

# *Do Dual-Branded Hotels Outperform Single-Branded Hotels?*

*by Chekitan S. Dev and Eva Steiner*

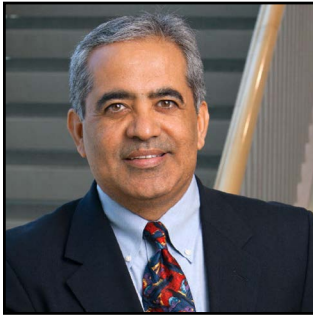
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## EXECUTIVE SUMMARY

**D**ual branding of hotels has become a growing industry practice. Beyond the potential marketing benefits of the dual-branding strategy, this paper tests whether dual-branded hotels operate more efficiently than comparable single-branded hotels (and therefore deliver better bottom-line results). Comparing a proprietary longitudinal data set on the operating performance generated by dual-branded hotels in the U.S. against a set of comparable single-branded hotels, we document mixed results. While dual- and single-branded hotels achieve similar occupancy percentages, dual-branded hotels generate higher average daily rate and revenue per available room. That said, dual-branded hotels have similar departmental expenses to those with a single brand. Although dual-brand hotels achieve some savings in undistributed expenses, for example, administrative and general (A&G) and maintenance, they incur higher IT and marketing expenses. As a result, gross operating profit margins are slightly lower in dual-branded hotels than in single-branded hotels. In sum, we document limited operating efficiency gains in dual-branded hotels compared to single-branded hotels. However, we recognize that the novelty of dual branding may mean that we need to allow more time to allow these hotels to achieve stabilized operation.

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## ABOUT THE AUTHORS



**Chekitan S. Dev**, PhD, is professor of marketing at Cornell University's School of Hotel Administration in the SC Johnson College of Business, where he has received multiple awards for teaching excellence. A globally renowned thought leader with over 125 publications to his credit, Dev is recognized as the leading expert on hospitality marketing and branding, and has won numerous research awards. An active consultant, expert witness, keynote speaker, and workshop leader, Dev has served corporate, government, education, advisory, legal, and private equity organizations in over 40 countries on six continents. A sought after commentator on hospitality and travel trends, he is also active in professional and community service, serving as reviewer for peer reviewed journals, advising hospitality startups as a board member, and served the AHLA Chairman's Marketing Task Force and Tompkins Tourism Marketing Committee, as well as teaching in the Hotel School's Entrepreneurship Boot Camp for Veterans.

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# *Do Dual-Branded Hotels Outperform Single-Branded Hotels?*

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Leading global hotel firms have recently implemented a strategy of offering two brands in a single property—sometimes in the same building where they share common areas. Despite their physical proximity, these brands maintain different target markets, pricing strategies, and guest experiences. Such dual-branded hotels now exist in numerous markets around the United States. Examples of recently opened dual-branded hotels include the AC Hotel Atlanta Midtown and Moxy Atlanta Midtown, which commenced operations in 2019,<sup>1</sup> and IHG’s 2018 development of a newly built, dual-branded Staybridge Suites and Holiday Inn Express hotel in Quincy, Massachusetts.<sup>2</sup> Some analysts have argued that dual-branding offers operating savings from synergies between the two hotel brands, while simultaneously allowing the property to attract a wider array of potential guests.<sup>3</sup> Critically, however, the effect of dual branding on hotel performance has never been empirically evaluated.

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<sup>1</sup> See: “Dual-Brand Now Open in Atlanta; More Marriott Openings,” *Hotel Business*, 01/17/19.

<sup>2</sup> See: “What’s New With New-Builds? A Dual-Branded Property in Boston,” *Hotel Business*, 12/04/18.

<sup>3</sup> For example, see: “Two-In-One Hotels Please Different Clienteles,” *USA Today*, 01/02/13.

## Study Outline

This study tests the hypothesis that dual-branded hotels outperform single-branded hotels. To do so, we utilize a proprietary longitudinal data set provided by CBRE Hotels. The data set contains detailed information on operating performance metrics for a set of dual-branded hotels and a comparable set of single-branded hotels over the five-year period of 2014 through 2018. Using these data, we examine the differences between dual- and single-branded hotels in terms of top-line performance—that is, occupancy, average daily rate (ADR), and revenue per available room (RevPAR), departmental and undistributed expense ratios, and gross operating profit (GOP) margins. Importantly, the CBRE data include extensive information on property characteristics, allowing us to isolate the effect of dual branding on operating performance outcomes after controlling for potentially confounding factors, such as hotel size or chain segment.

We first establish a baseline comparison between dual- and single-branded hotels by benchmarking top-line performance metrics. Our estimates indicate that dual-branded hotels achieve average occupancy rates that are similar to single-branded hotels, but they generate 8-percent higher ADR and 6-percent higher RevPAR. Those results suggest that dual-branded hotels outperform their single-branded counterparts. However, outperformance in terms of top-line metrics is, at least in part, driven by the market environment in which a hotel operates. Such metrics thus provide an incomplete description of hotel operating efficiency.

**Regression analysis.** Keeping the full picture in mind, we examine whether dual-branded hotels in fact operate more efficiently. A popular explanation for the recent increase in dual-branded hotel openings is the potential for synergies in terms of operating cost savings (in addition to the purported marketing advantages). However, our results on departmental expense ratios suggest that the synergy-based hypothesis is not borne out in the data. In short, we find no evidence that such savings materialize in departmental expenses. Instead, we show that dual-branded hotels experience statistically equivalent expense ratios in rooms, food and beverage, and other operating departments.

On the other hand, the analysis of undistributed expenses provides some evidence consistent with the claim of superior operating efficiency in dual-branded hotels. We estimate that dual-branded hotels experience 5-percent lower administrative and general (A&G) expense ratios and 11-percent lower maintenance expense ratios. Thus, those results suggest that

dual-branded hotels benefit from cost-saving synergies by sharing resources for A&G and maintenance. At the same time, however, our estimates also indicate that dual-branded hotels incur 10-percent higher IT expense ratios. This finding may reflect that dual-branded hotels are operationally more complex properties, requiring larger and more sophisticated IT infrastructure. We further show that dual-branded hotels experience 12-percent higher marketing expense ratios. That result suggests that the ADR premium in dual-branded hotels is at least partly offset by higher marketing expenses incurred to generate those higher room rates.

In the final step of our study, we assess the differences in summary performance ratios across dual- and single-branded hotels. We show that the ratio of total departmental cost to total revenue and the ratio of total undistributed cost to total revenue are slightly higher for the dual-branded hotels in our study compared to their otherwise equivalent single-branded counterparts. Our estimates also indicate that the GOP margin (ratio of GOP to total revenue) is 3.6-percent lower in the dual-branded sample hotels. On balance, the results of our analysis provide evidence of limited operating-efficiency gains from the dual-branding strategy.

**Previous studies.** We are aware of two other empirical studies of the performance of dual-branded hotels: namely, a recent analysis by Hospitality Net using CBRE data, and an earlier study by CBRE itself.<sup>4</sup> While Hospitality Net author Robert Mandelbaum noted some efficiencies in undistributed expenses, that was not the case with operating expenses. Quoting a 2014 CBRE analysis, he offered a cautious finding that the dual-branded properties did report slightly better operating profit margins. This was a small study, with an *N* of some two dozen properties in each category. Thus, our study builds on that prior work in three ways: **(1)** we use a larger sample of dual-branded hotels against a representative set of comparable single-branded hotels; **(2)** we examine top-line performance measures and granular departmental cost ratios in addition to aggregate expense and operating profit metrics; and **(3)** we employ rigorous regression analysis to control for other property characteristics that determine performance and thus provide a more precise estimate of the effect of dual branding on hotel performance.

## The Dual-Branding Phenomenon

The phenomenon of dual-branding or co-branding, a form of multi-branding, has been in use as a business

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<sup>4</sup> See: Robert Mandelbaum, “Dual-Branded Hotels: Beware Expectations of Significant Operating Efficiencies,” Hospitality Net: 11/18/18.

strategy for quite some time.<sup>5</sup> This practice is prevalent in consumer goods (e.g., Kellogg Pop-tarts with Smucker's fruit jam) and durables (e.g., Dell laptops with Intel chips).<sup>6</sup> Situating two totally different service brands in the same physical space, with shared spaces and services, is a relatively recent phenomenon. In the restaurant business, Yum! brands was among the first to co-locate its different brands from their portfolio in a multi-branded offering by combining, for example, a Pizza Hut with a Taco Bell and KFC. As Cathy Enz stated in a Yum! multi-branding case study: "Intended to boost sales per unit, the cobranding strategy allows Yum! to locate restaurants in places that might not support a single concept by increasing the traffic and sales at a particular location. [...] The net result of these efforts was the addition of between \$100,000 and \$400,000 per unit in average sales."<sup>7</sup> These results inspired us to study this phenomenon in the hotel industry.

In the hotel industry, co-branding has been used in the form of "ingredient-branding" akin to the "Intel Inside" example cited above (for example, Bulgari bathroom amenities at a luxury brand), or co-branding in communications (e.g., Red Roof Inns advertising with Mr. Clean to signal clean rooms). Dual branding, as in co-locating two hotel brands in one spot with shared spaces and services, is even more recent than that of food concepts. Not surprisingly, dual-branded hotels occur typically within the same brand family. The dual brand may be vertical or horizontal. Vertical dual-branded hotels refer to a situation where two brands, serving up two different price points (e.g., midscale and economy), are co-located in one spot (e.g., Courtyard by Marriott and Fairfield by Marriott). Horizontal dual-branded hotels refer to a case where two types of hotels, serving two different travel purposes, are co-located in the same spot (e.g., a transient hotel brand such as Courtyard by Marriott with an extended

stay hotel such as Residence Inn by Marriott). Our study comprised both types of dual branding.

## Hypothesis Development

Our review of existing literature uncovered four specific reasons why dual-branded hotels would be expected to outperform single-branded hotels, and, on the other hand, four specific reasons why dual-branded hotels would be expected to underperform single-branded ones. This investigation provided us with a perfectly falsifiable hypothesis where the results could go either way. To guide our research, we formulated the following working hypothesis: dual-branded hotels will outperform single-branded hotels. Below, we explain why this hypothesis would be supported, and also offer a number of reasons why this hypothesis would be refuted.

**Supporting arguments.** In order to illustrate this equivocality of expected results, assume a hypothetical scenario of an owner's decision to build a 200-room hotel with two possible options: a 200-room single-branded property (whether a Courtyard by Marriott, or a Fairfield by Marriott), or a facility comprising 100 rooms of both brands. The arguments in favor of the dual-brand property are as follows. First, the owner would have two brand channels feeding the hotel, benefiting from the marketing and branding effort of each brand to drive business. Additionally, in the event one branded hotel is full, there is a possibility of an overflow from one hotel to the other during "compression" or peak occupancy times. This could help drive higher occupancy. Second, in our hypothetical dual-brand scenario, there is a limited supply of each brand's hotel resulting in relative scarcity compared to having double the number of rooms for either of the single brands, potentially driving higher ADR. Third, in a vertical dual brand, the higher-priced brand could help the lower-priced brand achieve a higher rate via a "halo" effect.<sup>8</sup> Fourth, as Yum! Brands discovered, multiple brands can help overcome the "veto vote" where one person in a group does not like a particular brand but having multiple brands offers something for everyone. For example, in groups (e.g., meetings, weddings), dual-branded hotels offer group members a lower- and higher-priced option, while keeping the location the same. For those in the group that like don't like the up-market option and want a down-market option in the same location, dual-branded hotels help overcome the "veto

<sup>5</sup> See, for example: John Saunders and Fu Guoqun (1996) "Dual-Branding: How Corporate Names Add Value," *Marketing Intelligence & Planning*, 14(7), pp. 29–34.

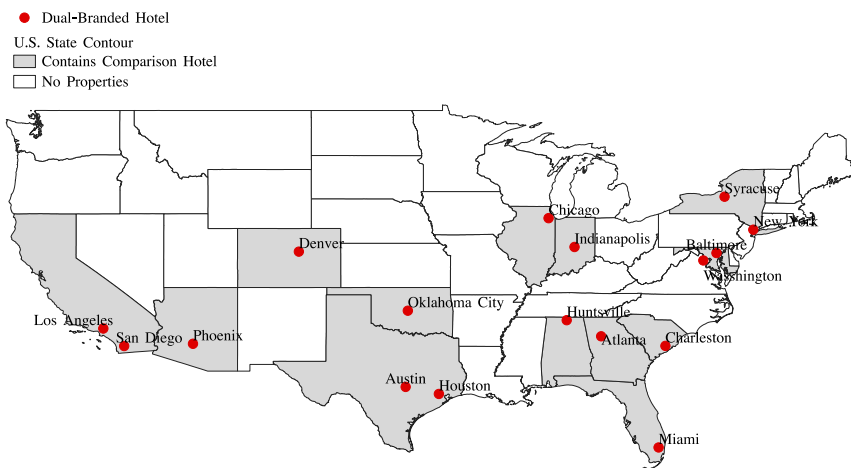
<sup>6</sup> See: Erevelles, Sunil; Stevenson, Thomas H; Srinivasan, Shuba; Fukawa, Nobuyuki (2008). "[An analysis of B2B ingredient co-branding relationships](https://doi.org/10.1016/j.indmarman.2007.07.002)" *Industrial Marketing Management*. 37 (8): 940. doi:10.1016/j.indmarman.2007.07.002; and Wei-Lun Chang, "A Typology of Co-branding Strategy: Position and Classification," *Journal of American Academy of Business, Cambridge (JAABC)*, Vol. 12, No. 2, March 2008, pp. 220–226. Also see: <https://en.wikipedia.org/wiki/Co-branding>, viewed 07/02/2019.

<sup>7</sup> See: Cathy Enz (2005). "Multi-Branding Strategy: The Case of Yum! Brands," *Cornell Hotel and Restaurant Administration Quarterly*, 46(1), 85–91.

<sup>8</sup> See: Lance Leuthesser, Chiranjeev Kohli, and Katrin Harich, (1995), "Brand Equity: The Halo Effect Measure," *European Journal of Marketing*, 29(4), pp. 57 – 66



## Location of dual-branded sample hotels and single-branded comparison hotels



*Note:* The figure depicts the MSA location of the dual-branded hotels (red circles) and the states containing the single-branded comparison hotels (grey-shaded areas). The data used to produce this figure are obtained from CBRE Hotels.

vote” which could derail the group’s hotel choice. The reverse would be true if people wanted the up-market option, rather than the down-market brand. This, too, could drive higher occupancy.

**Refuting arguments.** On the other hand, we see at least four reasons to expect dual-branded hotels to underperform single-branded hotels. First, property development costs could be higher for dual-branded hotels, resulting in higher cost per key. Second, having two sets of brand standards, training manuals, and operating protocols could complicate the lives of hotel employees and thereby increase operating expenses by experiencing “diseconomies of scale” from having a smaller base of rooms over which to spread each brand’s expenses. Third, the limited capacity of either brand could result in the hotels losing occupancy to a bigger single-branded competitor hotel. Finally, when co-branding in this way, the upper-tier brand could experience a “horn effect” by associating with the lower-tier brand causing “negative spillover” or damage to the other brand. In the following section, we describe the data set and empirical methodology employed to empirically test our hypothesis.

### Data and Methodology

We start our sample selection process with a representative database of annual property-level U.S. hotel operating performance measures over the five-year period of 2014 through 2018. The information is taken from CBRE Hotels.<sup>9</sup> CBRE gathers data on operating

performance outcomes from approximately 7,000 contributing hotels on a self-reported basis. In addition to the data on hotel operating performance, the database provides extensive information on hotel property characteristics, including the number of rooms, address, chain segment, property type, and location type. The CBRE Hotels database is unique in that it identifies dual-branded hotels separately from single-branded hotels, enabling us to compare operating performance outcomes across the two types of hotel property. CBRE defines dual-branded hotels as those that operate two brands in the same building, with shared common areas. From CBRE Hotels, we obtain data on operating performance measures for all dual-branded hotels in their data base as well as a set of comparable single-branded hotels. The single-branded hotels in our sample are chosen to match the brands represented by the properties in each dual-branded hotel, and to be located in comparable markets in the same U.S. state as the dual-branded hotels.<sup>10</sup>

The CBRE Hotels database provides 158 property-year observations from 42 properties operating as 21 dual-branded hotels and 2,205 property-year observations from 585 single-branded comparison hotels. Exhibit 1 shows the geographical distribution of the sample hotels across sixteen different U.S. MSAs.

period over which we were able to obtain operating performance data on dual- and single-branded hotels from CBRE. We leave it to future research to re-examine our evidence over a longer time period encompassing a full economic cycle.

<sup>10</sup> CBRE masks information on the brand affiliation of any individual hotel for confidentiality purposes.

<sup>9</sup> The sample period represents an expansionary economic regime in which hotels performed well. However, it is the longest

## Descriptive statistics on performance measures for dual- and single-branded hotels

	(1)			(2)		
	Dual-branded Hotels			Single-branded Hotels		
	Mean	Median	N	Mean	Median	N
<b>Top-Line Performance</b>						
Occupancy	0.7655	0.7683	158	0.7772	0.7864	2,205
ADR	\$174.27	\$ 158.17	158	\$143.36	\$ 132.11	2,205
RevPar	\$135.82	\$ 124.01	158	\$112.99	\$ 103.10	2,205
<b>Departmental Expense Ratios</b>						
Rooms	0.2299	0.2269	158	0.2236	0.2182	2,205
Food & Beverage	0.8479	0.8654	70	0.8463	0.8138	1,124
Other Operating Departments	0.7563	0.5667	152	1.0835	0.5356	1,950
<b>Undistributed Expense Ratios</b>						
A&G	0.0757	0.0749	158	0.0836	0.0806	2,205
IT	0.0103	0.0096	158	0.0100	0.0093	2,205
Marketing	0.1113	0.1192	158	0.1041	0.1104	2,205
Maintenance	0.0350	0.0320	158	0.0435	0.0408	2,205
Utility	0.0350	0.0317	158	0.0349	0.0342	2,205
<b>Summary Ratios</b>						
Departmental Expense Ratio	0.2756	0.2571	158	0.2558	0.2490	2,205
Undistributed Expense Ratio	0.2671	0.2691	158	0.2763	0.2750	2,205
GOP Margin	0.4576	0.4680	158	0.4679	0.4716	2,205

Note: The table presents descriptive statistics for the performance measures generated by the dual- and single-branded U.S. hotels in our sample over the 2014–2018 period. Column (1) presents descriptive statistics for the dual-branded hotels. Column (2) presents descriptive statistics for the single-branded comparison hotels. The Departmental Expense Ratio for a given departments is computed as Departmental Expense scaled by the corresponding Departmental Revenue. Undistributed Expense Ratios are computed as a given Undistributed Expense item scaled by the hotel's Total Revenue. Summary Ratios are: Total Departmental Expense scaled by Total Revenue, Total Undistributed Expense scaled by Total Revenue, and Gross Operating Profit (GOP) scaled by Total Revenue.

## Performance Measures

The operating performance measures included in this study fall into four different categories: top-line performance metrics, departmental expense ratios, undistributed expense ratios, and summary ratios. Top-line performance metrics include occupancy, ADR, and RevPAR. Following the *Uniform System of Accounts for the Lodging Industry (USALI)*, departmental expenses include rooms, food and beverage, and other operating departments. We compute departmental expense ratios by scaling each departmental expense item by the corresponding departmental revenue. Undistributed expenses include A&G, IT, marketing, maintenance, and utilities. We construct undistributed expense ratios by scaling each undistributed expense item by the hotel's total revenue. The summary measures include

total departmental expense, total undistributed expense, and gross operating profit. Total departmental expense is the sum of all departmental expenses. Total undistributed expense is the sum of all undistributed expenses, while GOP is the bottom-line performance metric obtained after subtracting all departmental and undistributed expenses from total revenue. On the basis of those summary measures, we compute the following three summary ratios: total departmental expense scaled by total revenue, total undistributed expense scaled by total revenue, and GOP scaled by total revenue.

## Descriptive Statistics

Exhibit 2 presents descriptive statistics on the performance measures described in the previous paragraph. The dual-branded sample hotels achieve

average occupancy of 77 percent, ADR of \$174, and RevPAR of \$136. The single-branded comparison hotels achieve average occupancy of 78 percent, ADR of \$143, and RevPAR of \$113. These results suggest that dual-branded hotels outperform single-branded hotels in terms of ADR and RevPAR by a significant margin. However, the statistics presented here do not account for other hotel-specific characteristics that drive top-line performance, such as hotel size or chain segment. In the next section, we analyze the relative performance of dual- versus single-branded hotels in a regression framework that controls for such characteristics.

Exhibit 2 further shows that dual- and single-branded hotels have similar average expense ratios in the rooms and food and beverage departments (23 percent versus 22 percent for rooms, and 85 percent of F&B departmental revenues across the two hotel types). The average expense ratio for other operating departments in dual-branded hotels is 76 percent of other operating departments' revenues, which is lower than the corresponding ratio for single-branded hotels (108 percent). However, these descriptive statistics do not account for the property type of the sample hotels, which may encompass different numbers and types of other operating departments. In the next section, we will revisit this preliminary evidence in a regression setting that allows us to control for a hotel's property type.

The statistics presented in Exhibit 2 also suggest that, compared with single-brand properties, dual-branded hotels experience lower A&G expense ratios (7.6% versus 8.4% of total revenue), comparable IT expense ratios (1%), higher marketing expense ratios (11% versus 10%), lower maintenance expense ratios (3.5% versus 4%), and comparable utility expense ratios (3.5% of total revenue). Synergies in expenses, particularly undistributed expenses, are one of the primary reasons stated in the professional press for the recent surge in popularity of dual-branded hotel developments. The preliminary evidence presented here is partly consistent with this claim, suggesting efficiency gains for dual-branded hotels over the comparable single-branded properties in terms of A&G and maintenance expenses. However, the statistics in Exhibit 2 also suggest that dual-branded hotels experience greater expenses for marketing.

Exhibit 3 presents the breakdown of the hotels in our sample by U.S. state, chain segment, property type, and location type. Panel (A) shows that 33 percent of our sample hotels are located in California, followed by Texas (24%), and eleven other U.S. states with a broad geographical spread. Panel (B) indicates that 90 percent of our sample hotels fall into the upscale chain segment, followed by upper midscale (7%), and luxury (2%). Panel (C) shows that nearly 50 percent of our sample are full-service hotels, followed by extended-stay hotels (39%). The remaining property types (i.e., limited service hotels, suite hotels, and the category "other," which comprises convention hotels, conference centers, and resort hotels) account for smaller fractions of our sample. Panel (D) indicates that the dominant location type in our sample is suburban (57% of the sample), followed by city center (18%), and airport hotels (11%). Highway, rural/non-resort, and resort hotels account for relatively few hotels in our sample. These data are presented in a tabular format in the appendix.

## Empirical Approach

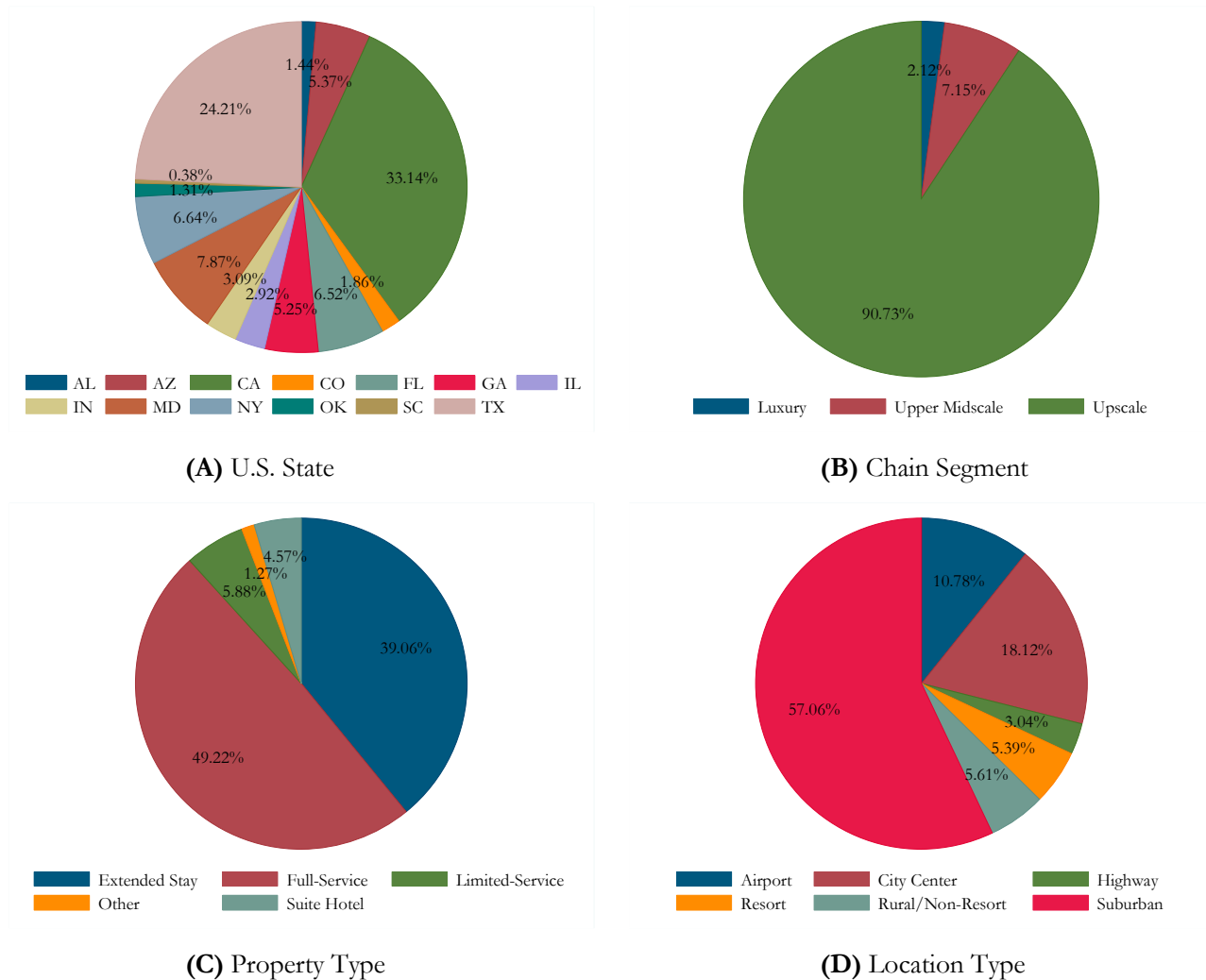
While the comparison of descriptive statistics presented above provides preliminary insight into the relative performance of dual- and single-branded hotels, it is important to control for the confounding effects of other hotel- and market-specific characteristics. Such factors could affect hotel operating performance, and we need to be careful not to attribute relative performance across the hotels in our sample to the dual-branding concept, when they are really driven by other characteristics of a given hotel or the market in which it is located. To provide a more precise comparison between the performance outcomes delivered by dual- versus single-branded hotels, we thus employ a linear regression model, the specification of which we outline below.

We estimate a separate regression model for each performance outcome observed in our sample, as described above, namely, the measures of top-line performance, departmental expense ratios, undistributed expense ratios, and summary ratios. The equation on the next page outlines the regression specification employed:



### EXHIBIT 3

#### Sample breakdown by U.S. state, chain segment, property type, and location type



Note: The figure depicts the breakdown of the sample hotels by the following three categories: chain segment, property type, and location. The data used to produce this figure are obtained from CBRE Hotels. See the appendix for these data presented in a text-only format.

$$Outcome_{i,t} = \beta_0 + \beta_1 DualBrand_i + \beta_2 Rooms_{i,t} + \beta_3 FixedEffects + \varepsilon_{i,t}$$

where  $Outcome_{i,t}$  represents a given performance outcome measure observed for hotel  $i$  at time  $t$ .

$\beta_0$  is a constant.

$DualBrand_i$  is an indicator that takes the value of 1 if hotel  $i$  is a dual-branded property, and 0 otherwise.

$Rooms_{i,t}$  is the number of rooms in hotel  $i$  at time  $t$ .<sup>11</sup>

<sup>11</sup> It is important to account for the age of a given hotel property in this analysis. For a sub-sample of hotels, CBRE was able to provide information on the year when the hotel commenced its operations. In unreported estimations pertaining to this sub-sample, we confirm that all our main findings and conclusions remain unchanged when additionally controlling for the age of the matched hotels in the regression specification.

**FixedEffects** is a matrix containing a saturated set of property characteristic  $\times$  time-fixed effects; including, U.S. State  $\times$  Time-fixed effects, Chain Segment  $\times$  Time-fixed effects, Property Type  $\times$  Time-fixed effects, and Location Type  $\times$  Time-fixed effects.<sup>12</sup> Those fixed effects account for the time-varying impact on performance of the state in which an asset is located, its chain segment, the property type it represents, and the location type it occupies.  $\varepsilon_{i,t}$  is the residual. Standard er-

<sup>12</sup> Exhibit 3 provides detail on the distribution of sample hotels across those categories, in data also found in the appendix.

## Dual-branding and hotel top-line performance measures

	(1)	(2)	(3)
	Occupancy	ADR	RevPAR
Dual-Branded	-0.013	11.484***	6.685*
	(0.01)	(3.72)	(3.68)
Rooms	0.000	0.010	0.015
	(0.00)	(0.03)	(0.03)
Constant	0.768***	143.212***	111.875***
	(0.01)	(3.97)	(3.76)
State x Year–Fixed Effects	Yes	Yes	Yes
Chain Segment x Year–Fixed Effects	Yes	Yes	Yes
Property Type x Year–Fixed Effects	Yes	Yes	Yes
Location x Year–Fixed Effects	Yes	Yes	Yes
Observations	2,299	2,299	2,299
R-squared	0.41	0.66	0.63

*Note:* The table presents output from estimating the regression equation for the U.S. hotels in our sample over the 2014–2018 period. Column (1) presents the results for Occupancy. Column (2) presents the results for ADR. Column (3) presents the results for RevPAR. Dual-Branded is an indicator that takes the value of one if property *i* is a dual-branded hotel, and zero otherwise. Constant thus refers to the omitted category of single-branded hotels in our sample. Rooms denotes the number of rooms in hotel *i* at time *t*. Property characteristic × time–fixed effects are included as indicated. Standard errors are clustered by U.S. state–year. Statistical significance is indicated as follows: \*\*\**p* < 0.01, \*\**p* < 0.05, \**p* < 0.1.

rors are clustered by U.S. state–year. In the estimation of departmental expense ratios, undistributed expense ratios, and summary ratios, we additionally control for a given hotel’s occupancy, ADR, and RevPAR in year *t*.

## Results

In the paragraphs below, we discuss the empirical results from estimating the regression for each of the hotel operating performance measures. We discuss the results pertaining to each group of performance measures separately, namely, top-line performance, departmental expense ratios, undistributed expense ratios, and summary ratios.

### Top-Line Performance Measures

Exhibit 4 presents the results for hotel top-line performance measures. The results reported in column (1) indicate that, holding hotel size, U.S. state, chain segment, property type, location type, and time of observation constant, dual-brand occupancy is numerically lower—but statistically equivalent with single-brand-

ed hotels. The estimates in columns (2) and (3) show that ADR in dual-branded hotels is \$11.50 or 8 percent higher and RevPAR is \$6.70 or 6 percent higher than in the single-branded comparison hotels.

It is important to highlight the difference between the unconditional descriptive statistics discussed earlier in connection with Exhibit 2 and the conditional regression results presented here. While the descriptive statistics suggest that dual-branded hotels experience lower occupancy than single-branded hotels, the conditional regression results shown here indicate that occupancy is, in fact, statistically indistinguishable between the two types of hotel. In terms of ADR and RevPAR, the conditional analysis is directionally consistent with the descriptive findings that dual-branded hotels achieve a premium over single-branded hotels, but the degree of outperformance is significantly reduced after accounting for other relevant property- and market-specific characteristics.

## Dual-branding and hotel departmental expense ratios

	(1)	(2)	(3)
	Rooms	Food & Beverage	Other
Dual-Branded	-0.001	0.012	-0.076
	(0.01)	(0.02)	(0.09)
Rooms	0.000**	-0.000***	0.000
	(0.00)	(0.00)	(0.00)
Occupancy	-0.530***	-0.610	-2.679**
	(0.07)	(0.37)	(1.26)
ADR	-0.003***	-0.004**	-0.011*
	(0.00)	(0.00)	(0.01)
RevPar	0.003***	0.005**	0.010
	(0.00)	(0.00)	(0.01)
Constant	0.706***	1.423***	3.586***
	(0.05)	(0.30)	(0.99)
State x Year–Fixed Effects	Yes	Yes	Yes
Chain x Year–Fixed Effects	Yes	Yes	Yes
Property Type x Year–Fixed Effects	Yes	Yes	Yes
Location x Year–Fixed Effects	Yes	Yes	Yes
Observations	2,299	1,162	2,038
R-squared	0.40	0.20	0.31

Note: The table presents output from estimating Eq. (1) for the U.S. hotels in our sample over the 2014–2018 period. Column (1) presents the results for Rooms Expense Ratio. Column (2) presents the results for Food & Beverage Expense Ratio. Column (3) presents the results for Other Operating Departments Expense Ratio. We compute departmental expense ratios by scaling each departmental expense item by the corresponding departmental revenue. Dual-Branded is an indicator that takes the value of 1 if property *i* is a dual-branded hotel, and 0 otherwise. Constant thus refers to the omitted category of single-branded hotels in our sample. Rooms denotes the number of rooms in hotel *i* at time *t*. Property characteristic × time–fixed effects are included as indicated. Standard errors are clustered by U.S. state–year. Statistical significance is indicated as follows: \*\*\**p* < 0.01, \*\**p* < 0.05, \**p* < 0.1.

## Departmental Expense Ratios

Exhibit 5 presents the results for departmental expense ratios. As reported across columns (1) through (3), the results indicate that rooms expenses and other operating department expenses are numerically lower in dual-branded hotels, whereas food and beverage expenses are numerically higher. However, these departmental expense numbers are statistically identical across dual- and single-branded hotels, after controlling for hotel size, top-line performance measures (i.e., occupancy, ADR, and RevPAR), U.S. state location, chain segment, property type, location type, and year

of observation. We document the same patterns across all departmental expenses: namely, rooms, food and beverage, and other operating departments.

As we noted at the outset, synergies in terms of operating cost savings are among the most popular reasons cited for the recent increase in dual-branded hotel developments. Such cost efficiencies may occur in any operating departments where the two hotels constituting a dual-branded property share resources. In our analysis, however, we find no evidence that such cost savings materialize in rooms, F&B, or other operating departments.

## Dual-branding and undistributed expense ratios

	(1)	(2)	(3)	(4)	(5)
	A&G	IT	Marketing	Maintenance	Utility
Dual-Branded	-0.004** (0.00)	0.001** (0.00)	0.013*** (0.00)	-0.005*** (0.00)	0.001 (0.00)
Rooms	-0.000*** (0.00)	-0.000*** (0.00)	-0.000*** (0.00)	-0.000* (0.00)	0.000 (0.00)
Occupancy	-0.171*** (0.03)	-0.025*** (0.01)	0.052* (0.03)	-0.101*** (0.02)	-0.065*** (0.01)
ADR	-0.001*** (0.00)	-0.000*** (0.00)	0.000 (0.00)	-0.001*** (0.00)	-0.000*** (0.00)
RevPAR	0.001*** (0.00)	0.000*** (0.00)	0.000 (0.00)	0.001*** (0.00)	0.000*** (0.00)
Constant	0.243*** (0.02)	0.037*** (0.01)	0.087*** (0.02)	0.142*** (0.02)	0.104*** (0.01)
State x Year-Fixed Effects	Yes	Yes	Yes	Yes	Yes
Chain x Year-Fixed Effects	Yes	Yes	Yes	Yes	Yes
Property Type x Year-Fixed Effects	Yes	Yes	Yes	Yes	Yes
Location x Year-Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	2,299	2,299	2,299	2,299	2,299
R-squared	0.30	0.50	0.37	0.36	0.50

*Note:* The table presents output from estimating Eq. (1) for the U.S. hotels in our sample over the 2014–2018 period. Column (1) presents the results for A&G Expense Ratio. Column (2) presents the results for IT Expense Ratio. Column (3) presents the results for Marketing Expense Ratio. Column (4) presents the results for Maintenance Expense Ratio. Column (5) presents the results for Utility Expense. We construct undistributed expense ratios by scaling each undistributed expense item by the hotel's Total Revenue. Dual-Branded is an indicator that takes the value of one if property  $i$  is a dual-branded hotel, and zero otherwise. Constant thus refers to the omitted category of single-branded hotels in our sample. Rooms denotes the number of rooms in hotel  $i$  at time  $t$ . Property characteristic  $\times$  time-fixed effects are included as indicated. Standard errors are clustered by U.S. state-year. Statistical significance is indicated as follows: \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

### Undistributed Expense Ratios

Exhibit 6 presents the results for undistributed expense ratios across dual- and single-branded hotels. Here, we do find some evidence that dual-branded hotels operate more efficiently due to cost-saving synergies.

The estimates in column (1) indicate that, conditioned on hotel property characteristics and time trends, A&G expenses are 0.4-percent lower in dual-branded hotels than in single-branded hotels. Given the unconditional mean A&G expense ratio for single-branded hotels of 8.36 percent, this effect translates into a nearly 5-percent cost saving in terms of A&G expenses in dual-branded hotels compared to single-branded properties. By contrast, the results in column (2) show that dual-branded hotels experience 0.1-percent higher IT expenses. Given the unconditional mean IT expense

ratio of 1 percent, the economic magnitude of this effect is approximately 10 percent. The estimates reported in column (3) suggest that marketing expenses in dual-branded hotels also significantly exceed those in single-branded hotels, by a margin of 1.3 percent, or over 12 percent relative to the unconditional mean. We estimate that maintenance expenses, on the other hand, are significantly lower in dual-branded hotels than in their single-branded counterparts, by 0.5 percent, or over 11 percent relative to the unconditional mean (column (4)). Last, the estimates in column (5) indicate no significant difference between dual- and single-branded hotels in terms of utility expenses.

Two patterns are worth highlighting in this set of results. First, we document that dual-branded hotels achieve synergies over single-branded hotels in terms of cost efficiencies in A&G and maintenance. The

## Dual-branding and hotel summary ratios

	(1)	(2)	(3)
	Department	Undistributed Expenses	GOP
Dual-Branded	0.011*	0.007*	-0.017*
	(0.01)	0.00	(0.01)
Rooms	0.000***	-0.000***	0.000
	0.00	0.00	0.00
Occupancy	-0.556***	-0.307***	0.846***
	(0.07)	(0.07)	(0.12)
ADR	-0.003***	-0.002***	0.005***
	0.00	0.00	0.00
RevPAR	0.003***	0.002	-0.005***
	0.00	0.0	0.00
Constant	0.763***	0.613***	-0.365***
	(0.06)	(0.06)	(0.10)
State x Year-Fixed Effects	Yes	Yes	Yes
Chain x Year-Fixed Effects	Yes	Yes	Yes
Property Type x Year-Fixed Effects	Yes	Yes	Yes
Location x Year-Fixed Effects	Yes	Yes	Yes
Observations	2,299	2,299	2,299
R-squared	0.59	0.51	0.53

Note: The table presents output from estimating Eq. (1) for the U.S. hotels in our sample over the 2014–2018 period. Column (1) presents the results for Total Departmental Expense Ratio. Column (2) presents the results for Total Undistributed Expense Ratio. Column (3) presents the results for Gross Operating Profit (GOP) Margin. We compute these summary ratios as: Total Departmental Expense scaled by Total Revenue, Total Undistributed Expense scaled by Total Revenue, and Gross Operating Profit (GOP) scaled by Total Revenue, respectively. Total Departmental Expense is the sum of all departmental expenses. Total Undistributed Expense is the sum of all undistributed expenses. GOP is the bottom-line performance metric obtained after subtracting all Departmental and Undistributed Expenses from Total Revenue. Dual Branded is an indicator that takes the value of one if property  $i$  is a dual-branded hotel, and zero otherwise. Constant thus refers to the omitted category of single-branded hotels in our sample. Rooms denotes the number of rooms in hotel  $i$  at time  $t$ . Property characteristic  $\times$  time-fixed effects are included as indicated. Standard errors are clustered by U.S. state-year. Statistical significance is indicated as follows: \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

evidence presented here suggests that, among the overhead functions in our sample hotels, A&G and maintenance benefit the most in terms of cost savings from sharing resources across the two hotels that constitute a dual-branded property. Second, we present evidence that dual-branded hotels experience significantly higher expense ratios for IT and marketing. The evidence on higher IT expenses in dual-branded hotels is consistent with the fact that those properties are more operationally complex, requiring larger and more sophisticated IT infrastructure to manage operations. The evidence on higher marketing expenses suggests that the ADR and resulting RevPAR premiums we document for dual-branded hotels are achieved at the price of greater expenditures on marketing

programs and activities. In other words, while top-line performance of dual-branded hotels seems to exceed that of single-branded hotels, the ADR and RevPAR premiums earned by dual-branded hotels are at least partly offset by higher marketing expenses required to generate those premiums.

### Summary Ratios

Exhibit 7 presents the results for the summary performance ratios. The results reported in columns (1) and (2) indicate that, all else equal, the total departmental expense ratio and total undistributed expense ratio in dual-branded hotels are slightly higher than in single-branded hotels. While the estimates in Exhibit 5 suggest numerically mixed results on the difference between individual departmental expense ratios



in dual- versus single-branded hotels, the estimates reported here show that the sum of all departmental expenses in dual-branded hotels is slightly higher than in single-branded hotels. Our results suggest a similar pattern in undistributed expenses. While the estimates in Exhibit 6 indicate that dual-branded hotels achieve cost savings in A&G and maintenance expenses, we also document that those hotels experience higher IT and marketing expenses than their otherwise comparable single-branded counterparts. On balance, the evidence presented in column (2) of Exhibit 7 suggests that the cost savings in A&G and maintenance achieved by dual-branded hotels are insufficient to offset the higher expenses in IT and marketing, leading to slightly higher total undistributed expenses in dual-branded hotels. Column (3) of Exhibit 7 presents the results on the GOP margin across dual- and single-branded hotels. We estimate that dual-branded hotels achieve a 1.7-percent lower GOP margin than do single-branded hotels. Given the unconditional mean GOP margin of 47 percent, this effect translates into a statistically significant but economically small underperformance of dual-branded hotels of 3.6 percent in terms of GOP margin. In sum, the evidence presented here suggests that, after controlling for a comprehensive set of hotel- and market-specific characteristics, the operating efficiency of dual-branded hotels is slightly lower than that of otherwise comparable single-branded hotels.

It is worth noting that a number of the dual-branded hotels in our sample have commenced operations relatively recently. While we can't observe the exact year of construction or opening for all of the sample hotels, we know that dual branding is a relatively new trend. It is therefore possible that the operating profitability of the dual-branded hotels in our sample is lower in part because those properties haven't yet reached a stabilized level of operations.

### Directions for Future Research

Like any research study, our analysis has a number of limitations that open opportunities for future research. First, our study covers the five-year period from 2014 to 2018. That period falls into an expansionary economic regime during which hotels overall performed well. It is possible, though, that the savings we document for dual-branded hotels in terms of undistributed (A&G and maintenance) expenses would become more valuable for overall operating efficiency during an economic downturn. Future work will be able to re-examine the relative performance of dual-branded hotels over a longer sample period,

encompassing a full economic cycle, and potentially identifying the marginal impact on performance of the dual-branded hotel concept in each individual year of a hotel's operations since opening. Second, given that dual-branding is a novel concept in the hotel industry, a number of the dual-branded hotels in our sample have commenced operations relatively recently. As we just noted, it is possible that some newer dual-branded properties have not yet achieved a stabilized level of operations. That may negatively affect their operating efficiency compared to more established single-branded hotels. Future research will be able to observe a longer time series of performance data for dual-branded hotels that have stabilized their operations. Finally, it is also conceivable that dual-branded hotels are more cost-effective for developers, or that the trend towards dual-branding is driven by the hotel branding companies themselves. Those hypotheses represent further avenues for future research.

### Pursuing the Strategy

Our results on limited operating efficiencies associated with the dual-branding concept raise the question of why this strategy has recently experienced a surge in popularity. In our scanning of hotel development news, the number of dual (or triple) branded hotels continues to grow. Based on our review of the literature on dual branding in hotels and restaurants, and from speaking to operators, owners, developers, consultants, and brand managers, we uncovered a number of reasons for the popularity of the dual-branding concept. Chief among these is the potential for top-line gains. In a recent discussion of these results with the chief development officer of a global hotel company, he explained that dual branding is clearly a strategy that they are pursuing actively, and in their company, are seeing both top- and bottom-line gains. Seeing our study finding that any topline gains from dual branding are offset by inefficiencies or diseconomies resulting in an unchanged bottom line, he speculated that there were hotels in our sample that still hadn't figured out "how to do this right."

Hotel development and brand managers told us that they sometimes prefer dual-branded hotels because it gives them an additional "pipeline" count when their performance is measured by number of hotels where they may otherwise be shut out of the deal, but have to deal with the time and effort involved in coordinating the project with the other brand team. Hotel owners told us they sometimes prefer dual-branded hotels because they have two brand teams working to fill the hotel, although they have to deal

with the challenge of two brand teams sometimes being at odds with each other. There is also some preliminary evidence that there may be a premium to be had when selling dual-branded hotels compared to single-branded ones.<sup>13</sup> As dual branding becomes more prevalent in the hotel industry, and the sample size of dual-branded hotels grows, enabling more fine-tuned research on dual-branded hotels, this study—and future work—promises to assist hotel brand managers, owners, operators, and developers in optimizing hotel asset configuration.

### In Sum, a Mixed Picture

Dual branding has become an increasingly popular strategy among leading global hotel firms to achieve operating synergies and appeal to a wider array of potential guests. This study tests the hypothesis that dual-branded hotels operate more efficiently than single-branded hotels. As was the case with the earlier study by Robert Mandelbaum, our results were mixed, at best. We used a unique longitudinal data set on dual-branded hotels in the U.S. and a comparison set

of single-branded hotels, chosen to match the brand and U.S. state location of the dual-branded hotels. Over the past five years, dual-branded hotels achieved statistically similar occupancy compared with single-branded hotels and reported somewhat higher ADR and RevPAR. We also show that departmental expense ratios are similar across the two types of hotels, suggesting limited synergies in terms of cost efficiencies across individual operating departments. In terms of undistributed expenses, our evidence indicates that dual-branded hotels achieve lower A&G and maintenance expenses than their single-branded counterparts, but experience higher IT and marketing expenses.

In other words, we document some evidence consistent with the claim of operating synergies in dual-branded hotels, but those benefits are limited to cost savings in a small number of overhead functions. Summing across departments, we find that total departmental expenses and total undistributed expenses in dual-branded hotels slightly exceed those of single-branded hotels. Last, we show that GOP margins are slightly lower in dual-branded hotels than in otherwise equivalent single-branded hotels. ■

<sup>13</sup> <https://www.bizjournals.com/denver/news/2019/12/02/denver-dual-branded-hotel-sells.html>, viewed 12/02/2019.

## Appendix

### Sample breakdown by U.S. state, chain segment, property type, and location type

U.S. States		Chain Segment		Property Type		Location Type	
Alabama	1.44%	Luxury	2.12%	Extended Stay	39.06%	Airport	10.78%
Arizona	5.37%	Upper Midscale	7.15%	Full Service	49.22%	City Center	18.12%
California	33.14%	Upscale	90.73%	Limited Service	5.88%	Highway	3.04%
Colorado	1.86%			Suite Hotel	4.57%	Resort	5.39%
Florida	6.52%			Other	1.27%	Rural—Non-resort	5.61%
Georgia	5.25%					Suburban	57.06%
Illinois	2.92%						
Indiana	3.09%						
Maryland	7.87%						
New York	6.64%						
Oklahoma	1.3%						
South Carolina	0.38%						
Texas	24.21%						

Note: Data obtained from CBRE Hotels. These data are presented in graphic format in Exhibit 3.

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