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The asset-light strategies and the dividend puzzle: international evidence from the hospitality industry

Abstract

This study investigates the impact of the asset-light strategy on dividend policy using a sample of large international publicly-listed companies (399 firm-year observations) operating in the hotel and restaurant industry over the 2006-2018 period. Taking the perspective of agency theory, we posit that the asset-light strategy in conjunction with significant growth is a context in which high agency conflicts arise. Using Tobit and OLS models, our results indicate that adopting an asset-light strategy only impacts dividend policy for firms with high growth. More interestingly, the positive impact of the asset-light strategy on dividend payouts occurs for firms with substantial growth if institutional ownership is low. In such situations, significant potential agency conflicts (due to high free cash flows) coupled with the lack of monitoring from institutional investors lead firms to use dividends as a monitoring tool. Finally, a change analysis supports our main findings.

Keywords

Asset-light ● Dividend payout ● Growth ● Institutional ownership ● Hotel ● Restaurant

1. Introduction

The mechanics underlying dividend policy is a widely researched topic leading to contradictory findings. In his well-known article on the dividend puzzle, Fisher Black (1976) concludes with the following sentence: "*What should the corporation do about dividend policy? We don't know.*" [6, p.8] Dividend policy varies across firm characteristics (Myers, 1984), industries and countries (Michel and Shaked, 1986; Baker, 1988; Mackay and Phillips, 2005). Consequently, various studies have focused on dividend policy in specific contexts (Mancinelli and Ozkan, 2006; Dalbor and Upneja, 2007; Kim and Jang, 2010; Imran, 2011; Marfo-Yiadom and Agyei, 2011; Oak et al., 2012), enabling to slowly put the pieces of the puzzle together.

This study investigates dividend policy in the hospitality industry by examining international publicly-listed companies operating in the hotel and restaurant business. The hospitality industry is a particularly interesting context to explore the dividend puzzle for two main reasons. First, the major shift in terms of business model that has been happening over the past decades implies a deep change in firm's capital structure. Many hospitality firms have adopted, or have started to adopt, "asset-light strategies", enabling them to expand business rapidly without having to raise substantial external funds or bear the risk related to owning properties (Blal and Bianchi, 2019; Sohn et al., 2013). As explained by Marriott and Hilton in their recent 10-K forms, the asset-light strategy, which involves managing or franchising hotels rather than owning them (Marriott International Inc., 2018), is expected to increase cash available for return to shareholders (Hilton Worldwide Holdings Inc., 2017). Consequently, we might reasonably expect the asset-light strategy to impact dividend policy in the hospitality industry. Second, ownership held by institutional investors[1] in publicly-traded firms has been

[1] Institutional investors are mutual funds, pension funds, hedge funds, private equity funds, brokerage firms and research firms who hold a significant stake of the company (more than 5%).

increasing over the past decades (Leung and Lee, 2006; Oak and Dalbor, 2008a; Oak and Dalbor, 2008b; Oak and Upneja, 2009; Tsai and Gu, 2007), and the trend continues as evidenced by an HVS report on European Hotel Transactions (Auer and Rey, 2019). Once they become major shareholders, institutions have an impact on the main corporate decisions (Hartzell and Starks, 2003), such as dividend policy.

Based on recent data[2], 54% of all rooms worldwide are affiliated to international hotel chains, while 11% of all restaurants are affiliated to a chain. The hospitality and tourism industry is composed of large corporations, which serve the mass market and small firms that cater for niches (Papatheodorou, 2004). Our study explicitly focuses on large companies, which allows to capture the main dynamics of the industry. Indeed, recent data retrieved from Thomson Reuters Datastream indicate that 89% of all dividends paid worldwide by listed hotel and restaurant firms in 2016 were coming from the 30 largest firms[3]. Moreover, institutional ownership is most prevalent in large firms which are prominent in equity indexes (Cornett, Marcus, Saunders & Tehranian, 2007).

In a recent article investigating the dividend puzzle in the restaurant industry, Gim and Jang (2019) document that franchise firms' dividend policy is conditional on institutional holdings and prior dividends, while non-franchise firms' policy depends on other factors such as growth and leverage. We contribute to Gim and Jang (2019) by expanding the analysis beyond the national franchising context to worldwide publicly-listed hotel and restaurant firms, most of which operate (at least partially) under management and franchise contracts. Furthermore, we extend the analysis – by coupling growth and institutional ownership – to

[2] According to Smith Travel Research (STR) and Euromonitor data (2019).
[3] While the revenues generated in 2016 by these 30 largest firms represented 68% of the whole sub-industry's revenues.

examine in greater detail the contexts in which a hospitality firm's business strategy influences its dividend policy. Following agency theory (Jensen, 1986), various mechanisms can mitigate agency conflicts (e.g. manager-shareholder conflicts leading to agency costs), among which dividend and institutional holdings. Previous literature documents that institutional investors serve as monitors by strengthening corporate governance and mitigating agency costs (Chang et al., 2016). This role of monitor is especially important for firms with high free cash flows available to managers, as these cash flows might not be used in shareholders' best interest. Moreover, dividends can also serve as a tool to mitigate agency conflicts, as increasing cash disbursements 1) reduces the cash flows that are available to managers, 2) avoids any private benefits expropriation and 3) discourages overinvestment (Grossman and Hart, 1980; Easterbrook, 1984; Jensen, 1986).

We posit that the asset-light strategy in conjunction with significant growth is a context in which high agency conflicts arise. As mentioned by Dogru et al. (2020), fees and royalties increase available cash flows - which might be used inefficiently - and the greater the growth, the more agency conflicts are likely to occur. As a result, we expect corporations to use dividend policy to mitigate the concerns related to the misuse of cash flows available in such situations. Moreover, asset-light firms with substantial growth and low institutional ownership (a situation in which institutions do not serve as a monitor) represent a sub-group for which dividend policy is expected to play a preeminent role in mitigating agency costs.

Using a sample composed of large publicly-traded hospitality firms worldwide[4] from 2006 to 2018 (399 firm-year observations), we document that adopting an asset-light strategy

[4] Hotel and restaurant companies worldwide with a market capitalization greater than $0.5 billion USD as of December 2017. Appendix B provides a comprehensive list of the companies included in our sample.

only impacts dividend policy for firms with high growth, while there is no effect for low growth firms. More interestingly, the positive impact of the asset-light strategy on dividend payouts only occurs for firms with substantial growth if institutional ownership is low. In such situations, the high level of potential agency conflicts (due to high free cash flows) coupled with the lack of monitoring from institutional investors lead firms to use dividends as a monitoring tool.

Our study contributes to the literature in several ways. First, as mentioned by Kim and Jang (2010), dividend decisions deserve more extensive academic work, and limited efforts have been made in hospitality academia. We expand the current literature on dividend distribution by examining the international lodging and restaurant context. Given that the hospitality industry is highly internationalized (Song, Li, & Cao, 2018), and that most studies focusing on dividend policy use US data (Canina et al., 2001; Kim and Gu, 2009; Kim and Jang, 2010; Gim and Jang, 2019), we adopt a broader perspective compared to previous literature by placing our study in a global context. Second, we add to the current knowledge of the effects of asset-light on dividend policy by studying the combined effect of both growth and ownership structure on dividend policy. As such, we aim to further support and expand the findings of Gim and Jang (2019) by clearly differentiating the situations in terms of growth and ownership structure - independently and jointly - impacting dividend policy.

The rest of the paper is organized as follows. In Section 2, we review the relevant literature and develop our hypotheses. In Section 3, we describe the methodology and present the data. In Section 4, we report and analyze the results. Finally, we conclude in Section 5.

2. Hypothesis development

Agency theory states that conflicts of interest between managers (insiders) and shareholders (outsiders) lead to agency costs that hurt shareholder value (Jensen, 1986). When the company

generates substantial free cash flows, it has to motivate managers to invest in positive net present value projects and avoid misusing the firm's resources (e.g. managers' private benefits). Various mechanisms have been proposed in the literature to mitigate agency conflicts. For example, cash disbursements (i.e. dividend payments) reduce the cash flows available to managers and, as a result, the resources they control (Jensen, 1986). Rozeff (1982) and Easterbrook (1984) argue that dividend payments push managers to find alternative financing through the capital markets, which induces additional monitoring. Another mechanism is institutional ownership. As mentioned by Chang et al., (2016, p.2552), institutions holding a large stake in the firm "*increase the probability and effectiveness of monitoring, as institutions can gain access to the board.*" When institutional investors (e.g. pension funds, hedge funds, private equity funds, etc.) hold a significant stake in the company, they'll push for improved corporate governance and mitigate agency conflicts (Hartzell and Starks, 2003; Khan, Dharwadkar, and Brandes, 2005; Velury and Jenkins, 2006). Zeckhauser and Pound (1990) posit that institutional ownership substitutes as a monitoring device, hence reducing the need for the capital markets to provide external monitoring (Short et al., 2002).

The hospitality industry is characterized by high levels of competition, risk, capital intensity, and sensitivity to changes in the economy and consumer spending (Singal, 2015). Moreover, the industry's business model has undergone a major shift in recent decades, leading to the co-existence of firms pursuing different business strategies with different capital structures, risk profiles, profitability and liquidity (Roh, 2002; Hsu and Jang, 2009; Gim and Jang, 2019). Some hotel and restaurant corporations have been divesting from hotel and restaurant assets, while focusing more on management and/or franchise (fee-earning) business models. Such an "asset-light" business model enables firms to grow fast with less capital investments (Sohn et al., 2013), allowing for greater flexibility (Gim and Jang, 2019), and

stabilizing and increasing cash flows (Andrew et al., 2007; Dogru et al., 2020). In sum, the asset-light strategy allows players to seize growth opportunities in the tourism market while not bearing the real estate risk.

The pecking order theory (Myers and Majluf, 1984) predicts that firms will prefer financing through retained earnings, followed by debt and equity. Accordingly, firms with significant growth first use retained earnings to finance their growth opportunities, which lowers the dividend payout. Franchising firms have access to additional cash through franchise fees (and the cash flows related to franchising contracts which include initial fees and other operational fees), which represents an alternative source of funds (Norton, 1995). Park and Jang (2017) show that the capital derived from franchising substitutes for long-term debt (and is a complement to short-term debt), while Gim and Jang (2019) explain that franchise restaurant firms can finance their growth opportunities through additional franchises, which is a cheaper source of funds, and has less of an impact on dividend payouts. In other words, the impact of growth on dividend policy is conditional on the business strategy followed by the firm. Non asset-light firms with poor growth opportunities will distribute higher dividends, due to their low needs for financing. However, asset-light firms enjoying high growth rates, all else equal, have more cash flows available for disbursement than asset-light firms with sluggish growth. In consequence, given that on the one hand, franchising firms have access to additional cash through franchise fees, and on the other hand, the impact of growth on dividend policy is conditional on the business strategy, we propose the following two hypotheses:

Hypothesis 1. *The asset-light strategy has a positive impact on the dividend payout ratio.*

Hypothesis 2. *The impact of the asset-light strategy on the dividend payout ratio is stronger (weaker) for high (low) growth firms.*

The link between ownership structure and dividend policy has been extensively investigated (Williamson, 1964; Leland and Pyle, 1977; Rozeff, 1982; Jensen, 1986; Jensen et al., 1992; Eckbo and Verma, 1994; Moh'd et al., 1995; Short et al., 2002). According to the free cash flow theory (Jensen, 1986), conflicts between shareholders and managers are exacerbated by large amounts of cash flows in excess of funds used for projects with positive net present value, and lowering these cash flows reduces agency costs. Agency theory predicts that institutional investors will push for higher dividends in order to mitigate managers' opportunistic behaviors (Jensen, 1986), especially in firms with high agency costs (Chang et al., 2016), while Zeckhauser and Pound (1990) state that institutional ownership substitutes as a monitoring device which reduces the need for external monitoring (Short et al., 2002). In other words, institutional ownership can serve as a monitor, without necessarily implying larger dividend payouts (by improving corporate governance for example). Consequently, we posit that the context with the greatest probability of generating agency conflicts is when an asset-light firm, with substantial growth, has low levels of institutional ownership. In such a situation, the business strategy (degree of asset-light) leads to high levels of cash flows available to managers, while no institution is on the board serving in a supervisory role. In such a situation, in line with the agency theory and as a signal to firms' outsiders, we expect the firm to distribute more dividends to compensate for the lack of monitoring from institutional investors, which would reduce agency costs. This leads us to hypothesis 3:

Hypothesis 3. *The positive impact of the asset-light strategy on dividend policy for growing firms is conditional on a low level of institutional ownership.*

3. Methodology

3.1. Sample and data

To empirically test our hypotheses, we used Thomson Reuters Datastream to build a sample composed of publicly-listed hotel and restaurant companies worldwide[5] with a market capitalization greater than $0.5 billion USD (as of December 2017). In line with Cornett et al. (2007), we focus on large firms as they are prominent in equity indexes and are of particular interest to institutional investors. Moreover, recent data[6] indicate that almost 90% of all dividends paid by listed hotel and restaurant firms worldwide are coming from the 30 largest firms. The initial dataset comprised 495 firm-year observations, for which we hand-collected information on dividend policy, management and franchise fees, institutional holdings, M&A activities and share repurchases in annual reports and proxy statements[7]. We eliminated all observations with missing data, which led to a final sample composed of 399 firm-year observations over the 2006-2018 period. All variables are winsorized at 1% and 99% to alleviate the effect of outliers.

3.2. Model development

The purpose of this study is to investigate the impact of the asset-light strategy on dividend policy in different contexts. The main regression model, a Tobit model with left censoring[8], is as follows:

$$\mathrm{PAYOUT}_{i,t} = \beta_0 + \beta_1 * \mathrm{FEE\_RATIO}_{i,t} + \beta_2 * \mathrm{GROWTH}_{i,t} + \beta_3 * \mathrm{FEE\_RATIO}_{i,t} * \mathrm{GROWTH}_{i,t} + \sum_{j=4}^{k} \beta_j * \mathrm{CONTROLS} + \varepsilon_{i,t} \quad (1)$$

[5] Seven countries are represented in our final sample: Canada, China, France, Japan, the United Kingdom, the United States of America, and Spain.

[6] Based on 2016 data retrieved from Thomson Reuters Datastream.

[7] The initial sample firms for which we hand collected various data represents 20% (495/2496) of all hotel and restaurant firms available on Datastream for the countries covered in our study.

[8] The payout ratio is by nature "left-censored" (or bounded to 0). Such situation destroys the linearity assumption so that a Tobit model is more appropriate than the least squares method (Tobin, 1958; Amemiya, 1984; Wooldridge, 2001; Greene, 2003).

where *PAYOUT* is the dividend payout ratio measured as cash dividend divided by net income. *FEE_RATIO* is a measure of asset-lightness, namely the fee-income ratio. *GROWTH* is a dummy variable equal to 1 if year-on-year sales growth for a given firm-year is greater than the sample median, and 0 otherwise[9]. We use a dummy variable for growth to facilitate the interpretation of the interaction term. *CONTROLS* is a vector of control variables that have been used in the literature focusing on dividend policy (Baker et al., 1985; Holder et al., 1998; Fama and French, 2001; Adelegan, 2003; Amidu and Abor, 2006; Ho, 2003; Chang et al., 2016; Gim and Jang, 2019) including cash flow volatility, institutional ownership, size, leverage, cash ratio, return on asset and share repurchases. In all tests, we include hotel, time and country fixed effects. On top of the full sample regression model (model 1), we conducted group-wise analyses based on growth (high growth firms versus low growth firms) and institutional ownership (high versus low institutional ownership). High growth firms (high institutional ownership firms) are firms with sales growth (institutional ownership) greater than the sample median.

3.3. Variables of interest

Following Chang et al. (2010) and Gim and Jang (2019), we use as our dependent variable the dividend payout ratio, which is calculated as cash dividends divided by net income (although Gim and Jang (2019) use net sales in the denominator). As documented in **Table 1**, the median payout ratio increased during the sample period, from 21.4% in 2006 to 35.5% in 2018, with a low in 2010 (26.2%). Regarding our independent variables, we follow Li and Singal (2019) and Sohn et al. (2013) to measure the degree of fee business using the fee-income ratio (*FEE_RATIO*), which is the sum of fee income from franchising, management and

[9] In additional analyses (section 4.5), we use a continuous variable to measure growth, and our results hold.

licensing contracts over total sales revenue. In line with Blal and Bianchi (2019), the fee-income ratio increased over the sample period from 7.7% in 2006 to 14% in 2018. Sales growth has been around 7% throughout the sample period, with a downturn during the financial crisis in 2009 (-3.9%), and a peak in 2007 (+14.4%). Finally, institutional ownership (*INST_OWN*), which is the percentage of common shares owned by institutional investors who own individually more than 5%, increased significantly between 2006 (12.8% on average) and 2018 (18.5% on average).

[Insert Table 1 here]

4. Results and discussions

4.1. Descriptive Statistics

Table 2 presents descriptive statistics of the variables used in our tests for the full sample (panel A), low growth firms (panel B), and high growth firms (panel C). Significant differences appear between high and low growth firms in terms of mean payout ratio (43.4% versus 54.8%), fee-income ratio (8% versus 14%), and leverage (30.6% versus 38.6%). Unsurprisingly, high growth firms pay lower dividends as more capital is needed to finance their growth (Fama and French, 2001). Moreover, high growth firms have a smaller percentage of sales revenue coming from fees (*FEE_RATIO*). High growth firms have also higher cash flow volatility (*CASH_FLOW_VOL*), lower levels of institutional holdings (*INSTIT_OWN*), are smaller (*SIZE*), have less debt (*LEVERAGE*), lower levels of cash (*CASH_RATIO*), higher return on assets (*ROA*), engage less in share repurchases (*BUYBACKS*) and more in M&A activities (*M&A*). Finally, asset growth (*ASSET_GROWTH*) is higher for high growth firms.

[Insert Table 2 here]

Table 3 illustrates the correlation matrix for the variables used in our tests for the high

growth (panel A) and low growth (panel B) subsamples. Looking at high growth firms, it appears that the fee-income ratio (*FEE_RATIO*) and cash flow volatility (*CASH_FLOW_VOL*) are significantly correlated with the payout ratio, which is not the case for low growth firms. This preliminary finding suggests differences in dividend policy between firms with different levels of growth. Moreover, cash flow volatility (*CASH_FLOW_VOL*) is negatively associated with the fee-income ratio (*FEE_RATIO*) for low growth firms only, while size (*SIZE*) is positively associated with cash flow volatility for high growth firms only. It also appears that firms with more leverage (*LEVERAGE*) have greater return on assets (*ROA*) in the low growth subsample only. Finally, share repurchases (*BUYBACKS*) are positively correlated with size (*SIZE*) and return on assets *(ROA*) for both subsamples, and with the cash ratio (*CASH_RATIO*) for high growth firms.

[Insert Table 3 here]

4.2. Dividend payout conditional on growth

Table 4 documents the results of the tests related to hypotheses 1 and 2. In column 1, in line with Gim and Jang (2019), *ASSET_LIGHT* is a dummy variable equal to 1 if the firm has a fee-income ratio greater than 0. The results show that, all else equal, adopting as asset-light strategy positively impacts the dividend payout ratio, as documented by the coefficient on *ASSET_LIGHT* which is positive and significant at the 5% threshold ($p < 0.05$). In column 2, the coefficient on the interaction term *FEE_RATIO*GROWTH* is positive and significant at the 5% threshold ($p < 0.05$), meaning that the positive impact of the asset-light strategy on dividend policy only exists for high growth firms. Focusing on group-wise regressions, the results in columns 3 and 4 support the findings of column 2. For the high growth firms subsample only (column 3), the coefficient on *FEE_RATIO* is positive and significant ($p < 0.05$), meaning that,

all else equal, the greater the proportion of total revenue derived from management and franchise fees, the greater the payout ratio when the firm is growing substantially. In contrast, the coefficient on *FEE_RATIO* in column 4 (low growth firms) is not statistically different from 0. Overall, the results documented in **Table 4** support the idea that the asset-light strategy impacts dividend policy in a specific context, i.e. when the firm is enjoying robust growth. Substantial growth for asset-light firms leads to higher cash flows available to managers, and potential agency conflicts. Increasing dividend payouts mitigates the agency costs by preventing these cash flows from being misused (e.g. not used in shareholders' best interest).

[Insert Table 4 here]

4.3. Dividend payout conditional on growth and institutional ownership

In **Table 5**, we document the results of the tests related to hypothesis 3. In columns 1 and 2, we run model (1) on two subsamples based on institutional ownership. The high institutional ownership subsample (column 1) is composed of firms with institutional investors representing a percentage of common stock that is larger than the sample median (13.1%). The coefficient on the interaction term *FEE_RATIO*GROWTH* is statistically significant at the 1% threshold ($p < 0.01$), in column 2 only (low institutional ownership subsample). In other words, the positive impact of the asset-light strategy on the dividend payout ratio for high growth firms only occurs in a situation of low institutional ownership. This finding contributes to Gim and Jang (2019) and further supports the hypothesis that the impact of the asset-light strategy on dividend policy is context-dependent.

Next, in columns 3 to 6, we deepen the analysis by running group-wise regressions conditional on growth and institutional ownership. Column 3 focuses on firms with high institutional ownership and high growth (group 1), column 4 on firms with high institutional

ownership and low growth (group 2), column 5 on firms with low institutional ownership and high growth (group 3), and column 6 on firms with low institutional ownership and low growth (group 4).

When institutional holdings are high (columns 3 and 4), the coefficient on *FEE_RATIO* is not statistically different from 0, meaning that adopting an asset-light strategy – all else equal – does not impact dividend policy. When institutional holdings are low, however, adopting an asset-light strategy does impact dividend policy in one situation: when growth is high. In such a context (low institutional ownership but high growth), the coefficient on *FEE_RATIO* is positive and significant at the 1% threshold ($p < 0.01$). These findings further support the idea that going asset-light – in and of itself – has a limited impact on dividend policy. However, the impact on dividend policy is significant when the firm is growing at a fast pace (and thus generates high free cash flows) and when institutional owners are not serving as monitors.

[Insert Table 5 here]

4.4. Change analysis

If asset-light firms with high levels of growth pay more in dividends (e.g. have higher payout ratios), one might wonder whether a change in the fee-income ratio (asset-lightness) leads to a change in the dividend payout ratio. We investigate this issue by running a change analysis, which also helps us establish causality between asset-light strategies and the dividend payout ratio. As explained by Ayres (2016, p.643), "*a changes model is similar to a first-differenced equation because only the change to the co-variates is specified in the model. This "differencing" mathematically eliminates the effect of any average unmeasured trait for the firm for the two time periods. First differencing is a common way to control for unobserved firm-level traits* […]." **Table 6** documents the results of the change analysis using an OLS

model[10], in which we explain the change in the dividend payout ratio by all previously-used independent variables expressed in variations. Note that instead of using the variation of the fee-income ratio, we use a dummy variable equal to 1 if the ratio increased from the previous year, and 0 otherwise (*FEE_RATIO_INCREASE*). In **Table 6,** we show that - in line with our previous results - an increase in the fee-income ratio only leads to an increase in the payout ratio for high growth firms with low institutional ownership. The coefficient on *FEE_RATIO_INCREASE*GROWTH* is not statistically different from 0 in column 1 (high institutional ownership), while it is positive and statistically significant at the 5% threshold ($p < 0.05$) in column 2 (low institutional ownership).

[Insert Table 6 here]

4.5. Alternative measure of growth

In this section, we use an alternative measure of growth, namely the percentage change in total assets (instead of a dummy variable based on the percentage change in sales revenue). To control for M&A activities that might influence the growth in total assets, we include a dummy variable (M&A) equal to 1 if a firm engaged in M&A activities during a given year, and 0 otherwise.

[10] In this model, the dependent variable is the variation in the payout ratio (in percentage), which has no lower or upper bound. In consequence, we do not use a Tobit model.

As documented in **Table 7**, for the full sample test as well as for the group-wise regressions, all the results are in line with our main findings. The coefficient on *FEE_RATIO*ASSET_GROWTH* is positive and significant at the 1% threshold ($p < 0.01$) in column 1, while the coefficient on *FEE_RATIO* is positive and significant ($p < 0.01$) in column 2 (subsample of high growth firms) and negative and significant ($p < 0.05$) in column 3 (subsample of low growth firms). In other words, it confirms that adopting an asset-light strategy leads to a higher payout ratio for high growth firms only (all else equal, low growth asset-light firms even pay lower dividends as indicated by the negative and significant coefficient on *FEE_RATIO* in column 3). Finally, focusing on group-wise regressions based on institutional ownership (columns 4 and 5), the coefficient on the interaction term *FEE_RATIO* ASSET_GROWTH* is positive and significant ($p < 0.05$) only in column 5 (low institutional holdings), which supports our main findings.

[Insert Table 7 here]

5. Conclusion

5.1. Summary of findings and contributions

The asset-light model, which is widespread in the hospitality industry, represents an interesting feature when analyzing the dividend puzzle from the angle of the agency theory. Indeed, adopting an asset-light strategy is supposed to generate substantial free cash flows without heavy capital investments. Companies that generate substantial free cash flows have to motivate managers to invest in positive net present value projects and avoid misusing the firm's resources (e.g. managers' private benefits). Existing literature presents various mechanisms that mitigate such agency conflicts, such as dividends and institutional ownership. Gim and Jang (2019, p.183) investigate the restaurant sector by differentiating between

franchise and non-franchise firms, and document that "*dividend behaviors of franchise restaurants are a function of the size of institutional holdings and prior dividend payments, while those of non-franchise restaurants depend on the degree of growth opportunity and financial leverage*." We contribute to the literature on the dividend puzzle and the impact of asset-light strategy on major corporate decisions by deepening the analysis of the contexts in which the business strategy leads to higher payout ratios. Using a sample composed of the largest publicly-traded hotel and restaurant firms in the world, we find that the business strategy (the asset-light strategy) only impacts dividend policy for firms with substantial growth. Moreover, the impact of the asset-light strategy on dividend policy only holds when institutional investors do not serve as monitor (in the case of low institutional holdings). After creating four subgroups in function of the level of growth (high or low) and institutional ownership (high or low), we find that the asset-light strategy only impacts dividend policy in one context, high growth and low institutional ownership. Finally, a change analysis reveals that increases in the fee-income ratio lead to increases in the dividend payout ratio for high growth firms with low institutional ownership only, which further supports our main findings.

In conclusion, the contribution of our paper is fourfold. First, we expand the current finance and accounting literature on dividend policy and provide new elements by examining the role of growth and institutional ownership on strategic decisions related to the business model. Second, we explicitly contribute to the findings of Gim and Jang (2019) by focusing on the international lodging and restaurant context and by placing our study in a global context. Third, we clarify the role of the different key financial stakeholders to the firm, including institutional investors, shareholders and board members. Finally, we provide insight to executives with an assessment of the impact of specific business decisions (e.g., to pursue an asset-light strategy) on major corporate actions such as dividend distribution.

5.2. Limitations and recommendations for future research

Our study is not without limitations. First, while the sample represents a comprehensive view of the international lodging and restaurant industry, future studies could extend the sample of companies to smaller listed and non-listed companies, and also expand it by investigating a more diverse sample of multinational hospitality corporations (e.g., casinos) pursuing an asset-light strategy. While our study provides valuable new insight on the effect of the asset-light strategy on corporate decisions, expanding the nature of the sectors in future studies will strengthen the findings and further refine the contextual variables mitigating the impact of the asset-light model on firm corporate actions. Second, in order to test our agency theory-driven hypotheses we grouped all types of institutional owners. As such, we identified the effect of institutional ownership in general in the relationship between dividend payout and asset-light decision in a growth context. Future research endeavors could examine whether the relationship varies with the type of institutional owners, as different investors have different time horizons, investment constraints, or risk tolerance, which might lead to different impacts on dividend policy (Chang et al., 2016; Gim and Jang, 2019). Third, our purpose was to conduct a deep-dive examination of the contextual variables affecting the dividend policy of hospitality firms executing, or not, the asset-light model. While we controlled for key variables in our model, further contextual variables should complete future examination of the dividend puzzle. In particular, the business cycle, which was identified as a key variable of the effects of asset-light models on firm performance (Sohen et al. 2014), warrants attention. Finally, our focus was to study the dividend puzzle in relation to a business strategy. Future studies could explore other corporate decisions and their relationship with the asset-light strategy.

5.3. Managerial implications

This paper sheds light on the contexts in which the business strategy impacts the dividend

policy in the hospitality industry. The results reveal that growth and institutional holdings are contextual factors that jointly contribute to solving the dividend puzzle. In a context of high agency costs (asset-light strategy with high growth), the lack of institutional investors (monitors) means that firms tend to distribute a greater proportion of earnings in the form of dividends. From a theoretical standpoint, there are two possible angles of interpretation. On the one hand, mitigating agency costs by increasing the payout ratio will prevent managers from investing in sub-optimal projects or adopting opportunistic behaviors, which is beneficial to shareholders. On the other hand, it is possible that the primary reason to distribute such dividends is to send a positive message to comfort financial markets. Due to the high levels of free cash flows generated by asset-light firms, we argue that the recent increase in institutional ownership (both in hospitality and non-hospitality firms) introduced more monitoring and thus improved corporate governance. From a shareholders' point of view, increasing dividend payouts to mitigate agency conflicts might come at a high cost (e.g. alternative sources of funds could be more expensive, opportunities could be missed, and/or it might have tax implications), while having institutional investors as major shareholders might prevent such decisions and the steep costs associated with them.

From a managerial standpoint, these findings can also imply that in a phase of growth, the initial investors, who bore the entrepreneurial risk of executing the asset-light strategy, may receive compensation via a dividend distribution. And this is possible when the proportion of institutional ownership is low. Therefore, fast-growth, asset-light firms (and their top managers) should be aware of the fact that opening up their capital to institutional investors might increase their financing capabilities and prevent the distribution of cash. In the case of lodging and restaurant firms, whose performance is highly correlated to the economic and tourism cycles, keeping enough cash internally sends a strong signal of financial soundness to the financial

market, which may impact investors' perception. Moreover, these findings also suggest that in a context of growth, institutional investors would favor the expansion of the network over the distribution of cash to better capture the financial benefits of the upward tourism cycle.

More importantly, this study further confirms and refines the contextual aspects related to the impact of the asset-light strategy on corporate decisions. In particular, it validates the role of the context (i.e. growth phase, corporate governance) in mitigating the effects of the asset-light model on dividend policy. Such results support the recommendation that managers in the lodging and restaurant industry seek distinctive models or adapt the asset-light structure to their particular situation rather than solely divesting their real estate and pursue management or franchise contracts.

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Table 1. Descriptive statistics for the main variables of interest

	Dividend payout ratio		Fee-income ratio		Sales growth		Institutional ownership	
Year	Mean	Median	Mean	Median	Mean	Median	Mean	Median
2006	0.621	0.214	0.077	0.002	0.137	0.068	0.128	0.113
2007	0.670	0.291	0.078	0.002	0.144	0.142	0.151	0.119
2008	0.321	0.299	0.078	0.003	0.094	0.084	0.134	0.115
2009	0.358	0.277	0.094	0.007	-0.039	-0.121	0.149	0.125
2010	0.262	0.259	0.103	0.004	0.104	0.072	0.137	0.107
2011	0.282	0.270	0.109	0.010	0.088	0.083	0.140	0.103
2012	0.577	0.342	0.104	0.017	0.031	0.051	0.128	0.101
2013	0.792	0.365	0.107	0.010	0.080	0.051	0.176	0.148
2014	0.479	0.385	0.125	0.011	0.039	0.056	0.203	0.177
2015	0.455	0.395	0.123	0.012	0.070	0.037	0.207	0.200
2016	0.469	0.396	0.137	0.012	0.026	0.024	0.182	0.155
2017	0.458	0.404	0.144	0.013	0.021	0.035	0.171	0.175
2018	0.427	0.355	0.140	0.011	0.126	0.081	0.185	0.162
Total	0.469	0.348	0.107	0.009	0.068	0.056	0.165	0.132

Table 2. Descriptive statistics

Variables	Mean	SD	1st quartile	Median	3rd quartile
Panel A. Full sample (N = 399)					
PAYOUT	0.488	0.950	0.145	0.351	0.525
FEE_RATIO	0.108	0.173	0.000	0.009	0.130
GROWTH	0.531	0.500	0.000	1.000	1.000
CASH_FLOW_VOL	6.680	4.885	0.000	8.974	10.820
INSTIT_OWN	0.163	0.151	0.053	0.132	0.239
SIZE	15.094	1.089	14.286	14.947	15.895
LEVERAGE	0.344	0.243	0.207	0.311	0.441
CASH_RATIO	0.073	0.074	0.019	0.052	0.098
ROA	0.075	0.068	0.030	0.059	0.098
BUYBACKS	0.567	0.496	0.000	1.000	1.000
M&A	0.286	0.453	0.000	0.000	1.000
ASSET_GROWTH	0.075	0.293	-0.018	0.038	0.142
Panel B. High growth firms (N = 212)					
PAYOUT	0.434	0.880	0.079	0.327	0.472
FEE_RATIO	0.080	0.149	0.000	0.000	0.097
CASH_FLOW_VOL	6.757	4.857	0.000	8.998	10.820
INSTIT_OWN	0.162	0.151	0.053	0.130	0.242
SIZE	15.024	1.092	14.221	14.914	15.830
LEVERAGE	0.306	0.215	0.175	0.265	0.425
CASH_RATIO	0.072	0.072	0.018	0.049	0.100
ROA	0.078	0.064	0.033	0.065	0.097
BUYBACKS	0.524	0.501	0.000	1.000	1.000
M&A	0.295	0.457	0.000	0.000	1.000
ASSET_GROWTH	0.153	0.315	0.032	0.094	0.194
Panel C. Low growth firms (N = 187)					
PAYOUT	0.548	1.023	0.176	0.377	0.583
FEE_RATIO	0.140	0.193	0.000	0.042	0.211
CASH_FLOW_VOL	6.593	4.929	0.000	8.974	10.820
INSTIT_OWN	0.164	0.151	0.053	0.136	0.230
SIZE	15.174	1.083	14.403	15.068	15.932
LEVERAGE	0.386	0.266	0.240	0.336	0.462
CASH_RATIO	0.073	0.076	0.020	0.053	0.088
ROA	0.071	0.072	0.026	0.050	0.099
BUYBACKS	0.616	0.488	0.000	1.000	1.000
M&A	0.277	0.449	0.000	0.000	1.000
ASSET_GROWTH	-0.003	0.245	-0.074	0.000	0.048

All variables are defined in Appendix A.

Table 3. Correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12
Panel A. High growth firms												
1. PAYOUT	1											
2. ASSET_LIGHT	0.1364	1										
3. FEE_RATIO	0.1896*	0.5546*	1									
4. CASH_FLOW_VOL	0.1856*	-0.0917	-0.1664	1								
5. INSTIT_OWN	0.0442	-0.0074	0.0163	-0.2420*	1							
6. SIZE	0.1438	-0.1159	-0.1301	0.3463*	0.0262	1						
7. LEVERAGE	0.0371	0.1358	0.4157*	-0.1188	-0.0504	-0.0867	1					
8. CASH_RATIO	0.0542	0.1809*	0.2373*	-0.2257*	0.0398	-0.0013	-0.0702	1				
9. ROA	-0.0545	0.2414*	0.3063*	-0.1509	0.0434	-0.0891	0.0286	0.4349*	1			
10. BUYBACKS	0.0728	0.0871	0.1358	-0.0216	0.1324	0.2906*	-0.0424	0.2310*	0.3662*	1		
11. M&A	0.0163	0.0835	0.0558	0.0002	-0.0715	0.1231	0.0309	-0.0088	0.0223	0.0174	1	
12. ASSET_GROWTH	0.0020	0.0034	-0.0305	-0.0492	-0.0695	-0.0412	-0.0399	0.0986	0.0183	0.0224	0.1910*	1
Panel B. Low growth firms												
1. PAYOUT	1											
2. ASSET_LIGHT	-0.0404	1										
3. FEE_RATIO	0.0322	0.6011*	1									
4. CASH_FLOW_VOL	0.0326	-0.3319*	-0.2625*	1								
5. INSTIT_OWN	-0.0072	0.1807	0.1553	-0.2478*	1							
6. SIZE	0.0739	-0.1118	-0.0904	0.0937	-0.0295	1						
7. LEVERAGE	-0.0270	0.2456*	0.4072*	-0.2007*	0.0636	-0.0477	1					
8. CASH_RATIO	-0.0003	0.0469	0.2418*	-0.0744	-0.1618	0.0878	0.1075	1				
9. ROA	-0.0015	0.2161*	0.4719*	-0.0863	-0.0986	0.0757	0.5137*	0.3652*	1			
10. BUYBACKS	0.0204	0.0146	0.1629	-0.1383	0.2267*	0.3575*	0.1013	0.1403	0.3075*	1		
11. M&A	-0.0086	0.0557	0.0391	-0.0210	0.0695	-0.0523	-0.0328	-0.0602	-0.1389	-0.0608	1	
12. ASSET_GROWTH	-0.0343	-0.0068	0.1775	-0.0272	-0.0513	-0.0578	-0.0168	0.1347	-0.0207	-0.0696	0.1228	1

All variables are defined in Appendix A.

* denotes significant Pearson correlation at the 1% level.

Table 4. Dividend payout conditional on growth
Tobit model. *** p<0.01, ** p<0.05, * p<0.1
All variables are defined in Appendix A.

Dependent Variable: *PAYOUT*	Full sample		Group-wise regressions	
			High growth firms (sales)	Low growth firms (sales)
	1	2	3	4
ASSET_LIGHT	0.96**			
	(2.32)			
FEE_RATIO		-0.08	1.82**	-0.67
		(-0.10)	(2.43)	(-1.04)
GROWTH	0.11	-0.25		
	(0.28)	(-1.35)		
FEE_RATIO*GROWTH		1.00**		
		(2.07)		
CASH_FLOW_VOL	0.11**	0.02	0.05**	-0.00
	(2.54)	(0.92)	(2.34)	(-0.13)
INSTIT_OWN	-3.81**	-0.59	-0.29	-0.96
	(-2.58)	(-0.66)	(-0.42)	(-1.22)
SIZE	0.37*	0.16**	0.17*	0.08
	(1.88)	(2.15)	(1.80)	(0.70)
LEVERAGE	1.47**	0.46	0.59	0.16
	(2.08)	(1.29)	(1.40)	(0.44)
CASH_RATIO	6.38**	-0.00	1.24	-0.86
	(2.43)	(-0.00)	(0.94)	(-0.58)
ROA	-10.20***	-0.46	-3.09	2.08
	(-2.70)	(-0.20)	(-1.65)	(0.89)
HOTEL	0.62	0.40*	0.17	0.45*
	(1.48)	(1.86)	(0.75)	(1.80)
BUYBACKS	0.21	-0.06	0.03	-0.27
	(0.49)	(-0.26)	(0.15)	(-1.17)
Constant	-6.96**	-2.46**	-3.22**	0.27
	(-2.05)	(-2.05)	(-2.03)	(0.14)
Year and Country FE	YES	YES	YES	YES
Observations	399	399	212	187
Pseudo R-squared	0.04	0.07	0.12	0.07

Table 5. Dividend payout conditional on growth and institutional ownership
Tobit model. *** p<0.01, ** p<0.05, * p<0.1
All variables are defined in Appendix A.

Dependent Variable: *PAYOUT*	Group-wise regressions		Group-wise regressions			
			High institutional holdings		Low institutional holdings	
	High institutional holdings	Low institutional holdings	High growth firms	Low growth firms	High growth firms	Low growth firms
	1	2	3	4	5	6
FEE_RATIO	-0.49	0.06	0.01	-0.65	2.95***	-0.27
	(-0.67)	(0.08)	(0.02)	(-0.64)	(2.86)	(-0.35)
GROWTH	-0.28	-0.31				
	(-1.49)	(-1.58)				
FEE_RATIO*GROWTH	-0.53	2.72***				
	(-0.62)	(2.93)				
CASH_FLOW_VOL	0.03	0.03	0.01	0.06*	0.06**	-0.00
	(1.51)	(1.38)	(0.56)	(1.71)	(2.02)	(-0.03)
SIZE	-0.05	0.16	0.03	-0.14	0.12	0.18
	(-0.54)	(1.45)	(0.39)	(-1.03)	(0.82)	(0.84)
LEVERAGE	0.36	0.28	0.61*	0.23	-0.16	0.21
	(1.16)	(0.60)	(1.97)	(0.46)	(-0.20)	(0.31)
CASH_RATIO	-2.22	1.02	-2.51*	-2.33	1.67	0.73
	(-1.65)	(0.90)	(-1.97)	(-0.97)	(0.99)	(0.43)
ROA	3.42**	-1.94	0.96	5.06*	-3.92*	-0.22
	(2.20)	(-1.13)	(0.67)	(1.88)	(-1.69)	(-0.08)
HOTEL	0.50**	0.30	-0.02	0.97***	0.37	0.49
	(2.51)	(1.15)	(-0.09)	(2.77)	(0.93)	(1.21)
BUYBACKS	-0.05	0.14	-0.20	-0.12	0.65**	-0.45
	(-0.28)	(0.66)	(-1.37)	(-0.38)	(2.15)	(-1.53)
Constant	0.21	-2.48	-0.30	2.90	-2.54	-1.60
	(0.12)	(-1.10)	(-0.18)	(1.02)	(-0.80)	(-0.53)
Year and Country FE	YES	YES	YES	YES	YES	YES
Observations	200	199	105	95	107	92
Pseudo R-squared	0.17	0.09	0.31	0.20	0.14	0.08

Table 6. Change analysis
OLS model. *** p<0.01, ** p<0.05, * p<0.1
All variables are defined in Appendix A.

Dependent Variable: Δ*PAYOUT*	Group-wise regressions	
	High institutional holdings	Low institutional holdings
	1	2
FEE_RATIO_INCREASE	-0.85	-1.57
	(-0.64)	(-1.47)
GROWTH	1.01	-0.55
	(1.30)	(-0.44)
FEE_RATIO_INCREASE*GROWTH	-1.24	3.79**
	(-1.04)	(2.20)
ΔCASH_FLOW_VOL	0.05	-1.79
	(0.06)	(-0.87)
ΔSIZE	-38.86	-42.57
	(-1.35)	(-1.15)
ΔLEVERAGE	-1.86	0.38
	(-1.31)	(0.25)
ΔCASH_RATIO	0.21	0.03
	(1.64)	(1.03)
ΔROA	0.01	-0.01
	(0.66)	(-0.34)
HOTEL	2.45	-0.47
	(1.50)	(-0.61)
BUYBACKS	1.07**	0.24
	(2.19)	(0.30)
Constant	-0.85	-1.57
	(-0.64)	(-1.47)
Year and Country FE	YES	YES
Observations	83	126
Adjusted R-squared	0.54	0.17

Table 7. Additional analysis – Asset growth
Tobit model. *** p<0.01, ** p<0.05, * p<0.1
All variables are defined in Appendix A.

Dependent Variable: *PAYOUT*	Full sample	Group-wise regressions		Group-wise regressions	
		High growth firms (assets)	Low growth firms (assets)	High institutional holdings	Low institutional holdings
	1	2	3	4	5
FEE_RATIO	-0.27	2.30***	-1.26*	-1.01	-0.11
	(-0.33)	(3.89)	(-1.90)	(-0.59)	(-0.15)
ASSET_GROWTH	-0.31*			-0.54**	-0.20
	(-1.87)			(-2.29)	(-1.05)
FEE_RATIO*ASSET_GROWTH	1.40***			0.97	2.24**
	(3.00)			(0.84)	(2.42)
CASH_FLOW_VOL	0.02	0.04**	0.01	0.03	0.03
	(1.05)	(2.59)	(0.40)	(0.81)	(1.22)
INSTIT_OWN	-0.45	-1.18*	0.01		
	(-0.58)	(-1.92)	(0.01)		
SIZE	0.14**	0.13*	0.06	-0.02	0.20
	(2.10)	(1.77)	(0.52)	(-0.19)	(1.62)
LEVERAGE	0.27	-0.19	0.40	0.29	0.43
	(0.73)	(-0.63)	(0.84)	(0.61)	(1.01)
CASH_RATIO	-0.19	0.99	-1.03	-1.85	0.99
	(-0.14)	(0.98)	(-0.59)	(-1.18)	(0.69)
ROA	0.43	-2.43*	4.35*	3.72*	-2.70
	(0.22)	(-1.77)	(1.87)	(1.77)	(-0.83)
HOTEL	0.40*	0.12	0.71***	0.41	0.28
	(1.93)	(0.69)	(2.74)	(1.09)	(1.27)
BUYBACKS	0.02	0.24	-0.36	-0.05	0.27
	(0.12)	(1.53)	(-1.48)	(-0.39)	(1.27)
M&A	-0.15	-0.07	-0.15	0.01	-0.26***
	(-1.25)	(-0.53)	(-0.76)	(0.03)	(-2.70)
Constant	-2.22**	-2.13*	-0.23	0.03	-3.22
	(-2.08)	(-1.78)	(-0.12)	(0.02)	(-1.62)
Year and country FE	YES	YES	YES	YES	YES
Observations	399	216	183	200	199
Pseudo R-squared	0.07	0.13	0.09	0.17	0.08

Appendix A. Definitions of variables

Variable name	Definition
PAYOUT	Payout ratio calculated as dividend per share divided by earnings per share.
FEE_RATIO	Sum of management and franchise fee divided by total revenue.
ASSET_LIGHT	Dummy variable equal to 1 if *FEE_RATIO* is greater than 0, and 0 otherwise.
GROWTH	Dummy variable equal to 1 if sales growth is larger than the sample median, and 0 otherwise.
CASH_FLOW_VOL	The natural logarithm of the standard deviation of operating cash flows in the last four quarters.
INSTIT_OWN	The percentage of shares held by institutional investors.
SIZE	The natural logarithm of total assets.
LEVERAGE	Total debt divided by total assets.
CASH_RATIO	Cash divided by total assets.
ROA	Return on assets calculated as net income divided by total assets.
HOTEL	Dummy variable equal to 1 if the firm is a hotel chain, and 0 otherwise.
BUYBACKS	Dummy variable equal to 1 if the firm engaged in share repurchases during a given year, and 0 otherwise.
M&A	Dummy variable equal to 1 if the firm engaged in M&A activities during a given year, and 0 otherwise.
ASSET_GROWTH	Growth in total assets for a given firm between year t and t-1.

Appendix B. Firms in the sample

Company name	Type
Accor S.A.	Hotel
Aramark	Restaurant
Carnival Corporation and PLC	Hotel (Cruise)
Cheesecake Factory Inc.	Restaurant
Chipotle Mexican Grill	Restaurant
Choice Hotels International	Hotel
Compass Group	Restaurant
Cracker Barrel Old Country Store and Restaurant	Restaurant
Darden Restaurants Inc.	Restaurant
Extended Stay America, Inc.	Hotel
Genting Hong Kong	Hotel
Great Eagle Holdings	Hotel
Greene King PLC	Restaurant
Hilton Worldwide Holding	Hotel
Hyatt Hotels	Hotel
Intercontinental Hotels Group	Hotel
Jack in the Box Inc.	Restaurant
Marriott International Inc.	Hotel
McDonald's Corp.	Restaurant
Melia Hotels	Hotel
Millennium and Copthorne Hotels	Hotel
NH Hotels Group	Hotel
Norwegian Cruise Line	Hotel (Cruise)
The Oriental Land Company,	Hotel
Restaurant Brands International Inc.	Restaurant
Royal Caribbean International	Hotel (Cruise)
Shenzhen Overseas Chinese Town Co.	Hotel
Sodexo	Restaurant
Starbucks Corp.	Restaurant
Texas Roadhouse Inc.	Restaurant
Whitbread PLC	Hotel
Wyndham Destinations	Hotel
Yum! Brands	Restaurant