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On the Importance of Market Identification

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Identifying markets is regarded as necessary for all companies and for research across many disciplines. In industrial organization (IO) economics, the definition of markets is critical for antitrust and regulatory policy; in marketing, it is the basis for pricing, product development, positioning, promotion, and distribution. Market definition is crucial in strategic management, as well. By thinking about what the market is and what it could be, firms often uncover new opportunities for innovation. Successful innovations follow when firms identify new and more profitable segments of existing markets and redefine their own market, which they can serve with new product variants or new services. The nature of the market affects the firm's identity and the skills or expertise that it needs to amass in order to be competitive (Geroski, 1998).

The problem is that there is no clear-cut boundary of the market. This is partially due to the fact that market boundaries are not considered to be an inherent part of the organization of economic activity but something that is used to classify the activity (Geroski, 1998). In terms of the traditional economic definition, the market, the natural market or trading market, is the mechanism by which the transaction between the supplier and the consumer is made and the product is exchanged between them at an agreed upon price.[1] This definition implies that a market is multidimensional where the supplier, the customer, and the product represent the key dimensions. Hence, the luxury hotel market would then be defined where high-end hotel rooms are provided by hotel firms to fulfill customers' needs for superior accommodations at some price that the hotel offers and the guest accepts. Another definition is the strategic market, which defines the market as "the smallest area within which it is possible to be a viable competitor" (Geroski, 1998, p. 690; Kay, 1990, p. 3). This definition suggests that any arena for competition qualifies as a market. Under this definition, the market can be defined narrowly by the product type, such as luxury hotels, but it can also include substitutes or similar products that have a potential to offer similar use.

[1] Rephrased from Jevons (1965), who defined the market as "two or more persons dealing in two or more commodities, whose stocks of those commodities and intentions of exchanging are known to all."

Many researchers have pointed out that there is no single correct way to define the market and that a market should be defined in consequence of the purpose (Buzzell, 1978; Chen 1996; Day, 1981; Porac & Thomas, 1990). This does not imply that the market definition is at the sole discretion of researchers or managers. In spite of the ambiguity in the boundaries of the market, where we draw the boundaries of the market must be appropriate for the purpose of the analysis because the activity of interest determines the various dimensions that are useful for identifying the market.

The determination of market boundaries in the lodging industry is complex. Direct rivals may be easy to identify, while it becomes more challenging to define indirect or potential competitors. Competition occurs internationally, nationally, locally, within brands, across brands, and between chains and independents. It occurs at both the property and corporate level. As a result, the identification of markets will differ depending upon the issue of interest. For example, the market boundaries used for a strategic analysis of a specific geographic location will differ from those used for international development strategies. In addition, the appropriate market definition for corporations is different from that for individual properties.

Management may fail to realize that it has a range of options for each of a number of dimensions to choose among when defining the market or markets and that the choices it makes shape its analysis from that point on. If the market is too broadly defined, it will not be effective for an analysis of current direct competition. On the other hand, if the market is narrowly focused on current rivalry, it will not be very helpful to uncover currently unexploited profit opportunities.

While diverse academic fields have used various dimensions and constructs to define markets for a long time, fewer resources have been devoted to the task of market definition per se because the actual definition has not been of interest but rather the analysis has been focused on the activity of interest. As a result, there have not been many studies that illustrate specifically how the different market definitions affect the actual results and the interpretation of the results of the intended analysis. The main purpose of this chapter is to show the need for a stream of research related to several issues of market boundaries and that the difficulty of market definition applies also to the lodging industry. This is accomplished through a discussion of the competitive analysis literature that concerns market identification. In addition, we illustrate the differences in the characteristics of the market and benchmarking results using two definitions of market boundaries. The first definition is based upon product type while the second is based upon average daily rate (ADR) in which clustering analysis is used to classify properties within each market. This comparison reveals the importance of the definition of market boundaries since the definition used impacts both the characteristics of the competitive landscape and the results of the competitive analysis.

We organize this chapter along the following lines: In the next section, we briefly review the various dimensions of market used in the strategy literature and other fields. In particular, we review the existing literature in the context of market identification. Then, we examine the lodging market and discuss the existing studies with respect to the different approaches used in market identification. Subsequently, we present a common way of identifying the market in the lodging industry and an alternative method, namely ADR clustering. In addition, we discuss the implications of the integration of the two methods for practice. In the final section, we present concluding remarks concerning the limitations of this research and ideas for future research.

Market Identification

The identification of markets plays an important function in many fields. In this section, we present an overview of the market dimensions that have been highlighted in the various disciplines related to competitive analysis. Our aim is to raise an awareness of the various approaches and how those views have evolved rather than to specify which particular approach should be used for which particular purpose.

In IO economics, firms in the same industry are considered to be competitors (Barney, 1986; Chen, 1996; Porter, 1981). The basic premise is that competition and returns to firms are determined by the structure of the industry—that is, the production technology, cost structure, and barriers to entry, as these factors determine the number and the size of the firms, the competition level of the industry, the behavior of the firms, and the performance of the industry. For example, if the cost structure of the industry displays very large economies of scale, the market can be defined as broadly as economies of scale permit, and its boundaries are driven by supply side factors. There will be substantial barriers to entry in the industry, and as a result, only a small number of firms will operate in the market. In some cases, firms may pursue globalization in order to reach the level of scale that optimizes cost. Underlying this market definition is the assumption that demand is very similar in all locations and that tastes are homogeneous enough to support a single product whose low price drives out more differentiated products.

Empirical research in IO has typically used three- or four-digit standard industrial classification (SIC) industry codes to define the market. However, defining markets by the industry unit may be too narrow or too broad (Day, 1981; Kadiyali, Sudhir, & Rao, 2001) to capture the complexity of the market that concerns strategists (Hatten & Hatten, 1987). Also, while the policymaker's goal is to achieve a socially optimal level of competition within the industry, the firm's goal is to come up with the strategy that protects itself from return-reducing competitive entry to the market and to enjoy a sustained period of superior financial performance (Barney, 1986).

Instead of the entire industry, the market is often defined by focusing on one of the dimensions—i.e., by the similarities in the firms in terms of resources or strategy, similar product by the product type or usage, and/or consumers with explicit or latent needs. When firms try to identify or redefine markets, they use one or more of the following: identifying people and places, identifying needs and functions (demand-side approach), or ignoring demand altogether and focusing on the comparable firms (supply-side approach).

When the central focus is on market suppliers, a widely held approach in management has been to classify consistent sets of firms (Ketchen, Thomas, & Snow, 1993) in terms of resources and strategies. The resource-based view (RBV) of the firm identifies competitors with respect to resource requirements. The firm's resources include physical capital resources (e.g., physical technology, plant, equipment, and geographic location), human capital resources (e.g., managerial skills, intelligence, relationship, training, experience, insight of individual managers), and organizational capital resources (e.g., routines such as formal and informal planning, reporting, and control procedures) (Barney, 1991). The resources of the firm are regarded as the foundation for its strategy and profitability (Barney, 1991; Grant, 1991; Peteraf, 1993; Wernerfelt, 1984) since products and services are generated by a set of particular resources. This approach implies that firms with similar resources have a higher likelihood of posing a competitive threat.

The strategic group approach focuses on the firms with similar strategies within the industry. A particular strategy determines how the resources are deployed (Cool & Schendel, 1987; McGee & Thomas, 1986; Mehra, 1996). While there have been a variety of concepts developed within the strategic group literature, such as strategic typologies (Miles & Snow, 1978), strategic groups (Hunt, 1972), strategic scope groups (Houthoofd & Heene, 1997), competitive groups (Leask & Parker, 2007), and taxonomies (Hambrick, 1984), the concept of the strategic group has been broadly accepted. The strategic group concept was first created by Hunt (1972), but the best known definition is offered by Porter (1980): A strategic group is "a group of firms in an industry following the same or similar strategy along the strategic dimensions" (p. 129). Porter (1980) developed three potentially successful generic strategies for creating a defensible position and outperforming competitors in a given industry (i.e., cost leadership, differentiation, and focus) (p. 34). The strategic group approach claims that firms in a strategic group within the industry compete more intensely with one another than firms across strategic groups (Fiegenbaum, Thomas, & Tang, 2001; Nair & Filer, 2003; Smith, Grimm, Wally, & Young, 1997).

However, the intensity of competition within and across strategic groups is not apparent from the extant literature. Even if firms follow the same strategy, they need not compete if they do not overlap in terms of the customer needs they serve (Bergen & Peteraf, 2002; Chen, 1996). In order to evaluate the effectiveness of corporate strategies, market definitions that focus on defining a set of profitable activities are required. This requires determining market competitors. However, the similarity across firms with respect to resources or strategy does not necessarily imply that these firms are competitors. In response, a simultaneous consideration of both the demand side and the supply side attributes (Abell, 1980; Bergen & Peteraf, 2002; Chen, 1996; Day, 1981; Porac & Thomas, 1990; Scherer & Ross, 1990) has emerged. This approach recognizes that a competitive market may include firms with different resource bases or strategies if they serve the same customers' needs.

Customers may have different interpretations of markets than management. This is because markets are not based just on a firm's rivalry for scarce factor inputs but also on the satisfaction of consumers' needs (e.g., Bergen & Peteraf, 2002; Besanko, Dranove, Shanley, & Schaefer, 2004; Porac, Thomas, & Baden-Fuller, 1989). Understanding customers' needs requires an awareness of the customers' perception of the market (Abrahamson & Hambrick, 1997; Bergen & Peteraf, 2002; Chen, 1996; Hodgkinson, 1996; Rindova & Fombrun, 1999). Customers define a market by the group of firms that offer products or services that yield the greatest utility or customer surplus (Besanko et al., 2004; Porac et al., 1989). Thus, they focus their attention on dimensions of competition that are most salient to their domain of experience—namely, product functionality or service support. Furthermore, customers possess knowledge, experiences, skills, and histories different from management. The consideration of demand-side factors ensures that the market definition accounts for the degree to which products are substitutable in the eyes of consumers—that is, the degree to which products fulfill similar functions and address similar needs (Chen, 1996; Clark & Montgomery, 1999; Day, Shocker, & Srivastava, 1979; DeSarbo, Grewal, & Wind, 2006; Levitt, 1960; Peteraf & Bergen, 2003; Porter, 1980; Srivastava, Alpert, & Shocker, 1984). Although all luxury hotels belong to a single product type, consumers may not consider all of them when they make a purchase decision, and they may consider other product types as well, such as upscale hotels. The hotels considered by the consumers represent the set of products judged to be substitutes.

Another approach in market identification is to examine the manager's cognitive perception about the market and competitors (Porac & Thomas, 1990; Reger & Huff, 1993). While

various theories suggest how managers should identify the market, this approach focuses on the positive perspective of how managers actually define the market and competitors with social psychological factors influencing how decision makers frame competition and rivalry (Porac & Thomas, 1990). Unlike customers, managers are more likely to characterize their competition relative to their firm's perceived competitive advantage (Porter, 1980). Hence, managers are more likely to define their competition on the basis of supply-side attributes (Clark & Montgomery, 1999), input factors, geographical location, economies of scale (e.g., Porac, Thomas, Wilson, Paton, & Kanfer, 1995), and reputation (Abrahamson & Fombrun, 1992).

Hotel Markets

In the United States, the lodging industry includes 50,000 properties as of 2006 that are owned by almost 30,000 distinct firms and sole proprietors (Kalnins, 2006). While the ownership is highly decentralized at the national level, *Standard & Poor's* estimates that more than 70% of the properties in the United States are affiliated with a chain (Basham & Kwon, 2009). In the United States, it is common that the ownership of the property, the ownership of the brand, and/or the management is separated. The lodging properties are operated by owning, managing, or franchising. Managed and franchised operations account for a substantial proportion of the chain properties.[2]

The lodging market has complex layers of structure; it can be defined geographically from global to local, by product type (e.g., luxury, upscale, economy), at the corporate level, between the brands, among individual properties, and any combination of these dimensions (e.g., global chain hotel market, Manhattan luxury hotel market). Several levels of competition exist simultaneously in the lodging industry. Geographically, the markets can be defined internationally, nationally, and locally. The local markets can be further classified into submarkets based upon the characteristics of the location, such as urban, suburban, highway, airport, or resort markets. Again, the determination of the market will differ depending on the issue of interest. Obviously, market identification for the strategies developed for a specific geographic location will differ from the market definition for international development strategies. Kalnins (2006) has suggested that "while casual observers often assume that the relevant market for the lodging industry must be local, rather than national, such a claim is half true" (p. 204). His argument is that in the United States about half of room rentals involve corporate accounts and conference business, which are often negotiated at the national level, but the other half of rooms are rented to individual business and leisure transient travelers, for which competition is local.

The lodging market is often classified by the product type, which summarizes the core characteristic of the product by the level of the service, amenities, and facilities available at the property. Since there is no uniform rule that determines the product type, several organizations identify the categories differently under various titles (e.g., the American Automobile Association's [AAA] diamond rating system or Mobil's star rating system). While these ratings are based on the evaluation of the individual properties, more often the product

[2] According to the annually published Brand Report by Lodging Hospitality, among the top 50 brands in the United States (in terms of the number of the rooms), about 90% of the properties are franchised or under the management contract from 2002 to 2006.

type is identified at the brand level as well. Smith Travel Research (STR) uses two classification schemes: a brand or chain classification (chain scale segments) and a price classification (price segments). For the former, they first classify properties as independent or chain and then they classify the chain scale segments as luxury, upper upscale, upscale, midscale with food and beverage (F & B) facilities, midscale without F & B facilities, and economy.[3] J.D. Power and Associates categorizes the chain brands as luxury, upscale, midscale full service, midscale limited service, economy budget, and extended stay.[4] Currently, almost all the Internet booking sites provide their own categorizations of hotel properties. Some lodging firms refer to their own brand by a particular product type (e.g., InterContinental Hotel is referred to as an upper upscale brand on the company's Web site).[5] Overall, these various categorizations may not agree with one another. Thus the rating system can be both informative as well as confusing to the consumers.[6]

Hotels are also classified broadly into full service and limited service depending on whether the property offers restaurant, meeting, and function spaces (full service) or rooms only (limited service), or chain (hotels with a chain brand affiliation) and independent hotels (hotels without a chain brand affiliation). As lodging companies develop niche markets, new segments have emerged between full service and limited service. For example, the select-service segment has become a commonly used term in the lodging industry. Typically, this segment is described with an emphasis on design and ambience with some F & B facilities and/or business or function space available. Hyatt Hotels Corporation refers to the Hyatt Place hotels as select service.[7]

The extended stay and boutique hotels are other commonly used categories. The extended stay segment of upper and lower tiers provides suite units with a living room, bedroom, and kitchen area (Dubé, Enz, Renaghan, & Siguaw, 1999). Boutique hotels refer to the hotels with an intense focus on the individual *property* concept with a unique design, style, or theme that is distinguished from the chain brand concept, which traditionally emphasizes consistency within the brand across different properties.

At the corporate level, a common method used to define competing firms is based upon the RBV and strategic group. The most recognized corporate group in the lodging industry is major brand-owning lodging firms. These firms operate multiple brands in multiple market segments internationally, constituting the global chain hotel market. They are likely to have similar resources and capabilities, both tangible as well as intangible such as brand equity, skills and know-how, routines, access to distribution channels, reservation networks, and organizational competencies.

In terms of strategic orientation, there are firms that concentrate on one of Porter's three generic strategies—that is, differentiation, cost-leadership, or focus strategy. Porter (1985) has argued that a firm that fails to pursue a single generic strategy will become "stuck in the middle," a state that possesses no competitive advantage. However, using a British hotel firm, Posthouse Forte, he recognized there are firms that successfully operate multiple business units with a different generic strategy. Actually, many lodging firms pursue a portfolio approach strategy in

[3] STR Global. (2009). *Glossary*. Retrieved from http://www.strglobal.com/Resources/Glossary.aspx#C

[4] J.D. Power and Associates. (2009). *North America hotel ratings*. Retrieved from http://www.jdpower.com/travel

[5] InterContinental Hotels Group. (2008). *Our history*. Retrieved from http://www.ihgplc.com/index.asp?pageid=326

[6] Grossman, D. (2004, March 5). Confusion is the star of hotel rating systems. *USA Today*. Retrieved from http://www.usatoday.com/travel/columnist/grossman/2004-03-05-grossman_x.htm; Burbank, L. (2005, August 23). Not all hotel star ratings are created equal. *USA Today*. Retrieved from http://www.usatoday.com

[7] Hyatt Place. (2009). Retrieved from http://www.hyattdevelopment.com/_pdfs/HP_Brochure.pdf

terms of product type (luxury to economy), modes of operation (owning, managing, or franchising), and geographic regions (domestic or international; e.g., Accor SA owns, manages, and franchises properties of luxury to budget brands internationally).

These major brand-owning lodging firms have established multibrand portfolios by developing new brands (W Hotels by Starwood Hotels and Resorts Worldwide or Indigo by InterContinental Hotels) or through acquiring already-established ones (Marriott International entered the extended stay segment by purchasing Residence Inn and strengthened the luxury segment by buying the Ritz-Carlton Hotel Company). There are several rationales that explain these lodging firms' motivation for the expansion both in terms of the market segments and geographical areas. The lodging product is an experience good, which is demanded when the consumers are away from home. Hence, consumers face higher uncertainty about the product. This, in turn, provides a great incentive for the brand-owning lodging firms to utilize their known brand equity over the broader scope. Also, the industry exhibits the possibility of economies of scope. Economies of scope are based upon the common and recurrent use of proprietary know-how or specialized and indivisible physical assets (Teece, 1980). The infrastructure underlying lodging operations—reservation systems, access to distribution channels, and property management and service know-how—are consistent with such characteristics. Nevertheless, it is worthwhile to notice Porter's (1980) suggestion that unless a firm strictly separates the units pursuing different generic strategies it may compromise the ability of any of them to achieve a competitive advantage.

The lodging market is often categorized by the characteristics of the consumer segment as well—business, leisure, individual, or group travelers. While most of the properties and brands tend to serve a mixture of these segments, some properties focus more on a particular segment depending on its location or the facilities available. For example, the "convention hotels," which are equipped with large function spaces, put more emphasis on the convention markets; the properties in a luxury resort may focus more on the individual leisure travelers.

The attributes of properties or firms discussed so far can also be analyzed with an emphasis on the customer's perspective. Customers are the ultimate arbiters of brand equity, which is defined by brand-use satisfaction, perceived superior value, preference, or loyalty (Prasad & Dev, 2000). Especially because the lodging product is service-oriented and the purchase decision is made without full information of the quality of the product, consumers' expectation and perception about the product experience plays an important role in repeat purchasing, brand loyalty, and competitiveness. The customer-oriented market approach is also important when the purpose of the analysis is to create a new market. While it is important to keep track of the consumers' perception and the degree of satisfaction with the existing brand and product, it is also critical for managers to identify and envision previously unfulfilled needs (Slater & Narver, 1998). For example, W Hotel states that "It began with the recognition that there are customers who seek a balance between style and substance."[8]

As emphasized earlier, market boundaries in the lodging industry should be defined in light of the analysis of interest. For example, if the manager of a luxury property in a city center wants to evaluate the performance of the property relative to its direct rivals, the market should be defined locally in terms of the similar properties that serve similar customer needs. If a developer would like to analyze opportunities in a given location, he would

[8] W Hotels. (2009). *About W*. Retrieved from http://www.starwoodhotels.com/whotels/about/history.html

develop a competitive analysis by product type and then compare the characteristics and performance measures across these groupings in order to determine the type of hotel property to develop. If an investor would like to evaluate the performance of the management of the property relative to managers of properties with similar characteristics, then a competitive analysis of the properties by product type may be appropriate. On the other hand, if the purpose of the analysis is to develop a brand-level entrance strategy to a new country for a multibrand lodging company, the boundary of the market would need to be defined more broadly—including other brands that operate in a similar product category, their sister brands and the parent companies (which can affect the brand's performance through cross-selling), the domestic and foreign demand into that country, etc. In any case, if the market is not defined correctly it will lead to a poor strategy formulation.

In the academic literature, a variety of different lodging markets have been defined in both conceptual and empirical studies. Size, location, proximity, and price have been the most commonly used measures for market identification (Baum & Haveman, 1997; Baum & Lant, 2003; Baum & Mezias, 1992; Ingram & Inman, 1996). These measures are meant to be proxies for the overlap in resource requirements and the target market. Location and price have been used as dimensions of similarity since it is a widely held view that location (Canina, Enz, & Harrison, 2005; Chung & Kalnins, 2001) and price (Enz, Canina, & Lomanno, 2009; Siguaw & Enz, 1999) have a significant impact on the success of a hotel. Some researchers suggested the use of actual rate as opposed to the published rates (Mathews, 2000; Yesawich, 1987). In addition, the competitive intensity in a local lodging market depends on the size of the other hotels in addition to the number of other hotels in the local market. The product type is another commonly used attribute to define the market (Haywood, 1986; Ingram & Roberts, 2000; Mathews, 2000; O'Neill, Beauvais, & Scholl, 2004; Yesawich, 1987). As mentioned earlier, the product type is based on the physical characteristics of the properties and available services, which reflect the property's resources and the strategic orientation. Some scholars focused on consumers' perception or managers' cognitive process in identifying the market. For example, Yesawich (1987) noted conceptually that substitutability of the properties is a matter of the guests' perception of the hotels in the same market area. Morgan and Dev (1994) identified the competitive set of the hotel brands based on the consumers' perspectives in terms of the usage context, postpurchase satisfaction, and demographic measures.

Across the disciplines, there is not a theoretical model that guides the determination of the market. Market definitions are used frequently in the lodging industry for a variety of purposes, and market definition is the first step in a variety of property level and corporate level analyses. In the next section, we show the importance of market definition for competitive analysis in the lodging industry. The purpose of the next section is to illustrate the differences in the composition, characteristics, and performance evaluation between the two definitions of market boundaries.

Comparison of Two Market Definitions

The first method used to determine the market boundaries is based upon product type, and the second method is based upon ADR. We show that the two methods define the market differently and lead to different conclusions regarding performance evaluation. The product

type is often used in practice to define markets. While product type is useful to evaluate the property's intended competitive position, it may not be the most appropriate determinant of the current competitive position of the property due to differences in age, renovation schedules, and other reasons. Furthermore, product type does not account for the possibility that the market from the guest's perspective may include several product types. A property's ADR captures the property's current competitive condition from both managers' and the consumers' perspectives. Hence, in order to account for the current competitive position, we identified the markets using an ADR clustering approach as well. Lastly, we integrate the two methods and analyze the performance of each property. Our results show that the integration of the two methods provides additional information beyond that of each of them separately.

Product type was chosen because at the local property level the most common approaches to market definition are congruous with the task of categorizing the property according to its product type. Another method frequently used is based upon price. Some market classifications are based on market price. For example, STR defines market price categories by the average room rate regardless of whether the property is a chain or an independent. STR's market price groups are formed by categorizing properties based upon its ADR percentile within the local ADR distribution. For example, in metropolitan market areas, the market price groups are constituted according to average room rates as follows: luxury: top 15% of ADR; upscale: next 15%; midprice: middle 30%; economy: next 20%; and budget: lowest 20%. In rural or nonmetro markets, the luxury and upscale segments are collapsed into upscale (top 30% of average room rates), thus forming four price categories (upscale, midprice, economy, and budget segments). This schema forms market price segment categories based on fixed percentiles within the local distribution. Instead, for our analysis we chose to use cluster analysis, albeit still based on ADR. Cluster analysis does not constrain the number of categories or predetermine the cutoff points in advance. Consequently, the number of clusters and cutoff points are specific to the market in question. We are not proposing that these two methods are the best or that one is better than the other but simply that the determination of market boundaries is important because the results of any type of analysis depend on the initial stage of market boundary determination.

The data used for this analysis were obtained from STR for one section of an urban metropolitan area. Because our sample is the 49 properties in this location, the results of our analysis cannot necessarily be generalized to all markets. However, preliminary analyses of other locations reveal that similar results would be attained in other metropolitan statistical areas (MSAs). We computed annual ADR, occupancy, and revenue per available room (RevPAR) for 2004 based on the monthly revenue, room supply, and demand.[9]

Product Type

For the product type, we used the market chain scale segments (scale) as categorized by STR. This measure is commonly used in practice as a proxy for the resources that reflect the core characteristic of the property in terms of degree of physical and service quality. STR defines the chain scale segments by the actual average room rates of the major chain brand categories at the national level. STR categorizes the chain scales as luxury, upper upscale, upscale, midscale with F & B

[9] ADR = Annual room revenue/Annual number of rooms sold; Occupancy rate = Annual number of rooms sold/Annual number of rooms available; and RevPAR = ADR × Occupancy Rate.

facilities, midscale without F & B, and economy. The independent properties are not associated with a chain in the scale segment classification. Since the product type of independents varies from luxury through economy, we categorized the independents into a scale segment by classifying them according to their ADR and whether or not they have F & B facilities on site. Five of the 18 independent properties in the sample were classified as upper upscale, seven as upscale, four as midscale with F & B, and two as economy. More generally, hotel properties can be classified into a full-service category (luxury, upper upscale, upscale, midscale with F & B) and a limited service category (midscale without F & B and economy). According to the RBV of the firm, competition is expected to be the most intense among those properties that offer a similar product. This method assumes that properties compete with other properties of the same product type—that is, all the luxury properties compete with one another, all the upper upscale properties compete with one another and so forth. The product type of the property represents its target market.

The mean and standard deviation of ADR, RevPAR, and occupancy by product type are shown in Exhibit 15.1. The results across product types for the average ADR and RevPAR are as expected. That is, average ADR and RevPAR increase as the level of service quality and physical attributes change from the economy segment to the luxury segment.

The standard deviation of ADR, a measure of dispersion or variability, is much higher for the luxury segment than it is for any other segment. In addition, the variability of ADR decreases dramatically as the level of amenities and service quality is reduced from luxury toward economy. The minimum ADR for the luxury properties is $241.82 while the maximum ADR is $530.26. This range of $288.44 is very large. This large within-product-type range may be due to the differences in the within-product-type variability of the quality of the amenities, physical property, and service in the luxury segment. Luxury properties offer individualized service, an aesthetic physical environment, and much more whereas economy properties simply offer a clean room. As a result of the intangibility of many of the characteristics of a luxury property, there is much more room for variability in the quality of the service encounter, amenities, and physical property in a luxury property than in an economy property. Therefore, the task of determining the competitive set becomes even more challenging for the luxury segment in this local market.[10] In this particular local market, the mean ADR of the midscale with F & B, midscale without F & B, and economy properties are very close.[11] It seems highly probable that the midscale properties in this area compete with each other regardless of whether they have F & B facilities. Furthermore, it is likely that the economy segment competes with the midscale segments.

The heterogeneity within the product type and the ensuing possibility of competition across product types becomes clearer by looking at the distribution of properties in further detail. Exhibit 15.2 presents a scatter plot of ADR by product type.[12] It shows that there are

[10] We examined a broader urban area that encompasses the states of New York, Illinois, Texas, and California and the same pattern was found; the standard deviation of ADR is much higher for the luxury segment than it is for any other segment. It decreases dramatically as the level of amenities and service quality is reduced from luxury toward economy; and the variability of both ADR and RevPAR for the luxury segment in this local market is even higher than that of the independent segment, which is composed of properties of various rates and product types.

[11] Pairwise t-tests and Wilcoxon tests showed that mean ADRs were statistically different between luxury, upper upscale, and upscale segments. However, the differences were not significant between the midscale with F & B, midscale without F & B, and economy segments.

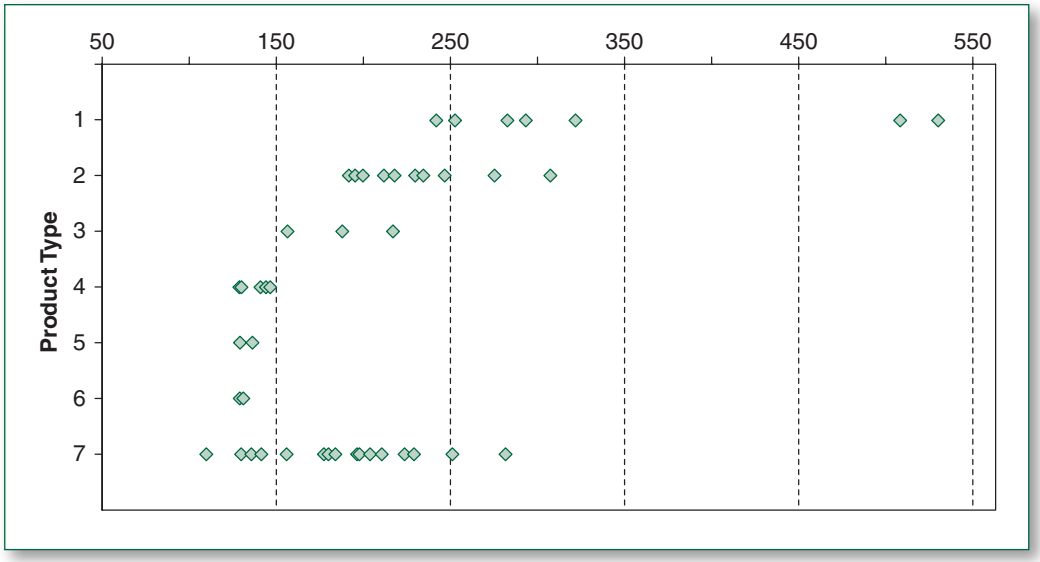
[12] Note that each of the analyses was also performed by market price segment. We have chosen not to discuss the results in the chapter since the conclusions are very similar to those discussed by scale segment. There was a significant overlap in ADR between the midscale and upscale price segments and between the luxury and upscale price segments.

Exhibit 15.1 Characteristics of Properties by Product Type

Product Type	No. of Prop.	Mean			Standard Deviation			ADR		RevPAR		Occ.	
		ADR	RevPAR	Occ.	ADR	RevPAR	Occ.	Min.	Max.	Min.	Max.	Min.	Max.
Luxury	7	$347.05	$284.06	83.18%	$120.54	$81.37	5.46%	$241.82	$530.26	$205.88	$403.13	76.03%	90.77%
Upper upscale	17	$234.36	$196.25	83.64%	$31.50	$31.84	6.54%	$191.50	$307.20	$139.41	$264.39	64.04%	90.68%
Upscale	10	$187.54	$156.23	83.28%	$16.87	$18.99	5.99%	$156.21	$216.52	$129.73	$197.86	73.26%	91.41%
Midscale w/ F & B	9	$140.15	$119.01	85.05%	$8.40	$6.32	4.46%	$128.40	$155.55	$106.22	$127.95	75.37%	90.97%
Midscale w/o F & B	2	$132.25	$118.41	89.31%	$4.68	$20.81	12.57%	$128.94	$135.57	$103.70	$133.12	80.42%	98.20%
Economy	4	$124.59	$112.20	90.09%	$10.14	$9.12	2.34%	$109.44	$130.73	$99.69	$121.28	87.39%	92.77%
Overall sample	49	$210.47	$176.40	84.50%	$83.95	$65.34	6.00%	$109.44	$530.26	$99.69	$403.13	64.04%	98.20%

Note: ADR = average daily rate; F & B = food and beverage; Max. = maximum; Min. = minimum; Occ. = occupancy; Prop. = properties; RevPAR = revenue per available room

Exhibit 15.2 ADR Range by Product Type



Note: Product Type: 1 = Luxury; 2 = Upper Upscale; 3 = Upscale; 4 = Midscale w/ F & B; 5 = Midscale w/o F & B; 6 = Economy; 7 = Independent

significant overlaps in the various ranges of ADR among the different product types, and there is no clear distinction between the product types in terms of ADR. As shown in Exhibit 15.2, within the ADR range of $200 and $250, luxury, upper upscale, upscale, and independent properties coexist in this local market. In the lower rate range of $120 to $160, upscale, midscale with F & B facilities, midscale without F & B facilities, economy, and independent hotels are available. Also, it is interesting to see that there are several blocks of ADR ranges in this local market. The properties are most densely populated in the ADR ranges between $170 and $260. In contrast, some ADR ranges (e.g., between $330 and $500) are completely missing. Clearly, the high heterogeneity of product types that fall within specific ranges of ADR supports the idea that it is not likely that only the properties within a product type are viewed as substitutes by guests. The findings thus far support the notion that lodging competition is fairly complex—even at the local level. In the next section, we examine the characteristics of the markets determined through the use of a clustering analysis where ADR was used as the clustering variable.

ADR Cluster Approach

The analysis of the product type strongly indicates that competition is not limited within the same product types (i.e., substitution can occur across product types). Recalling that ADR is the average price for which rooms are actually sold, the high variability of ADR in the luxury

segment suggests that the consumers may not perceive all of the luxury properties similarly. On the other hand, similar ADRs of the midscale and economy properties suggest that consumers might view these different product types similarly. Although the product type tends to be static, the physical attributes of the properties change over time, new entrants come to the local market, and the existing properties improve the physical or qualitative attributes, all of which affect the way the consumer views the product. The group of similar hotels from the guests' perspective consists of the set of properties viewed as substitutes. Thus, the fixed discrete category of the product type does not effectively capture the current competitive condition of the properties at the local level. Thus, as an alternative to the product type, we identify the lodging markets by the similarity in ADR itself using cluster analysis. We choose ADR as the clustering variable since it captures the interaction of both demand and supply conditions at the local level, and as a result, it reflects the *current* competitive condition of the properties from both the managers' and the customers' perspectives.

Economic theories tell us that items with similar attributes tend to sell for similar prices in a competitive market (Marshall, 1920), and price theory asserts that the market price reflects the interaction between demand considerations and supply considerations. Different from the rack rate, or the published rate, ADR is the average of the rates offered by the property, which are actually chosen by the customer. Hence, ADR from the consumers' point of view reflects their revealed preference that is consistent with the customers' value assessment with given price and quality perceptions. If the offered price is not consistent with the intended level of value, customers will not accept the deal and search further.

Consumers do not have full information about the quality of the property at the time of making a lodging purchase decision. In order to signal the quality, firms use price, brand, or advertising (Dodds, Monroe, & Grewal, 1991; Kirmani & Rao, 2000; Milgrom & Roberts, 1986; Olson, 1977; Oh, 2000; Wolinsky 1983). Customers use the visible cues, such as price, star rating, brand, or advertising as well as their direct experiences, such as prior stays in the same properties or same branded properties in the different locations, or indirect experiences, such as customer reviews on the Internet, to infer the product quality (Litvin, Goldsmith, & Pan, 2008; Oh, 1999). Many studies have shown that the actual purchase decision is based on the perceived price and quality relationship, which generate the perception on the relative value (Oh & Jeong, 2004; Zeithaml, 1988). Thus, the agreed price that the firm has offered and the customer have accepted—ADR—represents the customers' perceived value of the property given the product type, brand, and other qualitative information.

Theories predict that ADR also reflects the manager's view on the current condition of the property as well. While high price signals high quality, the firms do not have an incentive to cheat because in a repeated game setting, the loss of reputation will be greater than the short-term gain (Milgrom & Roberts, 1986). For the lodging product, the ex post quality evaluation depends largely on the gap between customers' expectation and the actual experience (Parasuraman, Zeithaml, & Berry, 1985) with relation to the price they paid. Empirical studies have shown that the fairness of price, which is defined as the consumers' overall judgment about a given price as assessed against the quality of the product, affects the postpurchase word of mouth and the customer's repurchase intent (Dodds et al., 1991; Kashyap & Bojanic, 2000; Oh, 1999). Hence, these factors reinforce the incentives of managers to offer a price that is aligned with the current competitive condition of their property since fair behavior is instrumental to the maximization of long-run profits (Kimes & Noone, 2002).

Cluster Analysis

In order to identify homogeneous groups in terms of ADR, we use cluster analysis, a statistical method that classifies unknown groups of similar objects (Everitt, 2001). Cluster analysis does not ex ante constrain the number of categories or predetermine the cutoff points. That is, the number and cutoff points are specific to the focal competitive market. By definition, competition arises from the similarities in the products and their target customers. Since cluster analysis identifies groups of homogeneous objects by using underlying factors that drive the similarity, it is often used as a tool to identify the groups of competing firms (Mehra, 1996). In order to identify the group of homogeneous objects by cluster analysis, we have to prespecify the factors that determine the similarity between the objects. In this chapter, we use ADR, which we believe is the best available measure that reflects both the product type and consumers' actual choice at the local level.

Classifying a large set of objects into groups of similar characteristics has been applied in many fields of study. By summarizing the data into a small number of groups, the group labels can provide a pattern of similarities and differences in the data (Everitt, 2001). Statistically, a cluster is formed by minimizing the variance within a group and maximizing the variance between groups. Smaller variance implies that the objects are more similar. This chapter adopts Ward's minimum variance clustering method, one of the agglomerative clustering algorithms. In the agglomerative approach, the clustering procedure starts by putting each single object in a separate cluster. In the subsequent steps, the distance between the clusters is estimated and the closest clusters are combined to build new aggregate clusters (Hair, Anderson, & Tatham, 1987). Ward's method is designed to minimize information loss, which occurs in the clustering process. Hence, at each stage of agglomeration, Ward's method minimizes the increase in the total within-cluster sum of squared error (Everitt & Dunn, 2001). There are two major issues in cluster analysis: which variables to use to divide the objects and how many clusters are optimal.

As discussed previously, we use ADR as the clustering variable, which captures the product characteristic and the guests' view of the product. ADR reflects the property's location, seasonality, and the demand and supply conditions of the local market. These factors are common across the properties within our sample since we have defined the location within a narrow area.

The number of clusters is determined by the guideline inferred from the statistical measures. In this chapter, pseudo F statistics, pseudo t2 statistics, and the cubic clustering criterion (CCC) are examined to determine the number of clusters, and five clusters are suggested in this local market.[13]

Characteristics of Markets Using ADR Clustering Analysis

The characteristics of the markets using the clustering methodology are very different from those based upon product type. None of the cluster-based markets contain the full set of properties within a given product type. The product type of each of the properties by

[13] The statistical details are available from the authors upon request.

Exhibit 15.3 Product Type Characteristics of Properties by Cluster

Cluster Number	Number of Properties	Number of Properties in Cluster by Product Type					
		Luxury	Upper Upscale	Upscale	Midscale w/ F & B	Midscale w/o F & B	Economy
5	2	2					
4	6	3	3				
3	10	2	8				
2	15		6	9			
1	16			1	9	2	4

cluster is shown in Exhibit 15.3.[14] The luxury, upper upscale, and upscale properties are divided into multiple clusters, while the midscale with and without F & B facilities and economy segments are collapsed into one cluster. In particular, the luxury segment, which had the largest dispersion in terms of ADR, is divided into three different clusters. Cluster 5 consists of only two of the seven luxury properties, Cluster 4 consists of three luxury and three upper upscale properties, and Cluster 3 consists of two luxury and eight upper upscale properties. Cluster 2 consists of six upper upscale and nine upscale, and Cluster 1 contains one upscale, nine midscale with F & B, two midscale without F & B, and four economy properties. Similar to the luxury segment, the upper upscale properties are also spread out across three separate clusters. Two clusters contain upscale properties. However, all of the midscale and economy properties are in Cluster 1. Clearly, the pattern of mixture of the product types within each cluster suggests that competition occurs across the different product types.

There may be several reasons for these differences: The range of qualities within a product type may be very broad; the product type may represent the initial target market of the property and due to age and the need for maintenance or renovation the categorized product type may no longer be appropriate; or it may be due to inferior management with regard to pricing, revenue management (RM), marketing or operations. When the range of qualities within a product type are broad, it is possible that the low end of the range may overlap with the high end of the closest product type and even overlap with the mid and low end of the closest product type. For example, a luxury property at the low end of the luxury spectrum may have similar characteristics as high end and even mid range upper upscale properties. The range of possibilities for the characterization of properties within the luxury segment may be quite large due to the diverse nature of the physical attributes of the property as well as the intangible nature of the service quality. As we move across the product types from

[14] We verified that the pattern shown in Exhibit 15.3 is not atypical for our sample market. ADR clustering was performed for other urban tracts across different geographical areas for the years 2000 through 2004 by setting the number of clusters as the number of different market scale segments within the tract (excluding the independent segment). If the ADR difference between the scale segments is substantially large, the cluster will coincide with the scale segment. In no instance did we find the properties included in each cluster were the same as those included in the scale segment. Similarly, we found the same result with the price segment as well.

luxury to economy, the range of characteristics within each product type decreases. The differentiated properties, such as the luxury, upper upscale, and to a lesser extent upscale, compete in regard to tangible characteristics, such as location and the main physical characteristics of the property; intangible characteristics, such as reputation; and service quality as well as price. However the low-cost properties such as midscale and economy mainly compete on price. They attempt to simply provide a basic product. This is probably the reason why both the luxury and upper upscale properties were placed into three separate clusters: The upscale properties were placed into two clusters and the midscale and economy properties were placed within one cluster.

The summary statistics for ADR, occupancy rate, and RevPAR for each of the identified clusters are presented in Exhibit 15.4. For ease of comparison, the summary statistics by product type are included as well. The clusters are sorted in descending order of ADR. In order to compare the characteristics of the competitive sets using cluster analysis to that of the product types, we classified each of the clusters into a corresponding product type. This was accomplished by choosing the minimum distance measure between each cluster and each product type. The distance measure was computed as the absolute value of the difference between the average ADR of the cluster and the product type. This method classifies Cluster 4 and Cluster 5 as separate luxury clusters. Cluster 3 is characterized as upper upscale, Cluster 2 is closest to upscale, and Cluster 1 as midscale with F & B. The characterization of the cluster based on the product type is henceforth referred to as cluster's product type.

For the overall sample, the standard deviations of ADR, occupancy rate, and RevPAR are lower for the clusters than they are for the product types. Furthermore, the standard deviation of ADR and RevPAR by cluster shows a steady level across each of the different clusters whereas the variability of ADR and RevPAR by product type shows huge volatility. This implies that the cluster analysis successfully grouped more homogeneous properties together.[15] In addition, the overall variability of occupancy and RevPAR is lower for the cluster-based groups than for the product type-based groups. Note that the standard deviation computed relative to the group mean rather than the sample mean is shown at the bottom of the table. The variability of ADR for the cluster-based approach is $12.28 versus $46.62 for the product type-based approach. The overall variability is only slightly lower for occupancy: 5.27% for the clusters versus 5.57% for the product type segments. But it is much lower for RevPAR: $14.00 for the clusters and $35.05 for the product type segments.

The differences in ADR between the cluster and product type defined competitive sets are the greatest in Cluster 5 followed by Cluster 4, Cluster 2, Cluster 3, and the smallest in Cluster 1. The average ADR for Cluster 5 is $519.02 while the average ADR for the luxury segment is $347.05. The difference is $171.97. Regarding RevPAR, the average for Cluster 5 is $399.38 whereas the average RevPAR for the luxury segment is $284.06, a difference of $115.32. The two luxury properties in Cluster 5 are clearly at the very high end of this market segment and do not seem to be comparable in terms of ADR and RevPAR to any other properties in the luxury segment. Notice also that the average occupancy of these two luxury properties in Cluster 5 is lower than the average occupancy in any other cluster and product type segment.

[15] The pairwise t-tests and Wilcoxon tests of the differences in the mean ADRs and the mean RevPARs among the clusters were significantly different at the 1% level with the exception of the mean ADRs and RevPARs between Clusters 4 and 5, which were significantly different at the 10% level in the Wilcoxon test.

Exhibit 15.4 Characteristics of Properties by Cluster and Product Type

Cluster Number	Number of Properties	Characterization of Cluster Based on Product Type	Mean						Standard Deviation					
			ADR		Occupancy		RevPAR		ADR		Occupancy		RevPAR	
			Cluster	Product Type	Cluster	Product Type	Cluster	Product Type	Cluster	Product Type	Cluster	Product Type	Cluster	Product Type
5	2	Luxury	$519.02	$347.05	77.00%	83.20%	$399.38	$284.06	$15.89	$120.54	1.30%	5.46%	$5.30	$81.37
4	6	Luxury	$293.51	$347.05	84.40%	83.20%	$247.66	$284.06	$17.73	$120.54	4.00%	5.46%	$16.84	$81.37
3	10	Upper upscale	$238.85	$234.36	85.90%	83.64%	$205.31	$196.25	$10.10	$31.50	4.80%	6.54%	$14.89	$31.84
2	15	Upscale	$196.34	$187.54	81.70%	83.28%	$160.42	$156.23	$13.75	$16.87	6.70%	5.99%	$17.75	$18.99
1	16	Midscale w/ F & B	$136.28	$140.15	87.20%	85.05%	$118.72	$119.01	$11.56	$8.40	5.40%	4.46%	$10.81	$6.32
Standard deviation relative to group mean									$12.28	$46.62	5.27%	5.57%	$14.00	$35.05

Exhibit 15.5 Average of the Absolute Value of the Difference in ADR, Occupancy, and RevPAR Between the Focal Hotel and the Reference Group by Product Type

Product Type	Number of Properties	ADR Reference Group		Occupancy Reference Group		RevPar Reference Group	
		Cluster	Product Type	Cluster	Product Type	Cluster	Product Type
Luxury	7	$11.11	$98.27	2.40%	4.64%	$7.78	$65.90
Upper Upscale	17	$10.30	$23.74	4.45%	4.60%	$13.45	$25.91
Upscale	10	$12.62	$12.81	3.87%	4.69%	$15.25	$13.71
Mid w/ F & B	9	$7.33	$6.04	3.36%	3.23%	$4.74	$4.71
Mid w/o F & B	2	$4.02	$3.31	8.89%	8.89%	$14.71	$14.71
Economy	4	$11.68	$7.57	2.85%	1.85%	$7.80	$6.26
Overall	49	$10.20	$26.75	3.89%	4.32%	$11.00	$23.18

The standard deviations of ADR and RevPAR are lower in four out of the five clusters—Cluster 5 through Cluster 2. In Cluster 1, the standard deviations of ADR and RevPAR are higher for the cluster than for the midscale with F & B segment. This may be due to the fact there are four different product types in this cluster ranging from upscale through economy whereas each of the other clusters contain two product types at most. In this sample the differences in the results that would impact the evaluation of properties the most falls within the luxury and the upper upscale segments. In order to analyze this, we computed the absolute value of the difference between a property's ADR, occupancy, and RevPAR and the corresponding value for the reference group (cluster and product type) and then averaged these differences in values by product type. The results are shown in Exhibit 15.5.

The overall average differences for ADR, occupancy, and RevPAR are higher when the product type is used as the reference group. It is $26.75 for ADR, 4.32% for occupancy, and $23.18 for RevPAR. The cluster reference group significantly improves upon the product type group. The overall average difference for ADR is $10.20 for the cluster reference group while the corresponding value for RevPAR is $11.00 for the cluster group.[16] The differences between the values for ADR and RevPAR for the luxury segment across the reference groups are striking. The average of the absolute value of the difference between the focal property's ADR and the cluster's ADR is $11.11 while the average difference is $98.27 when the product type is used as the reference group. For RevPAR, the average differences are $7.78 and $65.90 when the reference groups are the cluster and the product type, respectively. For occupancy, the difference between the two reference groups is also the largest for the luxury segment.

Implications for Performance Evaluation

Our empirical examination of the properties included in the markets based upon product type and ADR clustering analysis shows that the properties are categorized differently under the two methods. This is not surprising since the product type represents the property's intended type while the ADR cluster represents current competitive conditions. The comparison of the two methods provides information about the properties, which have some inconsistency between the property's intended type and its current competitive position. The integration of the two methods provides additional information on comparative performance. It is a useful tool to evaluate performance improvement strategies for managers.

Comparative performance is an important aspect of the competitive environment. A comparison of the performance of the focal hotel to the performance of those same product type hotels in a higher (lower) cluster may reveal ways in which to improve performance. All investors are interested in improving performance. In this chapter, RevPAR is used to analyze the relative performance of the properties. RevPAR aggregates ADR and the occupancy rate. Therefore, it reflects the performance of a property in terms of the degree of utilization of its capacity with the given ADR. In the lodging industry, RevPAR is the most commonly used performance measure. Other profitability measures, such as operating profit or net profit margin, would also be a good proxy for the performance of the property, but in the given data

[16] Paired *t*-tests and signed rank tests showed that the overall mean differences for ADR and RevPAR were significantly lower when the cluster was used as the reference group at the 1% and the 5% level, respectively.

set, these profitability measures are not available. In many cases, RevPAR is closely related to other performance measures, such as operating profit (Canina et al., 2005). The next section presents a discussion of the implications of the categorization of a property within a cluster in light of the product type characteristics of the cluster as well as ways to evaluate and improve the competitiveness of a property.

When a property is placed in a cluster higher than most of the other same product type properties, the best bet is that the strategies and management of the property are quite effective. Upper upscale hotels placed in the same cluster as luxury hotels can be an example. Such a placement can occur if there is a broad spectrum of luxury properties and/or upper upscale properties in this market and the focal hotel is at the high end of the upper upscale segment. The luxury and/or other upper upscale properties may be older and in need of maintenance or even a renovation. This knowledge will be helpful in the development of operating, pricing, and marketing strategies. If a property is placed in a cluster with higher product type properties then it probably outperforms its product type but may not necessarily outperform the cluster. If in fact it does outperform the cluster as well as the product type then it is in great shape although it might be difficult to sustain such a position in the long run as the theory of monopolistic competition predicts.

When a property is placed in a cluster with predominately lower product typed properties, the ADR of the focal hotel is lower than the same product typed properties that are in a higher cluster. A luxury property clustered with predominantly upper upscale properties can be an example. It may be useful to evaluate the physical condition, the renovation and maintenance schedules, the service quality, pricing strategy, and marketing policy of the property. Regardless of the reason, one would expect that this property would fall within the upper tier of the price range within the cluster. Therefore, at least, this property ought to outperform the cluster even though it will underperform relative to the product type. However, if the property underperforms relative to the cluster, this implies that the lower price fails to signal any value to the consumers. Eventually, the benchmark of performance for this focal hotel should be the same product type properties in the higher cluster.

It is clear that the identified markets are distinctly different across the ADR cluster-based approach and the product type-based approach. The composition of the properties as well as the average and standard deviation of ADR and RevPAR for each market differ significantly across the two approaches. Hence, property performance evaluation will also differ under the two market definitions. For illustrative purposes, let's now examine the competition in this local market in greater detail for Cluster 4. Exhibit 15.6 shows the difference between each property's ADR, occupancy, and RevPAR relative to the average value for each of three reference groups (i.e., ADR Cluster, Product Type, and Cluster-Product Type). The Cluster-Product Type reference group is defined as the same product type properties within the cluster. For example, Property 3 is a luxury property in Cluster 4. The difference in the Cluster RevPAR is computed as the Property 3's RevPAR less Cluster 4's average RevPAR; the difference in the Product Type RevPAR is defined as Property 3's RevPAR less the luxury segment's average RevPAR; and the difference in the Cluster-Product Type RevPAR is defined as Property 3's RevPAR less Cluster 4's luxury segment's average RevPAR. The differences for ADR and occupancy were computed similarly.

There are three luxury and three upper upscale properties in Cluster 4. If these three luxury properties are in a good competitive position then at the very least each of these properties ought to outperform relative to the cluster. Properties 4 and 5 indeed

Exhibit 15.6 Average Difference in ADR, Occupancy, and RevPAR Between the Focal Hotel and Various Reference Groups

Property Number	Cluster	Product Type	RevPAR Reference Group			Occupancy Reference Group			ADR Reference Group		
			Cluster	Scale	Cluster/Scale	Cluster	Scale	Cluster/Scale	Cluster	Scale	Cluster/Scale
	5										
1		Luxury	–$3.75	$111.58	–$3.75	0.01	–0.05	0.01	–$11.24	$160.73	–$11.24
2		Luxury	$3.75	$119.08	$3.75	–0.01	–0.07	–0.01	$11.24	$183.21	$11.24
	4										
3		Luxury	–$5.45	–$41.85	–$12.30	0.01	0.03	0.00	–$10.95	–$64.49	–$16.55
4		Luxury	$7.36	–$29.03	$0.52	–0.05	–0.04	–0.06	$27.92	–$25.63	$22.31
5		Luxury	$18.62	–$17.77	$11.78	0.06	0.08	0.05	–$0.16	–$53.70	–$5.76
6		Upper upscale	–$21.24	$30.17	–$14.40	–0.02	–0.01	–0.01	–$18.48	$40.67	–$12.87
7		Upper upscale	–$16.02	$35.39	–$9.18	–0.02	–0.01	–0.01	–$12.03	$47.12	–$6.42
8		Upper upscale	$16.73	$68.14	$23.57	0.02	0.02	0.03	$13.69	$72.84	$19.29
	3										
9		Luxury	$0.57	–$78.18	–$7.18	–0.01	0.02	–0.01	$2.97	–$105.23	–$5.17
10		Luxury	$14.93	–$63.82	$7.18	0.01	0.04	0.01	$13.31	–$94.89	$5.17
	2										

(Continued)

(Continued)

11		Upper upscale	–$21.96	–$12.90	–$20.02	–0.06	–0.03	–0.06	–$10.16	–$5.68	–$8.13
12		Upper upscale	–$21.30	–$12.24	–$19.36	–0.04	–0.01	–0.04	–$15.41	–$10.92	–$13.37
13		Upper upscale	–$13.49	–$4.43	–$11.56	–0.10	–0.07	–0.09	$12.08	$16.56	$14.11
14		Upper upscale	–$3.74	$5.32	–$1.80	0.02	0.04	0.02	–$9.22	–$4.73	–$7.18
15		Upper upscale	$5.21	$14.27	$7.14	0.04	0.06	0.04	–$4.72	–$0.23	–$2.68
16		Upper upscale	$6.06	$15.12	$8.00	0.04	0.06	0.04	–$4.31	$0.18	–$2.27
17		Upper upscale	$15.10	$24.16	$17.03	0.04	0.06	0.04	$7.35	$11.84	$9.39
18		Upper upscale	$18.63	$27.70	$20.57	0.05	0.07	0.05	$8.10	$12.59	$10.14

outperform the cluster, outperform the luxury properties in Cluster 4, and underperform relative to the overall luxury scale segment. The fact that they underperform relative to the product type may not be an issue since in this case it is highly probable that the spectrum of characteristics of the luxury segment in this location is very broad. The two luxury properties in Cluster 5 (Property 1 and Property 2) achieve a much higher level of ADR and RevPAR than any of the other luxury properties; Property 1's ADR is $160.73 above the luxury segment's average ADR while Property 2's ADR is $183.21 above the luxury segment's average ADR. On the other hand, there are two luxury properties (Property 9 and Property 10) in Cluster 3, a cluster with lower levels of ADR; Property 9 achieves an ADR that is $105.23 below the average ADR of the luxury segment and Property 10's ADR is $94.89 below. It is clear that the extreme values of ADR of the luxury properties in Cluster 5 dominate the average ADR of the luxury segment. If the two luxury properties in Cluster 5 are excluded from the set of luxury properties, the three luxury properties in Cluster 4 outperform the luxury segment.

There is a luxury property in Cluster 4 that underperforms relative to the cluster (Property 3). Notice that in terms of occupancy, Property 3 outperforms each of the reference groups, while its ADR is lower than each of the reference groups. As we all know, higher occupancy alone does not necessarily imply higher RevPAR. Investors in this property would be wise in evaluating the pricing policy and marketing effectiveness as well as the state of the physical property and quality of service. This property is pricing much lower than the other luxury properties in Cluster 4, and it is also pricing lower than some of the upper upscale properties in Cluster 4. The fact that it is pricing even lower than the upper upscale properties is useful information that would not have been provided by analyzing product types alone. On the other hand, there is an upper upscale property in Cluster 4 that outperforms the cluster (Property 8). Cluster 4 includes luxury properties as well as other upper upscale properties (Properties 6 and 7). Property 8 outperforms with regard to RevPAR, occupancy, and ADR across all reference groups. It is clear that the management and the strategies of this property are effective. As a result, even though Properties 6 and 7 outperform relative to their product type, they would be wise to evaluate the strategies of Property 8 in order to improve their positioning.

In sum, if a property is in the highest product type within the cluster and there are no other same product typed properties in a higher cluster then the best reference group for performance evaluation is the Cluster-Product Type. An example is Cluster 5 Properties 1 and 2. If there are same product typed properties in a higher cluster and they outperform their Cluster–Product Type then look at the same product typed properties in a higher cluster. Examples of this case are Cluster 4, Properties 4 and 5. If they do not outperform their Cluster-Product type then the first set of properties to use as a reference group are those in the same Cluster-Product type and the second set of properties are those in the same product type but in a higher cluster. An example is Cluster 4, Property 3. If they are the second product type segment or a lower segment in a cluster and outperform the cluster, then the first reference group is the higher product typed properties within the cluster; the second group are the same product typed within the cluster; and the third group are the same product types properties in a higher cluster. An example is Cluster 4, Property 8. If a property is in the second segment, or a lower segment, in a cluster and underperforms the cluster then the relevant reference group is the same product typed properties within the cluster (e.g., Cluster 4, Properties 6 and 7).

Conclusion

Relationships between market conditions, firm strategy, and firm performance have been the subject of a good deal of managerial attention and of a large volume of empirical research by strategic management researchers. Conditions of competition are usually defined and measured in the context of markets. As a result, market definition is an essential element of competitive analysis. While it is obvious that the correct market identification is crucial for sustaining the competitiveness of the firm, it is frustrating that there is no simple answer about how to define the market. In this chapter, we have discussed several methodologies and issues regarding market identification in general and the specifics in the lodging industry. Furthermore, we identified local lodging markets using two different but supplementary methods—product type and ADR clustering. We have illustrated that the two methods identify the markets differently, and the characteristics of the markets as well as performance evaluation differ under the two approaches.

Identifying markets is a consequence of identifying customers in common and similar products. The product type system is one of the most commonly used definitions of the market, and as the intended product position it affects the customers' expectation on the product's quality. In this respect, we cannot ignore this categorization. What we propose is by integrating another measure of similarity such as ADR, we can have a more complete picture of the local market. If the product type system was only used, the two luxury properties at the highest end would have been evaluated as outperforming their market. A more precise assessment would be that these two properties form a distinctive market in a duopolistic manner that serves the most sophisticated guests in that geographic area.

Market definition involves classifying firms on the basis of relevant similarities. We have shown that product type and ADR similarity are two characteristics that can be used to determine the extent of markets. The integration of the two provides insights beyond those of each separately. Our aim in this chapter was not to address the full set of complexities involved in market definition but simply to show its importance when the market was defined based on one similarity: product type or price. Identifying markets through product type or price is straightforward. However, since hotels are heterogeneous, then an area for future research is the examination of other relevant similarities for identifying markets. In particular, it is agreed that firms are in the same market to the extent that they satisfy the customers' same basic needs—that is, they serve the same purpose in the minds of the guests. This suggests the need to identify similarities in use. Guests make choices based upon distance to local demand generators, amenities, price, and quality. In addition to the inclusion of the product type and price in market definition, it may be useful to include these other measures in addition to size, age, and number of years since last major renovation, among others. Furthermore, what drives customer choice is not only whether or not the property can satisfy a given need but how well it can do so. The degree of satisfaction matters. As a result, customer satisfaction measures may be useful as well in the refinement of market definition.

Strategic management focuses on the relationships between strategy, market, and performance. Each of these constructs is multidimensional. The market is related to the firms, customers, and managers and performance consists of financial, operational, and overall effectiveness (Venkatraman & Ramanujam, 1986). The multidimensionality of these constructs creates a conceptual challenge in that an array of combinations could be developed

along these dimensions to group organizations. Investors, analysts, consultants, researchers, and managers recognize the importance of strategic development and performance evaluation. In addition, they recognize that both are highly dependent on how they define the market. Unfortunately, there are no simple answers to the question of how to best determine the market. However, despite its limitations, we believe that this chapter is a start to an area of research that will be useful to the industry.

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