

# teaching note

## *Market Feasibility Study: The hotel case of the city of Poplarville, MS*

### Teaching Objective

Presented within the case study is an example of data from a hotel market feasibility study conducted in a small town in Mississippi. Several key concepts addressed are market analysis, demand and performance analysis, and market competitor and comparison analysis.

By the end of this lesson, students should be able to:

- Analyze secondary data to determine the demand and supply needed to support a potential new hotel.
- Propose the type and size of a hotel needed for the city.
- Determine the financial sustainability of the hotel based on the type and size proposed.
- Determine the impact that a new hotel would have on the local community.

More importantly, to successfully complete this case study, students must be able to understand the four steps in the supply and demand analysis, which justifies if additional hotel (guestrooms) are necessary for the region. The four steps of the supply and demand analysis are:

- Step 1: Calculate the most recent 12-month average occupancy rate of the most competitive hotels.
- Step 2: Calculate the composite growth rate of demand from various sources.
- Step 3: Calculate the additional rooms required year by year.
- Step 4: Calculate the future supply of rooms required.

### Target Audience

This case study is understandable at the undergraduate level, albeit it would be more relevant to junior and senior students in a finance and capstone class. In order to complete this case, advanced analytical and practical skills are required, along with critical thinking skills to make decisions. This case intends to provide an understanding of the various elements that need to be considered before building a new hotel in a region. The themes presented here are advanced and also require a student understanding of concepts from strategic marketing and revenue management, as well as hotel operations. Additionally, this case is designed to provide thorough knowledge and understanding of the various elements and components that need to be evaluated in the planning stages of building a new hotel.

### Teaching Approach

Prior to the lesson, students will be asked to read this case study along with additional readings. Students should have a general understanding of the following topics and be able to provide examples of each:

- Market analysis
- Community demand
- Community resources
- Demand and supply analysis
- Competitors, including comparable hotels

### Instructions

This case study works well as a group project. Students should have a basic to intermediate knowledge of strategic management and finance operations of the lodging industry, and be familiar with the case study format. Students can be placed into groups of 3 or 4 with the purpose of conducting a hotel market study for the city of Poplarville or a comparable small town. The instructor may select a town based on location or have the class identify a location based on their knowledge of areas that may need additional information.

Groups can be split up and assigned to research the various key components of market analysis, performance analysis, demand analysis, and market competitive analysis presented in the case study, and further communicate their findings with the class. The instructor may provide additional information if they select a town that students are more familiar with, such as STAR reports from the STR Share center. Once the class has the data, the groups can make independent decisions about the need for a new hotel. Students should be able to discuss and defend their decision to support or oppose the feasibility of a new hotel based on the findings. Arguments need to consider the size and type of hotel. For example, a mid-scale or upscale hotel with a meeting facility can be one of the options to build in the city of Poplarville (see more detailed information in Step 4). A Possible Solution for the Specific Questions in the Case Study: the Four Steps of the Supply and Demand Analysis

#### *Step 1: The 12-month Average Occupancy Rate*

There are 20 hotels within a 30-mile radius from the city of Poplarville (see Table T.1.). These hotels currently provide 935 rooms per day or 28,050 rooms per month for the local markets, including 149 available rooms from two upper-midscale hotels. Among these available rooms, the current nightly demand in the marketplace is 483 rooms, which is about a 51.6% occupancy rate. However, if the average occupancy rate over 4 years (49.2%) is applied, rather than 51.6%, the nightly demand of local markets decreases by 23 rooms, for a total nightly demand of 460 rooms.

There are only 149 guestrooms available from the most competitive hotels in the local markets (see Table T.2.). With an approximate

51.6% occupancy rate, the current nightly demand from these hotels is 77 rooms. Similarly, if the average occupancy rate over 4 years (49.2%) is applied, rather than 51.6%, the nightly demand would be 73 rooms.

### ***Step 2: The Composite Growth Rate of Demand***

With the identified source of demand (see Table 6 in Case Study), the annual compound growth rate is estimated to determine the composite growth rate. The annual compound growth rate is projected in relation to the segment changes from 2016 to 2017 from the hotels within a 30-mile radius from the city of Poplarville.

To determine the composite growth rate, the estimated annual compound growth rate is multiplied by the source of demand for each market segment. In the transient segment, for example, the composite growth rate of the educational market segment (2.4%) is identified by the source of demand (30%) times the annual compound growth rate (8%). Similarly, the composite growth rate of the business market segment (1.2%) is determined by the source of demand (20%) times the annual compound growth rate (6%). However, the military market segment is estimated to grow at a fixed rate of 1% due to the challenge of attracting military markets to a new hotel. The total overall composite growth rate is 5.88%, and the composite growth rate of demand concerning each market segment is projected in Table T.3.

Based on the total composite growth rate (5.88%), the future demand for a new hotel in the city of Poplarville is estimated. The current average nightly demand for rooms of 483 is multiplied by the composite growth rate of 105.9% ( $100\% + 5.88\%$ ) to arrive at the projected demand of 512 rooms in Year 1 (see Table T.4.). The 512 room projection is then carried forward into Year 2 and multiplied by the composite growth rate (105.9%). Similar calculations are made for each of the remaining 3 years. In this manner, the future demand of 644 rooms in Year 5 is estimated. Overall, an average nightly demand of 576 rooms is projected for the city of Poplarville over 5 years.

### ***Step 3: The Future Supply in the City of Poplarville***

To estimate the future supply of rooms required in the city of Poplarville, the current occupancy rate (51.6%) is first determined by dividing the average nightly demand (576 rooms) by the combination of rooms shortage (181rooms) and current supply (935 rooms). From this, the supply required in the city of Poplarville is estimated. As seen in Table T.5., the local market could support additional rooms right now, although it requires only 57 additional rooms per night. In Year 2, there is a shortage of 115 rooms per night, while at the end of 5 years, 313 additional rooms per night could be supported at an average occupancy of 51.6%. In other words, if a new 60-room hotel were built today, given the current demand for rooms, the new overall average occupancy rate would be 51%, resulting in 31 additional rooms being sold per day.

### ***Step 4: The Future Supply in the City of Poplarville***

Should the city of Poplarville decide to pursue the development of a hotel, we would recommend the construction of a midscale or upper-midscale hotel on or near the intersection of Highway 11 and 26 or Highway 26 and 53.

Currently, there are 2 upper midscale hotels, while 18 economy hotels exist within a 30-mile radius from the city of Poplarville. At an average occupancy rate of 49.2% in the competitive market, an additional economy hotel would not be viable due to the existing 18 economy hotels. Also, there is no quality hotel (e.g., midscale or upper midscale hotel) within a 22-mile radius from the city of Poplarville, thus, if the city can offer a quality hotel, such as a midscale or upper-midscale hotel, the proposed hotel can attract visitors who prefer staying at a quality hotel around the city of Poplarville. Especially, the hotel can draw visitors, such as those from the educational, healthcare, and business market segments. More importantly, a 50- to 80-room hotel would be recommended because of the average new room requirement in the competitive market. Over a 5 year-period, demand supports an estimated 181 rooms, and it is anticipated to increase by 132 rooms, for a total of 313 rooms in year 5.

However, Figure T.1. shows that there are two upper-midscale hotels currently under construction, which will add 144 rooms in the Southern Mississippi area, including Hattiesburg, MS. Also, one upper-midscale and one midscale hotel are in a final planning stage, resulting in additional 184 rooms, whereas there are two midscale hotels and one upper midscale hotel in a planning stage, which could add additional 202 rooms in the area. Overall, 530 additional rooms could be added in the Southern Mississippi area. However, these additions would be less likely to influence the development of a hotel in the city of Poplarville because it (530 rooms) is about 7.2% of the total number of rooms in the area (7,215 rooms). Moreover, these development plans are proposed for major cities in the Southern Mississippi, including Biloxi, Hattiesburg, and Gulfport, MS.

In addition, restaurants and other development components would be beneficiaries of the hotel development. As the future business community (0.2%) and population (2.8%) continue to grow in the city of Poplarville, there might likely be increased demand from various guests for a proposed hotel. Also, to identify if there is a seasonality effect in this region, a twelve-month moving average of the hotels is provided in Appendix C.

### ***Assessment***

Students will be given a case study to write a report on one of the main topic areas, which will justify their respective views on the assignment. In addition, students should include at least three to five references other than those provided by the instructor. References must be cited using the APA 6th guidelines.

## Key Terms in Case Study

Hotel feasibility studies analyze various metrics associated with hotel operations and performance. The following glossary is provided as these terms are used throughout this case study:

- **Average Daily Rate (ADR):** Room Revenue divided by rooms sold.
- **Chain Scale:** Chain scale segments are a method by which branded hotels are grouped based on the actual average room rates. The chain scale segments are: Luxury Chains; Upper Upscale Chains; Upscale Chains; Upper Midscale Chains; Midscale Chains; Economy Chains; Independents.
- **Demand (Rooms Sold):** The number of rooms rented during a specific period.
- **Market Segmentation:** An analysis of demand generation; i.e. the sources of business (i.e., transient, group, contract) that a property attracts:
  - Transient covers retail, discount, negotiated, qualified, and wholesale (individual tour and travel).
  - Group includes corporate, association/convention, government, tour group/wholesale, and
  - SMERFE (social, military, educational, religious, fraternal).
  - Contract is affiliated with a company or organization that has a contract with the hotel (e.g., airline crews; permanent guests).
- **Occupancy (Occ):** Rooms Sold divided by Rooms Available times 100, expressed as a percentage of rooms occupied.
- **Penetration Rate:** The percentage of a property's fair share of demand that is actually accommodated by that property. Penetration rates in excess of 100% indicate that a hotel possesses competitive advantages, while competitive weaknesses are reflected by penetration rates that are below 100%.
- **Room Revenue:** Total Room Revenue generated from the rental of rooms. This revenue is separate from other revenues the hotel operation might generate.
- **Revenue per Available Room (RevPAR):** Total Room Revenue divided by Rooms Available. RevPAR accounts not only for the number of rooms actually sold, but also the amount of unoccupied available rooms. This is the hospitality industry's key metric for the comparison of properties.
- **Supply (Rooms Available):** The number of rooms in a hotel (or market) times the number of days (typically 365) in the period of analysis.

**Table T.1.**

### Average Occupancy of the Hotels within 30-mile Radius from the City of Poplarville

Hotel	Class	Average Rooms in Hotel	Average Occupancy Rate	Current Nightly Demand
1	Economy Class	74	51.6%	38
2	Economy Class	25	51.6%	13
3	Economy Class	25	51.6%	13
4	Economy Class	50	51.6%	26
5	Economy Class	21	51.6%	11
6	Economy Class	67	51.6%	35
7	Economy Class	31	51.6%	16
8	Economy Class	82	51.6%	42
9	Economy Class	82	51.6%	42
10	Economy Class	51	51.6%	26
11	Economy Class	24	51.6%	12
12	Economy Class	24	51.6%	12
13	Economy Class	50	51.6%	26
14	Economy Class	51	51.6%	26
15	Economy Class	51	51.6%	26
16	Economy Class	5	51.6%	3
17	Economy Class	24	51.6%	12
18	Economy Class	49	51.6%	25
19	Upper Midscale Class	82	51.6%	42
20	Upper Midscale Class	67	51.6%	35
Total		935	-	483

Source: Smith Travel Research (2017)

**Table T.2.**

### Average Occupancy of the Most Competitive Hotels

Hotel	Class	Average Rooms in Hotel	Average Occupancy Rate	Current Nightly Demand
1	Upper Midscale Class	82	51.6%	42
2	Upper Midscale Class	67	51.6%	35
Total		149		77

Source: Pipeline Report - Smith and Travel Research (2017)

**Table T.3.****Composite Growth Rate of Demand**

Source	Market Segment	Source of Demand (%)	Annual Compound Growth (%)	Composite Growth (%)
Transient	Educational Market	30%	8%	2.4%
	Business Market	20%	6%	1.2%
	Healthcare Market	20%	5%	1.0%
	Military Market	5%	1%	0.05%
	Others	7.3%	5%	0.37%
Group	Educational Market	3%	8%	0.24%
	Business Market	3%	6%	0.18%
	Healthcare Market	3%	5%	0.15%
	Military Market	-	1%	-
	Others	5.1%	5%	0.26%
Contract	Military Market	3.6%	1%	0.04%
Total		100%		5.88%

**Table T.4.****Future Rooms Demand Year by Year with Data from the Hotels within a 30-Mile Radius from Poplarville**

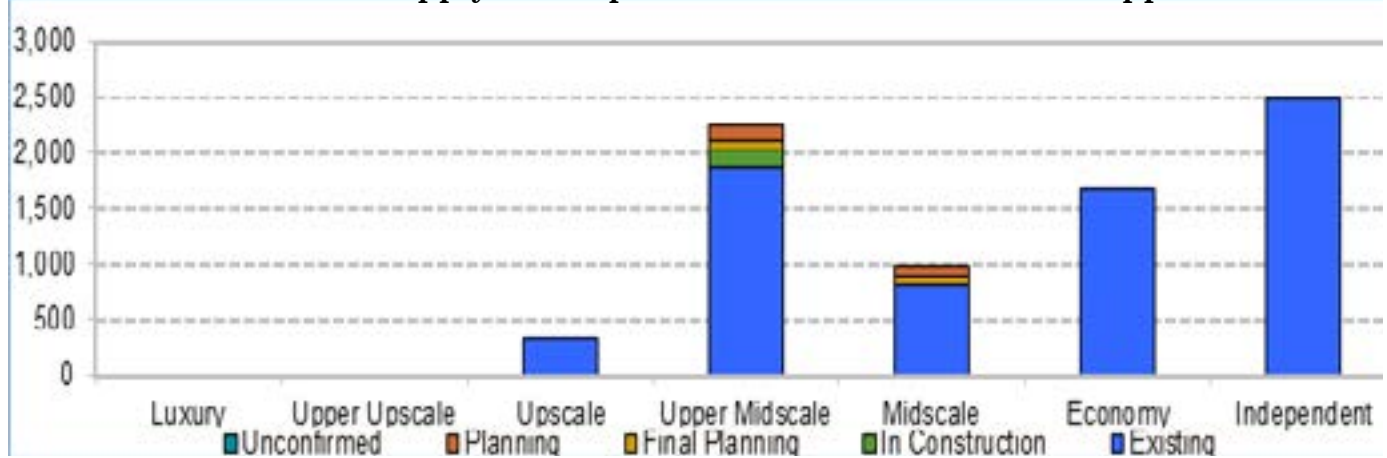
Year	Composite Demand (Nightly)	Future Growth (%)	Rooms Demand (Nightly)
1	483	105.9%	512
2	512	105.9%	542
3	542	105.9%	574
4	574	105.9%	608
5	608	105.9%	644

**Table T.5.****Future Rooms Supply Year by Year**

Year	Rooms Demand (Nightly)	Normal Occupancy (%)	Supply Required (Nightly)	Current Supply (Nightly)	New Rooms Required (Nightly)
1	512	51.6%	992	935	57
2	542	51.6%	1050	935	115
3	574	51.6%	1112	935	177
4	608	51.6%	1178	935	243
5	644	51.6%	1248	935	313

**Figure T.1.**

### Current Room Supply and Pipeline in the Southern Mississippi Area



Source: Pipeline Report - Smith and Travel Research (2017)

### Additional Readings Assigned

Cullen, K. (2015). *The Evolving Dynamics of Revenue management*, 2nd Edition, HSMIA Foundation.

Martin G. Jagels (2007), *Hospitality Managerial Accounting*, 9th Edition, Hoboken, NJ: John Wiley & Sons, Inc.

Tranter, Stuart-Hill, and Parker (2009). *An Introduction to Revenue Management for the Hospitality Industry*, Upper Saddle River, NJ: Pearson Education, Inc.

Kotler, P., Bowen, J. T., & Makens, J. C. (2014). *Marketing for Hospitality and Tourism*, 6th Ed., Upper Saddle River, NJ: Pearson Education, Inc.