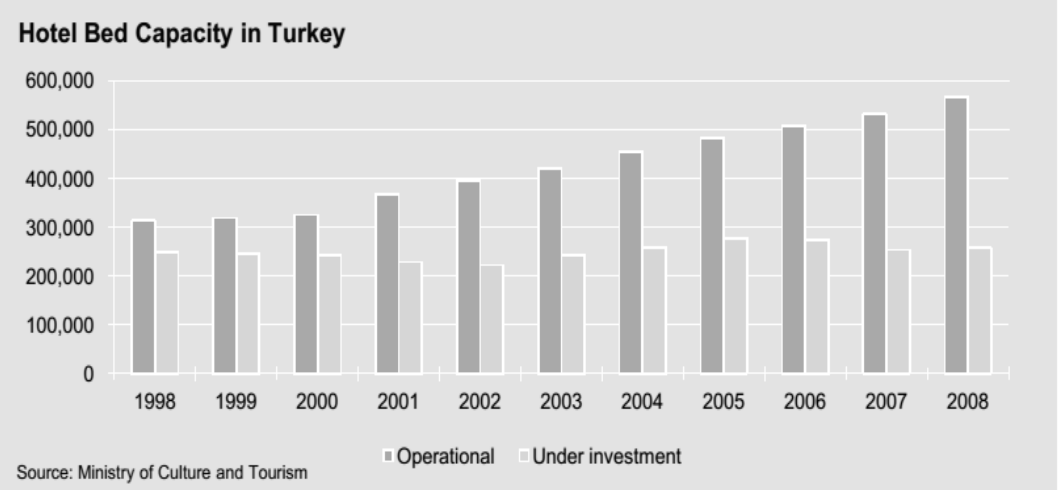

Figure 3.2.1. Hotel Bed Capacity in Turkey

The Mediterranean coastline is the major attractive destinations for visitors in Turkey which leads hotels to have 83% of the operational bed capacity during the 2008. In addition, 10% of this capacity covers the operational holiday villages. Also some tourists prefer to stay in apartment hotels, but the greater percentage of them are under construction.

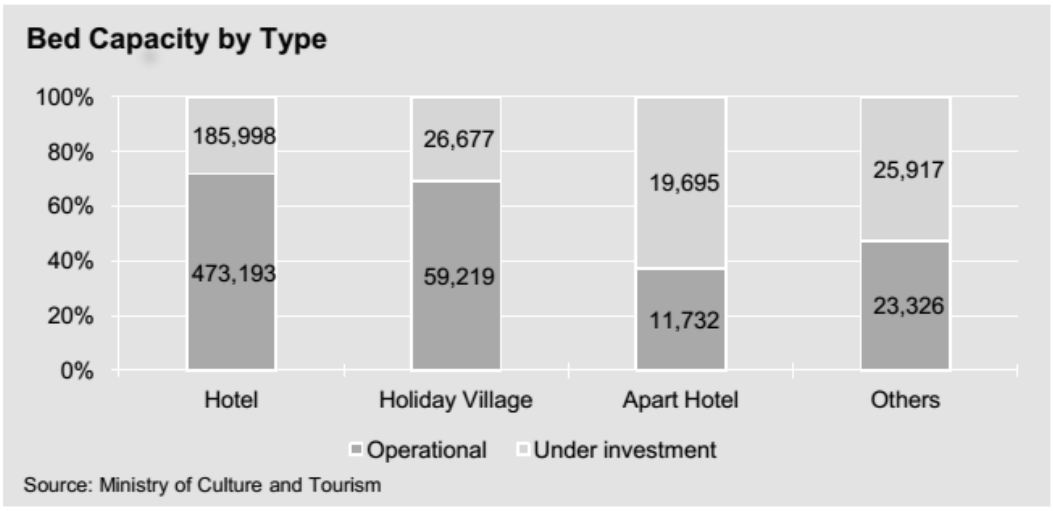

Figure 3.2.2. Bed Capacity by Type

The Turkish Treasury is the proprietor of many lands of hotels and other tourism facilities. In fact, these lands are leased by the government under the extendable contracts for a period of 50 years. Many international hotel chains have started their activities in Turkish tourism market since 1970's. Nowadays, nine of the best hotel chains are working in Turkey. In figure 3.2.3 the name these chains and the number of their hotels are listed.

International Hotel Chains in Turkey

Group	Brand	Location	# of Hotels
Best Western Int.	Best Western	İstanbul, Ankara, İzmir, Antalya	15
IHG Group	InterContinental Holiday Inn	Istanbul, Ankara, Izmir, Bursa	8
Hilton Hotels	Hilton Conrad	Istanbul, Ankara, Izmir, Adana, Kayseri, Mersin	8
Wyndham Worldwide	Ramada	Istanbul, Ankara, Muğla, Kahramanmaraş	6
Mariott International	Courtyard Ritz Carlton	Istanbul, Antalya, Erzurum	6
Starwood	Sheraton W Hotels	İstanbul, Ankara, İzmir, Antalya	6
Accor	Novotel Ibis	Istanbul, Eskişehir, Trabzon	4
Carlson Hospitality	Radisson	İstanbul, Ankara, İzmir	4
Hyatt	Hyatt Regency Park Hyatt	Istanbul	2

Source: Turkey Hotel Market Overview, Pamir & Soyuer, 2009

Figure 3.2.3. International Hotel Chains in Turkey

Chapter 4

DATA, METHODOLOGY AND MODEL

4.1 Data

The data applied in this research, were collected from the balance sheet and income statement of six major of tourism related companies in Turkey. Actually five large hotel chain companies which traded in Istanbul Stock Exchange and Turkish Airlines, were considered as the main sources in this research. This study considered a 14-year period from 1998 to 2011. Firms which were surveyed include: Marmaris Altın Yunus Turistik (MAALT), Metemtur Otelcilik ve Turizm (METUR), Net Turizm Ticaret ve Sanayi A.Ş. (NTTUR), Altın Yunus Çeşme (AYCES), Martı Otel Isle (MARTI) and Turkish Airlines (THY).

The required data were obtained by using Thomson Reuters Data-stream databank. Whereas, debated variables for this research, were given as the ratio of the study's data, Microsoft Excel was chosen to compute these factors. Also regression analysis was done by employing E-views which was one of the most useful software for the implementation of statistical and econometric analysis.

4.2 Variable Description

In this part of the study, both the dependent and independent variables are defined, which are investigated in the research. A brief description of the variables is shown in Table 4.1.

Table 4.1 Definition of Variables and Their Notation

Variables	**Description**	**Notation**	
Dependent Variables:			
Return on Average Asset	Net Income / Total Average Assets	ROAA	
Return on Average Equity	Net Income / Total Average Equity	ROAE	
Independent Variables:			**Expected Effect**
Internal Factors:			
Equity over Total Asset	Equity over Total Asset is a measure of capital adequacy. The higher percentage of this ratio causes the lower risk and makes firm safer and profitable.	EQTA	+/-
Cost-Income Ratio	Total expenses over Total Revenues. It shows the effect of operational efficiency on profitability.	OER	-
Size	It is a logarithm of firm's total asset.	SIZE	+/-
External Factors:			
Effective Tax Rate	Total Taxes over Pretax Profit. Actually it is a reflection of definitive tax which is paid by firms.	ETR	-
Real GDP Growth	It is a measurement of annually growth of total assets.	Growth	+

4.2.1 The Dependent Variable

Return on average assets (ROAA) and Return on average equity (ROEA), are considered as a main measure of the profitability in this research. For the purpose of the study, the percentage of these ratios is handled.

ROAA

This ratio is one of the most important measures of profitability. ROAA is described as an appraisal of the ability of a firm to earn profit from its asset. It shows the effectiveness of firm's asset management to obtain more revenue. It can be said that this variable is an indicator used to gauge the company's performance. In most of the studies about profitability, ROAA is used instead of ROA to compensate the changes in assets during the period of time.

ROAE

Return on average equity (ROAE) is the second criterion of profitability in this study. Actually it is an exact illustration of the performance, especially for companies which have experienced substantial changes in their shareholder's equity during the financial year. However, this ratio is not an appropriate scale of the profitability. For the purpose of higher ROAE, equity should fall, which cusses an increase in leverage ratio. This process has a direct impact on raising the risk of the corporate.

4.2.2 The Independent Variables

The determinants of profitability in this study are divided into internal and external factors which are defined in the following section.

Internal Determinants

Actually these factors explain the weaknesses and strengths of the financial institutions. In this section, internal variables, which are considered in this research, are described.

Equity over Total Assets

This ratio is used as a representative of firm's capital. Also, it is an indicator of safety and soundness for financial companies. Actually, this ratio is an indicator of the ability of financial institutions asset to perform its financial obligation. Also equity over total assets ratio identifies the financial adequacy of firms with respect to its credit risk. Recent studies show that results on the evidence on the impact of this factor (Equity/Total Asset) have provided mixed conclusions. Some showed positive effects while some other showed negative effects.

According to many researches, it is confirmed that firms and companies with the higher level of equity ratios are expected to face the lower funding costs which leads to avoid the bankruptcy. In addition, if this ratio increases, firms need to have less debt to finance their operations that leads to a higher profitability. So, "equity over total assets" is considered as an explanatory variable in this study to examine the profitability of Turkish tourism industry.

Cost-Income Ratio

It is the main key performance index which defines the relationship between operating the efficiency and profitability. This financial ratio gives the investors a view of changing costs compared to income. Rising in this factor has a negative impact on profitability. Actually, higher cost causes this change in cost-to-income ratio and it means that cost of firm increase in higher rate than income.

Size

The amount of total assets, are used to measure the firm's size. This factor is always shown as the logarithm in analysis. The impact of this variable on profitability is complex. On one hand, larger firms have more ability to raise their product than the smaller one. It means that these firms can keep the risk as low as possible which leads to higher profitability. On the other hand, large firms face more expenses, such as the agency costs, costs related to managing and bureaucratic process costs (e.g Sitroh and Rumble, 2006, Pasiouras and Koamidou, 2007). These expenses affect the profitability, and reduce it.

It is a well-known theory that companies can gain from economies of scale or scale of efficiency; that is as companies grow, they will be able to comparatively reduce the costs and achieve higher profitability. Therefore, the variable of "size" has been added to the model of this study in order to see if economies of scale or scale of efficiency will matter for the profitability in the Turkish tourism industry.

External Determinants

In this section the threats and opportunities which are generated by macroeconomic conditions and effect on profitability of firms are discussed.

Effective Tax Rate

This ratio measures a firm's tax that pay on all of its taxable income and is calculated by dividing taxes over the pretax income. This factor has an inverse relationship with profitability. The reason is that by increasing the tax, firm should pay the higher rate of income and this process reduces the net profit. On the other hand, companies with the higher effective tax rates will expect to shift a large fraction of their tax burden onto their depositors but it cannot eliminate the negative impact of this ratio on

profitability. Therefore "effective tax rate" is used in this research to analyze the effect of taxes on the Turkish tourism industry.

Real GDP Growth

It is an indicator of economic growth, which has positive impact on profitability. It can be said that, it is a percentage rate of increase in real domestic product (GDP). Actually, it is expected that as the GDP increases over the time, the number of tourist arrivals will grow, which means that hotels can gain more profits. Inasmuch as hotels are the important tourism related service industries, so it can be said that "real GDP growth" can have a positive impact on the profitability.

4.3 Methodology

This chapter focuses on the definition of the variables considered in the study. The following section will discuss the model and theoretical methods which are used to determine the factors of profitability. As the mentioned variables are composed of cross-sectional and time series, the balanced panel data is used to carry out the regression analysis. To assay the existence of change in mean, variance and autocorrelation of each factor with time, unit root test is conducted through E-views software. In this case, it is proved that all the variables are stationary which help the researcher to continue the research by running simple regression analysis.

When the stationary is confirmed, Ordinary Least Square (OLS) method is used to investigate the profitability of tourism industry in Turkey. Actually, Ordinary Least Square is a linear least square, which is applied as a way to appraise the passive parameters in a linear regression model. This method is more effective when there is no multicollinearity problem between the variables.

The econometric form of regression equation is:

$Y_{it} = \alpha + \beta X_{it} + u_{it}$

Where:

Y_{it} indicates the explained values in the model

α is appeared as the intercept of the equation

β is the representative of coefficient

X_{it} represents the independent factor of model

u_{it} demonstrates the error term in the model

i stands for the cross sectional dimension

t shows the time series dimension

As it was pointed out earlier, 2 different variables are used to investigate the profitability in this study. So, the equations can be represented as:

$Y = f(EQTA, OER, LSIZE, ETR, GROWTH)$

$$ROAA_{it} = \beta_0 + \beta_1 EQTA_{it} + \beta_2 OER_{it} + \beta_3 LSIZE_{it} + \beta_4 ETR_{it} + \beta_5 GROWTH_{it} + u_{it} \quad (1)$$

$$ROAE_{it} = \beta_0 + \beta_1 EQTA_{it} + \beta_2 OER_{it} + \beta_3 LSIZE_{it} + \beta_4 ETR_{it} + \beta_5 GROWTH_{it} + u_{it} \quad (2)$$

Where:

$ROAA_{it}$ = return on asset ratio of firm *i* at time *t*

$ROAE_{it}$ = return on equity ratio of firm *i* at time *t*

$EQTA_{it}$ = equity over total asset ratio of firm *i* at time *t*

OER_{it} = cost-income ratio of firm *i* at time *t*

$LSIZE_{it}$ = logarithm of size of firm *i* at time *t*

ETR_{it} = effective tax rate of firm *i* at time *t*

$GROWTH_{it}$ = real GDP growth of firm *i* at time *t*

Chapter 5

EMPIRICAL RESULTS

5.1 Correlation Analysis

This analysis is used to determine the relevance between the variables. Actually, if they have a significant correlation together, study's model will face a multicollinearity problem. It can be said that, this problem causes a misgiving in the results. This is due to an unreal increase in standard errors and misdiagnosis of the significant or non-significant variables. So, to insure no multicollinearity problem to happen, Pearson Correlation Matrix is applied. Table 5.1 shows the results of this analysis by using SPSS. In addition, base on unit root test proves that the data are stationary.

According to the table, all the dependent variables effect positively on ROAA. About ROAE, similar results are estimated except GROWTH, which have an inverse relation with it. EQTA is significantly related to the ROAE. Also LSIZE is significantly correlated with ROAA and ROAE. According to this analysis, it can be concluded that LSIZE is positively correlated with profitability. Also, there is not high relationship between the independent variables, and it means that no multicollinearity problem is found.

Table 5.1 Correlation

	ROAA	ROAE	EQTA	OER	LSIZE	ETR	GROWTH
ROAA	1						
ROAE	0.947** 0.00	1					
EQTA	0.147 0.221	0.256* 0.031	1				
OER	0.130 0.281	0.138 0.250	-0.196 0.102	1			
LSIZE	0.310** 0.009	0.354** 0.002	-0.345** 0.003	0.307** 0.009	1		
ETR	0.153 0.201	0.086 0.475	0.057 0.635	-0.077 0.522	-0.057 0.634	1	
GROWTH	0.048 0.691	-0.021 0.864	-0.061 0.614	0.090 0.453	-0.033 0.788	0.028 0.820	1

* Significance level is evaluated at 0.05
** Significance level is evaluated at 0.01

5.2 Regression Analysis

Different variables such as the return on average asset ratio, return on average equity ratio, equity over total asset ratio, operational efficiency ratio, size, effective tax ratio and growth ratio are used in this study. This thesis is done by multiple linear regressions which are listed below:

1) $ROAA_{it} = \beta0 + \beta1EQTA_{it} + \beta2OER_{it} + \beta3LSIZE_{it} + \beta4ETR_{it} + \beta5GROWTH_{it} + u_{it}$

2) $ROAE_{it} = \beta0 + \beta1EQTA_{it} + \beta2OER_{it} + \beta3LSIZE_{it} + \beta4ETR_{it} + \beta5GROWTH_{it} + u_{it}$

With respect to lower level of R-Squared (0.205191), it is concluded that there is no significant correlation between all the variables, which lead to a higher F statistic of 3.356137 and lower level of Prob F statistic of 0.009298 that is proving that

multicollinearity problem will not be appeared in the model. The effect of explanatory variables (EQTA, OER, LSIZE, ETR, and GROWTH) on profitability (ROAA, ROAE) is predicted via the regression analysis. To conduct this assay, mentioned ratios are entered in E-views software as input and Panel Least Squares model is run for the period of 1998 - 2011. It is important to mention that Likelihood Ratio and Hausman tests did not allow us to estimate regression models with fixed and random effects choices respectively.

5.2.1 Regression Results for ROAA

As mentioned earlier, ROAA is one of the most important benchmarks of profitability, which is considered as the dependent variable in the first formula of this study. Other ratios such as the equity over the total asset, operational efficiency, size, effective tax and real GDP growth are used as independent variables.

$$ROAA_{it} = \beta 0 + \beta 1 EQTA_{it} + \beta 2 OER_{it} + \beta 3 LSIZE_{it} + \beta 4 ETR_{it} + \beta 5 GROWTH_{it} + u_{it}$$

Table 5.2 Regression Analysis for Equation 1

Variables	Coefficient	t-Statistic	Prob.Value
Constant	-0.361378	-3.777925	(0.0003)
EQTA	0.117491	2.476936	(0.0159)**
OER	0.012964	0.601734	(0.5494)
LSIZE	0.023765	3.278965	(0.0017)*
ETR	0.022986	1.469514	(0.1465)
GROWTH	0.000802	0.608905	(0.5447)

R^2= 0.205191; Adjusted R^2= 0.144052; F statistics = 3.356137; Prob (F statistic) = 0.009298 Durbin-Watson stat = 1.890793

Table 5.2 represents the results obtained from the regression analysis of ROAA. It is apparent that EQTA and LSIZE are statistically significant. It means that, these two variables are more associated with profitability than the other variables. There is a significant positive correlation between EQTA and ROAA at 5% and 10% confidence level. In case of this ratio, correlation coefficient of 0.12 denotes that an increase of 1 unit of Equity overt Total Asset, if other variables do not change, leads to a raise of 0.12 in profitability. This result means that tourism companies could increase their levels of assets to gain more profits, by expanding more equity. Logarithm of size ratio is significant at α=1%, α=5% and α=10% and has a positive relevance with profitability. Regarding the correlation coefficient of 0.02, by 1 unit growth in LSIZE, profitability is expected to improve by nearly 0.02. This result means that firms with big size can have more assets to raise their profits. In addition regarding the Durbin–Watson of 1.890793, it can be said that our model will not face

with autocorrelation problem. Also C (error bound) with P-Value of 0.0003 demonstrated the restriction of error in the model. With respect to R-Squared by the value of 0.20, it can be said that EQTA, OER, LSIZE, ETR and GROWTH are only responsible for the 20% of the changes in profitability and the remaining 80% can be affected by other factors. In addition, the Prob.Value of 0.0009298 for F-Statistic proved the consistency and the credibility of the model.

5.2.2 Regression Results for ROAE

Another criterion for assessing the profitability is ROAE or Return on Average Equity. The second equation of this research, applies this ratio as the dependent variable. Also, EQTA, OER, LSIZE, ETR and GROWTH are used in the formula as the autonomous variables.

$$ROAE_{it} = \beta 0 + \beta 1 EQTA_{it} + \beta 2 OER_{it} + \beta 3 LSIZE_{it} + \beta 4 ETR_{it} + \beta 5 GROWTH_{it} + u_i$$

Table 5.3 Regression Analysis foe Equation2

Variables	Coefficient	t-Statistic	Prob.Value
Constant	-1.235080	-5.005465	(0.0000)
EQTA	0.477275	3.900644	(0.0002)*
OER	0.040855	0.735168	(0.4649)
LSIZE	0.078982	4.224663	(0.0001)*
ETR	0.036830	0.912801	(0.3647)
GROWTH	0.000375	0.110299	(0.9125)

R^2= 0.301780; Adjusted R^2= 0.248071; F statistics = 5.618773; Prob (F- statistics) = 0.000230 Durbin-Watson stat = 1.891291

The results of conduction regression tests for ROAE are pointed out in Table 5.3. As it can be seen from this table, profitability is affected by EQTA in a positive way at 1%, 5% and 10% level of significance. In this case, the correlation coefficient of 0.477275 means a unit increase in equity over the total asset causes 0.48 expansions in ROAE. It can be said that tourism companies which have substantial changes in their shareholder's equity, could gain more profits and incomes. Also, based on the results, it is inferred that LSIZE can influence the profitability positively and be significant at 1%, 5% and 10% respectively. The correlation coefficient of 0.078982 shows that, the increase in Logarithm of Size with one unit will result to raise the ROAE by 0.08. It means that larger tourism firms with a higher proportion of products could gain more income and profits. Also the value of Durbin–Watson is 1.891291 which indicates that there is no autocorrelation problem in our model. Additionally regarding C (error term), the Prob.Value of 0.000 shows the significance proving that the error is limited. The value of R-Squared is 0.30 which indicates that only 30% changes in ROAE depends on the mentioned independent variables in the model and the remaining 70% can be explained in terms of changes in other variables which are not used in this study. The F-Statistic with the P-Value of 0.000230 is significant and corroborating that the model is working and valid.

Chapter 6

DISCUSSIONS AND CONCLUSION

Turkey is one of the leading spots in the world to attract the international tourists. Actually this country has been able to considerably develop its tourism industry since 1980s. With regard to the world Tourism Organization Statistics, Turkey ranks 6th out to absorbing international visitors. Also, nowadays tourism industry is one of the important elements in the economic sector of developing countries. Especially, Turkey can suffer with least damage during the economic crisis because of this industry. It can be said that from 1980, Turkey has tried significantly to industrialize and expand the services and tourism activities. In 2010, 65% of GDP came from the value added of services industry and 25% of this proportion was resulted from the tourism sector. Because of the momentous of tourism in economy, this research attempts to investigate the determinative items of profitability for this industry.

This dissertation set out to investigate how internal, industry specific and macroeconomic factors related with the financial performance of six tourist companies which are located in Turkey. Equity over Total asset ratio (EQTA), Cost-Income ratio (OER) and Logarithm of size (LSIZE) are considered as internal factors. Also Effective Tax Rate (ETR) and Real GDP Growth (GROWTH) appeared as the indicators for the change in economic situation and external factors. In addition, profitability for firms is measured by Return on Average Asset (ROAA)

ratio and Return on Average Equity (ROAE) ratio. OLS regression analysis is employed to assess the relevance of mentioned variables with profitability ratios.

This study shows that a significant part of financial performance of tourist companies is affected by internal determinants. When ROAA is assumed to be a measurement of profitability, EQTA and LSIZE are significant variables with positive association. Similar results are obtained by supposing ROAE as the profitability item. This impact of Capital Adequacy ratio which is calculated by dividing equity over total asset denotes that tourism firms with the higher proportion of equity have easier accessibility to capital in order to support their equity holders and depositors at lower interest rates and credit risk which leads them to have a better performance. As well as according to the positive relationship between LSIZE and profitability, it can be deduced that larger companies are able to provide higher degree of services and diversify loans which causes a reduction in risk. Also this correlation between size of companies and their profitability means that large firms have enough income to offset their expenses.

Overall, it is concluded that Capital Adequacy and size are the main internal determinants of profitability in tourism industry. Therefore, tourism companies must have a strong focus and accuracy on these positive factors to improve their performance. For this reason, new services and products in higher quality should be provided by tourism sector. Also, firms can try to generate their products in accordance with customer satisfaction. It is suggested that tourism related firms try to boost up capitalization seek for reduction in expected costs.

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APPENDICES

APPENDIX 1: Panel Unit Root Tests

Levels					
Variables	LLC	Breitung t-stat	IPS	ADF	PP
ROAA					
τ_T	-3.31*	-1.99**	-0.37	14.78	21.94**
τ_μ	-3.71*	-	-1.93**	22.89**	21.19**
τ	-4.68*	-	-	38.16*	38.24*
ROAE					
τ_T	-3.31*	-1.99**	-0.37	14.78	21.94**
τ_μ	-3.71*	-	-1.93**	22.89**	21.19**
τ	-4.68*	-	-	38.15*	38.24*
EQTA					
τ_T	-7.66*	-1.74**	-2.14**	35.15*	34.56*
τ_μ	-2.27**	-	-1.42***	19.78***	15.23
τ	-1.48***	-	-	18.54	16.33
OER					
τ_T	-2.35*	-0.06	0.38	9.81	9.35
τ_μ	-1.71**	-	0.16	8.66	7.40
τ	-1.55***	-	-	15.75	17.19
LSIZE					
τ_T	- 3.21*	1.44	-0.17	12.42	19.51***
τ_μ	-5.42*	-	-0.77	19.15***	20.60***
τ	4.49	-	-	1.10	1.04

(Continued)

ETR					
τ_T	-21.49*	-0.04	-4.66*	42.10*	27.33*
τ_μ	-4.69*	-	-2.56*	27.87*	27.94*
τ	-227.72*	-	-	52.12*	41.85*
GROWTH					
τ_T	-5.96*	-4.67*	-1.66**	27.66*	34.88*
τ_μ	-5.54*	-	-3.58*	35.87*	40.84*
τ	-7.27*	-	-	58.72*	59.89*

Note:
ROAA represents profitability as percent of average total asset; ROEA is the ratio of net profits as a percent of average equity; CAR is a measure of capital adequacy as a percent of total asset; OER illustrate operational efficiency as a percent of total revenues; SIZE is dummy variable which is measured accounting value of total asset; ETR defined taxes paid divided by before tax profits; GROWTH shows the yearly real GDP growth. τ_T represents the most general model with a drift and trend; τ_μ is the model with a drift and without trend; τ is the most restricted model without a drift and trend. Optimum lag lengths are selected based on Schwartz Criterion. $^{*, **, ***}$ denotes rejection of the null hypothesis at the 1%, 5% and 10% level. Tests for unit roots have been carried out in E-VIEWS 6.

APPENDIX 2: Regression results for ROAA and ROAE

Dependent Variable: ROAA
Method: Panel Least Squares
Date: 08/12/13 Time: 12:05
Sample: 1998 2011
Periods included: 14
Cross-sections included: 6
Total panel (unbalanced) observations: 71

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.361378	0.095655	-3.777925	0.0003
EQTA	0.117491	0.047434	2.476936	0.0159
OER	0.012964	0.021544	0.601734	0.5494
LSIZE	0.023765	0.007248	3.278965	0.0017
ETR	0.022986	0.015642	1.469514	0.1465
GROWTH	0.000802	0.001316	0.608905	0.5447

R-squared	0.205191	Mean dependent var	-0.006858
Adjusted R-squared	0.144052	S.D. dependent var	0.108193
S.E. of regression	0.100098	Akaike info criterion	-1.684620
Sum squared resid	0.651270	Schwarz criterion	-1.493408
Log likelihood	65.80402	Hannan-Quinn criter.	-1.608581
F-statistic	3.356137	Durbin-Watson stat	1.890793
Prob(F-statistic)	0.009298		

Dependent Variable: ROAE
Method: Panel Least Squares
Date: 08/12/13 Time: 12:12
Sample: 1998 2011
Periods included: 14
Cross-sections included: 6
Total panel (unbalanced) observations: 71

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.235080	0.246746	-5.005465	0.0000
EQTA	0.477275	0.122358	3.900644	0.0002
OER	0.040855	0.055573	0.735168	0.4649
LSIZE	0.078982	0.018695	4.224663	0.0001
ETR	0.036830	0.040348	0.912801	0.3647
GROWTH	0.000375	0.003396	0.110299	0.9125

R-squared	0.301780	Mean dependent var	-0.018478
Adjusted R-squared	0.248071	S.D. dependent var	0.297768
S.E. of regression	0.258206	Akaike info criterion	0.210604
Sum squared resid	4.333573	Schwarz criterion	0.401816
Log likelihood	-1.476432	Hannan-Quinn criter.	0.286643
F-statistic	5.618773	Durbin-Watson stat	1.891291
Prob(F-statistic)	0.000230		