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Araştırma Makalesi

Liquidity and Profitability in Turkish Tourism Corporations

Türk Turizm İşletmelerinde Likidite ve Kârlılık

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Abstract

An adequate level of liquidity prevents a business from short-term insolvency, while excess levels of liquidity represent idle funds that jeopardize the overall profitability of a business. The study aspires to reveal the influence of liquidity on the profitability of Turkish tourism corporations listed on the Borsa Istanbul (BIST). The secondary data is retrieved from the financial statements of listed eight tourism corporations trading on the Tourism index (XTRZM). The data is analyzed by two different panel data regression approaches which are Pooled OLS and LSDV (Fixed Effects) regression models. The models employ liquidity ratios and profitability ratios as independent variables and dependent variables respectively. The findings of Pooled OLS regression model affirm that each liquidity ratio significantly influences the profitability of Turkish tourism corporations while the LSDV regression model found the effect statistically insignificantly.

Keywords: *Liquidity, Profitability, Turkish Tourism Corporations*

Özet

Yeterli bir likidite seviyesi, bir işletmenin kısa vadeli iflasını önlerken, fazla likidite seviyesi bir işletmenin genel kârlılığını tehlikeye atan atıl fonları temsil eder. Çalışma, Borsa İstanbul'da (BİST) işlem gören Türk turizm şirketlerinin kârlılığına likiditenin etkisini ortaya koymayı amaçlamaktadır. İkincil veriler, Turizm endeksinde (XTRZM) işlem gören sekiz turizm şirketinin mali tablolarından alınmıştır. Veriler, Pooled OLS ve LSDV (Sabit Etkiler) regresyon modelleri olan iki farklı panel veri regresyon yaklaşımı ile analiz edilmiştir. Modellerde, sırasıyla bağımsız değişkenler ve bağımlı değişkenler olarak likidite oranlarını ve kârlılık oranları kullanılmaktadır. Pooled OLS regresyon modelinin bulguları, her bir likidite oranının istatistiksel olarak Türk turizm şirketlerinin kârlılığını önemli ölçüde etkilediğini doğrularken, LSDV regresyon modelinde ise etki istatistiksel olarak anlamsız bulunmuştur.

Anahtar Sözcükler: *Likidite, Kârlılık, Türk Turizm İşletmeleri*

1. INTRODUCTION

The primary goal of tourism corporations is to achieve profitability, which is also one of the prominent metrics in analyzing financial success. Profitability reflects the financial well-being of a corporation, and by extension, its competitive advantage in the market. Some key tools labeled as profitability ratios measure the profitability of a corporation. These profitability ratios utilize financial statements to evaluate the capacity of a corporation to obtain earnings concerning its revenue, operating costs, assets, or equity over time and at specific periods (Robinson et. al, 2009). Eventually, profitability provides the shareholders' wealth maximization of a corporation that also enhances its value in the market. Primarily, profitability is based on the effectiveness and proper utilization of funds by a corporation (Paramasivan & Subramanian, 2009). As a matter of fact, not only generating earnings enhance the profitability of a corporation but also efficient management of its current assets maximize the profitability concerning the funds employed in these assets (Van Horne & Wachowicz, 2009). Liquid funds including cash and cash equivalents, accounts receivables, and inventory, are very essential for the success of a corporation. Besides, the costs associated with holding current assets require great attention for the corporation. In this case, a corporation should decrease its current assets without damaging its sales to increase profitability (Brigham & Houston, 2009). Therefore, the influence of liquidity on profitability is one of the key aspects for tourism corporations to achieve their primary goal.

In daily transactions, successful liquidity management is classically achieved by efficient use of its current assets. Thus, liquidity management focuses on cash flows to reduce the liquidity risk exposure of a corporation as liquidity signifies the ability of a corporation to satisfy its short-run debts by converting its current assets into cash (Robinson et. al, 2009). Determining an adequate level of liquidity connotes the successful management of its current assets. Maintaining an optimal level of current assets is associated with the profitability of a corporation. When a corporation preserves a high level of current assets, its profitability will be affected even it maintains liquidity (ICWAI, 2010). Superfluous liquidity is a state of possession of funds forgoing additional profitability (Van Horne & Wachowicz, 2009). On the contrary, liquidity requirements are misplaced and the corporation faces an insolvency risk because of the low level in its current assets (Alexander, 2018). In this case, the corporation maintains a low level of current assets and its liquidity undoubtedly is weak even its profitability is considered as high. Both cases demonstrate that determining the level of liquidity employed is vital for corporations. An insufficient level of liquidity indicates a risk to satisfy short-run debts employing superfluous funds in current assets that decreases profitability (ICWAI, 2010). In concise, liquidity management is an inevitable fact for a corporation's profitability, thus, the influence of liquidity on profitability requires expanded attention. Within this scope, this study aspires to elucidate the influence of liquidity on the profitability of tourism corporations listed on the BIST Tourism index in Turkey. The motivation of this study is to fill the gap in the tourism corporation context to ascertain the influence of liquidity on profitability in achieving financial well-being.

2. LITERATURE REVIEW

Liquidity and profitability are the prominent tandem in determining the financial health of a corporation, unfortunately, drew little attention in the literature on tourism corporations context. An attempt by Hirigoyen (1985) pioneered the debate among liquidity and profitability in the intermediate and long run. In his study, he argued that a low level of liquidity also lowers the profitability of a corporation due to debt requirements, and a low level of profitability prevents generating sufficient cash flows for liquidity. Hence, he concluded that the liquidity and profitability of a corporation are directly related in the medium and long term. On the contrary, Ross et al. (2000) claimed that the association between liquidity and profitability is negatively related. Gitman (2003)

also supported the inverse association among liquidity and profitability. Pursuant to the literature review, in some studies, the association among liquidity and profitability is investigated (Eljelly, 2004; Bhunia & Khan, 2011; Niresh, 2012; Mohanty & Mehrotra, 2018; Hossain & Alam, 2019; Panigrahi & Joshi, 2019) and other studies examine the influence of liquidity on profitability (Raheman & Nasr, 2007; Ehiedu, 2014; Nimer, Warrad & Omari, 2015; Malik, Awais & Khursheed, 2016; Madushanka & Jathurika, 2018;).

Eljelly (2004) empirically inspected the association among liquidity and profitability of 29 joint-stock firms between the periods of 1996 and 2000 in Saudi Arabia. The dependent variable of the model is net operating income. The results of correlation and regression analyses, according to the current ratio, the association is negatively significant between liquidity and profitability. Furthermore, the findings asserted that the CCC is a momentous metric than the current ratio due to its influence on profitability. In another study, Raheman and Nasr (2007) investigated the influence of WCM on liquidity and profitability as well as the association among them of 94 non-financial firms trading on the Karachi Stock Market between the periods 1999 and 2004. Pearson's correlation and regression analyses are realized to the determinants of net operating profitability. The findings expose that liquidity and profitability are negatively associated.

Bhunia and Khan (2011) researched the association among the liquidity and profitability of 230 steel firms gathered through the CMIE database between the periods 2002 and 2010. Multiple correlation and regression analyses are performed, and the findings deduce a low level of association among liquidity management and profitability. In the same vein, Niresh (2012) attempted to report the association among liquidity and profitability of 31 manufacturing firms trading on the Colombo Stock Exchange (CSE) from 2007 to 2011. Correlation and descriptive statistics analyses are practiced to the data and the results display that the association among liquidity and profitability of chosen firms are insignificant.

In another study, Ehiedu (2014) addressed the impulse of liquidity on the profitability of manufacturing firms selected from the Nigeria Stock Exchange (NSE) among the periods from 2007 to 2011. Correlation analysis is implemented to investigate the associations among the variables. The findings of the study detect the associations among the variables of selected firms are insignificant. Nimer et al. (2015) probed the impulse of liquidity on the profitability of 15 banks traded on the Amman Stock Exchange (ASE) between 2005 and 2011. The findings of simple regression analysis confirm that liquidity significantly has an effect on profitability. In the same manner, Malik et al. (2016) inspected the influence of liquidity on the profitability of 22 private sector banks in Pakistan between the periods of 2009 and 2013. Ordinary Least Squares (OLS) analysis is employed to tempt three models. The findings of the study inform that the association between liquidity metrics and profitability is statistically significant according to the dependent variable of ROA.

In the same way, Madushanka and Jathurika (2018) soughed to determine the influence of liquidity on profitability. The data of the study is retrieved from 15 manufacturing firms trading on the Colombo Stock Exchange (CSE) between the periods 2012-2016. Descriptive statistics, correlation, and regression analyses are employed, and the findings exposed that liquidity metrics (quick ratio) are significantly and positively associated with the profitability metrics of the selected production firms. Mohanty and Mehrotra (2018) intended to search the association among liquidity and profitability of 28 SMEs traded on the Bombay Stock Exchange between the periods 2011 and 2016. The correlation analysis is conducted to uncover the associations among liquidity and profitability ratios are insignificantly negative. The findings of pooled regression analysis assert that liquidity management significantly affects the profitability of listed SMEs. Moreover, liquidity variables are negatively associated with the profitability variables of listed SMEs.

In their study, Hossain and Alam (2019) purposed to designate the association among liquidity and profitability by utilizing the annual statements of cement industry firms trading on the Dhaka Stock Exchange between the periods of 2013-2017 in Bangladesh. Pearson's correlation analysis is employed to reveal the association among liquidity and profitability of six cement firms. The dependent variables and the independent variables are profitability metrics liquidity metrics, respectively. The results of the correlation matrix present that an association among liquidity and profitability is available. Findings ascertain that a strong negative association among the CCC and all profitability ratios (NPM, ROA, and ROE) is available. Additionally, a positive association among liquidity ratios (CR, and QR) and profitability ratios are also noticed. Panigrahi and Joshi (2019) applied a comparative study to delve into the association among liquidity and profitability of two Indian medicine firms. According to the findings of one firm, a positive and significant association among liquidity ratios and profitability ratios is procured. Due to the findings of other firm, the association between liquidity ratios and profitability ratios are insignificant and weak. A prominent finding is the contradiction of the inverse association rule between liquidity and profitability as the sample firm maintains profitability even its liquidity is flawless.

The argument among liquidity management and profitability is still prominent and topical according to the components and findings of the previous studies. The literature review reveals that the elected firms of the previous studies are varied such as joint-stock firms (Eljelly, 2004), non-financial firms (Raheman & Nasr, 2007), steel firms (Bhunia & Khan, 2011), manufacturing firms (Niresh, 2012; Ehiedu, 2014; Madushanka & Jathurika, 2018), bank firms (Nimer et al., 2015; Malik et al., 2016), SMEs (Mohanty & Mehrotra, 2018), cement industry firms (Hossain & Alam, 2019) and medicine firms (Panigrahi & Joshi, 2019). Besides, it should be highlighted that not just the study areas are varied but also the findings of the previous studies place divergent results. For instance, in some studies, liquidity, and profitability are negatively associated (Ross et al., 2000; Gitman, 2003; Eljelly, 2004; Raheman & Nasr, 2007; Mohanty & Mehrotra, 2018). On the contrary, some studies explore that liquidity and profitability are positively associated (Hirigoyen, 1985; Madushanka & Jathurika, 2018; Hossain & Alam, 2019; Panigrahi & Joshi, 2019). Moreover, other studies report that the association among liquidity and profitability is insignificant (Niresh, 2012; Ehiedu, 2014). The findings of another study concede a low level of association among liquidity management and profitability (Bhunia & Khan, 2011). The result of other study informs that liquidity significantly has an impact on profitability (Nimer et al., 2015). Yet another study displays that the association between liquidity and profitability is statistically significant (Malik et al., 2016). The findings of the previous studies contradict because of the varied field areas of the elected firms. For that matter, the present study aspires to investigate the influence of liquidity on the profitability of Turkish tourism corporations as this unique study field area is intact. This unique study field area of tourism corporations induces a gap in the literature that the contribution of the current study elaborates on.

3. METHODOLOGY

3.1. Selection of Variables

As the current study aspires to inspect the influence of liquidity on the profitability of Turkish tourism corporations, the study utilizes liquidity and profitability ratios that are classified as financial ratios in common. Financial ratios are arranged to distill critical information that is not apparent while reviewing the financial statements of a corporation (Brigham & Ehrhardt, 2017). Thus, financial ratios expose the associations between different accounts from financial statements that act as performance indicators. In other words, financial ratios elicit specific performance aspects of a corporation by choosing the key items of information from the financial statements and resolving this information in a specific timeline (Brooks, 2016). Moreover, it is very crucial for a

corporation to measure and evaluate its financial performance with the assistance of financial ratios (Kayalı & Aktaş, 2018).

Liquidity ratios imply the ability of a firm to satisfy its short-run debt at a specific period in time. Liquidity ratios also state the short-term solvency of a corporation and focus on current assets and current liabilities reported on the balance sheet (Brooks, 2016). Thus, liquidity ratios expose the association among the current assets and current liabilities of a corporation during a specific term (Paramasivan & Subramanian, 2009). Current assets encapsulate cash and cash equivalents, accounts receivable, and inventory that should be transferred into cash within one year or an operating cycle. On the other hand, current liabilities inclose accounts payable, accruals, and notes payable that should be satisfied within an operating cycle or one year (Brigham & Houston, 2009; Berk, De Marzo & Harford, 2012). The most common ratio of liquidity ratios is the current ratio that emits current assets regarding current liabilities. A higher current ratio implies an excessive amount of liquidity for the corporation (Robinson et. al, 2009). The second liquidity ratio is the quick ratio that is gauged by ejecting inventories from current assets, thereafter; the balance is divided by current liabilities (Brigham & Houston, 2009). However, the quick ratio is excluded in the present study to delve into the influence of liquidity on profitability because of the specific characteristic of tourism corporations operating without inventory or a slight amount of inventory. In this case, the values of the quick ratio share similarity with the values of the current ratio, and therefore the quick ratio is dismissed as a liquidity ratio in this study to prevent incoherency. Thus, the cash ratio typically presents a reliable metric of liquidity of a corporation, especially in a crisis position indicating the portion of current liabilities covered by cash and cash equivalents (Brigham & Houston, 2009; Brooks, 2016).

Profitability ratios are broadly divided into two groups, in which one group represents the profitability concerning sales and the other group presents the profitability concerning investment. Both groups of profitability ratios demonstrate the overall effectiveness of a corporation (Van Horne & Wachowicz, 2009). In other words, profitability ratios express how efficiently a corporation is converting its sales or assets into income (Brooks, 2016). The rate of return on sales is one group of profitability ratios that measures the overall performance of a corporation and is obtained by dividing net income by sales (Alexander, 2018). The second group of profitability ratios that relates profits to investment is the rate of return on assets. (Van Horne & Wachowicz, 2009). The rate of return on assets indicates how well the assets namely its investment in equipment, property, and plant are generating income (Brooks, 2016). Additionally, the rate of return on equity is contemplated as a bettermost overall metric of effectiveness, since it reflects both profitability and asset effectiveness measures (Alexander, 2018). It illustrates how much profit a business obtains for the owners under their ownership claim (Brooks, 2016).

Based on the review of the literature; the displayed liquidity and profitability ratios in Table 1 represent the variables of the present study with their measurements and supported studies. In the previous studies, the dependent variables are representing the profitability of the selected firms and the independent variables are presenting the liquidity of the same firms. Thus, the independent variables are the current and cash ratios which are the liquidity ratios computed for this study.

Table 1. The Selection of Variables

Variables	Measurement	Supported Studies
Liquidity Ratios		
Current Ratio (CR)	$\frac{Current\ Assets}{Current\ Liabilities}$	Eljelly (2004); Raheman & Nasr (2007); Bhunia & Khan (2011); Niresh (2012); Ehiedu (2014); Malik et al. (2016); Madushanka & Jathurika (2018); Mohanty & Mehrotra (2018); Hossain & Alam (2019); Panigrahi & Joshi (2019)
Cash Ratio (CaR)	$\frac{Cash\ and\ Cash\ Equivalents}{Current\ Liabilities}$	Bhunia & Khan (2011); Niresh (2012); Malik et al. (2016); Mohanty & Mehrotra (2018)
Profitability Ratios		
Return on Asset (ROA)	$\frac{Net\ Income}{Total\ Assets}$	Niresh (2012); Ehiedu (2014); Nimer et al. (2015); Malik et al. (2016); Madushanka & Jathurika (2018); Mohanty & Mehrotra (2018); Hossain & Alam (2019); Panigrahi & Joshi (2019)
Return on Equity (ROE)	$\frac{Net\ Income}{Equity}$	Bhunia & Khan (2011); Niresh (2012); Malik et al. (2016); Madushanka & Jathurika (2018); Mohanty & Mehrotra (2018); Hossain & Alam (2019); Panigrahi & Joshi (2019)
Return on Sales (ROS)	$\frac{Net\ Income}{Sales}$	Niresh (2012); Mohanty & Mehrotra (2018); Hossain & Alam (2019); Panigrahi & Joshi (2019)

As the tourism corporations are included in the service industry, the annual inventory account reported on financial statements is impending to zero according to the nature of the service industry such as tourism corporations. This specific characteristic of tourism corporations clarifies the fact that quick ratio values are nearly bordering upon the current ratio. Therefore, the quick ratio is excluded from the analyses as a variable of liquidity. The independent variables are the current ratio and cash ratio which are the liquidity ratios of the tourism corporations of this study. In addition, the dependent variables are the return on asset, return on equity and return on sales ratios which are the profitability ratios of the selected tourism corporations for eight years. Thus, the research framework of the current study is given in Figure 1.

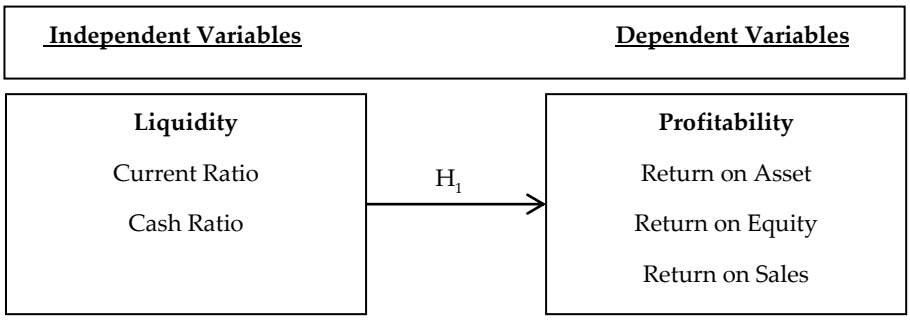

Figure 1. Research Framework of the Study

The field area of the supported studies is varied and the financial statements of the elected firms constitute the secondary data for the analyses. The present study aspires to elucidate the influence of liquidity on the profitability of Turkish tourism corporations as this field area has a characteristic feature that the tourism corporations operate mostly without inventory. This unique feature of tourism corporations induces a gap in the literature and practices that the contribution of the current study also elaborates on. The hypothesis of the present study is developed in the line

with the literature review and also forms the basis for the models of the Pooled OLS and LSDV (Fixed Effects) regression analyses.

H_1: The liquidity of tourism corporations listed on the BIST Tourism index has an effect on the profitability of the tourism corporations.

3.2. Method

The current study applies a quantitative approach that employs the secondary data collected through annual financial statements of the selected tourism corporations covering the period of eight consecutive years to 2020. This study is benefited from both cross-sectional and time-series panel data in which the variables of Turkish tourism corporations are observed across time. As cross-sectional data, the values of variables such as liquidity ratios and profitability ratios are collected from Turkish tourism corporations. As time-series data, the values of the variables are elected from eight consecutive years. The secondary data is computed by utilizing a data collection excel sheet. The data collection excel sheets are issued to measure all variables of all eight corporations due to the quantitative analysis. Data collection excel sheets designate data for liquidity and profitability ratios before conducting the panel data regression analyses. Panel data regression is the best analysis method to combine cross-sectional and time-series data as the same cross-sectional item is gauged at different periods. Thus, panel data designate the pooling of observations from cross-sectional entities over time-periods (Baltagi, 2005). In other words, the panel data determines the total observation items of $n \times t$, where t is the time-periods ($t = 1, 2, \ldots, T$) and n is the number of entities. This is denoted as (X_{it}, Y_{it}), $i = 1,\ldots..,n$ and $t = 1,\ldots..,T$ where the index i pertain to the entity while t pertain to the time-period (Hanck, Arnold, Gerber & Schmelzer, 2021). Thus, a panel data regression equation combines time-series and cross-sectional data (Baltagi, 2005).

$$Y_{it} = \beta_1 X_{it} + \ldots. + \beta_k X_{k,it} + \alpha_i + u_{it} \quad (3.1)$$

Y= Dependent variable
X = Independent variable(s)
β = Coefficient
α = Individual effects
u = Error term

Essentially, there are different approaches of regression models for panel data, and the present study benefits from two approaches which are Pooled OLS and LSDV (Fixed Effects) models. The current study utilizes two approaches of panel data regression models to compare the results of each approach. Pooled OLS panel data regression models of the present study using the SPSS 25.0 package program is given below that are developed according to the hypothesis:

Model 1: $ROA_{it} = \beta_1 (CR)_{it} + \beta_2 (CaR)_{it} + \alpha_i + u_{it}$
Model 2: $ROE_{it} = \beta_1 (CR)_{it} + \beta_2 (CaR)_{it} + \alpha_i + u_{it}$
Model 3: $ROS_{it} = \beta_1 (CR)_{it} + \beta_2 (CaR)_{it} + \alpha_i + u_{it}$

While utilizing Pooled OLS (Ordinary Least Square) model to panel data, individual effects (α_i, $i = 1,..., n$) remain unobserved. Fixed Effects model with dummy variables solve this problem by determining the individual effects of unobserved independent variables as constant over time utilizing Least Squares Dummy Variable (LSDV) regression. Fundamentally, a dummy variable is assigned for each time-period and cross-sectional entity into the sample data. Moreover, this approach is recommended for small data sets (Park, Song & Lee, 2020). Therefore, the variation in the α_i, $i = 1,\ldots..,n$ can be expressed as a regression model including n-1 dummy regressors and constant:

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \ldots\ldots + \beta_k X_{k,it} + \gamma_2 D2_i + \gamma_3 D3_i + \ldots\ldots + \gamma_n Dn_i + u_{it} \quad (3.2)$$

Model (3.2) has n particular intercepts for every one entity. With $i = 1, \ldots\ldots, n$ and $t=1, \ldots\ldots, T$. The α_i are specific entity intercepts that embrace heterogeneities through entities. The representations of dummy variables are given as *D2, D3, ….., Dn* in the model. Based on the hypothesis, the following models with dummy variables for the α_i terms are established to reveal the influence of liquidity on the profitability of Turkish tourism corporations. The Fixed Effects models with dummy variables also referred to as Least Squares Dummy Variable (LSDV) regression utilizes SPSS 25.0 package program to analyze the models given below:

Model 1: $ROA_{it} = \beta_0 + \beta_1 (CR)_{it} + \beta_2 (CaR)_{it} + \gamma_2 D2_i + \gamma_3 D3_i + \gamma_4 D4_i + \gamma_5 D5_i + \gamma_6 D6_i + \gamma_7 D7_i + \gamma_8 D8_i + u_{it}$

Model 2: $ROE_{it} = \beta_0 + \beta_1 (CR)_{it} + \beta_2 (CaR)_{it} + \gamma_2 D2_i + \gamma_3 D3_i + \gamma_4 D4_i + \gamma_5 D5_i + \gamma_6 D6_i + \gamma_7 D7_i + \gamma_8 D8_i + u_{it}$

Model 3: $ROS_{it} = \beta_0 + \beta_1 (CR)_{it} + \beta_2 (CaR)_{it} + \gamma_2 D2_i + \gamma_3 D3_i + \gamma_4 D4_i + \gamma_5 D5_i + \gamma_6 D6_i + \gamma_7 D7_i + \gamma_8 D8_i + u_{it}$

3.3. Sampling

The data set in the present study is obtained from the annual financial statements of tourism corporations listed on the Borsa Istanbul Stock Exchange (BIST) Tourism index (XTRZM) for the periods of eight consecutive years to 2020. During the given period, eight tourism corporations are listed on the BIST Tourism index (XTRZM). The data for the measure of the variables are elected from the annual financial statement of the sampled corporations due to the disclosure of their financial reports respectively. Thus, the data is retrieved from the financial statements of tourism corporations that are gathered through the Public Disclosure Platform (PDP) (www.kap.org.tr, 2021). The liquidity and profitability ratios are measured by examining the required financial statements such as the balance sheet and income statement. The liquidity ratios are the independent variables that are the current ratio and cash ratio of the Turkish tourism corporations. On the other hand, the profitability ratios are the dependent variables of the present study that are the rate of return on assets, return on equity and return on sales. The panel data consists of 64 observations on 5 variables as all variables are monitored for all entities and the time-periods as the panel data is balanced.

4. FINDINGS

4.1. Findings of Descriptive Statistics

Descriptive statistics of the liquidity ratios (independent variables) and profitability ratios (dependent variables) are analyzed by utilizing SPSS 25.0 package program. Due to the results of descriptive statistics, the mean value of the current ratio (2.8876) is above the conventional rule of value 2. According to the descriptive statistics, Turkish tourism corporations cover their current liabilities more than two times. On the contrary, some corporations in the Turkish Tourism index fail to satisfy their short-run debts as the minimum value is 0.22. On the other hand, some corporations in the Turkish Tourism index have a great portion of current assets that the maximum value is 17.55 indicating current assets are not managed efficiently. The other liquidity ratio in this study is the cash ratio which is a conservative measure as cash and cash equivalents are the most liquid assets and can be converted into cash quickly. The results purport that some corporations are lack of cash and cash equivalent as the minimum value is 0.00, and other corporations reserve a great portion of cash and cash equivalents as the maximum value is 17.38. As a result, the mean value of the cash ratio (1.6390) is higher than the conventional rule as it satisfies its short-run debts more than one time with its cash and cash equivalents. On average, tourism corporations in Turkish the Tourism index have the adequate capacity to meet their short-run debts even they have not adopted effective liquidity management. Descriptive statistics of the liquidity ratios (independent variables) and profitability ratios (dependent variables) are represented in Table 2.

Table 2. Descriptive Statistics

	N	Min	Max	Mean	Std. Deviation
Current Ratio (CR)	64	0.22	17.55	2.8876	4.04974
Cash Ratio (CaR)	64	0.00	17.38	1.6390	4.06253
Return on Asset (ROA)	64	-0.23	0.45	0.0273	0.11442
Return on Equity (ROE)	64	-1,53	0.64	-0.0236	0.31162
Return on Sales (ROS)	64	-4.06	4.17	0.1632	1.29123

The mean value of each profitability ratio (ROA, ROE, and ROS) indicate the average value of the sector as a good rule of thumb. Therefore, the average value of each profitability ratio is 0.0273 for ROA, -0.0236 for ROE, and 0.1632 for ROS. According to the results of the descriptive statistics, some Turkish tourism corporations generate profit above the sector's average while utilizing their assets with a maximum value of 0.45. On the other hand, some Turkish tourism corporations experience a loss while using their assets with a minimum value of -0.23. Although the average value of return on equity ratio is negative considering the Turkish tourism sector, some tourism corporations generated profit from their investors' funds with a maximum value of 0.64. Another vital profitability ratio is the return on sales indicating the financial health of the business. The average value of return on sales is 0.1632, expressing a positive indicator for the Turkish tourism sector. Thus, there are some corporations above the average value with a remarkable maximum value of 4.17. Unfortunately, some other corporations trading in the Turkish Tourism index make a loss that their expenses exceed their revenues with a minimum value of -4.06. In concise, some Turkish tourism corporations achieve profitability in the Turkish Tourism index but some of them fail to generate profits from their assets, investors' funds, and sales.

4.2. Findings of Regression Analyses

The present study compares the results of two approaches which are Pooled OLS and LSDV (Fixed Effects) regression analyses. Model 1 (ROA) measures the influence of the current ratio and cash ratio as IVs on return on assets as the DV. According to the Pooled OLS regression, the model is significant as a whole ($p = 0.002<0.05$) and the R square value (18%) illustrates the percentage in ROA identified by the CR and CaR. Moreover, the independent variable, CR has a positive and statistically significant effect on the dependent variable, ROA ($\beta=0.029$, $p=0.001<0.05$). The second independent variable, the CaR has a negative and statistically significant effect on the dependent variable, ROA ($\beta=-0.023$, $p=0.006<0.05$).

Likewise, the results of the LSDV (Fixed Effects) regression reveal that the model is significant as a whole ($p = 0.000<0.05$). Besides, the R square value (41%) represents the percentage in ROA identified by the CR and CaR. Dummy variables are developed to conduct LSDV (Fixed Effects) regression approach and the results state that the CR has a positive and statistically insignificant effect on ROA ($\beta=0.016$, $p=0.077>0.05$). On the other hand, CaR has a negative and statistically insignificant effect on ROA ($\beta=-0.013$, $p=0.239>0.05$). Moreover, the Durbin-Watson test statistic is utilized to observe the existence of autocorrelation in the regression analyses and the findings of both approaches propound that there is no autocorrelation as the values are between 0 and 4 (Pooled OLS regression=1.572, LSDV (Fixed Effects) regression=1.949).

Table 3. Regression Results of Model 1 (ROA)

	Pooled OLS Regression		**LSDV (Fixed Effects) Regression**	
Variables	**β (SE)**	**t (Sig.)**	**β (SE)**	**t (Sig.)**
Constant	-0.018 (0.018)	-0.984 (0.329)	-0.020 (0.041)	-0.501 (0.618)
D2			0.007 (0.052)	0.127 (0.899)
D3			0.038 (0.086)	0.437 (0.664)
D4			-0.066 (0.051)	-1.284 (0.204)
D5			0.154 (0.048)	3.223 (0.002)
D6			0.032 (0.051)	0.625 (0.535)
D7			0.014 (0.049)	0.295 (0.769)
D8			0.001 (0.049)	0.030 (0.976)
CR	0.029 (0.008)	3.565 (0.001)	0.016 (0.009)	1.805 (0.077)
CaR	-0.023 (0.008)	-2.877 (0.006)	-0.013 (0.011)	-1.191 (0.239)
F	6.799			4.104
p	0.002			0.000
R	0.427			0.637
R^2	0.182			0.406
Durbin-Watson	1.572			1.949

Model 2 (ROE) measures the influence of the current ratio and cash ratio as IVs on return on equity as the DV. Due to the Pooled OLS regression, the model is significant as a whole ($p = 0.032<0.05$) and the R square value (11%) illustrates the percentage in the ROE imparted by the CR and CaR. The independent variable, the CR has a positive and statistically significant effect on the dependent variable, ROE (β=0.056, $p=0.019<0.05$). The second independent variable, the CaR has a negative and statistically significant effect on the dependent variable, ROE (β=-0.039, $p=0.009<0.05$). In the same manner, the results of the LSDV (Fixed Effects) regression approach reveal that the model is significant as a whole ($p = 0.006<0.05$). Moreover, the R square value (33%) illustrates the percentage in the ROE explained by the CR and CaR. Dummy variables are developed to conduct LSDV (Fixed Effects) regression approach and the results state that the CR has a positive and statistically insignificant effect on ROE (β=0.028, $p=0.291>0.05$). As other independent variable, the CaR has a negative and statistically insignificant effect on return on equity (β=-0.018, $p=0.573>0.05$). Moreover, the Durbin-Watson test approves that the current model is nonexposed to autocorrelation (Pooled OLS regression=1.853, LSDV (Fixed Effects) regression=2.958).

Table 4. Regression Results of Model 2 (ROE)

	Pooled OLS Regression		**LSDV (Fixed Effects) Regression**	
Variables	**β (SE)**	**t (Sig.)**	**β (SE)**	**t (Sig.)**
Constant	-0.119 (0.052)	-2.316 (0.024)	-0.048 (0.118)	-0.407 (0.685)
D2			0.028 (0.150)	0.185 (0.854)
D3			0.018 (0.250)	0.072 (0.943)
D4			-0.398 (0.149)	-2.678 (0.010)
D5			0.169 (0.138)	1.225 (0.226)
D6			0.024 (0.147)	0.162 (0.872)
D7			0.025 (0.140)	0.180 (0.858)
D8			-0.072 (0.143)	-0.504 (0.616)
CR	0.056 (0.023)	2.420 (0.019)	0.028 (0.026)	1.066 (0.291)
CaR	-0.039 (0.023)	-1.724 (0.009)	-0.018 (0.032)	-0.567 (0.573)
F	3.652			2.958
p	0.032			0.006
R	0.327			0.575
R^2	0.107			0.330
Durbin-Watson	1.853			2.958

Model 3 (ROS) measures the influence of the current ratio and cash ratio as IVs on return on sales as the DV. According to the Pooled OLS regression, the model is significant as a whole ($p = 0.001<0.05$) and the R square value (21%) illustrates the percentage in the ROS clarified by the CR and CaR. The independent variable, the CR has a positive and statistically significant effect on the dependent variable, ROS (β=0.260, $p=0.005<0.05$). The second independent variable, the CaR has a negative and statistically significant effect on the dependent variable, ROS (β=-0.136, $p=0.032<0.05$). In the same way, the results of the LSDV (Fixed Effects) regression approach expose that the model is significant as a whole ($p = 0.006<0.05$). Besides, the R square value (33%) illustrates the percentage in ROS explained by the CR and CaR. Dummy variables are developed to conduct LSDV (Fixed Effects) regression approach and the results state that the CR has a positive and statistically significant effect on ROS (β=0.226, $p=0.044<0.05$). Other independent variable is the CaR, which has a negative and statistically insignificant effect on ROS (β=-0.103, $p=0.446>0.05$). Furthermore, the Durbin-Watson test approves that the current study is nonexposed to autocorrelation (Pooled OLS regression=1.919, LSDV (Fixed Effects) regression=2.958).

Table 5. Regression Results of Model 3 (ROS)

	Pooled OLS Regression		LSDV (Fixed Effects) Regression	
Variables	**β (SE)**	**t (Sig.)**	**β (SE)**	**t (Sig.)**
Constant	-0.365 (0.201)	-1.820 (0.074)	-0.022 (0.503)	-0.043 (0.966)
D2			-0.135 (0.638)	-0.212 (0.833)
D3			-0.279 (1.060)	-0.263 (0.794)
D4			-0.904 (0.632)	-1.431 (0.158)
D5			-0.274 (0.587)	-0.467 (0.643)
D6			-0.144 (0.625)	-0.230 (0.819)
D7			0.233 (0.596)	0.391 (0.697)
D8			-0.897 (0.607)	-1478 (0.145)
CR	0.260 (0.089)	2.912 (0.005)	0.226 (0.110)	2.060 (0.044)
CaR	-0.136 (0.089)	-1.527 (0.032)	-0.103 (0.134)	-0.768 (0.446)
F	8.147			2.958
p	0.001			0.006
R	0.459			0.575
R^2	0.211			0.330
Durbin-Watson	1.919			2.958

The purpose of the study is to elucidate the influence of liquidity on the profitability of tourism corporations listed on the BIST Tourism index in Turkey. In order to assay the influence of liquidity management on the profitability of the selected tourism corporations, two different panel data regression approaches are utilized. Therefore, Pooled OLS and LSDV (Fixed Effect) regression approaches are benefited to investigate the effect of liquidity on the profitability of Turkish tourism corporations. In conclusion, even the findings of the Pooled OLS and LSDV (Fixed Effect) regression analyses have some similarities, some other findings differ from each other. It is remarkable that the findings of both approaches exhibit that the signs of the coefficients of the independent variables are the same, conveying the direction of the effect of each independent variable. On the other hand, the results of the Pooled OLS regression expose that the effect of liquidity on profitability is statistically significant while LSDV (Fixed Effect) regression presents a statistically insignificant effect except for one independent variable in just one model.

5. CONCLUSION

The goal of determining the influence of liquidity on profitability is to ensure the successful overall financial performance of a business. The tourism industry is one of the most prominent industries in Turkey that strongly contributes to employment, economic activity, and economic growth in the Turkish economy. Moreover, the tourism industry is highlighted with the importance of accelerating economic growth due to the foreign currency inflow and the multiplier effect when the tourism industry is compared to other industries. With the given importance of the tourism industry, obviously, the tourism corporations contribute to the economic growth in developed and developing countries and the financial well-being of tourism corporations is vital to the economy as well. In order to achieve financial well-being, the tourism corporations first need to obtain profitability which is the ultimate goal of all businesses, and secondly attain an adequate level of liquidity that meets the short-term obligations without damaging the profitability. In essence, profitability and liquidity are vital metrics, especially for tourism corporations with the given financial challenges such as low-profit margins with fluctuating sales volumes and capital-intensive

requirements (Süer, 2020). Considering the importance of profitability and liquidity for tourism corporations, the present study aspires to elucidate the influence of liquidity management on the profitability of tourism corporations in Turkey.

With the aim of the study, the quantitative approach is employed to the secondary data which is cross-sectional and time-series panel data till the year 2020 for eight consecutive years. Tourism corporations that are listed on Borsa Istanbul Stock Exchange (BIST) Tourism index (XTRZM) are selected as the sample of the current study. The financial statements of eight tourism corporations are gathered through Public Disclosure Platform (2021). The liquidity and profitability ratios are calculated by using excel sheets of tourism corporations listed on the Tourism index. The current and cash ratios are the independent variables as liquidity ratios; and the return on assets, return on equity and return on sales are dependent variables as profitability ratios. The hypothesis is developed in the same vein as the literature review and theoretical background of the study. The hypothesis is tested through two different panel regression approaches to compare the results of the findings. Pooled OLS and LSDV (Fixed Effect) regression analyses are conducted on the cross-sectional and time-series panel data. According to the Pooled OLS regression results, one of the liquidity ratios which is the current ratio is statistically significant and positively related to all profitability ratios in each model. This result supports the theoretical background and the previous studies (Hirigoyen, 1985; Madushanka & Jathurika, 2018; Hossain & Alam, 2019; Panigrahi & Joshi, 2019). However, the findings of LSDV (Fixed Effects) regression current ratio is statistically insignificant and positively related to ROA and ROE but statistically significant and positively related to ROS. The interpretation of this finding of both approaches approves that a low level of liquidity also decreases the profitability of Turkish tourism corporations due to debt requirements, and a low level of profitability prevents generating sufficient cash flows for liquidity. As another independent variable as liquidity ratio, cash ratio is statistically significant and negatively related to all profitability ratios in each model due to Pooled OLS regression supporting previous studies (Ross et al., 2000; Gitman, 2003; Eljelly, 2004; Raheman & Nasr, 2007; Mohanty & Mehrotra, 2018) while the results of LSDV (Fixed Effects) regression, cash ratio is statistically insignificant and negatively related to all profitability ratios in each model. The results of of both approaches purports that the portion of cash and cash equivalents to cover its short-run debts has a negative influence on profitability as the funds are not efficiently utilized to gather profitability. In other words, the level of funds that are dedicated to cash and cash equivalents decreases the profitability of Turkish tourism corporations. Therefore, if a Turkish tourism corporation aspires to gather profitability, it should reserve fewer funds for its cash and cash equivalents. Thus, these are the remarkable findings of this study and the panel data regression analyses with two approaches as the signs of independent variables' coefficients are in the same direction.

As a result of the panel data regression analyses of the two approaches that are developed to elucidate the influence of liquidity on profitability in Turkish tourism corporations are significant as a whole. Thus, the p values of Model 1 (ROA), Model 2 (ROE), and Model 3(ROS) are 0.002; 0.032, and 0.001 respectively while conducting Pooled OLS regression ($p<0.05$). Moreover, the p values of Model 1 (ROA), Model 2 (ROE) and Model 3 (ROS) are 0.000; 0.006 and 0.006 respectively while implementing LSDV (Fixed Effect) regression ($p<0.05$). However, the independent variables have a statistically significant effect on the dependent variable according to Pooled OLS regression, the independent variables mostly have a statistically insignificant effect on the dependent variable according to LSDV (Fixed Effect) regression with the same directions. Even the findings of each regression model approach contradict, the results still emphasize the association between liquidity and profitability. In line with all the results of the present study, the Turkish tourism corporations listed on the BIST Tourism index are recommended to properly manage their liquidity level to obtain profitability. According to the findings of the present study, it is suggested that the Turkish tourism

corporations should preserve an adequate level of current assets to meet short-term obligations as a low level of liquidity diminishes the profitability of a tourism corporation due to debt obligations, and a low level of profitability restrains generating sufficient cash flows for liquidity. At the same time, Turkish tourism corporations should consider the level of cash and cash equivalents in current assets as there is a negative effect on profitability as the funds are not efficiently utilized to obtain profitability. In other saying, the high level of funds that are reserved for cash and cash equivalents diminishes the profitability of Turkish tourism corporations. Therefore, if a Turkish tourism corporation aspires to gather profitability, it should reserve fewer funds for its cash and cash equivalents. Last but not least, the tourism corporations listed on the BIST Tourism index should balance their liquidity level for the overall financial performance and well-being of the business.

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