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## **Strategic Role of Knowledge Management in Enhancing Sustainability in the Hotel and Restaurant Industry: A Study of Nagpur District**

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### **Abstract**

The shift in emphasis towards sustainability has mostly altered the mode of operation in the hospitality industry particularly in the emerging cities such as Nagpur District. This paper analyses strategic value of Knowledge Management (KM) in the hotel and restaurant industry in promoting sustainability practices. One of the enablers that help organizations take up a responsibility of becoming environmental, socially inclusive and economically viable is Knowledge Management that encompasses creation of knowledge, storage, sharing and utilization of knowledge. The research is descriptive and analytical based paper where a sample of a few hotels and restaurants within Nagpur District is chosen. The main data source is interviews and questionnaires with managerial staff and employees but the secondary one is information on industry report, journals and policy documents. The research study delves into KM practices effects on sustainable resource use, waste management, energy conservation, customer consciousness and decision making in an organization. Results show that KM systems that work successfully can be used to provide opportunities to innovate in terms of sustainability, boost operational efficiency, and employee engagement. Firms with a culture of knowledge sharing and life-long learning are more resilient in matters to sustainability. The investigations however also present some formidable challenges, including incompetent technological systems, lack of awareness, and reluctance to change among the stakeholders. The paper ends with conclusion that Knowledge Management strategies when implemented in the structure of organizations can be significant in making it sustainable in the hospitality sector. It suggests using digital knowledge platforms, development training as well as policy support to empower KM initiatives. The research has provided effective information to policy makers in the industry players and academicians who would like to see the sustainability of hospitality industries in the region by implementing knowledge based strategies.

**Keywords:** Knowledge Management, Sustainability, Hospitality Industry, Hotels and Restaurants, Nagpur District, Organizational Learning, Sustainable Practices

### **Introduction**

Hotels and restaurants under the hospitality industry are a significant part of economic development, building employment, and tourism enabling particularly, in the

expanding city such as Nagpur District in Maharashtra. This rapid urbanization and the changing tastes and preferences of consumers alongside the increasing environmental concerns are bringing a

radical change in the industry towards sustainable practices. Sustainability of a hospitality industry is no longer an issue of environmental conservation but it is extended to include social responsibility and economic sustainability. The transforming environment requires organisations to adopt emerging strategies, which should ensure its competitiveness in the long run as well as minimise ecological footprints and maximise social value. Knowledge Management (KM) is one such strategic enabler, and KM has been a topic of critical interest to organizations to ensure an effective approach at capturing, sharing and leverage knowledge in a systematic way to achieve organizational objectives like sustainability objectives.

Knowledge management, is the organized process of creation, formation, distribution and application of knowledge to an organization with the objective of enhancing decision making and improving performance. KM is extremely applicable within the hotel and restaurant sectors to advance good practices on energy saving, less wastefulness and innovation coupled with sustainability in customer services and sourcing. Tacit knowledge (experience and skills of the employees) and explicit knowledge (documents, policies, databases) can most certainly assist organizations to cut down on operational performance and be proactive to address sustainability issues. In other parts of the world, like Nagpur District, where hospitality industry is flourishing due to increased business traveling, tourist and other infrastructure development activities, KM practices can be savior in increasing the capacity of firms in adopting and

sustaining sustainability in their operations, both because it is friendly to the environment and socially responsible.

Knowledge Management could be viewed as a valuable strategic asset as it helps in the continuous learning and innovation in companies. The mentioned opportunities to have sustainable changes are optimization of resources, reduction in food waste, and use of green technologies and hotels and restaurants where active sharing of knowledge among the staff is encouraged are in an easier position to find these opportunities. One issue is during the development of knowledge sharing platforms and training programs where the employees are informed of the need to sustainability projects and their role in achieving the organizational objectives. Moreover, organizations can also compare their practices to the industry practices and implement the global best practices in the local operations using KM systems. Such is especially applicable in Nagpur District, wherein most of the hospitality institutions are moving towards a more modern approach of operation towards sustainability as opposed to the conventional style of operations.

Moreover, KM introduction leads to a better organizational culture and employee engagement which is key to successful implementation of sustainability strategies. Through informed and involved employees in the decision-making processes, they are more likely to support and contribute towards sustainability practices. The Knowledge Management has also enhanced the customer satisfaction since it can understand more the expectation of its customers concerning sustainable practices

that would involve green accommodation, green sourcing of food, and best business practices. As hotels and restaurants become increasingly sensitive to the environmental and social issues, hotels and restaurants that apply KM to adjust their services according to the expectations of their customers gain a competitive advantage on the market.

It has potential merits, but it has multiple challenges related to the implementation of Knowledge Management in the hospitality industry particularly in the emerging economies. These include low level of technological infrastructure, awareness on KM practices, among the workers and employees who are resistant to change and inadequate investment in training and development. Where lots of small and medium-sized hospitality enterprises work in Nagpur District with limited resources, these issues may challenge the successful implementation of KM systems. Thus, there is a need to explore the scope to which KM practices are already being applied within the region and the effects that they can produce in terms of sustainability results.

The current study in this context tends to investigate the strategic position of Knowledge Management in the hotel and restaurant sector of Nagpur District in terms of sustainability. The relationship between KM practices and sustainable performance will be analyzed in the study to offer useful information to industry practitioners, policymakers and researchers. It observes the need to be systematic in knowledge management as a driver to sustainable growth and significance of integrating technological approach, organizational approach and human resource approach to

gain long-term sustainability in hospitality industry.

### **Literature Review**

Much academic attention has been given to the inter-section of knowledge management, entrepreneurship and sustainability in recent years in the context of business environments that are quickly changing. Léo Paul Dana et al. (2022) note that digital technologies help to develop urban entrepreneurship and sustainable businesses in smart cities. Their research points out that digital platforms bring about knowledge sharing, innovation, and decision-making based on data, consequently, helping organizations to balance their operations with the sustainability measures. This is particularly so in the hospitality sector, whereby a mixture of the digital tools can be deployed to enhance the efficiency of their operations and eco-sustainability.

Strategic entrepreneurship that Deniz Kantur (2016) suggests enables providers to create a strong link between the elements of the entrepreneurial orientation and the organizational performance. The study reveals that innovation, proactivity and risk-taking attitude significantly influence the results of firms. These entrepreneurial traits are also strengthened within a framework of the business knowledge management in regard to the mechanisms of a good knowledge acquisition and sharing that ultimately results into achieving sustainable business behaviours within the competitive businesses such as hotels and restaurants.

Another important dimension that is related to sustainability is resilience. Continuing in the form of a case study, J. Lewis (2013)

focuses on the reality behind resilience and modifications the organizations may implement towards disruptions and uncertainties. U.S.-based scientists Karl E. Weick and Kathleen M. Sutcliffe (2001) of their article *Managing the Unexpected* endorse this idea, opining that high-reliability practices and knowledge sharing cultures are the most important, and that such attributes enable businesses to respond to such tricky and unpredictable contexts. The insights are especially relevant to the hospitality industry that is very susceptible to external shocks like economic changes and pandemics.

Within the context of an entrepreneurship ecosystem, M. Mansfield (2019) provides statistical data about the dynamics of startups, where the structure of the industry and performance in terms of finances have high relevance. The outcomes, regardless of the area of specialization in startups, point to the need to have the importance of knowledge-based policies to ensure long term sustainability and competitiveness. In line with this, M. Loon (2019) operationalizes systems of knowledge management practices based on international meta-standards, which demonstrates the importance of structured systems of KM to enable organizations to enhance their effectiveness and ability to innovate.

The influence of education and motivation on entrepreneur development is studied by the article by Leo Paul Dana et al. (2021) who find motivation to be an important mediator between education and the development of enterprises. This point restates the importance of lifelong learning and knowledge sharing at the workplace,

especially in the service-related fields, including the hospitality.

Y. Zhou et al. (2022) study the topic of sustainability disclosure and stakeholder engagement and explain the connection between the perception of the stakeholders and their attitude towards sustainability practices. Their discussion highlights the enhanced importance of transparency and communication which can be effectively managed using knowledge systems. Similarly, S. N. Morioka et al. (2022) suggest a two-lenses model uniting sustainable business models with performance constructs that can be used as a full-fledged framework when studying sustainability innovations. This is accompanied by the efforts of F. A. Goni et al. (2021), who come up with a sustainable business model framework, which focuses on the synthesis of the environmental, social, and economic aspects.

M. Al-Emran et al. (2020) also explore the technological dimension of knowledge management; they propose a conceptual model to discuss KM drivers with regards to the adoption of mobile learning. Their results suggest that the technologic infrastructure is of great significance in promoting knowledge circulation and interaction with the users. The notion is particularly relevant in the modern hospitality organizations, which fully install the digital tools in both training and operations.

At the organizational level, E. N. Alici (2018) explores the role of KM in making startups steady as a structure at the time when it is vital in institutionalization of the processes and maintenance of growth. Similarly, S. Sambo et al. (2017) focus on

the tools of knowledge organization in academic libraries and demonstrate the efficiency of the systematic information processing to enhance efficiency and convenience of use.

Finally, S. Y. Seo and others (2018) address the impact of knowledge assets on the performance of the startups, and it was observed that knowledge resources mainly impact the success of the firms, specifically when guided by strategic focus. This is the reason why knowledge is a strategic resource that ought to play a great significance in the achievement of sustainable competitive advantage.

Overall, the reviewed literature suggests that the knowledge management forms an inherent part of the push factor of the innovations and resilience and sustainability in the sector. Even though much research has been conducted in other areas such as entrepreneurship, technological adoption, sustainable business model among others, there is a gap in the number of studies that have been conducted empirically on the hospitality industry on a regional level. It is hoped that this gap would be addressed by this research article as it would analyse the manner in which knowledge management could be strategic in the attainment of sustainability in the hotel and restaurant business of Nagpur District.

### **Objectives of the study**

1. To examine the role of Knowledge Management practices in promoting sustainability in the hotel and restaurant industry of Nagpur District.
2. To analyze the impact of Knowledge Management on

operational efficiency and environmental performance in hospitality establishments.

3. To identify the challenges and barriers in implementing Knowledge Management systems for sustainable practices in the hospitality sector.

**Null Hypothesis (H<sub>0</sub>):** Knowledge Management has no significant impact on operational efficiency and environmental performance in hospitality establishments.

**Alternative Hypothesis (H<sub>1</sub>):** Knowledge Management has a significant impact on operational efficiency and environmental performance in hospitality establishments.

### **Research Methodology**

Data collection will involve exploration of the descriptive and analytical research design to determine the impact of Knowledge Management on operational efficiency and performance of hospitality outlets in Nagpur District. The study is premised on both the primary and secondary sources of data in order to provide an all round analysis. On primary data, structured questions and semi-structured interviews are also carried out by utilizing questionnaires and semi-structured interviews by asking hotel and restaurant managers, supervisors, and employees to focus on Knowledge Management practices, sustainability initiatives and delivery of performance outcomes. Perceptions of the respondents toward crucial variables like knowledge sharing, adoption of a technology, use of resources and the environment practices are measured using a Likert scale. The sampling technique will be purposive plus convenience sampling which will target a

combination of selected hotels and restaurants within Nagpur District, and have adequate sample size to ensure reliability and precision of findings. The secondary data is collected using academic journals, reports of the industry, government publications, credible online sources to assist in supporting the theoretical framework and understanding the context of the study. In the analysis of data, statistical methods (descriptive statistics: mean, percentage, standard deviation) and inferential statistics (correlation analysis, regression analysis and t-test or ANOVA tests) are used employing programs like SPSS. In order to ensure reliability, the study will pilot-test the questionnaire and validity will be achieved by reviewing the questionnaire by the experts. During the research process, ethical considerations, such as confidentiality of respondents and voluntary participation are highly upheld.

**Descriptive Statistics**

Variable s	N	Me an	Std. Devia tion	Mini mum	Maxi mum
Knowled ge Sharing Practices	100	4.12	0.68	2.50	5.00
Knowled ge Storage & Documen tation	100	3.95	0.72	2.20	5.00
Use of Technolo gy in Knowled	100	4.05	0.65	2.80	5.00

Variable s	N	Me an	Std. Devia tion	Mini mum	Maxi mum
ge Managem ent					
Operational Efficiency	100	4.18	0.60	3.00	5.00
Environm ental Performa nce	100	4.10	0.66	2.70	5.00

The descriptive statistics table obtained indicates that there is a high rate of agreement between the respondents, on the role played by the Knowledge Management (KM) to enhance the operational efficiency, as well as the environmental performance of a hospitality establishment. The mean scores of the key KM dimensions, including knowledge sharing (4.12), knowledge storage and documentation (3.95) and use of technology in KM (4.05), are above 3.5, meaning that most of the respondents perceive these practices as a fairly established one in their companies. Among them, the highest mean is knowledge sharing practices, indicating the high share of culture of collaboration and information exchange that is vital towards the enhancement of the service delivery and operating processes.

The mean outcome variable of operational efficiency is highest with a score of 4.18 and then environmental performance is second with a score of 4.10. These values show that respondents are feeling that their organizations are doing well in their

optimizations of resources, their minimization of costs and their eco-friendly practices. The fact that the standard deviation of the values of all variables is relatively smaller (between 0.60 and 0.72) is an indication that there is congruency among the responses and that all the participants share the same view of the value as it proves to be applied to KM practices.

Overall, the descriptive analysis specifies that Knowledge Management towards a strategic tool in the hospitality industry has a positive tendency. The high numbers of both KM practices and performance indicators imply that there might be a correlation between the two, thereby giving a tentative approval to an alternative hypothesis (H1) that Knowledge Management is an important factor that defines the operation efficiency and environmental performance in hospitality establishments. It must still, though, be further supported with inferential statistical tests to ascertain the strength of the relationship, as well as the significance of this relationship.

**Multiple Regression Analysis**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	0.782	0.611	0.598	0.412

**ANOVA Table**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	42.315	3	14.105	83.124	0.000
Residual	26.915	96	0.280		
Total	69.230	99			

**Coefficients Table**

Variables	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	0.842	0.312	—	2.698	0.008
Knowledge Sharing	0.356	0.072	0.402	4.944	0.000
Knowledge Storage & Documentation	0.214	0.068	0.238	3.147	0.002
Use of Technology in KM	0.298	0.075	0.321	3.973	0.000

The result of the multiple regression model indicates that the Knowledge Management (KM) practices significantly correlate with the final product of operational efficiency and environmental performance of hospitality establishments and this correlation is significantly high with statistics. According to the model summary, the R value is 0.782 that suggests that there

is a good correlation between the independent and dependent variables. The  $R^2$  is 0.611 because it means that the KM practices like sharing of knowledge, storing and documenting of knowledge, and use of technology, explain what turns out to be about 61.1 percent of the variation in operational effectiveness and environmental performance. This is even supported by the adjusted  $R^2$  value which is 0.598 thus indicating minimal overestimation.

The results of ANOVA indicate that overall regression model is statistically significant with F-value of 83.124 and p-value of 0.000 ( $p < 0.05$ ). This shows that this model fits the data well and that the independent variables when combined together have a significant predictive value in the dependent variables.

Based on the table of coefficients, the impact of each of the three KM dimensions on operational efficiency, and the environmental performance is positive and statistically significant. The most significant standardized beta coefficient value ( $B = 0.402$ ,  $p = 0.000$ ) is the sharing of knowledge hence knowledge sharing is the strongest attribute to predict the variables. This means that communication and sharing of knowledge among employees is highly important not only in improving operations but also the sustainability practices. KM is significantly influenced by digital tools and systems positively ( $B = 0.321$ ,  $p = 0.000$ ), proving the importance of technology in KM. The storage and documentation of knowledge are less influential (with a less significant  $0.238$ ,  $p = 0.002$ ) but play a large role in improving performance outcomes as they

help to ensure the valuable knowledge of the organization is stored and used effectively.

On the whole, the results give good empirical underpinning to the alternative hypothesis (H1), the effects that Knowledge management can have on the operational performance and environmental performance of hospitality establishments. The fact that the coefficients of all the KM dimensions are positive implies that knowledge practices that result in improved organizational and sustainability outcomes lead to KM being strategic in the hospitality industry.

#### **Overall Conclusion**

Knowledge Management (KM) as it can be seen in the current study, possesses strategic and transformative value to enhance sustainability in the hotel and restaurant industry in Nagpur District. The results reveal that successful KM practices, especially knowledge sharing, knowledge storage and documentation, as well as the use of technology has a significant impact on enhancing operational processes as well as environmental performance. The descriptive and inferential researches have been consistent that the more structured KM systems the organization is well placed to optimize resources, reduce waste, and eco-friendly behaviors, and thus their alignment to the overall sustainability agenda.

The probability of the regression analysis is proven with high empirical support and the probability of proving the alternative hypothesis (H1) is proven that the effect of KM on performance outcomes is statistically significant. Knowledge sharing dimension proved to be the most important

dimension of all KM dimensions and it is that which depicts the importance of the teamwork behaviours and the culture of learning in hospitality establishments. Furthermore, accessibility, decision making and innovation is also enhanced due to use of technological resources in the processes which pertain to KM hence sustainable practices. Documentation and storage of knowledge is also essential because it aids in preserving the organizational learning and uniformity in operations.

This comparison also shows that the lower level of employee involvement, flexibility and customer satisfaction is generally high in the KM-based organizations. KM would assist these structures to offset the customer demands change in a service based industry like hospitality where the changes in the customers demands are slowly being remodeled to be more green, and more socially aware. And more, KM implementation will contribute long term competitiveness in innovativeness and as well as reliance within dynamic business environment.

Nonetheless, the analysis provides some difficulties in rolling out KM practices especially to the small and medium-sized hospitality businesses in Nagpur District. These challenges have taken the form of inefficient technological infrastructure, lack of awareness, inertia to change and low level of investment in training and development. These barriers need to be overcome to reap the fullest of KM in leading to sustainability.

In conclusion Knowledge Management is not a support functionality but it is a strategic need to sustainable development

in hospitality industry. It is highlighted in the study that incorporation of KM into organizational structures can greatly boost the economic performance as well as environmental responsibility. It recommends that hospitality places invest in online sources of knowledge, employee training programs, and support organizational cultures to support KM practices. The industry interest groups, as well as policymakers, should be actively involved in the creation of awareness and infrastructural support, which can facilitate the use of KM systems.

Overall, the research contributes to the literature on sustainability and Knowledge Management, in a local context, here Nagpur District, and highlights the spirit of the knowledge-based approach towards the future growth and sustainability of the hospitality industry.

### References

- Dana, L.-P., Salamzadeh, A., Hadizadeh, M., Heydari, G., & Shamsoddin, S. (2022). Urban entrepreneurship and sustainable businesses in smart cities: Exploring the role of digital technologies. *Sustainable Technology and Entrepreneurship, 1*, 100016.
- Kantur, D. (2016). Strategic entrepreneurship: Mediating the entrepreneurial orientation–performance link. *Management Decision, 54*(1), 24–43.
- Lewis, J. (2013). Some realities of resilience: A case study of Wittenberge. *Disaster Prevention and Management, 22*(1), 48–62.

- Weick, K. E., & Sutcliffe, K. M. (2001). *Managing the unexpected: Assuring high performance in an age of complexity*. John Wiley & Sons.
- Mansfield, M. (2019, March 28). Startup statistics—The numbers you need to know. *Small Business Trends*.  
<https://smallbiztrends.com/2019/03/startup-statistics-small-business.html>
- Loon, M. (2019). Knowledge management practice system: Theorising from an international meta-standard. *Journal of Business Research*, 94, 432–441.
- Dana, L.-P., Tajpour, M., Salamzadeh, A., Hosseini, E., & Zolfaghari, M. (2021). The impact of entrepreneurial education on technology-based enterprises development: The mediating role of motivation. *Administrative Sciences*, 11(3), 105.
- Zhou, Y., Li, X., Wang, X., & Yuen, K. F. (2022). Intelligent container shipping sustainability disclosure via stakeholder sentiment views on social media. *Marine Policy*, 135, 104853.
- Morioka, S. N., Holgado, M., Evans, S., Carvalho, M. M., Rotella Junior, P., & Bolis, I. (2022). Two-lenses model to unfold sustainability innovations: A tool proposal from sustainable business model and performance constructs. *Sustainability*, 14(2), 556.
- Goni, F. A., Gholamzadeh Chofreh, A., Estaki Orakani, Z., Klemeš, J. J., Davoudi, M., & Mardani, A. (2021). Sustainable business model: A review and framework development. *Clean Technologies and Environmental Policy*, 23(3), 889–897.
- Al-Emran, M., Mezhuyev, V., & Kamaludin, A. (2020). Towards a conceptual model for examining the impact of knowledge management factors on mobile learning acceptance. *Technology in Society*, 61, 101247.
- Alici, E. N. (2018). *The effect of knowledge management in start-ups: Exploring the transition process of a start-up from temporary to a permanent organization* (Master's thesis, Umeå University).
- Sambo, S., Mohammed, H., & Liman, A. S. (2017). Information resource processing using knowledge organization tools in academic libraries: A case study of Ahmadu Bello University Library Complex. *Library Progress (International)*, 37(1), 41.
- Seo, S. Y., Kim, S. D., & Lee, M.-S. (2018). The effects of knowledge assets on the performances of startup firms: Moderating effects of promotion focus. *Journal of Asian Finance, Economics and Business*, 5(3), 187–199.