PROCESS IMPROVEMENT IN HOSPITALITY SERVICE USING HOTEL INFORMATION SYSTEMS

R. Punniyamoorthy[1], Mahesh Kumar. K. R[2]

[1]Assistant Professor, SRM Ramapuram B-school, SRM University, Ramapuram, Chennai, India.

[2]MBA Scholar (Part Time), SRM University, Ramapuram, Chennai, India.

ABSTRACT

The motive of this project is to control and utilize various activities and operations performed with help of HIS. To find out the impact of HIS in process improvement of a hotel, survey has been conducted with same questionnaire before and after implementation of HIS in hotels. Questionnaire related to Cost efficiency and Lean Time Utilization has been shared and obtained results from both Hotel Employees and Hotel Owners. CSAT has been obtained from Customers who stayed in hotel during the project duration. Impact of HIS in hotel process improvement is measured with Percentage analysis of Ratings provided by Employees, Owners and Customers and it is processed through correlation analysis , Mann-Whitney test and paired T test. .

KEYWORDS- Cost Efficiency, CSAT , Forecasting, Lean Time Utilization and Process

INTRODUCTION

The most recent pattern and present day thought of the cordiality is not a zone to offer `accommodation, nourishment and drink, however like city inside a city and giving the every potential offices, settlement, administration and accommodation, not such like rooms. Lodging administration is one space of action that benefits straightforwardly from the automation of: reservations, looking at in and strategies, reports creation. The article talks about the development of Information systems in Hospitality and likely future improvements. Envision it being utilized as a part of a recently settled lodging it will give both the administration and its visitor comfort than utilizing manual technique which takes a ton of

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time. Much the same as in numerous 3 and 4 Star Hotels, they are experiencing issues managing in sorting out documents including room accessibility, registration and registration points of interest of their visitor. In this venture an overview on how the manual methodology function, regardless of the way that they as of now have a PC however just utilizing it for recording of offers, making an electronic or automated framework that can screen room accessibility, registration and registration points of interest and can free of customary way that expends unreasonable measure of time.

Hotel Information system gives answer for 4 principle working procedure 1) the procedure of inn housekeeping, 2) the way toward providing vital sources of info, 3) the procedure of visitors landings and takeoffs and 4) the way toward delivering and serving nourishment and refreshment and furthermore different process which includes 1) Tracking of Employee Work Status, 2) Compare the quotes from various providers and specialist co-ops, 3) Budget Forecasting, 4) Finding Lean time, 5)Relationship with Customers.

SCOPE AND NEED OF THE STUDY

This study is to discover the current issue in procedure of 3 and 4 Star lodgings with survey and to discover the downsides in existing procedure utilized as a part of Property Management System of 3 and 4 Star hotels and to discover the services among hotels which utilize and don't utilize HIS procedure by looking at process proportion prior and then afterward HIS execution. As data is the key for basic leadership in today's market there is a need of giving right data at perfect time, at correct place and quicker likewise to deliver total supply side solutions that unite guests, travel professionals, suppliers, operators and owners and to run a proficient operation where expenses are kept to a base – else less benefit is produced and have less to put resources into the development of business

REVIEW OF LITERATURE

Hotel Information System is a product framework where the administration of whole inn is mechanized (KuljitKaur, Pooja 2010). As indicated by bituin Abi, (August 2010), The present issue watched is the manual list if people to attend records, the manual reservation of visitors, the manual booking of spaces for the visitors which sets aside a long opportunity to fulfill. Lagman D, (September 2012) The approach of new innovation offered ascend to simple and bother free connection between and among people. This is the reason most lodging and resorts want to utilize computerization in their business. Thusly, the Internet has

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been turning into a capable channel for business promoting and correspondence (Palmer, 1999), and for new business openings - as it is regularly called as "e-business" or "web based business" today (Schneider and Perry, 2001)

HIGHLIGHTS ABOUT THE SECTOR

The Indian tourism and cheerfulness industry has showed up as one of the key drivers of advancement among the organizations portions in India. It adds to 6.23 percent to the National GDP and 8.78 percent of the total work in the country. Steady change, valuable advancement and upgrading gages have grabbed the settlement business of India underwriting wherever all through the world. The business is widely compartmentalized in two areas Tourism: The tourism part consolidates therapeutic and human administrations tourism, encounter tourism, legacy tourism, ecotourism, commonplace tourism, untamed life tourism and trip tourism. Lodging: These fuse business lodgings, suite hotels, resort motels, air terminal hotels, increased stay hotels, level motels, resort hotels, timeshare hotels, club motels, custom concentrations and social affair centers. Mean responsibility by travel and tourism range to India's GDP is depended upon to increase from US$ 136.3 billion in 2015 to US$ 275.2 billion in 2025. Travel and tourism is the third greatest outside exchange laborer for India. A total of US$ 1.76 billion was earned under remote exchange through tourism in the midst of the season of September 2016. As per the Planning Commission, the part makes a more prominent number of occupations per million rupees of theory than whatever other territory of the economy. It is prepared for offering work to an extensive variety of business searchers, from the unskilled to the particular, even in the remote parts of the country. The part's business period potential has also been highlighted by the (WTTC). WITC says India's travel and tourism fragment is to be the 2nd-greatest supervisor on the planet, using approximately Fifty lakhs people, particularly or roundly by 2019.

OBJECTIVE

- To provide Cost efficiency solution to hotels in which HIS are not implemented
- To measure the lean time and utilization of lean time with help of HIS
- Effective way of obtaining feedback from Customers and measuring CSAT

LIMITATIONS

- This study provides all required information for improving the process of Hospitality but the decision making with help of information entirely depends on individual ideas

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- This project cannot be implemented below 3 star hotels as many features in HIS will not be utilized and it is waste of money for them

- Reviews obtained from Customers may not be 100% true

- Information provided on response of questionnaire varies from location to location

- This system cannot be used by an untrained professional

5. RESEARCH METHODOLOGY

Research methodology used here is mixed methodology with

(i) Questionnaire and Survey (ii) Association rule learning (iii) Percentage analysis (iv) Correlation analysis (v) Mann-Whitney test (vi) Paired 'T' test

Questionnaire related to Cost efficiency, Lean time Utilisation and CSAT has been prepared and shared among 10 hotels Hotel Treboo Bluten, Hotel Tryaa, Hotel Dee Cee Manor, Hotel Milan, Hotel Innside, Hotel Comfort, Zaith Residency, The Park Royal, Hotel Himalaya Residency and Hotel Apple residency in Chennai. In each hotel- Owners, Employee and Customers are chosen for conducting survey and respondents for questionnaires. Total of 105 participants has been chosen among 10 hotels and survey with questionnaire has been completed with duration of 90 days in Chennai. Hotels which considered for this survey are 3 and 4 star hotels. Survey has been conducted with same 45 Employee and 10 Owners before and after implementation of HIS to obtain the difference provided by HIS on Lean Time Utilisation and Cost efficiency of a hotel. 50 Customers are chosen before and 50 Customers are chosen after implementation of HIS to obtain the CSAT on hotel.

Considering 10 hotels Owners, Employees and Customers total sample size of 105 has been chosen for this project and analysis is done by comparing 105 sample size responses both before and after HIS implementation.

Association rule learning

Association rule learning is used in this project to identify the relationship between different variables which measures Cost efficiency, Lean Time Utilization and CSAT. Different Variable used here to measure the performance are CSAT from Customers, Owner Satisfaction before and after HIS implementation, Cost and Wastage to measure the Cost efficiency and Employee performance to measure the Lean time Utilization. From the

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response of Participants it is clearly noted that CSAT, Cost efficiency, Lean time utilization are directly dependent on each other.

Percentage analysis

To calculate the performance of HIS on hotel in which HIS was not implemented previously, percentage of Respondents ratings on Cost efficiency, Lean Time Utilization and CSAT has been considered. 5 Star rating scales have been used to measure the ratings of HIS among Respondents, where 1 defines Very Poor and 5 defines Excellent. Total count of Respondents for Cost efficiency and Lean time utilization is 55 and Count of Respondents on CSAT is 50.

Distribution of Respondents by Age bracket

Age	Owners	Employee	Customers
25 - 40	3	32	31
41- 56	7	13	19

The distribution clearly depicts that Employee aged 25 to 40 are high in today's hotel, where as the owners are mostly in the range of 41 to 56.
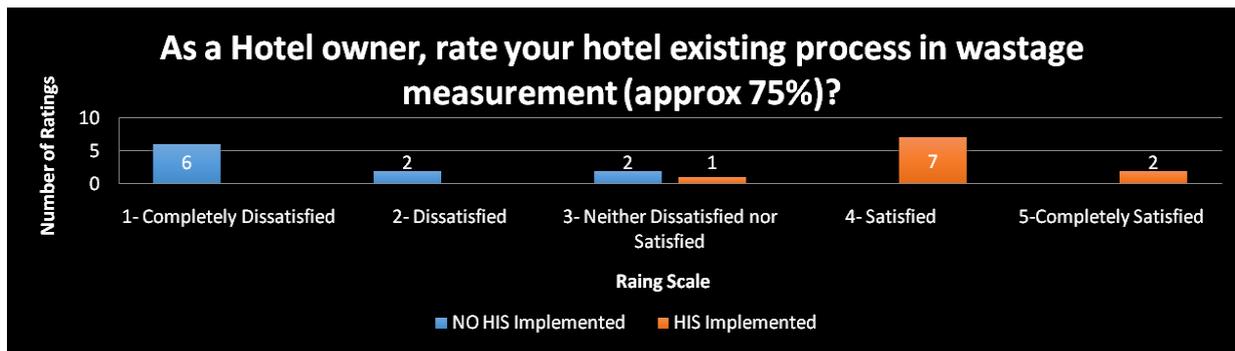
Gender Distribution of Respondents

	Owners	Employee	Customers
Male	9	36	44
Female	1	9	6

 Gender distribution explains that Hotel industry is dominated by Male in both Owner and Employees.

For graphical representation of Responses related to cost efficiency, Lean Time Utilization and CSAT below charts are provided.

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Owner responses on Cost Efficieny

From chart it is clear that Satisfaction level of Owner on Cost efficiency increased after implementation of HIS

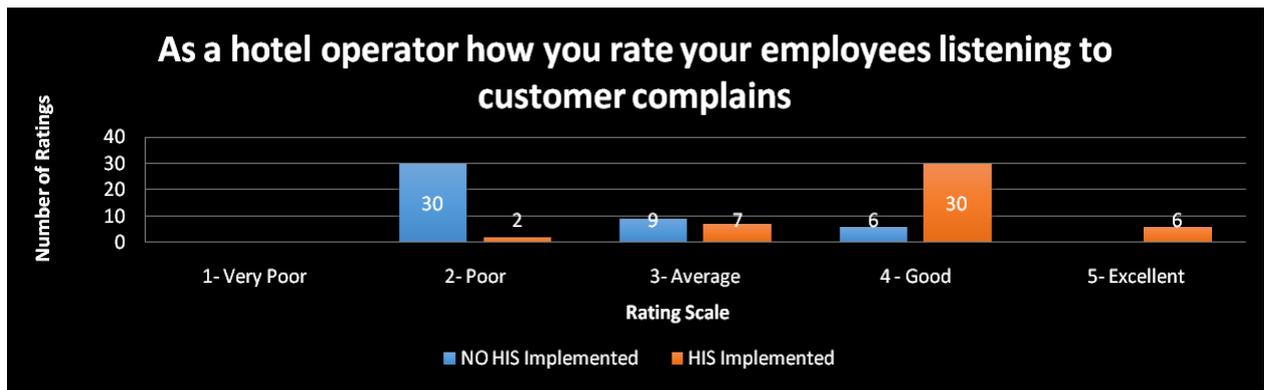**Hotel Employee response on Cost efficiency**
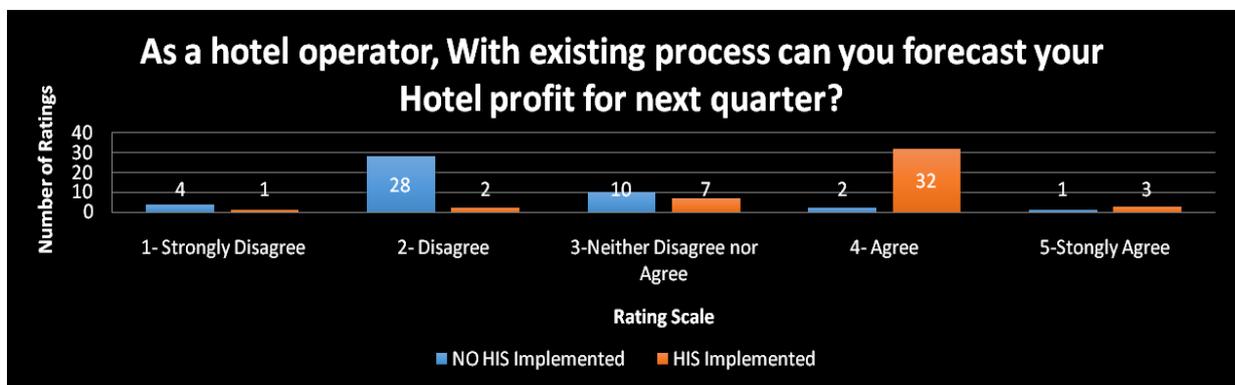
From chart it is clear that Employee acceptance level on Profit forecasting is increased after implementation of HIS

Owner Responses on Lean Time Utilisation


From chart it is clear that Owner rating on measurement of Lean time and Utilization of lean time is increased after implementation of HIS

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Hotel Employee responses on Lean Time Utilization

From chart it is clear that Employee response to Customer has been increased after implementation of HIS, Employee response to Customers are improved by identifying Lean time of employee and providing training on Hospitality to employees.

CSAT
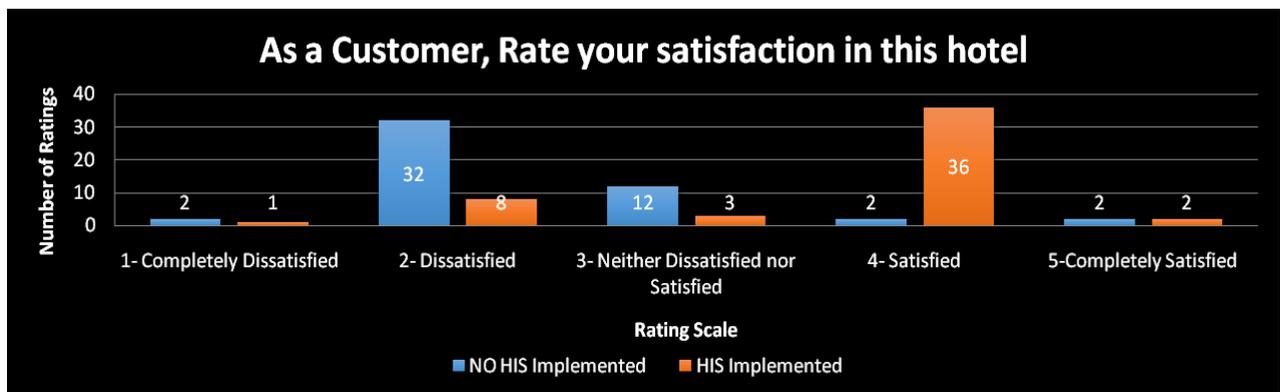
Satisfaction level of Customer is increased after implementation of HIS

TOOLS AND ANALYSIS

CORRELATION

Null Hypothesis Ho: There is no significant association between rating the employees communicating to customers after implementation of HIS and Rate Hotel Information Systems process in improving process efficiency in the hotel.

Alternative Hypothesis H1: There is significant association between rating the employees communicating to customers after implementation of HIS and Rate Hotel Information Systems process in improving process efficiency in the hotel.

		rating of employees communicating to customers after implementation of HIS	Rate Hotel Information Systems process in improving process efficiency in hotel
rating of employees correlation communicating to customers after implementation of HIS	Pearson sig.(2-tailed) N	1 45	.778** .000 45
Rate Hotel Information correlation Systems process in improving process efficiency in hotel	Pearson sig.(2-tailed) N	778** .000 45	1 45

INTERPRETATION

The correlation between rating the employees communicating to customers after implementation of HIS and Rate Hotel Information Systems process in improving process efficiency in the hotel is r = 0.778 and significant value is 0.000, this indicates that rating the employees communicating to customers after implementation of HIS and Rate Hotel Information Systems process in improving process efficiency in the hotel are not independent to Each other. Here the value of r is 0.778 so it is considered to be a strong correlation.

MANN WHITNEY TEST

Mann- Whitney Test

   (Table-5)

Gender		N	Mean Rank	Sum Of Ranks
Level of satisfaction After implementing HIS	Male	44	23.95	1054.00
	Female	6	36.83	221.00
	Total	50		

(Table-6)   Test Statistics[a]

	level of satisfaction after implementing HIS
Mann-whitney U	64.000
Wilcoxon w	1054.000
Z	-2.573
Asymp.Sig.(2.tailed)	.210

a. grouping variable : gender

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Interpretation

Mean rank for female is higher (36.83) than the mean rank of male (23.95), indicating that level of satisfaction after implementing HIS for female is higher than male. The U statistics is the number of times members of the lower ranked group (male) precede members of the higher ranked group (female). The Z is standardized score associated with the significance value (p=.210). the p value is large, so we conclude that level of satisfaction after implementing HIS for female did not come to the satisfied level significantly higher than male.

PAIRED 'T' TEST

Null hypothesis : There is a significant difference between a hotel operator with HIS, effectiveness to compare cost provided by different suppliers and hotel operator with HIS, Forecasting the hotel profit for Next quarter

(Table -7)   Sample statistics

		mean	**N**	**Std.dev**	**Std.error mean**
pair1	As a hotel operator with HIS, effectiveness to compare cost provided by different suppliers	4.0444	45	.63802	.09511
	As a hotel operator with HIS, Forecasting the hotel profit for Next quarter	3.7556	45	.74332	.11081

Paired sample correlation

		N	**Correlation**	**Sig.**
Pair1	As a hotel operator with HIS, effectiveness to compare cost provided by different suppliers	45	.790	.000
	As a hotel operator with HIS, Forecasting the hotel profit for Next quarter			

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(Table-8)   **Paired samples test**

	Paired Differences					t	df	Sig.(2 tailed)
	Mean	Std. dev	Std. error mean	95% confidence interval of the difference				
				lower	upper			
Pair1 As a hotel operator with HIS, effectiveness to compare cost provided by different suppliers - As a hotel operator with HIS, Forecasting the hotel profit for Next quarter	.28889	.45837	.06833	.15118	.42660	4.228	44	.000

Interpretation

The mean score of hotel operator with HIS, effectiveness to compare cost provided by different suppliers are 4.0444 and mean score of hotel operator with HIS, Forecasting the hotel profit for next quarter is 3.7556 and the difference between their mean is 0.28889. Based on the result generated by SPSS, the significant value is .000 and it is lesser than 0.05 so reject null hypothesis. Hence there is a significant difference between hotel operator with HIS, effectiveness to compare cost provided by different suppliers and hotel operator with HIS, Forecasting the hotel profit for next quarter

RESULTS AND FINDINGS

From the questionnaire and survey conducted among different Employees, Owners and Customers at different phase of project below conclusion is driven. At initial stage where survey conducted among the hotels where HIS is not implemented, 45% of ratings are given as below average on Cost efficiency, Lean Time Utilisation. CSAT was 64% on below average of a hotel. To create awareness about Hospitality Information system among Hotel Owners and Employee- relation between CSAT, Employee Lean time Utilization and Cost efficiency has been explained to Owners with help of details obtained above and HIS has

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been implemented after owners approval. When the same survey conducted among hotels Owners, Employees and Customers after 45 days of HIS implementation, 68% of Owners and Employee are Satisfied with HIS and 14% Owners and employees are extremely satisfied on Lean Time Utilization and Cost efficiency where as it was just 16% is the satisfaction level before HIS implementation. 72% of Customers are satisfied with hotels which implemented HIS and 4% of Customers are completely satisfied with Hotel Service and Quality where as it was just 6% before implementation of HIS. From the percentage level of Satisfaction level before and after implementation of HIS among Employees, Owners and Customers, it is very relevant that satisfaction level is increased 50% among Employees, Owners and Customers after implementation of HIS.

CONCLUSION

Hotel information system Increased the level of satisfaction and it improves efficiency of the hotel. Customers complaints are effectively taken after implementing HIS, this process used to measure and improve lean time of hotels and employees also it improves process efficiency in hotels. Hotel Owners needs to concentrate in cost efficiency along with profit As a hotel operator with Hotel Information Systems, it is easy and effective to compare cost provided by different suppliers. According to hotel operator it is easy to forecast for next 3 months in advance.

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