THE EFFECT OF FIRM AND COUNTRY CHARACTERISTICS ON EARNINGS MANAGEMENT: EVIDENCE FROM THE HOTEL INDUSTRY

ABSTRACT:
This paper explores the determinants of firm and country characteristics in explaining the earnings management in a wide sample of listed firms from the tourism industry in 15 countries over 2007 – 2013. We focus on the level of discretionary accruals as a dimension of earnings management that is particularly responsive to firms' financial statement incentives and examine the variables that are potentially associated with the earnings management in hotel firms. The results suggest that firm characteristics are the major determinant of earnings management in the hotel industry around the world. Additionally, our results demonstrated that star rating classification is the determinant of earnings management in high development countries. This paper aims to contribute to knowledge about the tourism industry by examining the determinants of earnings management across a large panel of firms and countries and by focusing on both the characteristics of the firm and its institutional environment.

KEYWORDS: Earnings management, Hotels, Regulation, Star rating.

1. INTRODUCTION

Earnings management has attracted much attention from policymakers and regulators in the last years following financial scandals involving their use. A substantial body of research in accounting is dedicated to understanding the causes and consequences of earnings management (Dechow, Hutton, Kim, & Sloan, 2012). Why managers manipulate earnings, how they to do so and consequences, have been widely studied in the empirical literature (Bharath, Sunder, & Sunder, 2008; Burgstahler, Hail, & Leuz, 2006; Francis, LaFond, Olsson, & Schipper, 2004; Healy & Wahlen, 1999; Leuz, Nanda, & Wysocki, 2003). Although some authors have studied earnings management in the tourism literature (Esteban & Garcia, 2014; Esteban & Devesa, 2011), not much is known about the importance of different star rating of hotels for management options. In addition, much remains to be learned about determinants of earnings management in hotel firms, as prior research has mostly focused on hotels' efficiency (Oliveira, Pedro, & Marques, 2013) and performance (Ray & Phillips, 2005). In this study, we have two research objectives. First, we investigate the determinants of earnings management across a worldwide sample of hotel firms and we focuses on the characteristics of the firm and its institutional environment. Second, we examine whether the differences in the star rating of hotels are associated with determinants of earnings management.

Over the last decades, tourism has been growing and become a key sector in the world economy by making an increasing contribution to the balance of payments, incomes and employment. For example, whereas international tourism receipts totalled about 2 billion dollars in 1950, it had reached 1.197 billion dollars in 2013 (UNWTO Word Tourism Barometer, 2015). Nowadays, the sector originates more than one of third of world exports of services. Tourism is therefore an important driver of economic growth and prosperity. Despite these economic motivations, and the previous empirical literature has certainly advanced our understanding about earnings management, there are little empirical evidence about determinants of earnings management in hotel firms.

A sample of listed firms from the tourism industry for the 2007 – 2013 period in 15 countries is used. We focus on the level of discretionary accruals, namely the modified Jones model suggested by Kothari, Leone and Wasley (2005), as a dimension of earnings management that is particularly responsive to firms' financial reporting incentives.

We find that firm characteristics are the major determinant of earnings management in the tourism industry worldwide. At a more detailed level, our results demonstrated that firms with more investment opportunities and the firms with more financial leverage, greater cash flow from operating, more incidence of losses, determine the higher level of earnings management. Our results are consistent with the previous literature, indicating that firm characteristics are major determinant in explaining earnings management variations across different countries (Chen, Tang, Jiang, & Li, 2010; Gaio, 2010; Sánches-

Ballesta & García-Meca, 2007). Regarding the country characteristics, we find that firms located in more economically developed countries and firms located in common-law countries are the determinants of a lower level of earnings management. Our findings indicate that earnings management is less in developed countries and in common-law countries (Ball, Kothari, & Robin, 2000; Burgstahler et al. 2006; Leuz et al., 2003).

Moreover, our results demonstrated that cash flow from operation and frequency of negative earnings determine the higher level of earnings management and origin of countries determine the lower level of earnings management in five star hotels, whereas only investment opportunities determine the earnings management in other star hotels. Additionally, our results demonstrated that star rating classification is the determinant of lower level of earnings management in high development countries. Growth, cash flow from operation and frequency of negative earnings are the determinants of higher level of earnings management in less development countries. Finally, we demonstrate that the main results of this study are robust to alternative earnings management measures and that they are not sensitive to the exclusion of any particular country in our sample.

Our study makes several contributions to the literature First, it strives to contribute to knowledge of the tourism industry by examining the firm-level and country-level characteristics that determine the level of earnings management. It has the novelty of investigating the determinants of earnings management in top hotels worldwide, particularly the influence of star rating. Second, we extend the corporate governance literature by presenting evidence that economic development and investor protection determine the level of earnings management. Our study therefore complements recent work by Gaio (2010) and Chen, Tang, Jiang and Lin (2010). Third, we demonstrated that the determinants of earnings management is different in five-star hotels and in other hotels. It is important contribution because this paper helps further the understanding of earnings management choices in five-star hotels around the world.

The remainder of this study is organised as follows. Section 2 reviews the literature on determinants of earnings management and develops the hypotheses. Section 3 describes the data and empirical methodology. Section 4 analyses the research results and section 5 addresses the robustness of our main findings. Finally, section 6 presents the concluding remarks.

2. DETERMINANTS OF EARNINGS MANAGEMENT AND HYPOTHESES

To evaluate the determinants of firm and country characteristics on the level of earnings management, we select a set of characteristics previously related to earnings management in empirical research.

2.1. FIRM-LEVEL DETERMINANTS OF EARNINGS MANAGEMENT

Hotels classification. The hotel classification aims to harmonize international standards in order to differentiate and improve hotel facilities and services. Having a greater number of stars suggests more luxury, and better services, food and beverages, entertainment, panoramic views and a variety of rooms of different sizes. Additional requirements, such as spa centres and fitness facilities, as well as location, are also commonly considered in the definition of a standard. The property of greater number of stars hotels is associated with foreign assets and investors who bring more experienced management techniques and attracted more attention from customers and analysts. Empirical studies suggest that greater number of stars do not necessarily correspond to greater efficiency and greater profitability. According to Ray and Phillips (2005), the greater number of stars is associate with the better financial performance in hotels. In this regard, Assaf and Agbola (2011) suggest a positive relationship between number of stars and efficiency of hotels. However, Oliveira, Pedro, & Marques (2013) suggest that star rating is not significant determinant of efficiency of hotels. Because that greater number of stars attract more attention, we expect that greater number of stars correspond of lower level of earnings management.

This study hypothesizes that there is a negative association between hotel classification and the level of earnings management.

Size. Firm size is usually believed to influence the relationship between firms' ownership and earnings management (Burgstahler & Dichev, 1997; Verrecchia, 1983; Watts & Zimmerman, 1990). Large firms take into account their concern about reputation and visibility. Study developed by Verrecchia (1983) supports the idea that managers of larger firms are likely to sense that the cost of supplying non-

proprietary information to the public is minimal, when compared with managers of smaller firms. In fact, the cost of generating, assembling and disseminating detailed information is believed to be higher for smaller firms than for larger ones (Singhvi & Desai, 1971), because the latter generally already collects this information for internal purposes. Because large firms attract more attention from financial analysts and the press, it is more difficult for them to conceal their earnings management behaviour (Healy & Wahlen, 1999). Hence, the cost of engaging in earnings management will be higher for large firms.

Consistent with previous studies, we expect to find a negative association between firm size and the level of earnings management.

Leverage. The relationship between earnings management and leverage is often ambiguous (Healy & Palepu, 2001). Based on agency theory, financial leverage can act as a self disciplining internal governance mechanism to mitigate the costs of debt among owners, managers and creditors (Jensen & Meckling, 1976). Francis et al. (2004) state that firms which are more dependent on external financing tend to achieve a higher quality of accounting figures, because they believe this will lead to a lower cost of external financing. However, the firm's debt is usually regulated through formal written contracts which, in many cases, set some terms for the firm, i.e. covenants. The linking of these clauses is connected to the financial information, since they are based on financial ratios. Therefore, managers can be encouraged to manage the earnings to avoid the penalties considered in the covenants. Authors like Sweeney (1994), Dichev and Skinner (2002) and Bharath et al. (2008) find that there is a higher level of earnings management when firms have higher levels of debt.

Therefore, it is our hypothesis that there is a positive association between leverage and the level of earnings management.

Investment opportunities. In literature, there seems to be no agreement regarding the relationship investment opportunities and earnings management. On the one hand, firms with high growth potentials are generally dependent upon raising equity or debt capital to fund profitable investment projects. A greater need for external financing creates incentives to improve earnings quality so as to benefit from the lower cost of capital (Bhattacharya, Hazem, & Welker, 2003; Francis et al., 2004). On the other hand, some prior studies find that firms with high growth opportunities present more important investment opportunities, which encourages managers to influence the probability of obtaining the future financing needs through the exercise of accounting discretion. In this regard, Sánches-Ballesta and García-Meca (2007) suggest that firms with a high market to book ratio may have higher discretionary accruals than firms with a low market to book ratio. Skinner and Sloan (2002) find that the market severely penalises growth firms in the case of negative earnings surprises. Therefore, growth firms have relatively strong incentives to meet earnings benchmarks, perhaps to avoid increases in the cost of capital or to maintain access to it.

Our hypothesis is that there is a positive association between market to book ratio and the level of earnings management.

Cash flow from operations. According to Roychowdhury (2006), managers also use cash flow from operations to manipulate real earnings activities during the year to meet certain earnings targets. Gaio (2010) in line with Francis, LaFond, Olsson and Schipper (2005), states that greater cash flow from operations as more uncertainty in the operation environment, which means there is a higher probability of manager judgment and error estimation and thus, poorer accruals quality. In agreement with previous literature, firms with a greater cash flow will have a higher level of earnings management.

Consistent with previous studies, we expect to find a positive association between cash flow from operations and the level of earnings management.

Frequency of negative earnings. Previous literature states that negative earnings may induce managers to use more accruals to mitigate the impact of losses, which leads to greater incentives of accounting manipulations. For example, according to Park and Shin (2004), firms that face financial constraints or distress have an incentive to adjust earnings in order to avoid the disclosure of a financial problem leading to a potential loss. Roychowdhury (2006) find evidence that managers manipulate real activities to avoid reporting annual losses. Gaio (2010) also find that more incidence of losses negatively affect accruals quality, concluding that firms with more incidences of losses have a higher level of earnings management, perhaps, to mitigate the impact of losses.

Therefore, it is our hypothesis that there is a positive association between frequency of negative earnings and the level of earnings management.

2.2. COUNTRY-LEVEL DETERMINANTS OF EARNINGS MANAGEMENT

Economic development. Existing literature indicates that economic development also affects financial reporting quality (Ball et al., 2000; Leuz et al., 2003). Ball et al. (2000) find that poorer economic development is too costly to support credible accounting information. Consequently, this could affect managerial incentives to produce high-quality financial information, leading to firms located in poorer economically developed countries having stronger incentives for earnings management. According to the Leuz et al. (2003), earnings management is more pervasive in countries where the economic development is poor, because managers and insiders in these countries enjoy private control benefits and hence have stronger incentives to obfuscate firm performance. In the same vein, Gaio (2010) determines that firms in less developed countries have lower earnings quality rankings.

Hence, we expect to find a negative association between economic development and the level of earnings management.

Origin of country. La Porta, Lopes-de-Silanes, Shleifer and Vishny (1998) classify the countries based on the origin of their commercial laws, which is historically predetermined. In general, commercial laws derive from common-law tradition, which is English in origin, and civil-law tradition, which draws from Roman law. Laws vary greatly across countries, partly due to differences in legal origin. According La Porta et al. (1998) legal systems have also been influencing the demand for accounting information in countries over the years. Several empirical studies find that a common-law country's legal system and consequently higher degree of enforcement in a country is associated with lower earnings management (Ball et al., 2000; Ball, Robin, & Wu, 2003; Leuz et al., 2003).

Therefore, we expect to find a negative association between firms located in common-law countries and the level of earnings management.

3. RESEARCH DESIGN

3.1 THE SAMPLE

The empirical study relies on the worldwide listed firms from the hotel industry with accounting information available in the Thomson Worlscope Database. Given the focus of the analysis, the quality of accounting information, and in order to guarantee the homogeneity of the data, we considered only those countries where firms are required to apply the International Financial Reporting Standards when preparing such accounting information.

Given the need to use data from many years to apply the earnings management model, we based our analysis on firms with accounting information available at least for seven consecutive years. To ensure that the regression results are not influenced by unusual or extreme observations, we first winsorize the extreme values of all variables (1%); then we remove the observations for which the absolute value of the studentized residual is higher than two. The final sample is an unbalanced panel comprising 610 firm-year observations over the period 2007-2013 from 15 countries.

Table 1 presents a composition of sample by countries. When all the firms are considered together, the country Croatia is the most dominant in the sample with 24%, followed by Bulgaria (11%), and Cyprus (10%). The smallest firms representation is for the Bahrain, Peru, Spain, Turkey and United States all with the 2% in the sample. Due to the concern that empirical findings would depend on the effect of countries with a large number of firms, we re-estimate the empirical model eliminating firms from Croatia. The main results are not affected by this sample variation.

TABLE 1 – Composition of sample by countries

Country	N observations	%
Australia	47	8
Bahrain	14	2

Bulgaria	65	11
Croatia	135	24
Cyprus	54	10
France	42	7
Greece	33	6
New Zealand	21	4
Oman	45	8
Peru	11	2
Philippines	28	5
South Africa	37	7
Spain	14	2
Turkey	12	2
United States	10	2
Total	568	100

3.2. VARIABLES

Dependent variable. The dependent variable used in this study is the level of earnings management, measured by the commonly used magnitude of the absolute value of discretionary accruals. We compute this measure by using the modified Jones model with current-year ROA (Return on Assets), computed according to Kothari et al. (2005).

Our dependent variable is the absolute value of discretionary accruals ($ABS\_DA_{i,t}$). We compute the total accrual ($TA_{i,t}$) component of earnings from the balance sheet to each firm i, in each year t, as indicated in the equation:

$$TA_{i,t} = (\Delta CA_{i,t} - \Delta Cash_{i,t}) - (\Delta CL_{i,t} - \Delta STDEBT_{i,t}) - DEPN_{i,t} \tag{1}$$

where, $CA_{i,t}$ is the change of current assets for firm i between year t-1 and year t; $Cash_{i,t}$ is the change in cash for firm i between year t-1 and year t; $CL_{i,t}$ is the change of current liabilities for firm i between year t-1 and year t; $STDEBT_{i,t}$ is the change in debt in current liabilities for firm i between year t-1 and year t; $DEPN_{i,t}$ is the depreciation and amortization expense for firm i, year t. All numbers are scaled by average total assets for firm i, year t-1 ($A_{i,t-1}$) to overcome heteroskedasticity. In the estimated period, the total accruals are calculated by the equation:

$$\frac{TA_{i,t}}{A_{i,t-1}} = r_1 \frac{1}{A_{i,t-1}} + r_2 \frac{(\Delta REV_{i,t} - \Delta AR_{i,t})}{A_{i,t-1}} + r_3 \frac{PPE_{i,t}}{A_{i,t-1}} + r_4 \frac{ROA_{i,t}}{A_{i,t-1}} + v_{i,t} \tag{2}$$

where $REV_{i,t}$ is the change in sales for firm i between year t-1 and year t; $AR_{i,t}$ is the change in account receivable for firm i between year t-1 and year t; $PPE_{i,t}$ is the gross amount of properties, plants and equipment for firm i in year t; $ROA_{i,t}$ is the return of assets for firm i in year r; $A_{i,t-1}$ is average total assets for firm i, in year t and t-1; other variables are previously defined.

We regress total accruals ($TA_{i,t}$) on the change in revenues ($REV_{i,t}$), the level of gross property, plant and equipment ($PPE_{i,t}$) and return of assets ($ROA_{i,t}$), scaled by lagged total assets ($A_{i,t-1}$). The non-discretionary accruals of the cross sectional modified Jones model with current-year ROA are estimated as by equation:

$$NA_{i,t} = \hat{r}_1 \frac{1}{A_{i,t-1}} + \hat{r}_2 \frac{(\Delta REV_{i,t} - \Delta AR_{i,t})}{A_{i,t-1}} + \hat{r}_3 \frac{PPE_{i,t}}{A_{i,t-1}} + \hat{r}_4 \frac{ROA_{i,t}}{A_{i,t-1}} \tag{3}$$

where all variables are defined above.

In the test period, the parameters $\hat{r}_1, \hat{r}_2, \hat{r}_3, \hat{r}_4$ are generated into equation (2). The residual accruals (the equation's prediction error) are the abnormal accruals, which are fully equated with abnormal accruals. Mathematically, abnormal accruals for firm i in year t, ($AA_{i,t}$) are calculated as the difference between the actual total accruals ($TA_{i,t}$) and the estimated normal accruals ($NA_{i,t}$):

$$AA_{i,t} = TA_{i,t} - (\hat{r}_1 \frac{1}{A_{i,t-1}} + \hat{r}_2 \frac{\left(\Delta REV_{i,t} - \Delta AR_{i,t}\right)}{A_{i,t-1}} + \hat{r}_3 \frac{PPE_{i,t}}{A_{i,t-1}} + \hat{r}_4 \frac{ROA_{i,t}}{A_{i,t-1}}) \tag{4}$$

where, $AA_{i,t}$ is the abnormal accruals in year t; other variables are previously defined.

We use the absolute value of abnormal accruals, ABS_DA, as the dependent variable to proxy for earnings management in the regression model, which captures the combined effect of income-increasing and income-decreasing earnings management (Warfield et al., 1995; Gabrielsen et al., 2002; Ballesta and García-Meca, 2007):

$$ABS\_DA = |AA_{i,t}| \tag{5}$$

A higher magnitude of absolute discretionary accruals corresponds to a greater level of earnings management, or lower accounting quality, and vice versa. Our measure of earnings management the modified Jones model with ROA, has some limitations (Dechow et al., 2010). In order to further validate our results, we also calculated other earnings management variables: the absolute value of discretionary accruals estimated by Jones (1991) model, the absolute value of discretionary accruals estimated by modified Jones model suggested by Dechow et al. (1995) and modified Jones model with book-to market (BM) and cash flow from operation (CFO). The main results of our study are unchanged.

Independent firm-level variables. A set of independent firm-level variables is used to test the hypotheses related to the association between firm characteristics and the level of earnings management. We hypotised that there is a negative association between hotel classification, firm size, investment opportunities and positive association between leverage, frequency of negative earnings and earnings management.

We use an industry specific firm-level variable that distinguishes firms based on the hotels features. Previous empirical literature suggest that hotel classification is the significant determinant of the performance and efficiency of hotels and determine the star rating as the binary variable (Ray and Phillips, 2005; Assaf and Agbola, 2011). We used the binary variable for hotels classification, CLASS, that assumes 1 if the firm hold five-star hotels and 0 otherwise.

We also use the following set of broader variables, selected based on prior literature on earnings management: SIZE, LEVERAGE, GROWTH, ROA, CFO and NEGNIBE. The variable SIZE is measured by the natural logarithm of the firm's total assets, and LEVERAGE is the firm's total debt divided by the market capitalisation. The variable GROWTH is the annual percentage change in sales. The CFO is the cash flow from operations scaled by total assets and NEGNIBE is the frequency of negative earnings measured as the number of firm-years with the negative NIBE divided by the total of firm-years.

Independent country-level variables. A set of independent country-level variables is used to test the hypotheses related to the association between country characteristics and the level of earnings management. We hypotised that there is a negative association between economic development, origin of country and earnings management. Based on prior literature on earnings management, we use the following country-level variables: DEVELOPMENT and ORIGIN. DEVELOPMENT is the natural logarithm of gross domestic product per capita for each country. ORIGIN is a binary variable that assumes 1 if the firm is domiciled in a common-law country and 0 otherwise.

3.3. RESEARCH MODEL

In order to analyse whether firm and country characteristics play an important role in explaining the level of earnings management in the hotel industry, we estimate the following model:

$$ABS\_DA_{i,t} = {}_0 + {}_1CLASS_{i,t} + {}_2SIZE_{i,t} + {}_3LEVERAGE_{i,t} + {}_4GROWTH_{i,t} + {}_5CFO_{i,t} + {}_6NEGNIBE_{i,t} + {}_7DEVELOPMENT_{i,t} + {}_8ORIGIN_{i,t} + {}_9YEAR_{i,t} + {}_{10}COUNTRY_{i,t} + {}_{i,t.} \tag{6}$$

Where $ABS\_DA_{i,t}$ is the absolute value of discretionary accruals (MJM with ROA) estimated by Kothari et al. (2005). The independent variables are computed as shown in the previous section. $YEAR_{i,t}$ is the year dummy variables, $COUNTRY_{i,t}$ is the country dummy variables, ${}_{i,t}$ is the residual term.

4. EMPIRICAL RESULTS

4.1. DESCRIPTIVE ANALYSIS

Table 2 presents the descriptive statistics for main variables.

TABLE 2 – Descriptive statistics

Panel A: Descriptive statistics of earnings management variables

	Mean	Std Dev	10%	25%	Median	75%	90%
Jones model (JM)	0,036	0,036	0,004	0,011	0,026	0,049	0,086
Modified Jones model (MJM)	0,037	0,036	0,005	0,011	0,026	0,049	0,087
Modified Jones model with BM and CFO (MJM with BM and CFO)	0,036	0,035	0,005	0,012	0,026	0,047	0,081
Modified Jones model with ROA (MJM with ROA)	0,037	0,034	0,005	0,012	0,027	0,050	0,082

Panel B: Descriptive statistics of independent variables

	Mean	Std Dev	10%	25%	Median	75%	90%
CLASS	0,680	0,467	0,000	0,000	1,000	1,000	1,000
SIZE	11,872	1,697	10,000	10,792	11,660	12,743	14,398
LEVERAGE	54,177	85,936	0,000	3,978	26,220	69,135	124,333
GROWTH	0,345	4,690	-0,255	-0,055	0,039	0,154	0,518
CFO	0,054	0,073	-0,012	0,011	0,037	0,087	0,151
NEGNIBE	0,380	0,345	0,000	0,000	0,330	0,670	0,830
DEVELOP	3,181	0,502	2,526	2,943	3,039	3,608	3,780
ORIGIN	0,300	0,458	0,000	0,000	0,000	1,000	1,000

Jones model (JM) is the absolute value of discretionary accruals estimated by Jones (1991); Modified Jones model (MJM) is the absolute value of discretionary accruals estimated by Dechow et al. (1995); Modified Jones model with BM and CFO (MJM with BM and CFO) is the absolute value of discretionary accruals estimated by Larcker and Richardson (2004); Modified Jones model with ROA (MJM with ROA) is the absolute value of discretionary accruals estimated by Kothary et al. (2005). CLASS is the binary variable that assumes 1 if the company hold the five-star hotels and 0 otherwise. SIZE is the natural logarithm of total assets in dollars. LEVERAGE is the firm total debt divided by its total market capitalisation. GROWTH is the annual percentage change in sales. CFO is the cash flow from operations scaled by total assets. NEGNIBE is the frequency of negative earnings measured as the number of firm-years with negative NIBE divided by the total of firm-years. DEVELOPMENT is the natural logarithm of gross domestic product per capita. ORIGIN assumes 1 if the company is domiciled in a common-law country and 0 otherwise. Number of observations is 568.

Panel A reports the descriptive statistics for dependent variables. The mean (median) value of the dependent variable, ABS_DA, is 0.037 (0.027), are consistent with those of Esteban and Devesa (2011). As for other discretionary accruals metrics, namely Jones model, modified Jones model, modified Jones model with BM and CFO the results are similar to those found with our main discretionary accruals measure ABS_DA.

Panel B lists the independents firm-level and country-level variables. In respect of firm-level variables, CLASS has a mean (median) value of 0.68 (1.00) SIZE has a mean (median) value of 11.87 (11.66), which is also lower than Gaio (2010) and Sánches-Ballesta and García-Meca (2007). LEVERAGE has a mean (median) value of 54.18 (26.22). The mean (median) values for the variables GROWTH and CFO are 0.345 (0.039) and 0.054 (0.037), respectively. NEGNIBE has a mean (median) value of 0.38 (0.33). Sánches-Ballesta and García-Meca (2007) and Gaio (2010) report similar results.

In respect of the country-level independent variables, DEVELOP has a similar among the sample companies, since its mean and median are almost identical, 3.132 and 3.039, respectively. The companies that domiciled in a common-law country (ORIGIN) has mean (median) value of 0.30 (0.00).

Table 3 shows the Pearson correlations among all the variables included in the empirical study.

TABLE 3 – Pearson Correlations

	ABS_DA	CLASS	SIZE	LEVERAGE	GROWTH	CFO	NEGNIBE	DEVELOP	ORIGIN	VIF
ABS_DA	1.000									
CLASS	0.034	1.000								1,094
SIZE	-0.069	**0.090**	1.000							1,114
LEVERAGE	0.064	**0.132**	**0.139**	1.000						1,079
GROWTH	**0.099**	-0.028	0.017	0.063	1.000					1,029

										VIF
CFO	**0.090**	-0.041	-0.011	-0.029	**0.104**	1.000				1,587
NEGNIBE	0.060	0.080	**-0.116**	0.021	-0.049	**-0.596**	1.000			1,632
DEVELOP	**-0.104**	0.214	0.246	0.038	**0.097**	0.100	-0.165	1.000		1,208
ORIGIN	**-0.120**	0.117	0.142	0.160	0.062	0.121	-0.146	0.243	1.000	1,121

ABS_DA is the absolute value of discretionary accruals estimated by Kothary et al. (2005). CLASS is the binary variable that assumes 1 if the company hold the five-star hotels and 0 otherwise. SIZE is the natural logarithm of total assets in dollars. LEVERAGE is the firm total debt divided by its total market capitalisation. GROWTH is the annual percentage change in sales. CFO is the cash flow from operations scaled by total assets. NEGNIBE is the frequency of negative earnings measured as the number of firm-years with negative NIBE divided by the total of firm-years. DEVELOPMENT is the natural logarithm of gross domestic product per capita. ORIGIN assumes 1 if the company is domiciled in a common-law country and 0 otherwise. Number of observations is 568. Boldface denotes significance at the 1% and 5% level.

Our dependent variable, absolute value of discretionary accruals (ABS_DA), is negatively correlated with the DEVELOP and ORIGIN variables. This is consistent with prior research on earnings management (Gaio, 2010; Ball et al. 2000) providing evidence that higher development countries and common-law origin countries are more likely to reduce managers' opportunities to exercise their accounting discretion in these firms. Also, ABS_DA is positively related to GROWTH and CFO variables, which means that firms with greater cash flow from operation and firms with more investment opportunities are more likely to stimulate managers' opportunities to manipulate earnings. These findings are consistent with prior literature on earnings management (Sánches-Ballesta and García-Meca, 2007; Ali et al., 2007). There are no pairwise correlation coefficients in excess of 0.80, indicating that the threat of multicollinearity is limited. The highest coefficient represents the value – 0.596 between NEGNIBE and CFO. However, we also conduct a formal test to ensure that multicollinearity is not present in our sample. In particular, we calculate the Variance Inflation Factor (VIF) for each independent continuous variables included in the estimated model. Kennedy (1992) suggests that a VIF greater than ten is indicative of problematic multicollinearity. As Table 3 shows, the highest VIF value is 1.632, which is well below 10 (Kennedy, 1992). Overall, the correlation values are low which suggests that our independent variables capture different aspects of business and countries environment characteristics.

4.2 MULTIVARIATE ANALYSIS

Table 4 presents the results of our multivariate analysis. The dependent variable in all models is the absolute value of discretionary accruals (ABS_DA). The determinants variables are estimates in the three models. Model 1 brings together firm-level and country-level variables, model 2 includes only the firm-level variables and model 3 includes only the country-level variables.

TABLE 4 – Determinants of earnings management in hotel industry

	Model 1 (t-stat)	Model 2 (t-stat)	Model 3 (t-stat)
Intercept	0.010 (0.687)	**0.046** (4.703)	**0.053** (3.912)
CLASS	0.003 (-0.856)		0.004 (1.380)
SIZE	0.001 (1.212)		-0.001 (-0.722)
LEVERAGE	**0.000** (2.046)		**0.000** (1.746)
GROWTH	**0.004** (2.876)		**0.001** (2.387)
CFO	**0.055** (1.798)		**0.083** (3.386)
NEGNIBE	**0.016** (2.968)		**0.013** (2.428)
DEVELOP		**-0.004** (-1.902)	**-0,006** (1.816)
ORIGIN		**-0.009** (-2.106)	**-0.009** (-2.859)
Years dummies	Yes	Yes	Yes
Country dummies	Yes	No	No
Adjusted R-square	0.08	0.03	0.07

Modified Jones model with ROA (MJM with ROA) is the absolute value of discretionary accruals estimated by Kothari et al. (2005). CLASS is the binary variable that assumes 1 if the company hold the five-star hotels and 0 otherwise. SIZE is the natural logarithm of total assets in dollars. LEVERAGE is the firm total debt divided by its total market capitalisation. GROWTH is the annual percentage change in sales. CFO is the cash flow from operations scaled by total assets. NEGNIBE is the frequency of negative earnings measured as the number of firm-years with negative NIBE divided by the total of firm-years. DEVELOPMENT is the natural logarithm of gross domestic product per capita. ORIGIN assumes 1 if the company is domiciled in a common-law

We find that firm characteristics are the major determinant of earnings management in the hotel firms worldwide. Regarding the firm-level variables, we find that the classification of hotels (CLASS) and firm size (SIZE) are not statistically related to the level of earnings management. The other firm-level variables coefficients are statistically significant although not always at 1% level. According to our hypothesis, the variable investment opportunities (GROWTH), firms leverage (LEVERAGE), and frequency of negative earnings (NEGNIBE) positively related to earnings management. Our results demonstrated that firms with more investment opportunities and the firms with more financial leverage, greater cash flow from operating, more incidence of losses, determine the higher level of earnings management. These findings confirm previous studies indicating that greater cash flow from operations seems to create more uncertainty in the operation environment (Francis et al., 2004). Consequently, there is a stronger probability of manager judgment and error estimation and this increases managers' opportunities to exercise accounting discretion. Regarding the frequency of negative earnings, our results indicate that managers use more accruals to mitigate the impact of losses, which would affect the earnings management decisions (Park & Shin, 2004). Our results are consistent with the previous literature, indicating that firm characteristics are major determinant in explaining earnings management variations across different countries (Chen, Tang, Jiang, & Li, 2010; Gaio, 2010; Sánches-Ballesta & García-Meca, 2007).

According to our hypothesis, we find that firms located in more economically developed countries (DEVELOP) and firms located in common-law countries (ORIGIN) are the determinants of a lower level of earnings management. Our findings indicate that earnings management is less in developed countries and in common-law countries (Ball, Kothari, & Robin, 2000; Burgstahler et al. 2006; Leuz et al., 2003).

To investigate whether the differences in the star rating of hotels are associated with determinants of earnings management, we split the sample into two groups: firms that hold five-star hotels and firms that hold other star hotels. Table 5 presents the results of this additional analysis.

TABLE 5 – Determinants of earnings management by star rating hotels and by country's economic development

	Five-star hotels n=386	Other hotels n=182	High development countries n=169	Less development countries n=399
Intercept	**0.061** (3.492)	0.005 (1.547)	0.040 (1.622)	**0.048** (2.833)
CLASS			**-0.011** (-2.001)	**0.008** (2.000)
SIZE	0.001 (-0.756)	0.000 (-0.092)	0.001 (1.026)	-0.001 (-0.985)
LEVERAGE	0.000 (1.419)	0.000 (1.492)	0.000 (0.800)	**0.000** (1.819)
GROWTH	0.001 (1.644)	**0.001** (1.749)	0.000 (0.643)	**0.001** (2.197)
CFO	**0.100** (3.323)	0.010 (0.227)	0.036 (1.201)	**0.096** (2.751)
NEGNIBE	**0.012** (1.838)	0.014 (1.410)	0.011 (1.201)	**0.015** (2.113)
DEVELOP	-0.005 (-1.181)	-0.004 (-0.721)	-0.006 (-1.065)	-0.004 (-0.967)
ORIGIN	**-0.014** (-3.373)	0.005 (0.910)		
Years dummies	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes
Adjusted R-square	0.08	0.07	0.07	0.05

Modified Jones model with ROA (MJM with ROA) is the absolute value of discretionary accruals estimated by Kothary et al. (2005). CLASS is the binary variable that assumes 1 if the company hold the five-star hotels and 0 otherwise. SIZE is the natural logarithm of total assets in dollars. LEVERAGE is the firm total debt divided by its total market capitalisation. MB is the market-to-book ratio. CFO is the cash flow from operations scaled by total assets. NEGNIBE is the frequency of negative earnings measured as the number of firm-years with negative divided by the total of firm-years. ROA is return on assets ratio. DEVELOPMENT is the natural logarithm of gross domestic product per capita. ORIGIN assumes 1 if the company is domiciled in a common-law country and 0 otherwise. Boldface denotes significance at the 1%, 5% and 10% level.

Our results demonstrated that cash flow from operation and frequency of negative earnings determine the higher level of earnings management and origin of countries determine the lower level of earnings

management in five star hotels, whereas only investment opportunities determine the earnings management in other star hotels.

To investigate whether the differences in the development of countries are associated with determinants of earnings management, we split the sample into two groups: firms that are located in the high development countries and firms that are located in the less development countries. Table 3 presents the results of this additional analysis. Our results demonstrated that star rating classification is the determinant of lower level of earnings management in high development countries. Growth, cash flow from operation and frequency of negative earnings are the determinants of higher level of earnings management in less development countries.

5. CONCLUSIONS

This paper examines the firm-level and country-level determinants of earnings management across 24 countries during the 2007–2013 period in tourism industry. We provide evidence that firm characteristics are the major determinant of earnings management in the hotel industry around the world. Additionally, we documents that country characteristics are important in explaining the determinants of earnings management in five-star hotels.

We find that star rating is not significant determinant of firms' earnings management practice. Our results demonstrated that the determinants of earnings management is different in five-star hotels and in other hotels. It is important contribution because this study helps further the understanding of earnings management choices in five-star hotels around the world. Regarding the country characteristics, we find that firms located in more economically developed countries and firms located in common-law countries have a lower level of earnings management.

Our findings do not attempt to imply that firm characteristics substitute country characteristics in explaining earnings management. Although firm and country characteristics play different roles, they interact in determining earnings management. In future research, it would be interesting to analyse the impact of the differences in firm-level determinants of earnings management in the tourism industry around the world.

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