

RESEARCH ARTICLE

Determinants of Working Capital Investments: Evidence from the Lodging Companies in Developed and Emerging Countries*

Mehmet Beyazgül¹, Erdinç Karadeniz²

¹(Asst. Prof. Dr.), Harran University, School of Tourism and Hotel Management, Şanlıurfa, Turkiye.

² (Prof. Dr.), Mersin University, Faculty of Tourism, Department of Tourism Management, Mersin, Turkiye.

ABSTRACT

The aim of this research study is to analyze and compare the factors affecting the working capital investment levels of lodging companies in both developed and emerging countries. To this end, the Generalized Method of Moments (GMM), one of the dynamic panel data analysis methods, was employed in testing the models, contingent upon the data compatibility. In the research study, the annual financial data of 152 lodging companies located in the top 25 countries with the highest tourism revenues over the period 2011-2019 were analyzed by categorizing them into groups by the status of being developed and emerging countries. As a result of the analysis of the factors affecting the level of working capital, it was observed that the factors affecting working capital differed between developed and emerging countries. Total leverage negatively affects the working capital investment levels of the lodging companies in developed countries, whereas it positively affects the working capital investment levels of the lodging companies in emerging countries. Moreover, the impacts of firm size and operating cash flow on working capital vary by the development level of the countries.

Keywords: Working capital management, Generalized method of moments, Lodging companies, Developed and emerging countries

*This study was produced from the Ph.D. thesis titled 'Working Capital Management: An International Comparison on Lodging Companies'.

Introduction

Tourism involves a sector that contributes to the economic prosperity and economic development of various developed and emerging countries. According to the United Nations World Tourism Organization (UNWTO) International Tourism Barometer Report 2022, the number of international tourists, which was 1.5 billion as of 2019, decreased to 400 million people as of 2020 due to the COVID-19 pandemic, and 415 million people as of 2021, far from the pre-pandemic period (UNWTO, 2022). While the tourism sector was preparing for the new season in 2022, when the impact of the pandemic was expected to be largely overcome, the war crisis that broke out between Russia and Ukraine created new problems for many countries, especially in Europe. In a circumstance with high demand fluctuations, tourism companies in both developed and emerging countries, especially the lodging sector which has a weighted fixed capital, have to attach more importance to capital budgeting and working capital investments. Working capital is the assets that can be converted into cash in a short time to meet the raw materials, labor, energy, and similar daily needs that companies need to fulfill their short-term liabilities (Harris, 2005; Hill, 2013). It is of great importance for lodging companies to have a sound and sustainable financial structure by making effective investment, financing, and dividend distribution decisions, and to achieve firm value maximization targets upon creating the composition of working capital and cash flows by considering risk and return balance, especially in times of crisis. In this respect, it is necessary to monitor the extent to which investment should be made in the working capital in which periods and what the working capital level is affected by to maintain the daily activities in the lodging companies without interruption.

It is quite difficult to predict the demand in the tourism sector due to the changes in the taste, fashion, and habits of the consumers, the seasonal demand fluctuations, and the socio-economic status of the tourists being seriously affected by the economic and political developments. Therefore, it may be difficult for the lodging companies, which are considered the main

Corresponding Author: Mehmet Beyazgül E-mail: mehmetbeyazgul@harran.edu.tr

Submitted: 17.07.2023 • Revision Requested: 12.08.2023 • Last Revision Received: 06.09.2023 • Accepted: 09.09.2023 • Published Online: 22.11.2023

This article is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0)

components of the tourism sector, to exhibit successful financial management obscured by such factors. The demand elasticity of the lodging subsector also complicates the working capital management of companies. In times of increased demand, the lodging company needs to enhance its activities to meet such demand, however, the subcomponents of working capital, such as cash, receivables, and inventory level, may also increase to fulfill the increased activities. Therefore, lodging companies that lack sufficient levels of working capital throughout the periods of increased demand resort to current liabilities to maintain their activities, and may have difficulty in meeting their liabilities and experience liquidity problems during the periods of reduced demand. However, sustaining the high level of working capital, even during periods of high demand, may render these assets idle funds and, in turn, lower profitability. In this respect, it is necessary to monitor the extent to which investment should be made in the working capital in which periods and what the working capital level is affected by to maintain the daily activities in the lodging companies without interruption.

The main purpose of this research study is to comparatively analyze the factors affecting the level of working capital investment of the lodging companies located in developed and emerging countries. For this purpose, the scope of the research consists of the lodging companies of developed and emerging countries, which are among the top 25 countries with the highest tourism revenues. Thus, the aim of this study is to reveal how the findings obtained from the analysis of the factors affecting the working capital level of lodging companies differ by the development level of the countries.

Upon examining the literature, it is determined that the number of studies that analyzed the factors affecting the level of working capital in the tourism sector and examined the international differences are limited. From this point of view, it is expected that this research study would contribute to both the sector and the literature in terms of revealing the importance of working capital management in lodging companies and indicating the differences in the context of countries' development levels.

In line with the determined objectives, the research study consists of six parts. Following the introduction, which is the first part, a summary of similar studies in the literature for the research study is presented in the second part. In the third part, information regarding the data and methodology of the research study is presented. In the fourth part, the analysis results of the factors affecting the level of working capital, as well as evaluations of these findings, take place. In the conclusion part, several suggestions were made along with inferences within the framework of the obtained findings.

Literature Review

Upon focusing on the studies examining the factors that affect the level of working capital, the factors most associated with working capital are determined as total leverage, sales growth, firm size, tangibility, operating cash flow, and return on assets (Chiou et al., 2006; Ramachandran & Janakiraman, 2009; Baños-Caballero et al., 2010; Wasiuzzaman & Arumugam, 2013). Upon examining the direction in which the aforementioned variables affect the working capital level, in general, it is noteworthy that there are studies in which both positive and negative relationships are detected. Research studies examining the impacts of these variables on working capital investments are presented in order below.

Total Leverage and Working Capital Investments

According to the Pecking Order Theory, companies should first prefer internal financing rather than equity financing. In case the internal resources are not sufficient, they should resort to short-term, and then, long-term borrowing, and finally stock issuance (Myers, 1984). Because stock issuance is more costly than borrowing, it increases the asymmetric information cost (Jensen & Meckling, 1976). However, according to the maturity matching principle, the current assets should be financed with short-term liabilities. Accordingly, the increase in the utilization of current liabilities can also increase the working capital level (Kwenda & Holden, 2014).

In the tourism sector, Morais and Silva (2013) stated that the total leverage ratio and short-term leverage ratio negatively affected the cash level of the companies in Southern European countries. Jerónimo (2015) concluded that the total leverage ratio in the Portuguese tourism sector negatively affected the current ratio. Nonetheless, in studies conducted on different sectors, Baños-Caballero et al. (2010); Russo (2013); Azami and Tabar (2016) revealed the existence of a negative relationship between working capital and total leverage. In some of the studies conducted in emerging countries, results are indicating that the level of total leverage positively affected working capital (Valipour et al., 2012; Naser et al., 2013; İltaş, 2016).

Sales Growth and Working Capital Investments

The increase in sales may stimulate the need for a rapid increase in the inventories, receivables, and liquid values of the company (Kwenda & Holden, 2014). The ability of companies to achieve more sales depends on the enhancement of their activities. Therefore, companies need more cash assets (Wasiuzzaman & Arumugam, 2013).

The sales growth ratio obtained by dividing the difference between the current period's sales amount and the previous period's sales amount by the previous period's sales amount has been used as the sales growth variable in many empirical studies. In some of these studies (Akinlo, 2012; Mongrut et al., 2014), it was revealed that the sales growth ratios positively affected working capital; whereas others (Palombini & Nakamura, 2012) revealed a negative relationship between the variables. Although no study revealed a relationship between the sales growth ratio and working capital in the tourism sector, similarly, Bansal and Khosla (2015) investigated whether five-star hotel chains operating in India were successful in working capital management, and detected the existence of a positive and significant relationship between the level of working capital and the level of sales.

Firm Size and Working Capital Investments

Large-scale companies may maintain higher levels of their current asset investments due to their higher activity volumes. At the same time, since large-scale firms have easier access to money and capital markets than small-scale firms, they can access the financing sources of working capital investments more easily (Wachilonga, 2013, p. 567).

Firm size is usually measured by calculating the natural logarithm of a firm's total assets. Supatanakornkij (2015), who calculated firm size in that manner and examined its relationship with working capital, found that firm size positively affected working capital in companies located in certain European countries. Fatimatuzzahra and Kusumastuti (2016) also found that a positive relationship existed between firm size and working capital. On the other hand, many studies found that firm size negatively affected working capital (Gill, 2011; Doğan & Elitaş, 2014; Qurashi & Zahoor, 2017).

In the tourism sector, Kim et al. (2011) revealed that the level of cash holding of restaurants in the United States was negatively affected by firm size. In another study, Ngugi (2014) found that firm size positively affected the receivables level of the lodging companies located in Kenya.

Tangibility and Working Capital Investments

Companies divide their limited capital between fixed assets and current assets according to the field in which they operate (Fazzari & Petersen, 1993, p. 332). Lodging companies have a large amount of tangible fixed assets, including land, buildings, and equipment, courtesy of their activities. Therefore, the working capital levels of lodging companies are usually quite limited (Moon & Sharma, 2014, p. 75). Therefore, it can be expected that working capital investments, which have limited shares in lodging companies, would be more sensitively affected by the changes in tangible fixed asset investments than of manufacturing companies (Morais & Silva, 2013).

In most of the empirical studies, it has been determined that the level of tangible fixed assets calculated by dividing tangible fixed assets by total assets negatively affects working capital (Kaur & Kaur, 2014; Supatanakornkij, 2015), whereas, in some studies, these variables positively affect the working capital investment level (Russo, 2013; Azami & Tabar, 2016). In the tourism sector, Morais and Silva (2013) stated that a negative relationship existed between the cash levels of lodging companies and the tangible fixed assets ratios.

Operating Cash Flow and Working Capital Investments

Operating cash flow represents the cash flows stemming from the daily production and sales activities of the company. Operating cash flow is a cost-effective resource as it is an internal resource for companies. In line with the Pecking Order Theory, companies can finance their daily activities with operating cash flow and make debt and dividend payments (Myers, 1984). In this context, the working capital levels of lodging companies can be affected by operating cash flows.

In sectors other than tourism, Narender et al. (2008); Hill et al. (2010) Fatimatuzzahra and Kusumastuti (2016) found that the working capital levels were positively affected by operating cash flows. On the other hand, Mansoori and Muhammad (2012) and Palombini and Nakamura (2012) detected that operating cash flows had negative impacts on working capital levels. Upon examining the studies conducted on the tourism sector, Morais and Silva (2013) stated that the cash levels in the lodging companies were positively affected by the operating cash flows.

Return on Assets and Working Capital Investments

There are many studies indicating that the increase in profitability enhances the working capital level (Nazir & Afza, 2009; Abbadi & Abbadi, 2013; Nyeadi et al., 2018). In these studies, by pointing out the agency cost problem put forward by Jensen and Meckling (1976), it is argued that the company managers avoid directing the retained profits to long-term investments with high returns and high risks, to maintain the control of the company, therefore, they consider short-term investments instead.

Upon considering the studies conducted on the tourism sector regarding the subject, Jerónimo (2015) detected a positive relationship between the current ratio and the return on assets in the lodging companies located in Portugal. In another study, Hiadlovský et al. (2016) found the existence of a positive relationship between the liquidity level and profitability in tourism companies located in Slovakia.

Data and Methodology

The scope of the research consists of lodging companies from both developed and emerging countries among the top 25 countries with the highest tourism revenues. The data collection and correction processes of the research were carried out in January 2021. In this respect, since the last announced data of the companies that constitute the sample of the research study belong to the year 2019, it was considered the base year for the tourism revenue ranking of the countries.

Order	Countries	Tourism Revenues 2019 (Million USD)
1)	United States of America	214.134
2)	Spain	79.708
3)	France	63.801
4)	Thailand	60.521
5)	United Kingdom	52.721
6)	Italy	49.596
7)	Japan	46.054
8)	Australia	45.709
9)	Germany	41.638
10)	Macao (China)	39.526
11)	China	35.832
12)	India	29.962
13)	Turkey	29.829
14)	Hong Kong	29.043
15)	Canada	26.971
16)	Mexico	24.573
17)	Austria	22.942
18)	United Arab Emirates	21.800
19)	South Korea	21.628
20)	Portugal	20.633
21)	Greece	20.351
22)	Singapore	20.052
23)	Malaysia	19.823
24)	Netherlands	18.487
25)	Switzerland	17.949

Table 1. Top 25 Countries with the Highest Tourism Revenues (2019)

Source: UNWTO (2020)

The annual frequency data of 152 lodging companies, obtained over the period 2011 - 2019, whose stocks are traded in the stock markets of the countries listed in Table 1, and whose data can be accessed soundly, constitute the main sample of the research study. Since the number of data was inadequate during the period before 2011, the analysis period of the study was determined as the period 2011-2019. Nonetheless, since the analyses planned to be conducted would be subject to international comparisons, the sample is classified into two groups such as developed and emerging countries. The classification of developed and emerging countries within the scope of the analysis is based on the classification of the World Economic Outlook database published by the International Monetary Fund (IMF) and listed in Table 2.

While the data of the lodging companies located in foreign countries in Table 2 are obtained from the Thomson Reuters Datastream database, the data of some of the lodging companies located in Turkey are obtained from the Public Disclosure Platform web page (KAP, 2022) since they are not available in the Thomson Reuters Datastream database. Countries such as Italy, Macao (China), United Arab Emirates, South Korea, and the Netherlands are not included in the analysis among the top 25 countries with the highest tourism revenues in the world as of 2019 since the data of those lodging companies located in those countries could not be accessed. Therefore, the sample of the research consisted of lodging companies trading in the stock markets of 20 countries. In the analysis, the data of the lodging companies over the period 2011-2019 are examined. Therefore, since the data used in the analysis includes 9 equal annual values belonging to more than one company, they are created as a balanced panel dataset.

Due to the short periods (T) in the dataset and the large volumes of instrument variables, the Difference GMM developed

Beyazgul, M., Karadeniz, E., Determinants of Working Capital Investments: Evidence from the Lodging Companies in Developed and Emerging Countries

Developed Countries	Number of	Emerging Countries	Number of
	Companies		Companies
USA	12	Turkey	11
Spain	2	India	32
France	6	China	7
United Kingdom	7	Thailand	9
Japan	9	Mexico	3
Australia	4	Malaysia	7
Germany	2	-	
Hong Kong	25		
Canada	1		
Austria	1		
Portugal	2		
Greece	2		
Singapore	9		
Switzerland	1		
Total	83	Total	69
Number of Observations	747	Number of Observations	621
our e IMF (2019)			

Table 2. Number of Companies and Observations in the Analyzed Countries

by Arellano and Bond (1991) and the System GMM panel estimators developed by Arellano and Bover (1995) and revised by Blundell and Bond (1998) are preferred. Both the System and Difference GMM dynamic panel estimators are found suitable for panel data in which the number of cross-section data (N) is large, and the time-series (T) is small. The System and Difference GMM dynamic panel estimators, heteroskedasticity, and autocorrelation problems are allowed within the unit, but not between the units (Terzioğlu, 2017). In the Difference GMM method, all explanatory variables are transformed by taking their first differences, while more instrumental variables are allowed by including the assumption that the first differences of the instrumental variables are unrelated to the fixed effects in the System GMM method. Thus, the System GMM estimator yields more efficient results than the Difference GMM estimator (Roodman, 2009).

The validity of the estimation results obtained from the GMM method is analyzed via different tests such as Sargan (1958) / Hansen (1982) and autocorrelation tests. The validity of the variables used in the models is tested with the Sargan/Hansen test. With the second-order autocorrelation test (AR2), it is determined whether autocorrelation exists in the GMM results (Arellano & Bond, 1991). In the GMM studies, the Wald test is performed to determine whether the model estimation is accurate (Roodman, 2009). The Difference GMM and System GMM methods are suitable for the related analyses to be conducted pertinent to the purposes of this research study.

In the analysis, the following model is generated to analyze the factors affecting the level of working capital in lodging companies.

$$WCR_{it} = \alpha + \beta_1 WCR_{it-1} + \beta_2 TL_{it} + \beta_3 GROWTH_{it} + \beta_4 SIZE_{it} + \beta_5 TANG_{it} + \beta_6 OCF_{it} + \beta_7 ROA_{it} + e_i t$$
(1)

$$WCR_{it} = \alpha + \beta_1 WCR_{it-1} + \beta_2 STL_{it} + \beta_3 GROWTH_{it} + \beta_4 SIZE_{it} + \beta_5 TANG_{it} + \beta_6 OCF_{it} + \beta_7 ROA_{it} + e_i t$$
(2)

$$WCR_{it} = \alpha + \beta_1 WCR_{it-1} + \beta_2 LTL_{it} + \beta_3 GROWTH_{it} + \beta_4 SIZE_{it} + \beta_5 TANG_{it} + \beta_6 OCF_{it} + \beta_7 ROA_{it} + e_i t$$
(3)

The "i" subscript in these models includes each lodging company included in the analysis; whereas the "t" subscript denotes each year over the period 2011-2019. Moreover, the symbol " β i" denotes the estimation coefficients, and the symbol " e_{it} " represents the error term. In Model 1, WCR_{it} denotes the working capital ratio; TL_{it} stands for the total leverage, $GROWTH_{it}$ represents the growth rate of sales; $SIZE_{it}$ denotes the firm size, $TANG_{it}$ stands for the tangible fixed assets ratio, OCFit denotes the operating cash flow ratio, and ROA_{it} represents the return on assets ratio. Furthermore, Model 2 and Model 3 are generated to comprehend the mediating impact of the maturity structure of the debt in the analyses. In Model 2, unlike the first model, STL_{it} is included instead of the total leverage and it denotes the short-term leverage. In Model 3, LTL_{it} is included and it represents the long-term leverage.

Upon deciding on the variables to be included in the models, the most frequently used variables in the most cited studies in the literature are considered. As a result of the examination, information on the dependent and independent variables that were decided

to be included in the analysis of the factors affecting the working capital level during the analysis process, and the calculation of these variables are presented in Table 3.

ariables	Abbreviations	Calculation Formula
orking Capital Ratio	CR	Current Assets Total Assets
Total everage Ratio	Т	Total iabilities Total Assets
Short-term everage Ratio	ST	Current iabilities Total Assets
ong-term everage Ratio	Т	ong-term iabilities Total Assets
Growth Rate of Sales	GRO TH	(Net Sales t - Net Sales t-1) Net Sales t-1
Firm Size	SI E	Natural ogarithm (n) of Total Assets
Tangible Fixed Assets Ratio	TANG	Tangible Fixed Assets Total Assets
Operating Cash Flow Ratio	OCF	Cash Flow from Operations Total Assets
Return on Assets Ratio	ROA	Net Profit Total Assets

Table 3. Variables Used in the Analysis of Factors Affecting the Level of Working Capital

Empirical Results

Descriptive Analysis

In Table 4, the descriptive statistics of the lodging companies in the developed and emerging countries of the research study are indicated, respectively. In the descriptive statistics of the aforementioned samples; the mean, standard deviation, minimum and maximum values of the variables used in the analysis, and the number of observations are introduced.

	ariables	Mean	Standard Deviation	Minimum	Maximun
	CR	0.224	0.175	0.008	0.923
	Т	0.487	0.224	0.010	0.993
	ST	0.185	0.152	0.009	0.905
D 1 1	Т	0.302	0.193	0.000	0.918
Developed	GRO TH	0.075	0.394	-1.000	4.662
Countries	SI E	5.704	0.901	3.619	7.654
	TANG	0.506	0.264	0.000	0.966
	OCF	0.040	0.076	-0.632	0.796
	ROA	0.010	0.096	-1.211	0.371
	CR	0.231	0.176	0.007	0.935
	Т	0.450	0.241	0.022	0.999
	ST	0.183	0.132	0.011	0.771
г .	Т	0.267	0.202	0.001	0.880
Emerging Countries	GRO TH	0.084	0.468	-0.969	5.214
	SI E	5.078	0.867	3.103	7.397
	TANG	0.584	0.231	0.000	0.985
	OCF	0.049	0.554	-13.583	0.559
	ROA	0.019	0.184	-4.108	0.465

 Table 4. Descriptive Statistics

Upon comparing the variables within the context of developed and emerging countries in Table 4, it is seen that the mean value of the working capital ratio is 22.4% in the developed country sample; whereas 23.1% in the emerging country sample. Accordingly, it is possible to claim that the working capital ratios in both samples converge on average. Upon comparing the leverage ratios in developed and emerging country samples, it can be said that lodging companies in developed countries have a higher level of borrowing than lodging companies in emerging countries, and a significant part of such difference stems from the utilization of long-term foreign debt. Upon evaluating the average working capital ratio and short-term foreign debt levels simultaneously in developed and emerging country samples, it is revealed that a net working capital surplus exists at almost the same rate in both groups. Therefore, it can be claimed that lodging companies in both developed and emerging countries usually pursue a moderate working capital financing policy.

Upon comparing the firm size and tangible fixed asset ratios, which are among the other variables calculated within the scope of the research study, in both developed and emerging country samples; it is seen that the total assets of the lodging companies in

developed countries are similar in size to the lodging companies in the emerging countries; however, it can be asserted that the shares of tangible fixed assets in the total assets of the lodging companies in the emerging countries are higher. Upon considering the other calculated variables it can be claimed that lodging companies in emerging countries are relatively more successful than lodging companies in developed countries in terms of improving sales volumes, providing cash flows from their main activities, and utilizing their assets efficiently.

Correlation Analysis

Correlation analysis is performed to reveal the relationships among the examined variables within the scope of the research study. The findings of the correlation analysis are presented in Tables 5 and 6 for developed and emerging countries, respectively.

ariables	CR	Т	ST	Т	GRO	TH	SI E	TANG	OCF	ROA
CR	1.000									
Т	-0.173	1.000								
ST	0.048	0.531	1.000							
Т	-0.239	0.745	-0.170	1.000						
GRO TH	0.075	-0.041	-0.063	0.002		1.000				
SI E	-0.082	0.174	-0.200	0.359		0.023	1.000			
TANG	-0.512	0.189	0.084	0.154		-0.051	-0.170	1.000		
OCF	-0.121	0.016	-0.062	0.067		0.080	0.084	0.218	1.000	
ROA	-0.016	-0.134	-0.193	-0.004		0.113	0.221	0.007	0.438	1.000

 Table 5. Correlation Analysis Results of the Developed Country Sample

Upon examining Table 5, it is seen that a moderate negative relationship exists between the working capital ratio and the tangible fixed asset ratio of the lodging companies in the developed country sample; besides, a negative but weak relationship exists between the working capital ratio and total leverage ratio, long-term leverage ratio, firm size, operating cash flow ratio, and return on assets ratio. Moreover, it is seen that a weak positive relationship exists between the working capital ratio, the short-term leverage ratio, and the sales growth rate.

ariables	CR	Т	ST	Т	GRO TH	SI E	TANG	OCF	ROA
CR	1.000								
Т	-0.190	1.000							
ST	0.118	0.549	1.000						
Т	-0.305	0.837	0.002	1.000					
GRO TH	0.045	-0.033	0.004	-0.042	1.00)			
SI E	-0.086	0.383	0.108	0.388	0.04	7 1.000			
TANG	-0.672	0.161	-0.027	0.210	-0.08	5 -0.167	1.000		
OCF	-0.012	-0.112	0.021	-0.148	0.06	6 0.035	0.088	1.000	

-0.268

Table 6. Correlation Analysis Results of the Emerging Country Sample

Upon examining Table 6, it is seen that a moderate negative relationship exists between the working capital ratio and the tangible fixed assets ratio of the lodging companies in the emerging country sample. Nevertheless, it is seen that a negative but weak relationship exists between the working capital ratio and total leverage ratio, long-term leverage ratio, firm size, and operating cash flow ratio. Furthermore, it is observed that a weak positive relationship exists between the working capital ratio and the short-term leverage ratio, the growth rate of sales, and the return on assets ratio.

0.112

-0.016

-0.047

0.913

1.000

GMM Estimation

ROA

0.118

-0.268

-0.079

The factors affecting the level of working capital in lodging companies, which is the main objective of the research study, are analyzed with the GMM, and the findings are interpreted separately for the lodging companies located both in developed and emerging countries, and the results are compared. Estimation results of both developed and emerging country samples are given in Tables 7 and 8, respectively.

In Table 7, it is seen that all models are significant as a whole according to the Wald test, no second-order autocorrelation problem exists in the models according to the AR(2) test, and the used instrumental variables are also valid according to the Hansen test.

Variables	Mod	del 1	Mo	odel 2	Мо	del 3
	Diff. GMM	System GMM	Diff. GMM	System GMM	Diff. GMM	System GMM
WCR _{i,t-1}	0.349*	0.419*	0.333*	0.412*	0.324*	0.411*
TL	(0.000) -0.060**	(0.000) -0.041***	(0.000)	(0.000)	(0.000)	(0.000)
STL	(0.012)	(0.052)	0.045* (0.002)	0.049* (0.000)		
LTL			(0.002)	(0.000)	-0.061** (0.015)	-0.072* (0.000)
GROWTH	0.001 (0.945)	0.001 (0.748)	-0.001 (0.724)	0.001 (0.868)	-0.003 (0.381)	-0.001 (0.969)
SIZE	0.016 (0.458)	0.009 (0.483)	0.006 (0.791)	0.004 (0.724)	0.026 (0.226)	0.016 (0.191)
TANG	-0.387* (0.000)	-0.399* (0.000)	-0.443* (0.000)	-0.422*	-0.463*	-0.417* (0.000)
OCF	0.081** (0.018)	0.121*	0.103*	0.140*	0.103*	0.134*
ROA	(0.018) 0.140* (0.000)	(0.000) 0.122* (0.000)	0.131*	0.122*	(0.002) 0.141* (0.000)	(0.000) 0.119* (0.000)
Constant	0.271**	0.297*	0.322*	0.302*	0.247**	0.269*
Sargan/Hansen	(0.023) 31.08	(0.000) 35.60	(0.009) 30.57	(0.000) 35.76	(0.043) 28.97	(0.000) 37.11
AR (2)	(0.268) -0.68	(0.393) -0.66	(0.289) -0.80	(0.386) -0.74	(0.363) -0.78	(0.328) -0.71
Wald Test	(0.497) 327.41	(0.509) 894.88	(0.427) 259.37	(0.458) 923.05	(0.438) 343.07	(0.477) 961.28
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 7. Estimation Results of Developed Country Sample

Note: *, **, and *** indicate significance at 1%, 5%, and 10% significance levels, respectively.

Upon examining Table 7, it is observed that total leverage (TL) has a statistically significant and negative impact on the working capital level (WCR) in Model 1, but the working capital level is positively affected by short-term leverage (STL) in Model 2. It is seen that the long-term leverage (LTL) has a negative impact on it. Accordingly, it can be claimed that the increase in short-term liabilities of lodging companies in developed countries increases the level of working capital, whereas the increase in long-term liabilities decreases the level of working capital, and the impact of long-term liabilities on the level of working capital is greater.

Upon examining Table 7, it is observed that operating cash flow (OCF) and return on assets (ROA) have statistically significant and positive impacts on the working capital level (WCR) in all models, however, the working capital level is negatively affected by tangible fixed assets ratio (TANG) at a high degree. Accordingly, it can be asserted that the increase in operating cash flow and asset profitability of the lodging companies in developed countries increases the working capital level, whereas the increase in tangible fixed assets decreases the working capital level. It is determined that the sales growth rate (GROWTH) and firm size (SIZE) do not have statistically significant impacts on the working capital level.

Upon examining Table 8, it can be asserted that the Wald test, indicating whether the models are significant as a whole, yields valid results and the models are appropriate for analysis, besides, no second-order autocorrelation problem exists in the models according to the AR(2) test, and the instrumental variables are appropriate for the models according to the Hansen test. In Model 1 presented in Table 8, total leverage (TL) has a positive impact on working capital (WCR) according to System-GMM results, and in Model 2, short-term leverage (STL) has a statistically significant and positive impact on working capital, however, it is seen that long-term leverage (LTL) negatively affects working capital in Model 3. Accordingly, it can be stated that as the level of short-term liabilities increases, the working capital levels of lodging companies in emerging countries increase, whereas the working capital level decreases as the level of long-term liabilities increases, however, the impact of short-term leverage on the working capital level is greater.

In Table 8, it is seen that size (SIZE) and tangible fixed assets ratio (TANG) negatively affect the working capital in all models, whereas the return on assets (ROA) positively affects the working capital. Accordingly, the increase in tangible fixed assets of lodging companies in emerging countries decreases the working capital level, and the working capital level becomes lower as the firm size increases. On the other hand, the increase in the return on assets increases the working capital level. It is determined that the GROWTH and OCF variables do not have statistically significant impacts on the working capital level in any model.

Beyazgul, M., Karadeniz, E., Determinants of Working Capital Investments: Evidence from the Lodging Companies in Developed and Emerging Countries

ariables	Mo	del 1	Ma	odel 2	Mo	odel 3
	Diff. GMM	System	Diff. GMM	Sistem	Diff. GMM	System
		GMM		GMM		GMM
CR _{i,t-1}	0.289	0.368	0.261	0.347	0.279	0.345
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Т	0.033	0.076				
	(0.333)	(0.015)				
ST	. ,	. ,	0.125	0.144		
			(0.021)	(0.003)		
Т				. ,	-0.080	-0.047
					(0.003)	(0.072)
GRO TH	-0.002	-0.003	-0.001	0.001	-0.002	-0.002
	(0.275)	(0.101)	(0.610)	(0.450)	(0.388)	(0.303)
SI E	-0.157	-0.125	-0.149	-0.113	-0.129	-0.104
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
TANG	-0.452	-0.462	-0.464	-0.462	-0.460	-0.466
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
OCF	-0.003	-0.002	-0.009	-0.004	0.001	0.008
	(0.755)	(0.827)	(0.346)	(0.611)	(0.972)	(0.284)
ROA	0.071	0.061	0.072	0.042	0.036	0.012
	(0.048)	(0.025)	(0.009)	(0.048)	(0.248)	(0.642)
Constant	1.208	1.008	1.171	0.966	1.107	0.955
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Sargan Hansen	28.21	36.68	29.01	35.43	26.54	33.02
5	(0.400)	(0.346)	(0.360)	(0.401)	(0.489)	(0.515)
AR (2)	-0.54	-0.046	-0.75	-0.63	-0.57	-0.45
	(0.592)	(0.647)	(0.453)	(0.529)	(0.568)	(0.650)
ald Test	915.86	1702.60	1045.52	2295.27	880.26	1737.32
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Note , , and	indicate sign	ificance at 1	, 5 , and 10 si	gnificance lev	els, respectively.	

Table 8. Estimation Results of Emerging Country Sample

Discussion

The summary of the findings obtained regarding the direction of the relationships between the dependent and independent variables in the models as a result of the analyses performed on both country samples within the scope of the research is presented in Table 9.

Table 9. Summary	of the	Obtained	Findings
------------------	--------	----------	----------

Independent ariables	Developed Countries (CR)	Emerging Countries (CR)
Т	-	
ST		
Т	-	-
GRO TH	No impact	No impact
SI E	No impact	-
TANG	-	-
OCF		No impact
ROA		-

() indicates a positive relationship, (-) indicates a negative relationship

Upon examining Table 9, it is revealed that the total leverage ratio negatively affects the working capital ratios of developed countries. This finding is consistent with Baños-Caballero et al. (2010) and Russo (2013). Whereas the total leverage ratio positively affects the working capital of the emerging countries. İltaş (2016); Naser et al. (2013); Valipour et al. (2012) had also drawn the same findings. Also, it is seen that the short-term leverage ratio positively affects the working capital ratio; whereas the long-term leverage ratio negatively affects the working capital ratio in both developed and emerging country samples. Kwenda and Holden (2014), reveal that short-term leverage and the working capital levels are positively related, and Supatanakornkij (2015), revealing that long-term leverage negatively affects the working capital level, support these findings. Upon evaluating the relationship between leverage ratios and working capital investments, it can be asserted that the lodging companies in emerging countries benefit more from current liabilities in working capital financing compared to developed countries. It is thought that the impact of long-term liabilities on working capital investments may be lower than that of developed countries, since the lodging companies in emerging companies in emerging companies less benefit from capital markets and experience higher economic uncertainties.

Sales growth, in general, is positively associated with working capital investments (Akinlo, 2012; Mongrut et al., 2014). A company that wishes to improve its sales volume has to invest in working capital at a higher level. However, upon examining Table 9, it is seen that the sales growth ratio does not have a statistically significant impact on the working capital ratio of the developed and emerging country samples.

In Table 9, it is revealed that the firm size negatively affects the working capital ratio in the emerging country sample, but no statistically significant relationship exists among these variables in the developed country sample. Accordingly, the finding suggesting that firm size negatively affects the working capital level is consistent with the findings of Gill (2011) and Doğan and Elitaş (2014). Accordingly, it can be stated that as the scale of lodging companies in emerging countries increases, working capital investments tend to decline. It can be asserted that while small-scale lodging companies in emerging countries act prudently and maintain their cash and inventory levels higher than that of large-scale companies, large-scale companies can maintain their working capital investments at a lower level since they have the advantage of meeting their supply and financing needs much faster.

In Table 9, it is seen that the tangible fixed assets ratio negatively affects the working capital ratio in both developed and emerging country samples. This finding obtained from both samples is consistent with the findings of Kaur and Kaur (2014) and Supatanakornkij (2015). Land, buildings, facilities, vehicles, and fixtures, in general, take place in quite high amounts in the tangible fixed assets of lodging companies. Increases in these assets reduce the share of current assets, and on the contrary, the share of current assets increases upon disposition of these assets. Therefore, the increase in the level of tangible fixed assets of lodging companies in both developed and emerging countries leads to a decline in the working capital level.

Upon examining Table 9, it is seen that the operating cash flow has a positive impact on the working capital level in the developed country sample. The finding suggesting that operating cash flow positively affects working capital is consistent with the findings of Baños-Caballero et al. (2010) and Hill et al. (2010). Therefore, it can be stated that lodging companies in developed countries act in accordance with the Pecking Order theory and benefit from internal resources while maintaining their activities.

It is found that the return on assets ratio positively affects the working capital ratio in both the developed and emerging country samples. The finding suggesting that the return on assets ratio positively affects the level of working capital is consistent with the findings of Nazir and Afza (2009) and Nyeadi et al. (2018). In light of these findings, it can be said that the revenue obtained from the assets of the lodging companies in emerging countries contributes to the working capital, or, in the opposite case, the working capital is adversely affected when the loss is incurred.

Conclusion

Upon considering the results of the research study, it is determined that the working capital level is positively affected by the short-term leverage ratio, and negatively affected by the long-term leverage ratio. However, it is revealed that the total leverage ratio negatively affects the working capital ratio in the developed country sample, whereas positively in the emerging country sample. In this case, it can be claimed that lodging companies in emerging countries pursue more aggressive policies within their working capital financing strategy. Therefore, since liquidity risk may be high in these companies, it may be recommended to pursue a more moderate policy. Another variable in the research study, whose impact differs by the level of development of the countries on the working capital level, is the firm size. In the performed analyses, it is revealed that the working capital level decreases as the firm size of lodging companies in emerging countries increases, however, no such relationship exists in developed countries. The relationship between working capital and operating cash flow is another result that differs between developed and emerging countries. Although operating cash flow has a positive impact on the working capital levels of lodging companies in developed countries.

Upon examining the studies conducted on working capital in the finance and tourism literature, no research study has been found that examines the analysis of the factors affecting the level of working capital in lodging companies with an international comparison. It is thought that the results obtained in the study within the context of working capital management would provide important information to both the literature and the managers in the sector in terms of revealing the differences between developed and emerging countries. Besides, it is thought that presenting the analyses performed to examine the factors affecting the level of working capital in the research study by making a comparison in the context of developed and emerging countries provides this research study with a unique quality.

The research study covers only a limited number of lodging companies located in a limited number of countries. Nonetheless, to render the data suitable for analysis, limitations are made in the measurement of working capital and the variables to be included in the model, and at the same time, it is deemed appropriate to investigate the data obtained from the companies over the period 2011-2019 to expand the scope in the context of the country. Due to the utilization of the annual data in the research study, the seasonality of the lodging companies could not be examined. Therefore, in future studies to be conducted on the factors affecting the level of working capital, both annual and quarterly analyses can be performed with a longer-term and more comprehensive

scope, in which different variables would also be included in the analyses. Moreover, the impact of the COVID-19 pandemic on the working capital investments and liquidity risks of lodging companies can also be examined. Furthermore, it is thought that researching the differences between the lodging sector and other subsectors of the tourism sector would contribute to the tourism literature.

Peer Review: Externally peer-reviewed.

Conflict of Interest: The authors have no conflict of interest to declare.

Grant Support: This study was supported by the Department of Scientific Research Projects of Mersin University [Project Number 2017-2-TP3-2656].

Author Contributions: Conception/Design of study: M.B., E.K.; Data Acquisition: M.B., E.K..; Data Analysis/Interpretation: M.B., E.K..; Drafting Manuscript: M.B., E.K. Critical Revision of Manuscript: M.B.; Final Approval: E.K.

ORCID IDs of the authors

Mehmet Beyazgül	0000-0002-3139-4351
Erdinç Karadeniz	0000-0003-2658-8490

REFERENCES

- Abbadi, S. M., & Abbadi, R. T. (2013). The determinants of working capital requirements in Palestinian industrial corporations. *International Journal of Economics and Finance*, *5*(1), 65-75. https://doi:10.5539/ijef.v5n1p65
- Akinlo, O. O. (2012). Determinants of working capital requirements in selected quoted companies in Nigeria. *Journal of African Business*, 13(1), 40-50. https://doi.org/10.1080/15228916.2012.657951
- Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies*, 58(2), 277-297. https://doi.org/10.2307/2297968
- Arellano, M. & Bover, O. (1995) "Another look at the Instrumental Variable Estimation of Error-Components Models", Journal of Econometrics,68(1): 29-51.
- Azami, Z., & Tabar, F. J. (2016). Investigating the factors affecting working capital of companies using the generalized method of moments. *Bulletin de la Société Royale des Sciences de Liège*, 85(1), 1402-1415. https://doi.org/10.25518/0037-9565.6143
- Baños-Caballero, S., García-Teruel, P. J., & Martínez-Solano, P. (2010). Working capital management in SMEs. Accounting & Finance, 50(3), 511-527. https://doi.org/https://doi.org/10.1111/j.1467-629X.2009.00331.x
- Bansal, S., & Khosla, D. (2015). Working capital management of hotel industry in India: An analysis. *International Journal of Research*, 2, 442-453. http://dx.doi.org/10.2139/ssrn.3458350.
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115-143. https://doi.org/10.1016/S0304-4076(98)00009-8
- Chiou, J.-R., Cheng, L., & Wu, H.-W. (2006). The determinants of working capital management. *Journal of American Academy of Business*, 10(1), 149-155.
- Doğan, M., & Elitaş, B. L. (2014). Çalışma sermayesi gereksiniminin belirleyicileri: Borsa İstanbul gıda sektörü üzerine bir inceleme. World of Accounting Science, 16(2).
- Fatimatuzzahra, M., & Kusumastuti, R. (2016). The determinant of working capital management of manufacturing companies. *Mimbar: Jurnal Sosial dan Pembangunan, 32*(2), 276-281.
- Fazzari, S. M., & Petersen, B. C. (1993). Working capital and fixed investment New evidence on financing constraints. Rand Journal of Economics, 24(3), 328-342. https://doi.org/10.2307/2555961
- Gill, A. (2011). Factors that influence working capital requirements in Canada. Economics and Finance Review, 1(3), 30-40.
- Hansen, L. P. (1982). Large sample properties of generalized method of moments estimators. *Econometrica: Journal of the econometric society*, 50(4), 1029-1054. https://doi.org/10.2307/1912775
- Harris, A. (2005). Working capital management: Difficult, but rewarding. Financial Executive, 21(4), 52-54.
- Hiadlovský, V., Rybovičová, I., & Vinczeová, M. (2016). Importance of liquidity analysis in the process of financial management of companies operating in the tourism sector in Slovakia: An empirical study. *International Journal for Quality Research*, 10(4). https://doi.org/10.18421/IJQR10.04-10
- Hill, M. D., Kelly, G. W., & Highfield, M. J. (2010). Net operating working capital behavior: A first look. *Financial Management*, 39(2), 783-805. https://doi.org/10.1111/j.1755-053X.2010.01092.x
- Hill, R. A. (2013). Working capital and strategic debtor management-eBooks and textbooks from bookboon.com.
- İltaş, Y. (2016). Türkiye Cumhuriyet Merkez Bankası sektör bilançolarını kullanarak işletme sermayesi gereksinimini etkileyen değişkenler üzerine bir analiz: 1996-2013. Erciyes Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi(48), 123-143.
- IMF. (2019). World Economic Outlook Database, April. International monetary fund. Retrieved March, 20, 2020, from https://www.imf.org/en/Publications/WEO/Issues/2019/03/28/world-economic-outlook-april-2019
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360. https://doi.org/10.1016/0304-405X(76)90026-X

- Jerónimo, D. F. R. (2015). The Determinants of Current Ratio on Portuguese Tourism Industry [Unpublished doctoral dissertation]. Universidade de Lisboa.
- KAP. (2022). Kamuyu Aydınlatma Platformu. Retrieved January, 15, 2022, from https://www.kap.org.tr/
- Kaur, N., & Kaur, J. (2014). Determinants of working capital requirements of automobile industry in India: A study of passenger vehicles segment. *Indian Accounting Association Past Presidents*, 46(2), 117-126.
- Kim, J., Kim, H., & Woods, D. (2011). Determinants of corporate cash-holding levels: An empirical examination of the restaurant industry. International Journal of Hospitality Management, 30(3), 568-574. https://doi.org/10.1016/j.ijhm.2010.10.004
- Kwenda, F., & Holden, M. (2014). Determinants of working capital investment in South Africa: Evidence from selected JSE-listed firms. *Journal of Economics and Behavioral Studies*, 6(7), 569-580. https://doi.org/10.22610/jebs.v6i7.518
- Mansoori, D. E., & Muhammad, D. (2012). Determinants of working capital management: Case of Singapore firms. *Research Journal of Finance and Accounting*, *3*(11), 15-23.
- Mongrut, S., Fuenzalida O'Shee, D., Cubillas Zavaleta, C., & Cubillas Zavaleta, J. (2014). Determinants of working capital management in Latin American companies. *Innovar*, 24(51), 5-18.
- Morais, F., & Silva, P. (2013). Determinants of cash holdings in the accommodation industry. A *formatação da revista obedece à 6^a edição das normas APA*.
- Myers, S. C. (1984). Capital structure puzzle. National Bureau of Economic Research Cambridge, Mass., USA.
- Narender, V., Menon, S., & Shwetha, V. (2008). Factors determining working capital management in cement industry. South Asian Journal of Management, 15(4).
- Naser, K., Nuseibeh, R., & Al-Hadeya, A. (2013). Factors influencing corporate working capital management: Evidence from an emerging economy. *Journal of Contemporary Issues in Business Research*, 2(1), 11-30.
- Nazir, M. S., & Afza, T. (2009). Working capital requirements and the determining factors in Pakistan. *IUP Journal of Applied Finance*, 15(4), 28.
- Ngugi, S. (2014). Determinants of accounts receivables management in the hotel industry in Kenya, Jomo Kenyatta University of Agriculture and Technology.
- Nyeadi, J. D., Sare, Y. A., & Aawaar, G. (2018). Determinants of working capital requirement in listed firms: Empirical evidence using a dynamic system GMM. *Cogent Economics & Finance*, 6(1), 1558713. https://doi.org/10.1080/23322039.2018.1558713
- Palombini, N. V. N., & Nakamura, W. T. (2012). Key factors in working capital management in the Brazilian market. *Revista de Administração de Empresas*, 52(1), 55-69.
- Qurashi, M., & Zahoor, M. (2017). Working capital determinants for the UK pharmaceutical companies listed on FTSE 350 index. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 7(1), 11-17. https://doi.org/10.6007/IJARAFMS/v7-i1/2535
- Ramachandran, A., & Janakiraman, M. (2009). The relationship between working capital management efficiency and EBIT. Managing Global Transitions: *International Research Journal*, 7(1).
- Roodman, D. (2009). How to do Xtabond2: An introduction to difference and system GMM in Stata. *The Stata Journal*, 9(1), 86-136. https://doi.org/10.1177/1536867x0900900106
- Russo, J. F. T. B. (2013). *The working capital management: the determinants and the effect on profitability: Evidence from Portuguese SMEs*, [Unpublished master's thesis]. ISCTE Business School.
- Sargan, J. D. (1958). The Estimation of Economic Relationships using Instrumental Variables. *Econometrica*, 26(3), 393-415. https://doi.org/10.2307/1907619
- Supatanakornkij, S. (2015). Determinants and consequences of working capital management [Unpublished doctoral dissertation]. The University of Edinburgh.
- Terzioğlu, M. K. (2017). Capital structure determinants in financial institutions: Turkish banking system. Gazi Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 19(2), 507-526. Retrieved from https://dergipark.org.tr/en/pub/gaziuiibfd/issue/36598/416137
- UNWTO. (2020). International tourism barometer. UNWTO. Retrieved February, 20, 2020, from https://www.e-unwto.org/doi/epdf/10.18111/wtobarometereng.2020.18.1.7
- UNWTO. (2022). UNWTO world tourism barometer and statistical annex, Retrieved March, 30, 2022. UNWTO World Tourism Barometer (English version), 20(2), 1-36. https://doi.org/10.18111/wtobarometereng.2022.20.1.2
- Valipour, H., Moradi, J., & Farsi, F. D. (2012). The impact of company characteristics on working capital management. *Journal of Applied Finance and Banking*, 2(1), 105.
- Wachilonga, L. W. (2013). Firm size and capital structure decisions: Evidence from hotel and Lodging SMEs in Eldoret Municipality, Kenya. International Journal of Academic Research in Business and Social Sciences, 3(8), 561.
- Wasiuzzaman, S., & Arumugam, V. C. (2013). Determinants of working capital investment: a study of Malaysian PublicListed firms. Australasian Accounting, Business and Finance Journal, 7(2), 63-83. https://doi.org/10.14453/aabfj.v7i2.5

How cite this article

Beyazgul, M., & Karadeniz, E. (2023). Determinants of working capital investments: evidence from the lodging companies in developed and emerging countries. *Journal of Tourismology*, 9(2), 157-168. https://doi.org/10.26650/jot.2023.9.2.1324886