

International Journal of Revenue Management

ISSN online: 1741-8186 - ISSN print: 1474-7332

<https://www.inderscience.com/ijrm>

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DOI: [10.1504/IJRM.2023.10051686](https://doi.org/10.1504/IJRM.2023.10051686)

Article History:

| | |
|-------------------|-----------------|
| Received: | 23 January 2022 |
| Accepted: | 21 August 2022 |
| Published online: | 04 May 2023 |

Prioritising the requisite skills possessed by revenue managers of the hospitality industry: an analytic hierarchy process approach

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Abstract: The main purpose of this study is to prioritise and identify the most required skill of a revenue manager as per the skill set defined by the Singapore Workforce Development Agency (SWDA) 2016 when applied to the Indian hotel industry. A set of skills was selected based on an extensive literature review and discussions carried out with the human resource managers and revenue managers from various business organisations. The present study is an attempt to identify the hierarchical structure of the skills expected of a revenue manager in the hospitality industry in India. Among the selected set of 12 skills, results of AHP ranked leadership, communication, negotiation, planning and implementation, and analytical, conceptual, and evaluative skills as the top five required skills of a revenue manager's skill set. The coverage of the study is limited to analysis of responses obtained from managers working in luxury hotels having chains in India.

Keywords: competitiveness; revenue management; analytical hierarchical process; AHP.

JEL codes: M31, M190.

Reference to this paper should be made as follows: Anand, L., Gupta, S. and Gupta, S. (2023) 'Prioritising the requisite skills possessed by revenue managers of the hospitality industry: an analytic hierarchy process approach', *Int. J. Revenue Management*, Vol. 13, No. 3, pp.125–143.

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1 Introduction

Companies these days are operating in a turbulent market environment and confronting increasingly difficult and complicated growth conditions like dynamics of globalisation, competition, and advancements in technology. For competitiveness, every company has no other choice than to make effective use of its resources and continuous analysis of its environment. The beginning of the research on 'competitiveness' is arguably traced back to the original work on the competitiveness of nations by Porter (1990). Porter (1998) also argued that "it is firms, not nations, which compete in international markets." It is believed that national competitiveness ultimately depends upon the firms in the country competing both in domestic and international markets. Firm-level competitiveness generally refers to the ability of the firm to increase in size, and expand its global market share, and profit (Clark and Guy, 1998). Tefertiller and Ward (1995) have related competitiveness to productivity growth and involve differences in quality, relative prices, costs of production and distribution, and marketing and distribution system's efficiency. With regard to firm-level competitiveness, D'Cruz and Rugman (1992) perceived it as a firm's 'ability to design, produce, and/or market its products superior to those provided by its competitors, considering both the price and non-price factors. However, competitiveness is considered to be a multi-dimensional concept that is composite in nature and attempts to capture the process of fit between the firm and its dynamically evolving environment' (Basu, 2011). Despite its complexity, researchers in the fields of hospitality have also got attracted to the study of their competitiveness (Tsai et al., 2009). Existing players in the ever-growing hospitality industry are constantly being forced to devise ways and means to stay competitive. The dynamism of this competitive marketplace has pushed the industry to resort to revenue management.

Revenue management is a practice of allocating limited resources (hotel rooms) among different customers efficiently and in a profitable manner (Cetin et al., 2016). In this process of revenue management, the role of revenue managers becomes a little difficult because they have to manage profits as well as customer satisfaction. Here, arises the need to have skilled hotel staff handling revenue to stay competitive. Certain skills and abilities are required in revenue managers to efficiently deal with the obstacles. An array of research has witnessed the presence of a number of studies focusing on the

skills of revenue managers related to the hospitality industry like Kimes (2011), Upchurch et al., (2002), Varini et al. (2017), Beck et al. (2011) and Hayes and Miller (2010).

Although previous research has revealed that revenue manager skills have far-reaching significance, few studies have examined the empirical framework based on the transdisciplinary qualities of revenue manager skill set as a business model. Furthermore, given the huge potential of skill set in addition to other aspects of revenue management, there is also a need for prioritising various skills so that hotel managers can focus on the critical skill set required for efficient hotel management. For a developing economy like India, the hospitality sector has a lot of promise. The urge to spend leisure time at tourist locations creates an excellent environment for India's hospitality industry to thrive. People's interest in the hospitality industry and hotel management has risen dramatically in India. Despite the huge potential of the hospitality sector for the Indian economy, there is a scarcity of research on revenue management in India, which limits the value of revenue manager skills. This study gap has previously been identified, with previous studies emphasising the need to better understand the skill set of revenue managers, particularly in the Indian context.

Yet, it is believed that the current study is the first attempt to prioritise these identified skills of revenue managers on the basis of necessity in the current scenario. The main purpose of this study is to identify the most required skill of a revenue manager as per the skill set defined by the Singapore Workforce Development Agency (SWDA), 2016 when applied to the Indian hotel Industry. This identification and prioritisation would accommodate the process of recruitment and selection of revenue managers which will lead to better revenue management in the hotel industry. By addressing all the aspects mentioned above, we propose two key research questions (RQs).

RQ1 What are the requisite skills of revenue managers in the hotel industry?

RQ2 To prioritise these skills to find out the most important skill of revenue managers in the hotel industry in the light of the skill set defined by the (SWDA), 2016.

The study adds to the body of knowledge. Unlike most previous studies, the current study uses the analytical hierarchical process (AHP) technique to rank revenue managers' skill sets. AHP is an effective technique for prioritising different criteria, evaluating choice alternatives for each criterion, and determining an overall rating of decision alternatives. The research is based on a survey of experts to determine which skills should be prioritised.

The flow of the paper is as follows: the paper starts with a discussion about revenue management. Then, previous literature has been discussed followed by the research methodology. The results of the study are then presented and discussed which leads to the conclusion of the study. In the end, implications and directions for future research are provided.

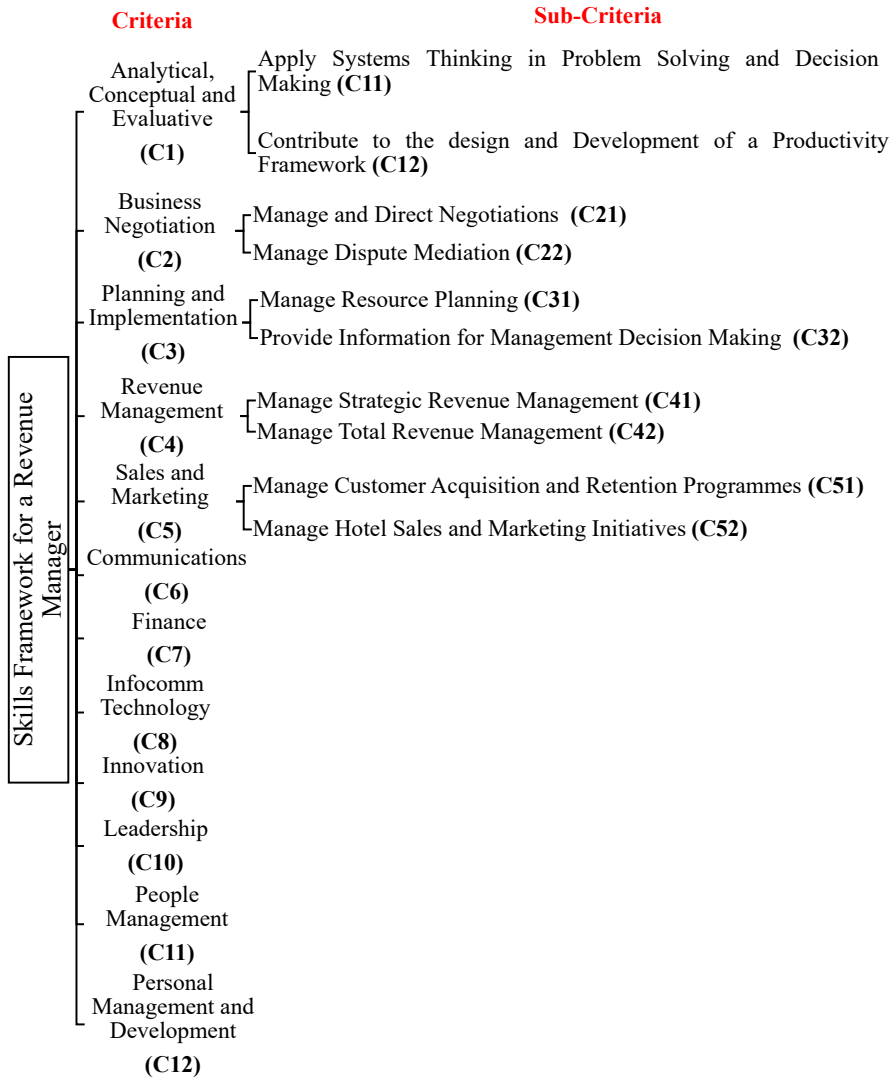
2 Literature review

The main purpose of the literature review is to understand the concept of revenue management and enlist the skills required to be possessed by a revenue manager as

identified by various researchers. Guillet (2020) has observed that the concept of revenue management is still developing and quite new. According to Binesh et al. (2021), hospitality researchers have contributed a lot to the field of revenue management starting from the Introduction of the concept in the 1980s and 1990s (Kimes, 2003), and its impact on customer services (Kimes and Wirtz, 2003), best practices in revenue management (Lieberman, 2003), pricing in revenue management (Tsai and Hung, 2009) and usage of revenue management in the field outside lodging and airlines (Kimes et al., 1998; Kimes and Singh, 2009). According to Klein et al. (2020), the term revenue management has been originated from the field of passenger air transport and now being widely used in various industries. The term 'revenue management' is most often used in industries having fixed cost structures, perishable inventory that is products/services such as hotel rooms, banquet halls in the hotels expire, limited capacity, fluctuating demand, proper customer segmentation, the possibility of advanced bookings and are more prone to loss of peripheral sales (Guillet and Mohammed, 2015). Revenue management is believed to have evolved from and is often used interchangeably with the term yield management. McGill and Van Ryzin (1999) have also used revenue management as a synonym for yield management. Yield management is "the process of allocating the right type of capacity to the right kind of customer at the right price in order to maximise revenue or yield" (Kimes, 1989). According to Cullen and Helsel, (2006) "revenue management is the art (intuition) and science (algorithms) of predicting real-time customer demand at the micro-market level and optimising the price and availability of products to match that demand." Previous research has witnessed that the fundamental reason for focusing on revenue management is to achieve the objective of profit maximisation (McGill and Van Ryzin, 1999). On the same lines, Chiang et al. (2007) also advocated that revenue management is the process of managing various service packages through attributes like price, distribution channel, facilities, and purchase restrictions for the ultimate aim of maximising profits.

Orkin (1988) proposed that 'actual revenue' divided by 'potential revenue' is the mathematical equivalent of yield. The idea behind revenue management is to maximise the effective utilisation of an organisation's resources through micro-market management instead of mass marketing and mass pricing (El Haddad et al., 2008). Revenue managers confront varied complications. Vinod, (2004) argued that the variables that need to be treated and aligned are too many, and decisions to be made are highly complicated, sophisticated, time-consuming, and normally irreversible. They have to manage pricing and availability strategies, understand and predict demand, achieve rate accuracy, allocate capacity, etc. (Berman, 2005). Thus, revenue management undertakes a variety of analytics through technological interfaces. Alrawadieh et al. (2020) have acclaimed technology to be an important aspect of the application of revenue management in the near future. Numerous computer programs are available at the behest of revenue managers for assistance in complex decision-making. Yet these programmed instructions cannot be understood as being able to resolve problems on auto-pilot and also are unable to apply heuristic tools that impact RM decisions (Berman, 2005). The involvement of the RM team and their interventions are also necessary to overcome such issues. RM effectiveness is expected to improve by investing in specific skill sets of RM staff. RM cannot be run solely by technology but it demands well-trained, skilled, and competent staff with expertise in diverse fields. A number of exploratory research studies can be found which enlist the required skills of a revenue manager but there exists a dearth of studies that could prioritise or highlight the most vital skills.

Figure 1 A hierarchical structure of skills framework for a revenue manager (see online version for colours)



Source: SWDA (2016)

2.1 Required skills of a revenue manager

Revenue managers have a critical role to play in the hospitality industry. Revenue Management function in the absence of a revenue manager, might not attain its full potential as the general manager who may be assigned this responsibility may lack time, knowledge, and/or skills to apply all RM techniques (Ivanov, 2014). Developing competencies of revenue managers have been considered vital for effective revenue management in the hotel industry (Demirciftci et al., 2021; Kimes, 2017). Upchurch

et al. (2002) identified four skill clusters as the basic components of the Revenue Management process in the hotel industry: “supply cycle characteristics, pricing management tactics, usage cycle characteristics, and supply-demand (forecasting) cycle characteristics.” Beck et al. (2011) aimed at identifying the skills essential for success in the job of revenue management and identified six skills: effective communication, managing daily activities, leadership, analysing trends, professionalising the revenue management professions, and effective RM strategies development that a revenue manager in Lodging industry should possess. Kimes (2011) identified four skills: communication, analytical, negotiation, and leadership. Cetin et al. (2016) differentiated between the knowledge, skills and abilities (KSAs) of revenue management staff. They were categorised as personal (social and cognitive), generic, technical, and ethical competencies of RM staff. Varini et al. (2017) suggested 11 qualities of a senior revenue manager as a coach and develop others, communication skills, analytical thinking, building relationships, negotiation skills, inspiring and motivating others, data-minded, tech-savvy, integrity and honesty, ability to think on one’s feet, market intelligence and trend awareness and financial skills. Various researchers have explored and identified a number of skills that a revenue manager should possess but there appeared an ambiguity or overlap while defining such skills. The skills standards for a revenue manager of the hospitality service provider and skill framework given by the SWDA, 2016 have been found to be relatively clearer, well-described and elaborated in terms of five domains and hence used for the present study.

For the present study, the demarcated criteria and sub-criteria are given in Figure 1.

3 Research methodology

3.1 Participants

The current study aims to investigate and prioritise the skills required by revenue managers in the hotel industry. The study has been conducted by developing a well-defined questionnaire as an attempt to collect primary data. The questionnaire was sent using various online and social media platforms like e-mail, WhatsApp, etc. Those who could not be contacted through online modes interacted on one to one basis and they were asked to fill out questionnaires on the spot. The target population was revenue managers working in luxury hotels having chains all over India. India is considered the universe of study and Revenue managers of the hotel industry are the population of the study. AHP Questionnaire was developed and responses were obtained from 365 managers working in large hotel chains who were expected to recognise the importance of and hence appoint a separate revenue manager (Ivanov and Vladimir, 2012). As the population size is large, so Non-probabilistic sampling method, i.e., purposive sampling has been employed. At first, 580 revenue managers were sent questionnaires online and offline mode in the month of September 2020. Repeated reminders were sent and as a result, a total of 470 responses were received till the mid of January means a response rate of 81.03%. Final responses took four and a half months (approximately) to reach us. Excluding incomplete responses, finally, 365 responses were used for further analysis in the study.

3.2 Demographic profile

The demographic profile of respondents was framed by asking them certain questions about their gender, age (in years), experience, nature of employment (part-time/full-time), and educational background. Out of 365 respondents, 88% were males and 12% were females. A survey of 775 companies across sectors, carried out by Aon¹ shows that 26% of the Indian workforce across sectors are females and the top sectors contributing to it are ITES, retail, and professional services including consulting. Further, a low percentage of well-educated women enter India's hospitality workforce primarily due to the long working hours, that usually go beyond the regular 9 to 5 job. Even they have to work on weekends and holidays as it is the busiest time for hotels and restaurants.

Most of the respondents belonged to the age group of 30–50 years. Their period of experience ranges from 10 to 20 years. Around 80% of the respondents were employed as full-time managers while 20% were working on a part-time basis. Three fourths of the respondents hold a master's degree in management while the rest of them had a master's degree in finance.

3.3 Measures

In order to prioritise the skills required by a revenue manager the skill set defined by the SWDA, 2016, Version 1 has been used. The adoption of SWDA (2016) to define the skill set is the first step, which is tested in the context of the Indian hospitality industry. In today's more competitive and contemporary marketplace, it has now become mandatory for the hotel industry to become globally competitive. The framework comprises a set of 12 main dimensions namely 'analytical, conceptual and evaluative skills, business negotiation, communications, finance, infocomm technology, innovation, leadership, people management, personnel management and development, planning and implementation, revenue management, and sales and marketing', among which five had sub-dimensions. So, for the purpose of calculating the global ranking total of 17 items (including sub-dimensions) were examined. Each skill has been described further in terms of five domains that are 'knowledge and analysis, application and adaptation, innovation and value creation, social intelligence and ethics and learning to learn'. For the purpose of the survey, the data was extracted from the revenue managers using a five-point Likert scale. The analytical hierarchy process (AHP), proposed by Thomas Saaty, has been applied to the gathered data and the numbers were converted according to their relative importance as shown in Table 1.

3.3.1 Analytical hierarchy process

AHP technique was developed by Saaty in 1971. AHP is a judgment-making instrument in which numerous criteria and sub-criteria are evaluated based on the importance scale for comparison. According to Juan and Lin (2013), AHP transforms individual predilections into ratio scale weightings. These weightings are used in ranking substitutions and supporting the judgment maker in creating projecting or choices and results. The scale used for this determination is a linguistic scale that comprises valuation changing from equal to the extreme and a mathematical assessment is assigned for each valuation. Chen and Hsu (2012) describe that AHP is moreover a dimension theory that orders the formation of a ladder and the reliability of the judgment matrix provided by

judgment/decision-makers. Gupta et al. (2018) stated that the AHP technique is designed to express how decision-makers think. AHP includes the valuations of all judgment makers (Saaty, 1990) in a concluding verdict. According to Vaidya and Kumar (2006) said AHP has become a standard technique for selecting locations.

According to Ho (2008) and Yousefi and Hadi-Vencheh (2010) the AHP comprises three main tasks:

- 1 hierarchy building
- 2 priority scrutiny
- 3 consistency confirmation.

It can be combined with other methods, including goal programming, linear programming, data envelopment analysis (DEA) and integer linear programming, etc. Fechner (1860) gave the pairwise comparison technique and industrialised by Thurstone (1927). Based on the above technique, Saaty (1980, 1994) suggests the analytic hierarchy process (AHP) as a technique for multi-criteria decision making. AHP delivers a way of flouting down the general technique into a ladder of sub-criteria (Alonso and Lamata, 2006), which are easier to assess. The AHP has acknowledged high recognition and has been used for a variety of judgment problems (Cheng et al., 2002). In addition, by flouting a problem down in a rational way from the superior, in phased steps, to the smaller and smaller (Daim et al., 2012; Dey and Ogunlana, 2004).

AHP herein applied to numerous fields by using the following process.

- Step 1 Define the skills: Identifying the skills of a revenue manager on the footing of review of literature and consultation with experts.
- Step 2 Formation of pair-wise comparison matrix A : A pairwise comparison matrix is built by using skills selected for a revenue manager. Let A_1, A_2, \dots, A_n indicate the set of elements, and a_{ij} represents a quantitative verdict about a pair of elements A_i, A_j . The comparative rank of these two elements is quantified on a Saaty scale (as shown in Table 1) from 1 to 9, where 1 represents 'equal importance', 3 denotes 'moderate importance', 5 is 'strong importance' and 9 is 'absolute importance'. The pairwise comparison matrix n-by-n, i.e., A is given below:

$$A(a_{ij}) = \begin{matrix} A_1 \\ A_2 \\ \vdots \\ \vdots \\ \vdots \\ A_n \end{matrix} \begin{bmatrix} A_1 & A_2 & \dots & \dots & \ddots & A_n \\ 1 & a_{12} & a_{13} & a_{14} & \ddots & a_{1n} \\ \frac{1}{a_{12}} & 1 & a_{23} & \dots & \ddots & a_{2n} \\ \vdots & \vdots & \vdots & \vdots & \vdots & \vdots \\ \frac{1}{a_{13}} & 1 & 1 & a_{34} & \dots & a_{3n} \\ \vdots & \vdots & \vdots & \vdots & \vdots & \vdots \\ a_{1n} & a_{2n} & a_{3n} & \dots & \dots & 1 \end{bmatrix}_{i \neq j}$$

- Step 3 After the formation of pairwise comparisons a square judgment matrix is made where the slanting elements will have the value 1. If criteria C1 is more significant than criteria C2 and it is valued at 7, then it infers that criteria C2 is less significant than criteria C1 and is valued at 1/7. The pairwise comparisons are prepared for all the sub-criteria.

Table 1 Measurement Saaty scale for pairwise comparisons

| <i>Intensity of importance</i> | <i>Definition</i> |
|--------------------------------|-------------------------------------|
| 1 | Equal importance |
| 3 | Moderate importance |
| 5 | Strong importance |
| 7 | Very strong/demonstrated importance |
| 9 | Absolute importance |
| 2, 4, 6, 8 | Intermediate importance |

Step 4 Formation of normalised matrix: After the formation of the pairwise comparison matrix, the equivalent normalised matrix will be created. From the normalised matrix principle eigen weights (vectors) of criteria and sub-criteria was computed.

Step 5 Consistency ratio (CR) valuation: For computing CR, at primary, the calculation of consistency index (CI) is obtained by using the following equation no 1.

$$Consistency\ Index(CI) = \frac{\lambda_{max} - n}{n - 1} \tag{1}$$

λ_{max} was obtained by taking an average of all the reliability measures of criteria and sub-criteria. After computing CI, CR is calculated by applying the following equation (2).

$$Consistency\ Ratio(CR) = \frac{Consistency\ Index(CI)}{Random\ Index(CR)} \tag{2}$$

RI (as shown in Table 2) shows the value stated for corresponding values of n, where ‘n’ is the number of criteria, and sub-criteria being compared.

Table 2 Random consistency index

| | | | | | | | | | | | | |
|-----|---|---|------|------|------|------|------|------|------|------|------|------|
| N | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| RCI | 0 | 0 | 0.52 | 0.89 | 1.12 | 1.26 | 1.36 | 1.41 | 1.46 | 1.49 | 1.52 | 1.54 |

Source: Dey et al. (2011)

According to Singh et al. (2018), the pairwise comparison matrix is contemplated to be reliable if the CR is ≤ 0.10 . If the value of CR is > 0.10 , then it indicates that the results made are inconsistent and must be repeated according to the concept of Saaty.

Step 6 Computation of global weights/ranking: For calculating global weights/ranking, the weights of each criterion were multiplied by the weights of sub-criteria. In this manner, the required skills of a revenue manager for company competitiveness are ranked.

The rank/weight of numerous criteria is premeditated with the assistance of the AHP pair-wise judgment is revealed in Table 3 and also gratifies the reliability of the pair-wise judgment matrix.

Table 3 Pair-wise judgement matrix of required skills of a revenue manager (see online version for colours)

| Indicators | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 |
|------------|-------|------|-------|-------|-------|------|-------|------|-------|------|-------|-------|
| C1 | 1.00 | 0.39 | 1.07 | 0.14 | 1.27 | 0.53 | 3.14 | 1.73 | 4.34 | 0.13 | 4.05 | 1.97 |
| C2 | 2.53 | 1.00 | 3.89 | 1.26 | 1.81 | 1.37 | 3.48 | 4.06 | 6.88 | 1.40 | 4.20 | 4.50 |
| C3 | 0.93 | 0.26 | 1.00 | 0.68 | 0.67 | 2.36 | 2.65 | 1.91 | 3.64 | 0.55 | 2.64 | 2.84 |
| C4 | 7.00 | 0.79 | 1.48 | 1.00 | 1.88 | 0.14 | 2.37 | 3.46 | 7.29 | 1.38 | 3.78 | 3.41 |
| C5 | 0.79 | 0.55 | 1.48 | 0.53 | 1.00 | 0.53 | 2.08 | 1.46 | 3.36 | 0.41 | 2.11 | 0.73 |
| C6 | 1.88 | 0.73 | 0.42 | 7.00 | 1.89 | 1.00 | 4.90 | 2.65 | 6.88 | 1.38 | 4.91 | 4.03 |
| C7 | 0.32 | 0.29 | 0.38 | 0.42 | 0.48 | 0.20 | 1.00 | 0.97 | 1.66 | 0.16 | 2.23 | 1.39 |
| C8 | 0.58 | 0.25 | 0.52 | 0.29 | 0.69 | 0.38 | 1.03 | 1.00 | 2.67 | 0.13 | 1.41 | 0.87 |
| C9 | 0.23 | 0.15 | 0.27 | 0.14 | 0.30 | 0.15 | 0.60 | 0.38 | 1.00 | 0.13 | 0.96 | 0.38 |
| C10 | 8.00 | 0.71 | 1.81 | 0.72 | 2.45 | 0.72 | 6.32 | 7.43 | 8.00 | 1.00 | 6.57 | 2.44 |
| C11 | 0.25 | 0.24 | 0.38 | 0.26 | 0.47 | 0.20 | 0.45 | 0.71 | 1.04 | 0.15 | 1.00 | 4.47 |
| C12 | 0.51 | 0.22 | 0.35 | 0.29 | 1.37 | 0.25 | 0.72 | 1.15 | 2.63 | 0.41 | 0.22 | 1.00 |
| Total | 24.01 | 5.58 | 13.06 | 12.74 | 14.28 | 7.84 | 28.75 | 26.9 | 49.36 | 7.22 | 34.08 | 28.04 |

Source: Author’s calculation

In Table 3 pairwise judgment matrix, the average of all the responses was filled. it can be examined from Table 3 that analytical, conceptual and evaluative (C1) is strongly preferred over personal management and development (C12) and hence is specified at a rate of 1.97. The judgment maker’s preference value of analytical, conceptual, and evaluative (C1) to business negotiation (C2) is the inverse of its fondness and hence is given a rate of 0.39. Likewise, all the groupings of the criteria are to be compared. After the pairwise judgment matrix is made, the normalised matrix is made as given below in Table 4.

From the calculations done in Table 4, the consistency ratio for the main criteria was 0.099 which is < 1. Therefore, it is accepted. The above ladders are repeated for the sub-criteria.

4 Results and discussion

In this research paper AHP technique has been applied to determine the relative position of criteria and sub-criteria affecting company competitiveness. With reverence to the position/ranks for the criteria level presented in Table 5, among the criteria of required skills of a revenue manager, ‘leadership’ was ranked as highest (weight = 0.1665), followed by ‘communication’ (weight = 0.1615), ‘business negotiation’ (weight = 0.1560), ‘revenue management’ (weight = 0.1298), ‘planning and implementation’ (weight = 0.0879), ‘analytical, conceptual and evaluative’ (weight = 0.0692), ‘sales and marketing’ (weight = 0.05636), ‘personal management and development’ (weight = 0.0382), ‘infocomm technology’ (weight = 0.0371), ‘people management’ (weight = 0.0362), ‘finance’ (weight = 0.0357) and ‘innovation’ (weight = 0.0184).

Table 4 Normalisation matrix of required skills of a revenue manager (see online version for colours)

| | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | P.V.(W)* | P.E.(λ)** |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|----------|-----------|
| C1 | 0.04 | 0.07 | 0.08 | 0.01 | 0.09 | 0.07 | 0.11 | 0.06 | 0.09 | 0.02 | 0.12 | 0.07 | 6.92% | 13.14 |
| C2 | 0.11 | 0.18 | 0.30 | 0.10 | 0.13 | 0.18 | 0.12 | 0.15 | 0.14 | 0.19 | 0.12 | 0.16 | 15.60% | 13.67 |
| C3 | 0.04 | 0.05 | 0.08 | 0.05 | 0.05 | 0.30 | 0.09 | 0.07 | 0.07 | 0.08 | 0.08 | 0.10 | 8.79% | 14.02 |
| C4 | 0.29 | 0.14 | 0.11 | 0.08 | 0.13 | 0.02 | 0.08 | 0.13 | 0.15 | 0.19 | 0.11 | 0.12 | 12.98% | 14.29 |
| C5 | 0.03 | 0.10 | 0.11 | 0.04 | 0.07 | 0.07 | 0.07 | 0.05 | 0.07 | 0.06 | 0.06 | 0.03 | 6.36% | 13.38 |
| C6 | 0.08 | 0.13 | 0.03 | 0.55 | 0.13 | 0.13 | 0.17 | 0.10 | 0.14 | 0.19 | 0.14 | 0.14 | 16.15% | 15.06 |
| C7 | 0.01 | 0.05 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.04 | 0.03 | 0.02 | 0.07 | 0.05 | 3.57% | 13.49 |
| C8 | 0.02 | 0.04 | 0.04 | 0.02 | 0.05 | 0.05 | 0.04 | 0.04 | 0.05 | 0.02 | 0.04 | 0.03 | 3.71% | 13.37 |
| C9 | 0.01 | 0.03 | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 | 0.03 | 0.01 | 1.84% | 13.41 |
| C10 | 0.33 | 0.13 | 0.14 | 0.06 | 0.17 | 0.09 | 0.22 | 0.28 | 0.16 | 0.14 | 0.19 | 0.09 | 16.65% | 14.04 |
| C11 | 0.01 | 0.04 | 0.03 | 0.02 | 0.03 | 0.03 | 0.02 | 0.03 | 0.02 | 0.02 | 0.03 | 0.16 | 3.62% | 13.21 |
| C12 | 0.02 | 0.04 | 0.03 | 0.02 | 0.10 | 0.03 | 0.02 | 0.04 | 0.05 | 0.06 | 0.01 | 0.04 | 3.82% | 13.02 |
| Total | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 13.02 |

$\lambda_{max} = 13.67, CI = 0.152, RI = 1.54, CR = 0.099$

Note: *P.V. (W) = priority vector (weight), and **P.E. (λ) = principal eigenvalue (λ).

Figure 2 Global ranking of sub-criteria of required skills of a revenue manager for company competitiveness (see online version for colours)

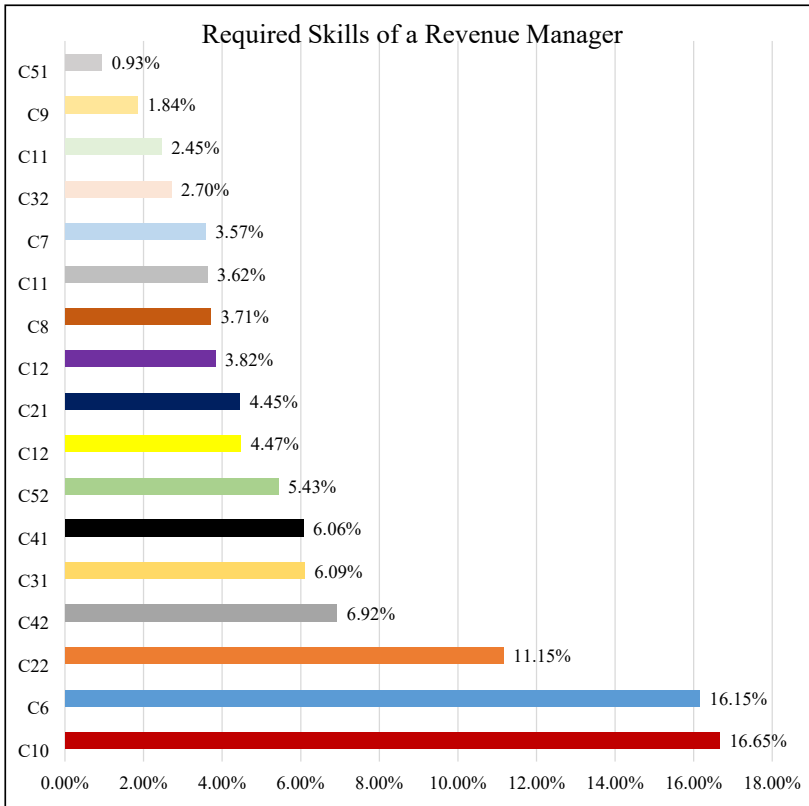


Figure 2 shows combined weights/rankings of all the important sub-criteria, which come under particular main criteria. It can be established that the five most essential skills required for a revenue manager are leadership, communications, manage dispute mediation, manage total revenue management, and manage resource planning.

Table 5 Global priority scores of required skills of a revenue manager with AHP (see online version for colours)

| <i>Criteria/sub-criteria</i> | <i>Local position of criteria (rank)</i> | <i>Local position of sub-criteria (rank)</i> | <i>Global position of sub-criteria (rank)</i> |
|------------------------------------------------------------------------------|------------------------------------------|----------------------------------------------|-----------------------------------------------|
| Analytical, conceptual and evaluative (C1) | 0.0692 (6) | | |
| 1 Apply systems thinking in problem solving and decision making (C11) | | 0.354 (7) | 0.0245 (15) |
| 2 Contribute to the design and development of a productivity framework (C12) | | 0.646 (4) | 0.0447 (8) |

Notes: Local position/rank refers to the decision with respect to a single criterion and sub-criterion. Global position/rank means the multiplication by the relative importance of the criteria.

Table 5 Global priority scores of required skills of a revenue manager with AHP (continued)
(see online version for colours)

| <i>Criteria/sub-criteria</i> | <i>Local position of criteria (rank)</i> | <i>Local position of sub-criteria (rank)</i> | <i>Global position of sub-criteria (rank)</i> |
|--------------------------------------------------------------|------------------------------------------|----------------------------------------------|-----------------------------------------------|
| Business negotiation (C2) | 0.1560 (3) | | |
| 1 Manage and direct negotiations (C21) | | 0.285 (9) | 0.0445 (9) |
| 2 Manage dispute mediation (C22) | | 0.715 (2) | 0.1115 (3) |
| Planning and implementation (C3) | 0.0879 (5) | | |
| 1 Manage resource planning (C31) | | 0.693 (3) | 0.0609 (5) |
| 2 Provide information for management decision making (C32) | | 0.307 (8) | 0.0270 (14) |
| Revenue management (C4) | 0.1298 (4) | | |
| 1 Manage strategic revenue management (C41) | | 0.467 (6) | 0.0606 (6) |
| 2 Manage total revenue management (C42) | | 0.533 (5) | 0.0692 (4) |
| Sales and marketing (C5) | 0.0636 (7) | | |
| 1 Manage customer acquisition and retention programmes (C51) | | 0.147 (13) | 0.0093 (17) |
| 2 Manage hotel sales and marketing initiatives (C52) | | 0.853 (1) | 0.0543 (7) |
| Communications (C6) | 0.1615 (2) | 0.1615 (12) | 0.1615 (2) |
| Finance (C7) | 0.0357 (11) | 0.0357 (17) | 0.0357 (13) |
| Infocomm technology (C8) | 0.0371 (9) | 0.0371 (15) | 0.0371 (11) |
| Innovation(C9) | 0.0184 (12) | 0.0184 (10) | 0.0184 (16) |
| Leadership (C10) | 0.1665 (1) | 0.1665 (11) | 0.1665 (1) |
| People management (C11) | 0.0362 (10) | 0.0362 (16) | 0.0362 (12) |
| Personal management and development (C12) | 0.0382 (8) | 0.0382 (14) | 0.0382 (10) |

Notes: Local position/rank refers to the decision with respect to a single criterion and sub-criterion. Global position/rank means the multiplication by the relative importance of the criteria.

The present study is an attempt to identify the hierarchical structure of the skills expected of a revenue manager in the hospitality industry in India. Results of AHP ranked leadership, communication, negotiation, planning and implementation, and Analytical, conceptual, and evaluative skills as the most required component of a revenue manager’s skill set. Leadership skill as used in the study indicates revenue managers’ ability to lead team leaders as together, they have to develop business unit strategies and operational plans. The study exhibit how organisational values, behaviours, and governance priorities are executed. Leadership skill here is inclusive of effective communication of strategic priorities to get the stakeholders’ support, self-reflection, and self-improvement through learning. Leadership skill is believed to be associated with soliciting commitment and participation from all management levels and hence building supportive organisational

culture and teams (Sigala et al., 2001; Kimes, 1989; Yeoman and Watson, 1997) that are vital for the success or failure of embracing and implementing revenue management. The findings of the study stand corroborated in the existing literature. Kimes (2011) has highlighted a few skills namely analytical skills, leadership skills and communication skills as most important followed by formal Revenue management education and negotiation skills. While discussing the future of hotel revenue management he also suggested colleges and universities focus less on topics like HR and rooms as being least important for future revenue managers to study. Beck et al. (2011) undertook gap analysis and found two main dimensions for hospitality organisations to focus their current training efforts in the RM profession: 'developing effective revenue management strategies' and 'analysing trends'. 'Pursuing the correct strategy' is also believed to be the core of competitiveness (Barros, 2005). Further, the Industry is witnessing a paradigm shift from 'high touch' to 'high tech' with artificial intelligence in place, where big hotel brands are in the race for acquiring, maintaining and using big data (Hotellivate Report, 2019). A revenue manager is expected to be able to compare and determine gaps between the industry benchmarks and its organisation's current best practices and technology. Ferguson and Smith (2014) recommended the training and development of future revenue managers due to increasing emphasis on data analytics cautioning companies to be proactive in formulating marketing strategies that can effectively correspond to anticipated consumer behaviour. Further, the study also highlighted the emergence of online distribution channels that require proactive planning and the art of negotiation from the revenue manager. It is well known that businesses often look for good negotiators in order to excel in organisational pursuits. The revenue managers who are able to manage negotiations in terms of planning and preparing for negotiations, implementing negotiation guidelines and facilitating policy revisions are highly sought after. With the passage of time, RM encompassed everything and everyone in an organisation for total business profitability. Competitiveness is expected to roll in through the revenue manager's ability to focus on all departments and businesses. RM uses knowledge of varied disciplines including economics, statistics, computers, management, etc. but the required extent and focus may vary.

5 Conclusions and implications

At the level of the industry, most of the competitiveness-related empirical research has been focused on the manufacturing and allied sectors (Tsai et al., 2009); whereas the present study contributes to the scant existing literature relating to the service sector. However, the results of the present study can help in the recruitment, selection, and also development of revenue managers for the hospitality industry. The research has both theoretical and practical implications. The study is theoretically based on a holistic framework for analysing revenue managers' abilities. Various facets of personal and professional skills were evaluated and thoroughly analysed in this method. By examining many interdisciplinary aspects, the study adds to the growing literature on revenue management. The research looked at the capabilities of revenue managers in one of the growing economies, India. The study's findings can be used to establish a conceptual framework in other developing markets. In addition, the study adds to the current

literature by using the AHP in the context of the hotel business, which has not been done before. Although previous research has looked into the skills of revenue managers (Cetin et al., 2016), our study is unique in that it is based on the AHP principles. The study's unique contribution is the use of AHP in revenue management. Another distinctive feature of the study is the in-depth assessment of the key criteria and sub-criteria elements. Future research can use the approach used in our work to comprehend the finer points of an occurrence. Hoteliers value revenue management because it allows them to employ advanced technology to maximise profits and returns. The fundamental goal is to anticipate market demand and respond quickly to market developments. Without a question, the hotel business is going through a difficult period. In this regard, it is critical that we devote all of our resources to cutting-edge technology and sophisticated systems that use intelligent automation to increase yield, boost sales, and improve the visitor experience. Our study will accommodate hoteliers to find out the requisite skills and help their managers to acquire them which will ultimately lead to profit generation and goodwill enhancement in the hotel industry. As discussed earlier there is a dearth of ready talent to be acquired by the industry due to which investment in training is the need of the hour. The present study may help to recognise key skills to be built among revenue managers in the hospitality and hence invest right. Moreover, significant inputs can be provided to business schools while designing related courses. Also, training related to the requisite skills can be provided during the course of study to the students enrolled in the courses of hotel management.

6 Limitations and future scope

The coverage of the study is limited to analysis of responses obtained from managers working in luxury hotels having chains in India. Independent and non-luxury hotels are not included in the study which may limit the generalisability of its results. Moreover, the contextual difference can also be the cause of the perceptual differences of the respondents that directly affect the results. Predicting the future of any job is uncertain but attempts can be made to understand the trends and perceived realities of those operating in the current competitive marketplace. In the future, the results of the current study may be verified using artificial neural network (ANN) technique which has gained attention in the recent past. Additionally, interrelations between skills of revenue managers may be modelled using interpretive structural modelling (ISM) and MICMAC analysis.

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Notes

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