The Quality of Institutions and Organizational Form Decisions: Evidence from Within the Firm*

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Abstract

In many retail and service sectors, firms have to establish a physical presence in a geographic market to access customers there. In countries where the quality of institutions is low, this can put assets at risk. We use data on the operations of a multinational, multi-brand hotel company to show that in environments where local institutions are weaker – as proxied mainly by the World Bank's Checks index – the company eschews direct ownership. Rather than increasing its reliance on franchising, as predicted by some models, the company relies more on another form of organization commonly used in this industry, namely management contracts. We explain these patterns by emphasizing how the quality of the institutional environment affects the cost of using equity-based organizational forms, per arguments in the current literature, but also the cost of enforcing the terms of franchise contracts.

1. Introduction

Economists and business scholars have devoted much attention to understanding how institutions affect economic behavior. An important part of this literature has focused on the effect of institutions, broadly defined, on economy-wide growth and performance (see, e.g., Acemoglu et al., 2001, Levchenko, 2007, Dixit, 2009, and Bruhn and Gallego, 2012; see also Acemoglu et al., 2005 for a review of the economics literature). A smaller but growing set of papers considers the effect of institutions at a more micro level, often by examining how multinational corporations adapt to local market conditions. One branch of this literature has explored how factors like the rule of law (Liu et al., 2011), regulatory credibility (Levy and Spiller, 1994, Holburn and Zelner, 2010), property rights protection (Javorcik, 2004), corruption (Cuervo-Cazuna, 2006, Javorcik and Wei, 2009), the quality of the legal system (Laeven and Woodruff, 2007), and regulatory stability (Henisz and Zelner, 2001, Delios and Henisz, 2003) affect the level of (often foreign) investment. Another part of this literature has focused on how the type of investments and the organization of firm activities – e.g., ownership structures in foreign ventures – are affected by similar factors (e.g., Oxley 1999, Henisz, 2000, Asiedu and Esfahani, 2001, Javorcik 2004, Branstetter et al., 2006, Uhlenbruck et al., 2006, Chong and Gradstein, 2011, Bloom et al., 2012, Feenstra et al., 2012).

One feature uniting the micro-level empirical literature on the effect of institutions on economic behavior is that it has been concerned almost exclusively with high-tech and manufacturing firms. Of course, institutional factors also affect firms in other sectors. In fact, in some other sectors, such as many retail and service industries, firms can access customers in markets only by being present locally. Thus, contrary to what occurs in manufacturing, firms in the retail and service sectors often must put assets at risk if they are to do business in a country: they cannot simply locate in, and export from, countries where both physical and intangible assets are better protected.

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Among retail and service firms, lodging companies are particularly susceptible to the types of expropriation and hold-up problems emphasized in the literature.[1] In this paper, we develop a simple model to show how the existence of three modes of organization in this industry – franchising, company ownership, and management contracts – allows hotel firms to adjust to different local market conditions. We argue in particular that management contracts, which combine aspects of company ownership and franchising, give lodging firms the opportunity to protect themselves against expropriation risks while also protecting the value of their intangible assets, namely the value of their brands. We test the predictions of the model using a unique, proprietary data set with information on the organizational form under which all of the international hotels affiliated with a specific major multinational, multi-brand lodging company operate. A confidentiality agreement prohibits us from disclosing the name of the company or characteristics that might lead to its identification. We therefore refer to it as the Company, and keep all references to its operations and brands oblique.

Our results imply that, consistent with evidence from the literature on high-tech and manufacturing firms mentioned above, the Company eschews asset ownership in markets where the quality of the institutional environment is low. However, rather than minimizing its involvement by turning over operational control to local partners, as would occur under franchising, the Company maintains control by relying instead on management contracts in these environments. We interpret these findings as evidence that in environments with lower quality institutions, the Company not only faces potential risks of expropriation, per arguments in the literature, but also major difficulties in enforcing franchise contract terms. The latter, in turn, can lead to important free-riding risks and potentially costly legal and other disputes under franchising, all of which are much less severe under management contracts given the level of control that this organizational form affords hotel firms.

We show that our results are robust to a variety of alternative specifications. In particular, when we include separate variables designed to proxy for the risk of expropriation and the reliability of contract enforcement, we find that reductions in the risk of expropriation increase the likelihood that the Company uses an equity-intensive organizational form. At the same time, an increase in the

[1] See specific examples for hotels further below. However, these issues are not absent in other service sectors. See James (2008) for example. Recent troubles experienced by McDonald's in Russia provide yet another example (see e.g., Gorst, 2014).

likelihood that contracts can be enforced increases the utilization of both contract-based organizational forms, namely both franchising and management contracts, while reducing the reliance on company ownership.

The paper proceeds as follows. In the next section, we describe the three organizational forms in some detail, and present the arguments and framework we use to analyze the organizational form decisions of the Company. In Section 3, we discuss our data and methodology. We describe our results in Section 4, and conclude in Section 5.

2. Organizational Form and the Institutional Environment

2.1 Organizational Forms in the Lodging Industry

Firms in the lodging industry, like those in several other service and retail sectors, can access customers in other countries only by being present locally. In many cases, firms choose between owning and operating an establishment directly and relying on a franchisee, who owns and operates the business locally. In the hotel industry, however, there is a third option: a hotel can be operated under what is called a management contract.[2] The characteristics of these three organizational forms are as follows:

> **Company-owned and operated:** The Company is the equity owner. The hotel's managers are employees of the Company. The compensation of these employees may involve some incentive payments, but the contracts are low powered compared to those of franchisees who are residual claimants on their hotel's profit stream (see below). More precisely, rather than being tied closely to local results, employee-managers' incentives relate more to opportunities for promotion within the firm, i.e. the opportunity to manage better/higher revenue hotels, or move up the Company hierarchy. This leads them to focus on company

[2] Management contracts are not unique to the lodging industry, however. In the U.S., they are common also, e.g., in the food service sector (e.g., Aramark) and in the senior/assisted living industry (e.g., Paradigm Senior Living).

rules and policies (see Bradach, 1998 for a series of case studies describing franchisee and employee-manager incentives and behavior in franchised chains).

Franchised: The hotel is both owned and operated by a franchisee, who may be an individual, a partnership, or a company. After paying to the Company some upfront franchise fees and the percentage royalties calculated on the basis of establishment revenues, the franchisee is the full residual claimant on current as well as future profit – at least for the duration of the contract. According to Blair and Lafontaine (2005), franchise contracts last an average of 16 years in this industry. As a result of their claims on residual and future profits, franchisees are expected to put more effort into revenue generation and cost control at their hotel. As noted in the literature, these incentives to maximize local profits, however, can lead to behaviors that are detrimental to the brand, i.e., free riding. For this reason, franchise contracts usually include specific operations and other guidelines that ensure that the hotel meets the Company's requirements. When credibly enforceable, these protect the Company against free-riding or local-profit-maximization behaviors that could damage the brand. We discuss this further below.

Management Contracts: The hotel is owned by an individual or a group of investors, usually local to the market in which the hotel is located. These owners contract with the Company who then runs the hotel under one of its brands. As with company-owned and operated hotels, the hotel managers are employees of the Company whose personal incentives are linked to promotion within the firm. Moreover, under a management contract, the Company exercises basically the same level of control over local operations as when the hotel is company-owned and operated. Indeed, management contracts give control over daily operations to the management company (here the Company) as well as discretion over the amounts and types of investments required for the maintenance of the premises and the level of service associated with the brand. For example, a sample management contract states that the "Manager [i.e., the Company] shall be responsible, at the sole cost and expense of Lessee [i.e., the owner of the property], for keeping and maintaining the

Premises…"[3] In exchange for its services, the Company receives contractually agreed upon management fees. The fees are normally a percentage of the hotel's gross revenues, sometimes supplemented by guaranteed annual minimum or lump-sum payments (e.g., Kehoe, 1996, Contractor and Kundu, 1998). Management contracts are long term, lasting up to, and sometimes beyond, ten years.

We argue that the ability to choose among these three organizational forms for each of their hotels gives firms in the global lodging industry much needed flexibility in how they respond to incentive issues and market characteristics, including the quality of the institutional environment. Specifically, as described above and summarized in Table 1, the three organizational forms differ along two crucial, but separate, dimensions: equity involvement and managerial/operational control. In particular, franchising and management contracts shift equity involvement to outside parties; however, management contracts and company ownership give the firm the same amount of managerial control, which is greater than the level of control it obtains under franchising.

The idea that equity involvement and managerial control concerns have distinct effects on the choices of organizational form plays a key role in our empirical analyses below, leading us away from treating the organizational forms as an ordered set. We argue that institutional quality is a necessary condition for company ownership, and also one needed for franchising, albeit for different reasons. Hence, the choice between company ownership and franchising hinges on issues of incentives and control, whereas the choice between company ownership and management contract will depend on the type of expropriation concerns that have been emphasized in the literature on the effect of institutional quality on investment and performance.

2.2 A Parsimonious Model of Organizational Form Decisions

[3] See http://contracts.onecle.com/mhi/mhi-hotels.svc.2004.shtml (08/11/2014). Conflicts over whether or not modifications and upkeep expenses are justified are not unheard of, especially during times of financial hardship (see, for example, Glater, 2009). However, the terms of the contract allow the Company to either sever ties or compel investment before the hotel becomes potentially harmful to the brand.

We present a simple model that lays out the fundamental trade-offs that firms in the lodging industry face, and describe the patterns we expect to find in the data as a result. Our empirical analyses below emphasize the decision that the Company makes for its new or newly-acquired hotels, so we present a model that predicts organizational choices at the time the Company opens or acquires a new hotel. However, assuming that the firm can change the organizational form under which it operates a hotel more easily than it can change hotel characteristics such as size and major amenities, the same model yields implications about organizational form decisions across hotels and years. This is useful as it allows us to rely on the full time-series dimension of our data, and thereby exploit data on older hotels, in some of our analyses.

From our discussions with industry members and reading of the trade press, the typical decision process for new hotels can be described as follows. First, lodging firms choose the type of hotel that they believe will best fit a given local market. Because most global firms operate hotels under several brands, in different quality tiers, they also choose a brand for the new hotel. Also, to maintain the consistency of each of their brands in the minds of customers, they keep variation in hotel characteristics such as size and major amenities to a minimum within brands.[4] Thus, the choice of brand amounts to a choice of size and amenities. Second, once the scope of the project is determined, or an existing hotel with the right characteristics becomes available for purchase, the lodging firm assesses the value of the proposed hotel under different organizational forms. The choice amongst these options then depends on the (proposed) hotel's predetermined characteristics, among other things.[5]

We formalize the above by assuming that at time *t*, the Company considers opening (or acquiring) a hotel in a given market (here country). Let π_{ik}^{f} represent the profits to the Company of operating a hotel with characteristics *i* (including brand) in market *k* using organizational form *f,* where *f* = (*M* for management contract*, F* for franchising*,* or *C* for Company ownership). For

[4] See Prasad and Dev (2000) for a discussion of lodging firms' brand management strategies and the importance of delivering consistency to customers.

[5] Assuming instead that the Company chooses hotel characteristics - brand and/or size - and organizational form simultaneously, the estimated effects of hotel characteristics in our organizational form regressions might be biased. However, as long as we control for hotel characteristics in our regressions, our coefficients of interest (the coefficient for measures of institutional quality) will be unbiased, and can still be interpreted as a causal effect (see notably Stock, 2010).

notational convenience, time subscripts are suppressed. We write the Company's profit under each organizational form as follows:

$$\pi_{ik}^{f} = R(d_k, \gamma_k, x_i) + I^f(\gamma_k) + G^f(m_{ik}) - E^f(d_k, \gamma_k, x_i).$$

In this function, *R* captures the baseline profitability of a hotel, which varies as a function of local conditions. For simplicity of exposition, we take *R* to be the same function regardless of organizational form, and let the effects of organizational form operate through the other components of the profit function, as described below.

We expect market demand, d_k, to have a positive effect on the baseline profitability of the hotel, *R*. Similarly, the quality of local institutions, γ_k, should affect demand, possibly through its effect on tourism. We include γ_k directly in this function to make this possibility explicit. In addition, *R* will depend on hotel characteristics, x_i, including notably hotel size and brand.

We let I^f stand for the Company's benefit, in terms of potential losses averted, from having someone else – be it a franchisee or investor – own the property. In other words, the benefit I^f depends on the likelihood that, during the expected life of the assets, the local government enacts rules that capture, or in some other way reduce, the future returns from the investment. Issues of hold-up or regulatory costs are very real in the hospitality industry: the international business press contains many articles about sudden changes in the regulation of hotels that can have profound impacts on the value of operations in affected markets. For example, Leung and Wong (2009) mention that "In Hangzou, China, there were reports that the local authorities might impose an order on the Shangri-La to remove the top few stories of its hotel to meet new height restrictions." Similarly, in June 2006, the United Arab Emirates' Economic Department decreed that all hotels and hotel apartments were required to obtain licenses to "serve alcohol, and open bars, nightclubs and restaurants which show artistic programmes" (Nazzal, 2006). As such changes affect the profitability of the hotels, we assume that I^f is decreasing in the quality of local institutions, γ_k. However, $I^C = 0$ since the Company assumes the risk in that case. Also, since the benefit to the Company arises from foreign ownership, it does not depend on whether the hotel is owned by a franchisee or an investor, $I^F(\gamma_k) = I^M(\gamma_k)$.

The G^f component of the above profit function captures the benefit of increased local effort – i.e., reduced shirking – by a highly-incentivized local owner relative to a salaried Company manager.

By definition $G^C = G^M = 0$ since the Company relies on hired managers under both of these organizational forms. In other words, our focus is on effort that goes beyond the level offered by an employee, so the Company only benefits from higher local effort if it franchises a hotel. The benefit from doing so relative to hiring a manager are expected to be monotonically increasing in the cost to the Company of monitoring effort provision in the market where hotel *i* is located. We refer to variables that affect this cost as m_{ik}.[6]

Finally, E^f captures the costs of free riding by highly-incentivized local agents (franchisees). In other words, these reflect the damage to the Company's reputational assets from the possibility that a franchisee does not abide by all company policies and damages the brand in the process. Given that the Company employs managers under both company ownership and management contracts, free riding is an issue only for franchising, i.e., $E^C = E^M = 0$. We expect free-riding costs by franchisees to be lower in markets with high-quality institutions, γ_k, because contract enforcement will be less costly in such environments. In addition, free-riding costs should be affected by hotel characteristics, x_i, because, for example, negative spillover effects – damage to the brand that can arise from inconsistency of operations – are expected to be larger for high-end/large hotels (see Lafontaine and Shaw, 2005 for related evidence). Moreover, the simplicity of operations in lower-tier hotel brands leaves less scope for free-riding behavior. Finally, free-riding costs are expected to be increasing in market demand, d_k, because hotel mismanagement in more prominent markets has greater potential reputational, and thus financial, consequences for the Company (for example, see Kalnins (2006, p. 207) on this issue).

Given the decision to open a hotel with characteristics x_i in market *k*, the firm chooses its organizational form by examining the upper envelope of the above profit function. Provided that this envelope lies above zero for at least some organizational form, the firm proceeds with the hotel and uses the organizational form that determines the envelope at the maximum point.[7]

[6] While we assume for simplicity that *G* is unrelated to institutional quality, what we need is that the cost of monitoring employees is not affected as much by institutional quality as is the cost of free riding. We believe, per the arguments in the text and our reading of the trade press, that this is a reasonable assumption.

[7] See Murrell (1983) for a graphical illustration of this decision process for the case of two organizational forms.

2.3 Implications

The implications of the model above for the relationship between organizational form and the quality of institutions are straightforward. Recalling that R is taken to be the same across organizational forms, the fact that I^M is positive, and $G^M = G^C = E^C = E^M = 0$, imply that $\pi^M > \pi^C$ when $\gamma_k = 0$. In other words, management contracts will be preferred to company ownership in markets with low-quality institutions. This prediction, however, raises an obvious question: why would outside investors expose themselves to owning properties that the lodging company finds too risky to own? The answer lies in the nature of the risks and the type of investors involved. The investors – be they equity owners or franchisees – are usually local business people who are better able to evaluate and manage risks locally by virtue of their knowledge of the local market as well as potential personal connections to the local business community and the government.[8] For example, on May 26, 2009, Marriott signed an agreement to manage a luxury hotel property owned by Emirates Airline and Group, the largest aviation and travel services provider in the Middle East. The chief executive of Emirates Airline and Group at the time was His Highness Sheikh Ahmed bin Saeed Al-Maktoum, a member of the United Arab Emirates royal family (Travelwires, 2009). Similarly, franchisees are typically local business people well versed in the characteristics of their local markets and tied to the local community. In that sense, both management and franchise contracts represent solutions to the potential expropriation problem where risk is reduced due to the local market knowledge of the investor, and the remaining risk gets allocated to parties (investors or franchisees) that are in a better position to manage it.

The model, however, also makes clear that franchising will not necessarily be the preferred form of organization in markets with low quality institutions. Because $I^F = I^M$ for all values of γ_k, the comparison of management and franchise contracts will always hinge on the relationship between G^F and E^F. Per our assumptions, free-riding costs, E^F, are largest at $\gamma_k = 0$ while G^F is independent of

[8] As Henisz (2000) notes, similar rationales exist for foreign manufacturers seeking local partners.

γ_k. Thus G^F - E^F is smallest when γ_k is low, making management contracts preferable also to franchising when the quality of institutions is low.[9]

The above conclusions provide the most important implications that we take to data below, namely that the desirability of management contracts – which have the advantages of low equity investment for the Company but also a high degree of control – will be high in those markets characterized by poor institutional quality.

There is strong anecdotal evidence from the hotel industry to support this particular prediction. For example, in 2008, Marriott announced its plans to increase the number of its Middle Eastern properties from 26 to 65 by partnering with prominent local investors who will build and own hotels that the company will run under management contracts.[10] Given that measures of the quality of institutions in many of the region's countries tend to be low, Marriott's decision to rely on management contracts to grow its presence in these markets is consistent with our model's prediction. Similarly, Accor's 2005 Annual Report indicates that growth in emerging markets will mostly take place via management contracts and other joint ventures with local businesses.[11] Along similar lines, IHG's 2009 Annual Report emphasizes the importance of its intellectual property, as captured in the reputations of its brands, and notes that this is imperiled if the Group's ability to enforce contracts is in doubt in a market or if changes in legislation hurt their ability to monetize their investments.[12]

The model's implications for the relationship between institutional quality and the choice between franchising and company ownership are less straightforward. Ignoring hotel subscripts for simplicity, and differentiating each organizational form's profit equation with respect to institutional quality, we can write:

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[9] Note that in our model, (R + I + G – E) would always be greater than R+ I if G – E were always positive. This would imply that franchising would always dominate management contracts, an implication that is contradicted by the data. Hence in our simple formulation where R is independent of contract type, we need to assume that G-E can be negative for low enough values of γ_k.

[10] Webwire (2008).

[11] Accor, 2005 Annual Report, p. 70.

[12] InterContinental Hotel Group (IHG), 2009 Annual Report, p. 32-33.

$$\frac{\partial \pi_k^C}{\partial \gamma_k} = \frac{\partial R}{\partial \gamma_k}$$

$$\frac{\partial \pi_k^M}{\partial \gamma_k} = \frac{\partial R}{\partial \gamma_k} + \frac{\partial I}{\partial \gamma_k} < \frac{\partial \pi_k^C}{\partial \gamma_k}$$

since $\partial I/\partial \gamma_k$ is negative, and

$$\frac{\partial \pi_k^F}{\partial \gamma_k} = \frac{\partial R}{\partial \gamma_k} + \frac{\partial I}{\partial \gamma_k} - \frac{\partial E^F}{\partial \gamma_k} > \frac{\partial \pi_k^M}{\partial \gamma_k}$$

since $\partial E^F/\partial \gamma_k$ is also negative. These inequalities imply that better institutions will lead to an increased use of company ownership relative to management contracts, and also lead the Company to want more franchising. However, in contexts where institutional quality is high, the decision to operate a hotel corporately or to franchise it will hinge on how $\partial I/\partial \gamma_k$ compares to $\partial E^F/\partial \gamma_k$, and on the levels of I^F, G^F and E^F. It is straightforward to construct examples where, for a given hotel in a given market, the Company switches from management contract to franchising and then to company ownership as the quality of institutions goes up, and other examples where it goes from *M* to *C* to *F*.[13]

What the model thus makes clear is that other factors besides institutional quality, notably factors that affect the level of monitoring and free-riding costs at a hotel, will come into play in the decision to turn towards franchising or company ownership for a particular hotel in those countries where institutions are higher quality. For example, if the cost of monitoring hired manager effort is low for a given hotel in a particular market, which implies that the benefit of high-powered incentives is low (low G^F), and there are significant returns to preventing free riding (high E^F), the firm will be more likely to turn to company ownership than franchising for that hotel in that market.

3. Data and Methodology

[13] In yet other cases, it can easily go from M to C, and never use F, or go from M to F without using C.

We test the predictions above using proprietary data from a large, multi-brand multinational hotel firm. As mentioned previously, a confidentiality agreement prohibits us from disclosing the name of the company and characteristics that might identify it. The data, which are at the hotel-year level, include information about organizational form, physical characteristics (i.e., size and location), and brand affiliation for all the Company's hotels between 1999 and 2003.

The Company operates almost as many hotels in its domestic market as it does internationally. We exclude the Company's domestic hotels from our analyses because we are concerned that the Company might pursue different strategies at home and abroad. More importantly, the Company makes almost no usage of management contracts in its domestic market, relying instead almost exclusively on franchising and company ownership. Since the domestic market is one that is characterized by high-quality institutions per our measures, including the large number of domestic hotels in our analyses would all but guarantee that we would obtain results consistent with our predictions. Thus, we pursue a more conservative approach and explore whether the pattern of organizational form decisions that the Company makes in the international arena conforms to our model's predictions.

Our data set includes information for 1,493 hotels in 100 countries, and a total of 5,584 hotel-years.[14] The presence of the Company in most countries around the world confirms that large multinational lodging firms operate hotels even in those countries where institutional quality is quite low. The Company, however, has only a few hotels per country: we have 56 hotel-year observations per country on average, but a median of only 11. The Company also operates its international hotels under 20 different brands and sub-brands. Interestingly, a large proportion of the Company's hotels in emerging markets are high-end brands – and thus also larger hotels. For example, the hotel-weighted average value of GDP per capita in 2003 for the countries where the Company has established hotels under its best-known luxury brand is about $12,000, while it is more than $19,000 for its best-known budget brands. Finally, the small number of observations per country, and the variety of brands that the Company relies on, imply that business stealing is not a major issue in

[14] As will be clear below, we have a complete set of variables on a smaller number of countries because some of the countries are not covered in sources of international economic data. These tend to be quasi-autonomous islands with something resembling colonial status. We discuss our final samples further below.

deciding where to establish hotels for the Company. This was confirmed in our discussions with Company managers.

3.1 Sample Definitions

Table 2 shows that changes in organizational forms over time are quite infrequent: we observe such changes for only 2.9 percent (or 21+1+68+15+3+5=113) of the 3,945 pairs of successive years for a hotel in our data. This low frequency suggests either that the Company has not had much need to change the organizational form under which its hotels operate, or that it is costly to make such changes.

If organizational form decisions are indeed sticky, as one might expect given the long-term nature of these contracts, exploiting the time-series dimension of our data may be problematic. For this reason, in what follows, we focus first on the Company's new hotels and analyze the organizational form decisions made at the time of opening (or acquisition). Given the low frequency of organizational form changes in our data, we assume that the organizational form we observe when a hotel is first included in our data is the organizational form upon entry if the first observation is within two calendar years of opening (or acquisition). After eliminating hotels for which we do not have all the variables for our baseline regressions, as described below, we are left with 712 hotels located in 64 different countries on six different continents for what we refer to as our "new hotel sample." [15] The median number of new hotels per country is 3.5, though the mean is 11. The new hotels operate under 16 different brands covering low, medium, and high quality segments. As with countries, observations are not evenly distributed across brands: the mean number of new hotels per brand is 44.5 while the median is 31.

While the lack of changes in organizational forms in the period of our data suggests that we should treat all observations for a hotel as a single observation as described above, it is also true that

[15] Our results are not sensitive to including only hotels that we observe in their first year and hence for which we can confirm their organizational form at that time. However, including hotels that we observe within 2 years of opening or acquisition by the Company allows us to retain a larger sample and hence use more of the information we have.

firms in the hotel industry sometimes buy back franchised or managed properties to operate as their own, and, at other times, they franchise or sell to new owners hotels that were company-owned and so on. Thus the lack of changes in the year-to-year data in Table 2 may reflect the fact that the Company has not needed to change organizational forms over the period of our data. In that case, it would be appropriate to rely on all the information in our panel data set, including observations over time for specific hotels, as well as data on older hotels. The latter are excluded from the new hotel sample as we cannot infer the original organizational form for them. Insofar as there was a general trend towards democratization during our sample period (several years after the fall of the Berlin wall), this means that stickiness in contractual form will lead to attenuated estimates of the relationship between the quality of institutions and organizational form. Thus, our approach of comparing the results of the analyses on our new hotel sample with those of our full sample serves as a conservative robustness check.

3.2 Measurement and Descriptive Statistics

Given the decision to open a hotel with characteristics x_i in market k, we analyze the likelihood that the hotel is franchised or company-owned or operated via management contract. We proxy for our main independent variable of interest, namely institutional quality (γ_k) in a country, using the Checks index from the World Bank's Database of Political Institutions (DPI) (Keefer and Stasavage, 2003). This variable has been used as a proxy for the quality of governance (Keefer and Knack, 2007), state stability (Arezki and Bruckner, 2011), and as a measure of political fragmentation impacting tax policy (Da Rin et al., 2011). The DPI Checks index is calculated using the weighted number of veto players in a political system, where the weights are allocated based on an analysis of electoral competitiveness, electoral rules, economic policy orientation and party affiliation.[16] Higher scores indicate increased institutional stability. We believe that this measure is a good proxy for the Company's view of the overall quality of the institutional environment insofar as political stability allows it to make more confident long-run predictions about the policy environment. In addition, we use the World Bank's "Voice and Accountability" Indicator, which, among the six World Bank

[16] Details on the construction of the index can be found in Beck et al. (2001) and Keefer and Stasavage (2003). The Database of Political Institutions is available at: http://go.worldbank.org/2EAGGLRZ40.

Worldwide Governance Indicators, is most directly interpretable as an indicator of democratic institutions.[17]

In some specifications, we include additional control variables to account for some of the factors highlighted in the literature and in our theoretical framework. Specifically, we use the "Control of Corruption" and the "Rule of Law" measures from the World Bank's Worldwide Governance Indicators to capture the risk of expropriation and the extent of enforcement of arms-length contracts respectively.[18]

Consistent with the empirical contracting and trade literatures (e.g., Brickley and Dark, 1987, Rose, 2004, Lafontaine and Slade, 2007), we rely on the physical distance of the hotel from the Company's headquarters to capture monitoring costs, m_{ik}. We use the log of the geographic distance (in kilometers, based on the "great circle" method) between the city where the Company is headquartered and the center of the city in which the hotel is located as our measure of physical distance. In addition to affecting monitoring costs, physical distance may reduce concerns over free-riding costs as further away markets may be less important to the Company from a reputation point of view. Such a reduction in concern over the potential for reputational damage also could manifest itself in the form of increased reliance on franchising in these markets, as the costs of franchising free-riding would be lower from the Company's perspective. This potential effect would thus be indistinguishable empirically from the potential effect of high monitoring costs: under both interpretations, the implication would be an increased reliance on franchising. Finally, physical distance might affect the cost of relying on courts to enforce certain types of contract terms. This

[17] The six indicators represent the views of a large number of respondents regarding the following dimensions of governance: Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. For more on these, see http://info.worldbank.org/governance/wgi/index.asp. The Voice and Accountability Indicator is meant to capture the extent to which "a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media." Because these were released every other year for our sample period, we interpolate the missing values.

[18] The Rule of Law measure is defined as follows, "captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence." The Control of Corruption variable "captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests."

could affect the desirability of franchising in further away markets as well, although this effect would reduce the Company's desire to franchise.

We expect monitoring to be more costly in distant markets, but given distance, less costly in those countries where the firm has a greater presence already by the time the new hotel is opened because the fixed cost of traveling to the market in question – to review hotel performance and/or the extent to which operations adhere to Company policies – can be spread across a larger number of hotels. Consequently, we include the total number of hotels affiliated with the Company, across all brands, in the same city as hotel *i* as an additional measure of monitoring costs.[19]

As mentioned earlier, the potential for reputational loss due to free riding may be greater for larger hotels. We therefore include hotel size, namely the (log of the) number of rooms in the hotel, among hotel characteristics (x_i). We also include year fixed effects, as well as brand/continent dummy variables in all our regressions. The latter in particular control for the possibility that the Company, for example, may have local monitoring headquarters in some regions, or may pursue different policies (i.e., brand mix) across continents that may also affect organizational form decisions within brands/continents.[20]

We use three different variables to proxy for market size (d_k), starting with the (log of) real per capita GDP and the (log of) country population, both taken from the World Bank's World Development Indicators. In addition, given that the demand for hotel services is linked not only to demand from residents but also from tourists and convention attendees, we use the (log of) real tourism receipts from inbound international tourists, which we obtained from the World Tourism Organization.[21] Like GDP per capita, the latter may also be positively associated with the quality of local institutions, in which case controlling for these directly in our regressions addresses a potential source of omitted variable bias.

[19] See also Kosová, Lafontaine and Perrigot (2013) on this approach to measuring monitoring costs.

[20] Specifically, we identify the Company's six major international brands, grouping all others into a seventh category. We then interact these brand dummy variables with six continent dummy variables, one for each of Africa, Asia, Australia, Europe, North America and South America.

[21] See http://www.unwto.org/facts/menu.html.

Finally, motivated by discussions in the investor reports of international lodging firms about economic as well as political stability affecting investment decisions, we include the standard deviation of each country's GDP growth rate for a rolling five-year window in all our regressions. Specifically, the value of this variable for a given country in a given year is the standard deviation of that country's GDP growth over the current and four preceding years, where data on GDP growth are from the World Bank. As with some of our other variables, controlling for economic volatility also ensures that our coefficient on institutional quality captures the impact of this variable separately from that of economic volatility.

Summary statistics for all the variables above – except the indicator variables – for both our new hotel and overall samples are shown in the top and bottom panels of Table 3, respectively. A comparison of the two panels suggests that the Company continues to open new hotels in countries whose characteristics are similar to those it already operates in. Because our observations are at the hotel level, in this table the averages for country characteristics such as the DPI Checks index and the World Bank's Governance Indicators give more weight to countries with more hotel observations. Using our whole sample, with country/year level data, such that countries are all given the same weight, yields a lower average DPI Checks index of 3.15 and a per capita GDP of 9,533. This confirms that the Company has established more hotels in those countries with higher DPI, as our model implies it would. There are of course countries around the world where the Company is not present. Consistent with our model's prediction, the average DPI Checks index in these is even lower, at 2.55 on average during the period of our data.[22]

Our main interest lies in exploring the relationship between the Company's choice of organizational form for its new hotels and the quality of local institutions. We describe this relationship on the left-hand side of Table 4, for the new hotel sample in the top, and the whole sample in the bottom panel. Specifically, we show the distribution of organizational forms for countries with low, medium, and high levels of institutional quality conditional on the Company being present in a country, as captured again by the DPI Checks index. In Table 4, we choose cutoffs that generate similar size groups to the extent possible given the lumpiness of the index.

[22] This average also is calculated by giving the same weight to each country. The lower average value of the index for countries where the firm has no hotel implies the Company estimates that such hotels would generate negative profits across all organizational forms, so a no entry decision is indeed associated with low values of γ_k.

Results in Table 4 confirm what was apparent already in Table 2, namely, that the Company operates most of its hotels, including almost half of its new hotels, under company ownership. However, the left-hand side of the table also reveals substantial heterogeneity in the usage of different contractual forms across the DPI Checks groups. Some of this variation fits the qualitative predictions of our simple model. For example, consider the Company's utilization of franchising. The Table shows that in countries with low scores of 1 to 3 in the DPI Checks Iindex, which include Ivory Coast, Ghana, and Morocco, very few hotels are franchised. However, for countries with a Checks score of 4, which at the time of our data included Argentina, Peru, and South Korea, the proportion of franchised hotels is much higher. For our new hotel sample, the proportion is higher still in countries with scores of five or more, which include Australia, the Netherlands, and New Zealand (in most years). It falls slightly in our overall sample. Overall, the data patterns strongly suggest that franchising is not the organizational form that the Company turns to in markets with low-quality institutions, contrary to predictions from some models in the literature (e.g., Contractor and Kundu, 1998, Chen and Dimou, 2005).

The descriptive patterns on the left-hand side of Table 4, however, do not completely support our simple model. For example, the reliance on management contracts does not go down systematically as the quality of institutions increases. Of course, other factors can affect these patterns. For example, the Company's luxury brands are disproportionately represented in countries with lower Checks scores, and luxury brands are expected to be operated under organizational forms that give the Company more control, i.e., company ownership or management contracts. Similarly, the right-hand side of Table 4 shows how the distribution of organizational forms across countries classified by per-capita GDP appears highly non-random. Conspicuously, we find that management contracts are overwhelmingly preferred in the countries with low GDP per capita, in both the new hotel and overall sample, and that the reliance on management contracts is much lower in higher GDP per capita countries. These data patterns suggest a strong relationship between organizational form and the level of economic development (per capita GDP), confirming the need to control for per capita GDP and other country characteristics, in assessing the role of institutions in our analyses below.

While Table 4 indicates that different organizational forms are used non-randomly around the world, it does not address the reasonable question of whether country-level factors perfectly determine these choices. If that were true, then the appropriate unit of observation would be the

country rather than the hotel. However, examining the Hirschman-Herfindahl Index (HHI) obtained from organizational form shares in each country – i.e., calculating the sum of squared shares of each organizational form as a percentage of all hotels in each country – we find an average of 8,596 across the countries where the Company operates hotels. Weighing countries by the number of hotels in each country leads to a lower, but still high, average HHI of 7,521. These values imply that country-level factors are certainly strongly correlated with the choice of organizational form, but they do not fully determine it. Moreover, the reduction in the average as we weigh by the intensity of the Company's operations indicates that where the Company has more hotels, it more frequently exploits flexibility in organizational form to address hotel-specific issues. We view this as evidence that it is appropriate to focus on empirical strategies that account for hotel-level variation in factors like size and branding, as we do below.

3.3 Empirical Model

The few papers that have examined organizational form decisions in the lodging industry have relied on ordered-response models (e.g., Contractor and Kundu, 1998, Chen and Dimou, 2005). These models assume the existence of a single unobserved index along which the organizational forms can be ranked. Estimated cutoff values for the index then indicate the predicted choice of organizational form along the continuum. We believe that this approach is problematic because underlying factors for organizational form decisions in this industry in our view cannot be reduced to a single dimension. This was illustrated in Table 1, where we showed that organizational forms differ along the two key dimensions of equity and control. Consequently, in our analyses below, we rely on non-ordered discrete choice models.

Our choice of specification is the multinomial logit (MNL) model. This model has many attractive features, not least of which is its analytical tractability. Its main drawback is that it imposes the stringent condition that the pair-wise conditional probabilities should not be influenced by the presence of other options. We conducted a series of Hausman tests and found that in our data, the

independence of irrelevant alternatives (IIA) assumption could not be rejected.[23] Because of concern about the power of Hausman tests, we also estimated less restrictive nested logit models. We found that none of the inclusive values were statistically different from one, implying that the best nested model was not statistically different from the MNL model. Furthermore, our nested logit estimates were very similar to the MNL estimates. Given all this, we follow Train (2003, p. 40) in thinking of the MNL model as a good approximation to the true choice process.

The MNL specification is straightforwardly derived from the model in Section 2.4. Adding error terms that are independently and identically drawn from type 1 extreme value distributions to the profit functions associated with each of the three organizational forms, where the error terms capture unobserved factors that might lead the Company to prefer one organizational form over the others, and assuming that the profit functions are linear in the explanatory variables, *X*, the probability of observing a given organizational form *f* is:

$$\Pr(f) = \frac{e^{\pi^f}}{\sum_j e^{\pi^j}} = \frac{e^{X\beta^{(f)}}}{\sum_j e^{X\beta^{(j)}}}$$

for *j = C, M, F*. Because there are multiple sets of $\beta^{(f)}$ that lead to the same probabilities, the model is identified by arbitrarily setting $\beta^{(f)}$ to 0 for one *f*. Consistent with our model above, and the fact that it is the most popular organizational form in the data, we set the default case to be company ownership. This means that we are modeling the effect of variables on the probability that a new hotel *i* in country *k* is operated under organizational form *f*, where *f* is either franchising or a management contract, relative to company ownership. Separating *X* into the factors identified above, and suppressing time subscripts, we have:

$$\ln\left(\frac{\Pr(f)}{\Pr(Company\ Owned)}\right)_{ik} = R(d_k, \gamma_k, x_i) + I^f(\gamma_k) + G^f(m_{ik}) - E^f(d_k, \gamma_k, x_i) + \varepsilon_{ik}$$

$$= \alpha_t^f + \alpha_{bc}^f + \beta_1^f \gamma_k + \beta_2^f m_{ik} + \beta_3^f x_i + \beta_4^f d_k + \varepsilon_{ik}$$

[23] We conducted these tests with regression models that excluded some dummy variables (brand/continent and/or year dummy variables). When all these were included, the Hausman tests suffered from the well-known finite-sample problem of failing to return non-negative test-statistics (Small and Hsiao, 1985, Wooldridge, 2002).

where ε_{ik} represents an idiosyncratic shock, the α_t^f are year fixed effects, and the α_{bc}^f capture the possible effects of brands – which we allow to be different across continents – on organizational form decisions. In all our regressions, we also control for possible correlations in the choice of organizational forms across hotels in a country by clustering standard errors at the country level.

4. Regression Results

4.1 Baseline Results

We show results for the new hotel sample in Table 5. Each model in this table is represented by a pair of columns, with the first showing the effect of a variable on the likelihood that a new hotel is organized under a management contract rather than company ownership while the second column shows the effect on the relative probability of franchising compared to company ownership. In the first set of two columns, we use the DPI Checks variable as our measure of institutional quality. In the second, we use the log of the same index. In the third pair of columns, we rely on the World Bank Voice and Accountability index as our main measure of interest.

As noted above, we include brand-continent dummy variables, which account for the possibility that the Company behaves differently with certain of its brands, and that this may be different in different regions. We also include year fixed effects, which capture potential changes in the macroeconomic conditions faced by the Company. χ^2 tests that the coefficients of these two sets of dummy variables are all equal to zero are rejected in all regressions.

We measure the goodness of fit using the share of correctly predicted outcomes, where the predicted outcome for each hotel is the organizational form with the highest predicted probability. The models all correctly predict 83-84 percent of the organizational form choices, much above the 47.9 percent that we would achieve if we predicted the most frequent outcome in the data, namely company ownership, for all observations (see Table 4, first row, 4th column).

To assess the validity of our empirical approach, we also estimated analogous specifications under the assumption that the organizational forms are ordered. These models only correctly predict 73% of the observed outcomes. Consistent with the dramatic improvement in model fit, likelihood ratio tests further confirmed that the multinomial models perform statistically significantly

better than ordered models do. We conclude that, consistent with our theoretical framework, institutional and market-level factors indeed affect different contractual choices in different ways.

To facilitate the interpretation of the results in Table 5, Table 6 shows the average effect of a one standard deviation increase in each of the independent variables on the probability that each organizational form is chosen. As suggested by Cameron and Trivedi (2005, p. 122-123) and Greene (2003, p. 668), we approximate the effect of a change in an independent variable using the average effect of such a change across all observations, rather than the effect at mean values of all variables.

The results in Tables 5 and 6 strongly support our model's prediction that an increase in institutional quality should lead to a decrease in the likelihood of choosing a management contract. Moreover, the impact is economically important: for example, a one standard deviation increase in the DPI Checks index is associated with a 6.9 percentage point decrease in the likelihood that a new hotel is opened under a management contract. Using the log of the same index, we find an even greater reduction, at 8.1 percentage points. Finally, using the Voice and Accountability Indicator, the effect of a one standard deviation is greater still, at 14.5 percentage points.

To ensure that our conclusions about the role of institutional quality in affecting organizational form decisions are robust, we re-estimated our baseline models with the Control of Corruption and Rule of Law measures. The estimates for these models are shown in Table 7 while the economic magnitudes of effects (as measured by the average predicted response of a one standard deviation change) are shown in Table 8. Not only are the results relating our measures of institutional quality robust to including these new variables, but consistent with our theoretical framework, we find a marked reduction in the use of company ownership as the Rule of Law index, i.e., as the enforceability of contracts and property rights increases. Similarly, as the index of Control of Corruption increases, such that investments are at lower risk of expropriation, we find significant increases in the likelihood of company ownership and reduced usage of both franchising and management contracts.

Most importantly, even with these additional measures of institutions in our regressions, the effects of our baseline measures of institutional quality on the Company's organizational form decisions remain economically and statistically significant. We conclude that the general stability of the policy environment constitutes an additional factor relevant to the Company, in addition to

factors representing the current environment, i.e., the current likelihood of expropriation or current enforceability of contract.

Turning to the other variables in our empirical model, we find that in both Tables 6 and 8, the Company relies less on management contracts in those countries with higher levels of tourism, another potential measure of the quality of institutions. However, controlling for other factors, it uses them more in higher income countries, contrary to the descriptive data in Table 4. Increased local presence has a statistically significant, but small effect on organizational form decisions. Based on monitoring cost arguments, we expect to find fewer franchised hotels in markets where the Company has greater local presence. And indeed this is the case.[24] Similarly, free-riding concerns suggest that the Company would not rely on franchising as much for its larger hotels, which is what we observe. Other variables have comparatively small effects on these decisions. Most importantly from our perspective, since, for example, tourism, income and economic volatility are all likely to be related to the quality of institutions, the fact that we still find a significant effect for our measures of institutional quality once we control for all these is reassuring.

Interestingly, one result that is very robust in our regressions but runs contrary to our initial hypotheses is that hotels that are more distant from the Company's headquarters – relative to other same brand hotels on the same continent – are much more likely to be operated under management contract. As distance might be expected to increase the cost of monitoring employed managers, agency arguments would suggest that these distant establishments should be franchised.[25] Yet we find strong evidence that the Company prefers to retain control, while still not taking ownership, in distant markets. One explanation for this, mentioned above, might be that distance also increases the cost of disciplining the potential free-riding behavior of franchisees, thereby making franchising less desirable in such markets. In addition, distant hotels may serve an important purpose for the

[24] There is also a literature suggesting that increased experience leads firms to take on greater risks than they otherwise would (e.g., Delios and Henisz, 2003). Our result, that the firm chooses to own and operate hotels to a greater extent, rather than franchise them, when it already operates more hotels locally can be interpreted to mean that increased experience leads to greater risk taking in the form of more company ownership (and less franchising in this case). See also footnote 29 on the effect of including hotel age in our panel analyses, which again can be interpreted in terms of experience.

[25] The fact that the markets are far away also might make the firm care less about control, as mentioned in our discussion section. This would reinforce the prediction that these establishments should be franchised.

Company that our model does not capture. For example, in distant locations, a given hotel might be a flagship property for the Company and its brands, in which case control becomes a major concern for the Company. Or it might be more difficult to find franchisees in the types of distant markets where the Company operates.

In their study of contracting by lodging firms, Contractor and Kundu (1998) distinguished among four types of contractual relationships, which they ordered from most to least company involvement as follows: first, company ownership; then, partial ownership; next, management contracts; and lastly, franchising. Chen and Dimou (2005) do not have a partial ownership category, but order the remaining organizational forms in the same way. Both papers find a statistically significant negative relationship between company involvement and country risk, implying that franchising should be the dominant organizational form in the riskiest countries. In contrast, allowing more flexibility in addressing issues of control and equity, our results indicate that the Company eschews ownership in the countries with low-quality institutions and low tourism demand, per the literature, but it also chooses to retain control in those markets – i.e., it relies more on management contracts rather than increasing its use of franchising.

4.2 Identification and Robustness

Establishing causality in cross-country settings such as the one here is always challenging (see, e.g., Rajan and Zingales, 1998, Commander and Svejnar, 2011). Besides choosing a within-firm design, which holds constant company policies and other firm-level attributes, our primary approach to identification is to control for as many observable differences across countries and hotels as possible, including brand/continent and year fixed effects. As described above, we also account explicitly for differences in levels of economic development (per capita GDP) as well as economic volatility (i.e., the standard deviation of GDP growth), tourism expenditures, and specific measures of contract enforceability and expropriation risk.

In this section, we provide further evidence for the results above, this time using our overall sample. As noted in Section 3.1, the regressions focusing on the organizational form decisions at the time the hotel becomes part of the Company will be consistent even if organizational forms are sticky. However, if the Company can modify organizational form decisions relatively easily, the

results from the new hotel subsample will be less efficient, due to the smaller sample size, than those estimated on the overall sample. For this reason, in Table 9, we show results for the same models as in Table 7, but for our overall sample.

Consistent with what we would expect if contracts are sticky, the results for our main variable of interest are again all statistically significant, and very consistent with those from the new hotel sample. In particular, a one standard deviation increase in the DPI index leads to a 4.5 percentage point decrease in the likelihood that a property is operated under a management contract. With the log of the same index, there is a 6.3 percentage point reduction, whereas with the Voice and Accountability index, the effect is again much larger, at 18.4 percentage points. In addition, the effects of other variables – e.g., distance, tourism expenditures, local presence – are also broadly consistent with those we found using our new hotel sample.

We also estimated a number of other specifications, using different functional forms for our main measure of quality of institutions, the DPI Checks index, as well as alternative measures of institutional quality, namely an index of Political Stability also produced by the World Bank, as well as the Political Constraint index, which is similar to the DPI Checks index insofar as it is explicitly intended to capture the stability of the policy environment.[26] We present the coefficients for the measure of institutional quality for our new hotel sample for these alternative models in Table A1 in the Appendix. We also tested the robustness of our main results to using a smaller sample of new hotels, namely only those that are opened from 1999 onward, such that we observe the organizational form upon entry (recall our sample above allows a delay of two years). The results for the main variable of interests were even stronger for this smaller set of new hotels. Finally, we tested the robustness of our results to the inclusion of further control variables, [27] or the exclusion

[26] The Political Constraint Index was developed by Witold Henisz. It is available at http://www-management.wharton.upenn.edu/henisz/. The World Bank Governance Indicators are available at: http://info.worldbank.org/governance/wgi/index.asp.

[27] To further test the robustness of our results, we also ran specifications involving a measure of education and controlling for cultural differences using a language control variable as in Holburn and Zelner (2010). Adding either of our two measures of education – years of compulsory education or percent of labor force with at least a secondary education level, both from the World Bank's World Development Indicators, did not alter our qualitative results. As their introduction reduced our sample size, and their effect was mostly not significant, we choose to focus on specifications without education in the body of the paper. The addition of a language dummy variable also did not affect our main results, although we found that it had a statistically

from the sample of hotels in three countries where government policies could have made ownership particularly difficult.[28] In all cases, we found that improvements in institutional quality led to similar reductions in the probability of using a management contract as in our main results above.

4.3 Changes in Institutional Quality and Organizational Form Decisions

As a final assessment of the causal interpretation of our results regarding our main variable of interest, in this section we focus on the Company's behavior in countries that have experienced important changes in institutional quality, as proxied by changes in the DPI Checks Index during the sample period. Given the relatively low frequency of such changes, we cannot draw strong conclusions from these analyses, but we view them as lending further support for our results.

We observe seventeen cases in which a country's DPI Checks Index score changed by two or more, a level of change that we believe is likely to reflect a real change in the quality of institutions in the countries. Of these, there are seven cases where the index went down, and ten where it increased.

Our model suggests that decreases in the quality of institutions should make expansion less attractive (or closings more likely), but that conditional on a new hotel opening, the Company should be more likely to rely on a management contract. What we find is that in one case of DPI reduction,

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significant effect on organizational form choices. Finally, because the above sample includes a number of older hotels, we also estimated the regressions in Table 9 with an additional variable, namely the (log of) hotel age. We found that this variable had a statistically significant effect on organizational form decisions, being associated with the Company moving away from management contracts and franchising towards more company ownership. However, the effects were not large, and results for other variables were unaffected, leading us to focus on the (larger sample) results in the tables and discussion above. Details on all these – and other robustness models – are available from the authors upon request.

[28] These include China and Vietnam and some other jurisdictions. Among other specifications, we also estimated our model with an interaction term between hotel size and our measure of institutional quality to capture the possibility that, in those markets where institutions are problematic, free riding might be more costly the larger the hotel is. The coefficient of this interaction term, however, was not statistically significant, and we could not reject the null hypothesis that a simpler model with just the main effects performed as well.

the Company closed its only hotel in the market. In four other cases, the Company changed neither the number of hotels in the country, nor its relative usage of the different organizational forms, suggesting again some degree of stickiness in these decisions. In the two remaining cases, the Company opened hotels. In one country, it opened a new hotel under a management contract. In the other, a country where the Company already had a substantial presence, all under management contracts, it added a new hotel under a management contract, as well as a new franchised hotel, in the year of the DPI index decrease. The year after the change in the DPI index, it added yet another hotel, again under management contract.

Of the ten instances where the country's DPI Checks score increased by two or more, there are three cases where the Company did nothing. When it made changes, it again changed its operations in a way broadly consistent with our model's predictions. Specifically, in four of the remaining seven countries, the Company expanded the scope of its operations. In three of these four cases, it did so by opening a company-owned hotel. In the fourth case, the Company increased its number of management contracts from none to two. In two of the remaining three cases, it reduced its total number of hotels. In one case, where it operated only a few franchised hotels, it exited the country completely, suggesting that it simply sold its operations there. In another, it reduced its stock of company-owned hotels from two to one, and made no change to its stock of three management contract hotels and zero franchises. Finally, in the last country, the Company switched from having a lone hotel under a management contract to a single hotel under a franchise contract.

While these patterns are mostly anecdotal, given that they do not account for the many other possible events that may have accompanied the change in institutional quality, we nevertheless draw some reassurance from their broad consistency with the predictions of our model and results of our empirical analyses.

5. **Conclusion**

Using proprietary data from a large multinational, multi-brand lodging firm, we examined the effect of differences in institutional quality across countries – principally captured by the World Bank's DPI Checks Index – on the way in which the Company chooses to organize its operations locally. We showed that the Company is less likely to choose to be sole owner and residual claimant when a

hotel is in a country with low institutional quality, where the "rules of the game" can be changed more easily. This is consistent with the idea that markets where institutions such as property rights protections are weak increase the risks attached to company ownership and investment, as Henisz (2000), Javorcik (2004), Branstetter et al. (2006), and Laeven and Woodruff (2007) have documented. Conditional on having decided to do business in these markets, the Company typically chooses to partner with local investors who, often because of what they know and who they are, including their connection to the business and political communities in the local market, and their knowledge of the same, can mitigate the risks associated with unexpected policy or regulatory changes. The data indicate that although both options afford it the opportunity to have no equity in the hotel, in markets with less stable institutions, the Company prefers to maintain operational control through the use of management contracts rather than relying on franchising. We argue that this occurs because franchisee free riding is harder to detect and/or punish in environments characterized by unstable regulatory regimes. This, in turn, makes franchising less appealing in such contexts.

Overall, our results show that the Company's organizational form decisions vary significantly depending on the characteristics of the market in which a hotel is located, and that institutional quality is one of the factors affecting these decisions. Our findings thus suggest that regulatory considerations can affect the behavior of firms in the service sector in ways that are similar – but not identical – to effects found in the literature, a literature whose focus to date has been almost exclusively on firms in manufacturing and high-tech industries. Our hope is that future work will consider how this effect might vary across retail and service industries, as well as how other organizational decisions – beside the choice among the three organizational forms used in the lodging industry – might be relied upon by firms in other sectors to deal with similar issues.

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Table 1: Company Control and Equity Involvement Under Different Organizational Forms.

		Direct Control Over Operations:	
		No	Yes
Equity Involvement:	No	F	M
	Yes		C

Note: `C' indicates company ownership; `M', management contract, and `F' franchising.

Table 2: Organizational Form Changes from One Period to the Next.

		Current:			
		Company-Owned	Management Contract	Franchised	Total
Previous:	Company Owned	2,275	21	1	2,297
		99.04%	*0.91%*	*0.04%*	*100.0%*
	Management Contract	68	1,228	15	1,311
		5.19%	*93.67%*	*1.14%*	*100.0%*
	Franchised	3	5	329	337
		0.89%	*1.48%*	*97.63%*	*100.0%*
	Total	2,346	1,254	345	3,945

	59.47%	*31.79%*	*8.75%*	*100.0%*

Note: Number of hotel-year observations with percentage of row total in *italics*.

Table 3: Summary Statistics.

a) New Hotel Sample

Variable	Obs	Mean	Std. Dev.	Min	Max
DPI Checks	706	3.68	1.22	1	7
World Bank Voice Indicator	711	0.86	0.80	-1.63	1.75
Control of Corruption	711	1.27	1.03	-1.14	2.43
Rule of Law	711	0.91	0.90	-1.45	1.95
Real GDP per capita ($K)	712	15.08	10.54	0.22	48.64
Log (real GDP per capita)	712	9.16	1.15	5.41	10.79
Std. Dev. (GDP – 5 years)	712	1.71	1.61	0.41	8.80
Country Population (Ms)	712	94.14	199.16	0.23	1288.4
Log (country population)	712	17.52	1.30	12.36	20.98
Tourism receipts ($M)	712	13894.13	13472.85	10.00	118629.99
Log (tourism receipts $M)	712	22.78	1.27	16.12	25.50
Number of rooms	712	132.51	94.41	5	702.00
Log (number of rooms)	712	4.67	0.68	1.61	6.55
Distance (km) to city	712	4835.38	5488.91	225.14	19066.92
Log (distance (km))	712	7.66	1.35	5.42	9.86
Number of hotels in city	712	5.83	7.90	1	43

b) Panel Data

Variable	Obs	Mean	Std. Dev.	Min	Max

DPI Checks	5,357	3.67	1.17	1	8
World Bank Voice Indicator	5,377	0.90	0.80	-1.86	1.75
Control of Corruption	5,377	1.20	1.03	-1.39	2.51
Rule of Law	5,377	0.97	0.90	-1.71	1.97
Real GDP per capita ($K)	5,386	16.25	10.55	0.11	48.64
Log (real GDP per capita)	5,386	9.23	1.22	4.69	10.79
Std. Dev. (GDP – 5 years)	5,385	1.63	1.47	0.22	8.80
Country Population (Ms)	5,386	76.26	141.52	0.21	1288.40
Log (country population)	5,386	17.45	1.24	12.25	20.98
Tourism receipts ($M)	5,386	14834.94	14509.04	0.90	118629.99
Log (tourism receipts $M)	5,386	22.83	1.37	13.71	25.50
Number of rooms	5,386	139.49	92.56	5.00	702.00
Log (number of rooms)	5,386	4.76	0.60	1.61	6.55
Distance (km) to city	5,386	4270.67	5175.15	225.14	19066.92
Log (distance (km))	5,386	7.49	1.37	5.42	9.86
Number of hotels in city	5,386	6.19	7.64	1	43

Table 4: Organizational Form and Local Market Characteristics.

a) New Hotel Sample

	DPI Checks Groups				GDP Per Capita Groups			
Organizational Form	1-3	4	5+	Total	<=$8,000	$8K-$23K	>$23,000	Total
Company	127	159	52	338	66	142	131	339
Owned	*53.14*	*53.72*	*30.41*	*47.88*	*23.83*	*56.80*	*70.81*	*47.61*
Management	100	92	65	217	155	81	26	262
Contract	*41.84*	*31.08*	*38.01*	*36.40*	*55.96*	*32.40*	*14.05*	*36.80*
Franchised	12	45	54	111	56	27	28	111
	5.02	*15.20*	*31.58*	*15.72*	*20.22*	*10.80*	*15.14*	*15.59*
Total	239	296	171	706	277	250	185	712
	100%	100%	100%	100%	100%	100%	100%	100%

b) Panel Data

	DPI Checks Group				GDP Per Capita Group			
Organizational Form	1-3	4	5+	Total	<=$8,000	$8K-$23K	>$23,000	Total
Company	990	1,584	483	3,057	454	997	1,614	3,065
Owned	*53.80*	*64.08*	*46.22*	*57.07*	*24.97*	*63.62*	*80.66*	*56.91*

Management	772	557	461	1,790	1,136	468	206	1,810
Contract	*41.96*	*22.53*	*44.11*	*33.41*	*62.49*	*29.87*	*10.29*	*33.61*
Franchised	78	331	101	510	228	102	181	511
	4.24	*13.39*	*9.67*	*9.52*	*12.54*	*6.51*	*9.05*	*9.49*
Total	1,840	2,472	1,045	5,357	1,818	1,567	2,001	5,386
	100%	100%	100%	100%	100%	100%	100%	100%

Note: Number of observations, with percentage of column total in *italics*.

Table 5: Institutional Quality & Organizational Form Choice: New Hotel Sample

	DPI Checks		log DPI Checks		WB Voice	
	M:C	F:C	M:C	F:C	M:C	F:C
Quality of Institutions	-0.71*	0.20	-2.22**	0.94	-2.55***	-0.44
	(0.40)	(0.30)	(1.06)	(0.95)	(0.67)	(0.83)
Log (tourism)	-0.99***	-0.29	-1.08***	-0.30	-0.83***	-0.42
	(0.33)	(0.37)	(0.34)	(0.36)	(0.32)	(0.36)
Log (distance)	1.86***	0.07	1.86***	0.09	1.76***	0.13
	(0.42)	(0.37)	(0.41)	(0.37)	(0.38)	(0.40)
Local Presence	-0.00	-0.04*	0.00	-0.04*	0.01	-0.04*
	(0.01)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)
Log (population)	-0.17	0.29	-0.12	0.30	-0.55*	0.25
	(0.33)	(0.35)	(0.31)	(0.34)	(0.31)	(0.33)
Log (Per Capita GDP)	0.35	-0.12	0.53	-0.15	1.08**	0.25
	(0.45)	(0.46)	(0.47)	(0.48)	(0.53)	(0.62)
StDev (GDP)	0.10	0.37	0.12	0.33	0.07	0.32
	(0.20)	(0.24)	(0.21)	(0.27)	(0.18)	(0.24)
Log (rooms)	0.76**	-0.71*	0.71**	-0.74*	0.62**	-0.65
	(0.30)	(0.39)	(0.30)	(0.40)	(0.30)	(0.41)
Observations	706		706		711	
Brand-Continent FE	Yes***		Yes***		Yes***	
Year Fixed Effects	Yes***		Yes***		Yes***	
Number Correct	587		588		597	
Percent Correct	83.1		83.3		84.0	

Note: Robust standard errors in brackets - clustered at the country level. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 6: Impact on the Probabilities of each Organizational Form of a One Standard Deviation Increase in the Independent Variable

(averaged across all observations, holding all other variables constant)

	World Bank DPI Checks Index		
	Company-Owned	Management Contract	Franchised
Quality of Institutions	0.038	-0.069	0.031
Log (tourism)	0.098	-0.088	-0.010
Log (distance)	-0.174	0.209	-0.034
Local Presence	0.017	0.004	-0.021
Log (population)	-0.008	-0.022	0.030
Log (Per Capita GDP)	-0.019	0.033	-0.014
StDev (GDP)	-0.045	0.003	0.042
Log (rooms)	-0.010	0.045	-0.035
	Log of World Bank DPI Checks Index		
	Company-Owned	Management Contract	Franchised
Quality of Institutions	0.034	-0.081	0.048
Log (tourism)	0.105	-0.095	-0.010
Log (distance)	-0.173	0.205	-0.032
Local Presence	0.016	0.006	-0.022
Log (population)	-0.013	-0.018	0.031
Log (Per Capita GDP)	-0.031	0.050	-0.019
StDev (GDP)	-0.043	0.006	0.037
Log (rooms)	-0.007	0.043	-0.036
	World Bank Voice and Accountability Indicator		
	Company-Owned	Management Contract	Franchised

Quality of Institutions	0.142	-0.145	0.003
Log (tourism)	0.093	-0.071	-0.022
Log (distance)	-0.155	0.180	-0.025
Local Presence	0.010	0.012	-0.022
Log (population)	0.022	-0.058	0.036
Log (Per Capita GDP)	-0.089	0.089	0.001
StDev (GDP)	-0.037	0.000	0.037
Log (rooms)	-0.004	0.036	-0.032

Table 7: Institutional Quality & Organizational Form Choice: Additional Control Variables

	DPI Checks		log DPI Checks		WB Voice	
	M:C	F:C	M:C	F:C	M:C	F:C
Quality of Institutions	-0.79*	0.20	-2.47**	0.89	-4.60***	-1.12
	(0.42)	(0.29)	(1.15)	(1.01)	(0.97)	(1.20)
Control of Corruption	-1.99*	-2.57**	-2.16*	-2.48**	-1.76*	-2.71**
	(1.21)	(1.22)	(1.20)	(1.21)	(0.97)	(1.16)
Rule of Law	3.35**	2.73	3.44**	2.53	5.90***	3.56*
	(1.43)	(1.76)	(1.40)	(1.74)	(1.61)	(1.92)
Log (tourism)	-1.64***	-0.82*	-1.76***	-0.81*	-2.00***	-0.93**
	(0.47)	(0.48)	(0.50)	(0.48)	(0.59)	(0.44)
Log (distance)	1.87***	-0.09	1.86***	-0.07	1.78***	-0.00
	(0.42)	(0.48)	(0.41)	(0.47)	(0.38)	(0.49)
Local Presence	-0.00	-0.03	0.00	-0.04*	0.01	-0.04*
	(0.01)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)
Log (population)	0.44	0.79*	0.49	0.78*	0.48	0.84*
	(0.37)	(0.45)	(0.36)	(0.45)	(0.39)	(0.44)
Log (Per Capita GDP)	0.35	0.65	0.61	0.64	0.65	0.83
	(0.68)	(0.73)	(0.73)	(0.76)	(0.59)	(0.73)
StDev (GDP)	0.13	0.34	0.13	0.29	0.13	0.26
	(0.22)	(0.27)	(0.23)	(0.31)	(0.22)	(0.29)
Log (rooms)	0.78**	-0.79*	0.74**	-0.82**	0.77**	-0.73
	(0.32)	(0.40)	(0.31)	(0.41)	(0.37)	(0.45)
Observations	706		706		711	
Brand-Continent FE	Yes***		Yes***		Yes***	

Year Fixed Effects	Yes***	Yes***	Yes***
Number Correct	591		593
Percent Correct	83.7		84.0

* $p<0.1$; ** $p<0.05$; *** $p<0.01$

Table 8: Impact on the Probabilities of each Organizational Form of a One Standard Deviation Increase in the Independent Variable

(averaged across all observations, holding all other variables constant)

	World Bank DPI Checks Index		
	Company-Owned	Management Contract	Franchised
Quality of Institutions	0.042	-0.073	0.031
Control of Corruption	0.232	-0.127	-0.105
Rule of Law	-0.288	0.169	0.118
Log (tourism)	0.177	-0.135	-0.042
Log (distance)	-0.161	0.204	-0.043
Local Presence	0.015	0.002	-0.017
Log (population)	-0.092	0.024	0.068
Log (Per Capita GDP)	-0.067	0.018	0.049
StDev (GDP)	-0.043	0.007	0.036
Log (rooms)	-0.008	0.045	-0.037
	Log of World Bank DPI Checks Index		
	Company-Owned	Management Contract	Franchised
Quality of Institutions	0.040	-0.086	0.046
Control of Corruption	0.240	-0.139	-0.102
Rule of Law	-0.282	0.181	0.101
Log (tourism)	0.185	-0.144	-0.041
Log (distance)	-0.158	0.199	-0.041
Local Presence	0.014	0.005	-0.019
Log (population)	-0.094	0.029	0.065
Log (Per Capita GDP)	-0.083	0.041	0.043

StDev (GDP)	-0.038	0.009	0.030
Log (rooms)	-0.005	0.043	-0.038
	World Bank Voice and Accountability Indicator		
	Company-Owned	Management Contract	Franchised
Quality of Institutions	0.238	-0.219	-0.018
Control of Corruption	0.212	-0.100	-0.111
Rule of Law	-0.367	0.288	0.079
Log (tourism)	0.197	-0.151	-0.046
Log (distance)	-0.137	0.170	-0.033
Local Presence	0.011	0.010	-0.021
Log (population)	-0.096	0.023	0.073
Log (Per Capita GDP)	-0.094	0.034	0.060
StDev (GDP)	-0.036	0.008	0.027
Log (rooms)	-0.005	0.040	-0.035

Table 9: Institutional Quality & Organizational Form Choice: Panel Data

	DPI Checks		log DPI Checks		WB Voice	
	M:C	F:C	M:C	F:C	M:C	F:C
Quality of Institutions	-0.37*	0.10	-1.48**	0.54	-2.87***	-0.30
	(0.22)	(0.23)	(0.69)	(0.92)	(0.52)	(1.50)
Control of Corruption	-0.88	-2.16**	-1.10	-2.26**	-1.15*	-2.08**
	(0.68)	(1.05)	(0.71)	(1.04)	(0.60)	(1.00)
Rule of Law	0.63	1.49	0.96	1.61	2.61***	1.55
	(0.76)	(1.43)	(0.79)	(1.42)	(0.92)	(1.27)
Log (tourism)	-0.33	-0.65	-0.49	-0.67	-0.49	-0.73*
	(0.32)	(0.41)	(0.33)	(0.42)	(0.37)	(0.43)
Log (distance)	1.00***	0.02	1.02***	0.02	0.89***	0.07
	(0.17)	(0.22)	(0.18)	(0.23)	(0.20)	(0.20)
Local Presence	0.01	-0.06**	0.01	-0.06**	0.02	-0.06**
	(0.02)	(0.03)	(0.01)	(0.03)	(0.01)	(0.03)
Log (population)	-0.24	0.51	-0.12	0.53	-0.15	0.55
	(0.26)	(0.36)	(0.26)	(0.36)	(0.23)	(0.39)
Log (Per Capita GDP)	0.04	0.81	0.21	0.83	0.25	0.92
	(0.52)	(0.58)	(0.53)	(0.60)	(0.52)	(0.63)
StDev (GDP)	0.30*	0.36**	0.30*	0.33*	0.24*	0.38**
	(0.16)	(0.17)	(0.16)	(0.18)	(0.13)	(0.18)
Log (rooms)	0.06	-0.70	0.03	-0.73*	-0.10	-0.73*
	(0.21)	(0.43)	(0.21)	(0.43)	(0.20)	(0.44)
Observations	5,356		5,356		5,376	
Brand-Continent FE	Yes***		Yes***		Yes***	

Year Fixed Effects	Yes***	Yes***	Yes***
Number Correct	4309	4319	4383
Percent Correct	80.5	80.6	81.5

* $p<0.1$; ** $p<0.05$; *** $p<0.01$

Appendix

Table A1: Additional Robustness Regressions: New Hotel Sample.

	Non-Parametric		WB Political Stability		Political Constraint	
	M:C	F:C	M:C	F:C	M:C	F:C
Checks						
Checks^2						
Checks==2	-4.15***	-1.94				
	(1.16)	(1.29)				
Checks==3	-2.49	-0.69				
	(1.38)	(1.46)				
Checks==4	-3.80***	0.14				
	(1.33)	(1.59)				
Checks==5	-3.96***	0.43				
	(1.36)	(1.31)				
Checks==6	-5.82***	-15.88***				
	(1.92)	(2.04)				
Checks==7	-22.58***	-16.05***				
	(2.78)	(1.82)				
WB Political Stability			-2.12***	-1.99**		
			(0.66)	(0.98)		
Political Constraint					-4.70***	0.81

			(1.59) (2.32)
Observations	706	704	711
Brand-Continent FE	Yes***	Yes***	Yes***
Year FE	Yes***	Yes***	Yes***
Number Correct	596	592	594
Percent correct	84.4	84.1	83.5

Notes: All regressions include the set of variables and fixed effects in Table 5. Robust standard errors, clustered at the country level, in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%. The WB political Stability index is available at: http://info.worldbank.org/governance/wgi/index.asp. The Political Constraint index, developed by Witold Henisz, is available at http://www-management.wharton.upenn.edu/henisz/.