CHAPTER V

DATA RESULTS AND STATISTICAL ANALYSIS

Following to the previous chapter, the implementation has been made by combined altogether into reservation model, training programme, job descriptions, Standards of Procedures (SOPs), penalty policies and online reservation system. Therefore, in this chapter, the result of such implementation will be mentioned. The chosen way of measurement is quantitative method which divided into three categories. The first group comprises of reservation model, training programme, job descriptions, and SOPs which can be measured by using questionnaire to analyse employees' attitudes. The second group, the online reservation system deals with customers' attitudes. The feedback in each questionnaire is also important for evaluating performance of the new reservation system. And the last group is the penalty policies which can be measured from the lists of sales volume, numbers of reservations, and room cancellation rate compared both in before and after the implementation has been done.

5.1 The Outcome of Sales Volume, Numbers of Reservations, and Room Cancellation Rate after Applying the Penalty Policies and Online Reservation System

The gathered data is presented in the forms of chart in order to make the result clearer and more comprehensible. Researcher will conclude the collected statistics by bringing numbers in the same period but in different time and putting them into the chart to compare both similarities and differences to avoid any errors. There are two periods of time which are the time prior to the implementation of the said system lasting from October 2005 to June 2006 (about 9-month time) and the duration after the implementation has been taken from October 2006 to June 2007 (about 9-month time as well).

To clarify more, in this specific duration, there are many related factors which mainly involve with the hotel's revenue such as high/low season and hotel promotion during that time. These factors certainly effect in the same way to the overall of the hotel's

revenue. However, researcher knows that there is one factor showing differently which the implementation of this studied paper is; the duration of applying the system starts from July 2006 to September 2006 which researcher believes that the comparison of these statistics can create the credibility for the implemented system more or less. After the implementation of the system took place, it appears that there have been a positive result and better level in reservation rate, cancellation rate and sale volume. It can be concluded as follow.

In the total cancellation (%), which is the cancellation of room booking among the hotel's customers, compare to the period of both before and after the implementation has been done, it appears that the average of the cancellation rate has been dropped about 7 per cent. In addition, it costs nearly THB 3 millions each year if it is brought to calculation in economic lost (please see Appendix C for more information).

Occupancy (%) is the augmentation of hotel's services due to the higher reduction of total cancellation. As a result, in every year, the hotel's revenue has been assumingly increasing with the average of 6 per cent. And if counting from the quantity of room that the hotel can serve, there are about 500 rooms per year. All in all, these are the factors that facilitate the higher revenue of the hotel (please see Appendix C for more information).

5.1.1 Changing in Reservation Channels

From Figure 5.1, prior to the implementation applied, the studied hotel normally had the booking reservation solely through fax answering, telephone call, mail, e-mail, and walk-in customers. Mostly, the hotel's customers with the average of 60 per cent of total reservation rate are likely to make a reservation via a telephone call on the ground that it is more convenient and rapid. In addition, using telephone is not difficult and complicated if compares with using fax and so on. However, for some customers who quite familiar with the computer system will be appreciated to book a room through an e-mail (almost 25 per cent of the overall booking rate). After these customers meet all of the requirements in the e-mail, their demand will go directly to the hotel booking staffs' personal e-mail just a case only for hotel's royal customers

who ask for hotel's employee personal e-mail (please see Appendix C for more information).
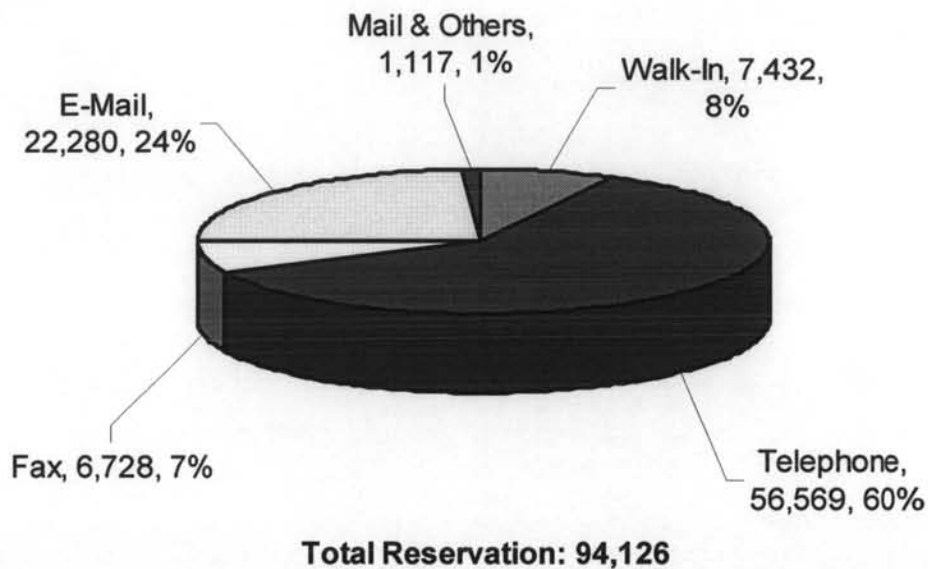
Mail & Others,
1,117, 1%   Walk-In, 7,432,
                                  8%

E-Mail,
22,280, 24%

Fax, 6,728, 7%   Telephone,
                                            56,569, 60%

Total Reservation: 94,126

Figure 5.1: Total Reservation before Implementation Divided by Channels (Jul'05-Jun'06)
Courtesy of: Sales and Marketing Department of the ABC Hotel, 2006

After the system has been implemented with the intention to fix many flaws as mentioned earlier in chapter 4, as well as, after the hotel decides to put the direct online reservation system in to practice, the next chart shows that most of hotel's clients who usually make a reservation via telephone and e-mail have been dropped. This is because the hotel adds more reservation channels and the new system is more convenient than old manner (please see Appendix C for more details). Moreover, it requires less time-consuming and small amount of customer's spending money as a deposit for advance booking. Furthermore, this system could vitally reduce some possible mistakes that might be occurred in the process of collecting the information among hotel's staffs because of the righteousness of using computerised reservation system (see also in Figure 5.2). Nonetheless, there are some available booking channels that their outcomes cannot be obviously achieved. It can be said that the reservation sale has not been augmented or reduced due to the fact that the habit of the hotel's customers which have already got used to the old ways.
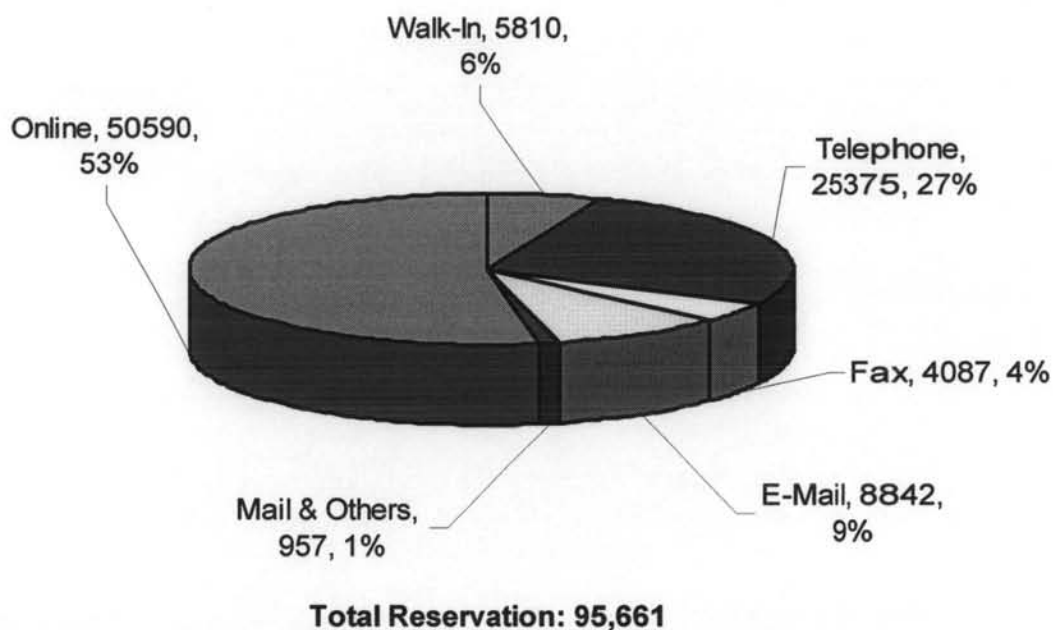
Total Reservation: 95,661

Figure 5.2: Total Reservation after Implementation Divided by Channels (Jul'06-Jun'07)

Courtesy of: Sales and Marketing Department of the ABC Hotel, 2007

5.1.2 Customer Categories

Figure 5.3 is presented in the form of pie chart indicating the sale rate of the hotel from the hotel's revenue, which counts from the real client's occupancy, in the past 24 months. This is the duration that all the information has been collected. There are three periods of the data collection. Firstly, it is before the implementation started lasting from July 2005 to June 2006 (about 12-month time). In this period, researcher will embrace the last nine months to compare and link with the time after the system implemented. Secondly, it is the duration of doing the implementation lasting from July 2006 to September 2006 (about 3-month time) while the services of the hotel have being served to the public as well. Last but not least, the duration after the implementation is from October 2006 to June 2007 (about 9-month time). In this pie chart, the hotel's revenue normally comes from many kinds of hotel's customers and divided in many categories. 20 per cent of hotel's customers are from travel agent such as many tour companies and tourists. 30 per cent is from other group called corporate, for instance a group of people and companies make a reservation for a seminar/conference session. The most important type is self booking service with the

average of 50 per cent of the total reservation (please see Appendix C for more information). The ABC hotel itself has 5 channels available for clients' room reservation. The customers can book a room via fax, telephone, e-mail, mailing system, Website, and walk-in.
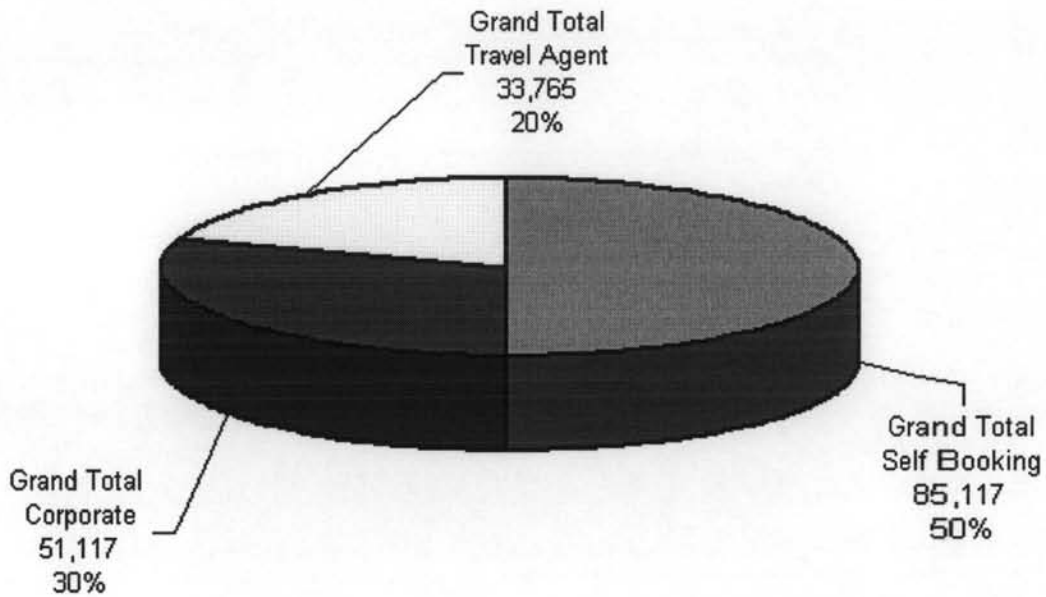
Grand Total
Travel Agent
33,765
20%

Grand Total
Self Booking
85,117
50%

Grand Total
Corporate
51,117
30%

Figure 5.3: Grand Total Sale (Jul'05 – Jun'07)

Courtesy of: Sales and Marketing Department of the ABC Hotel, 2007
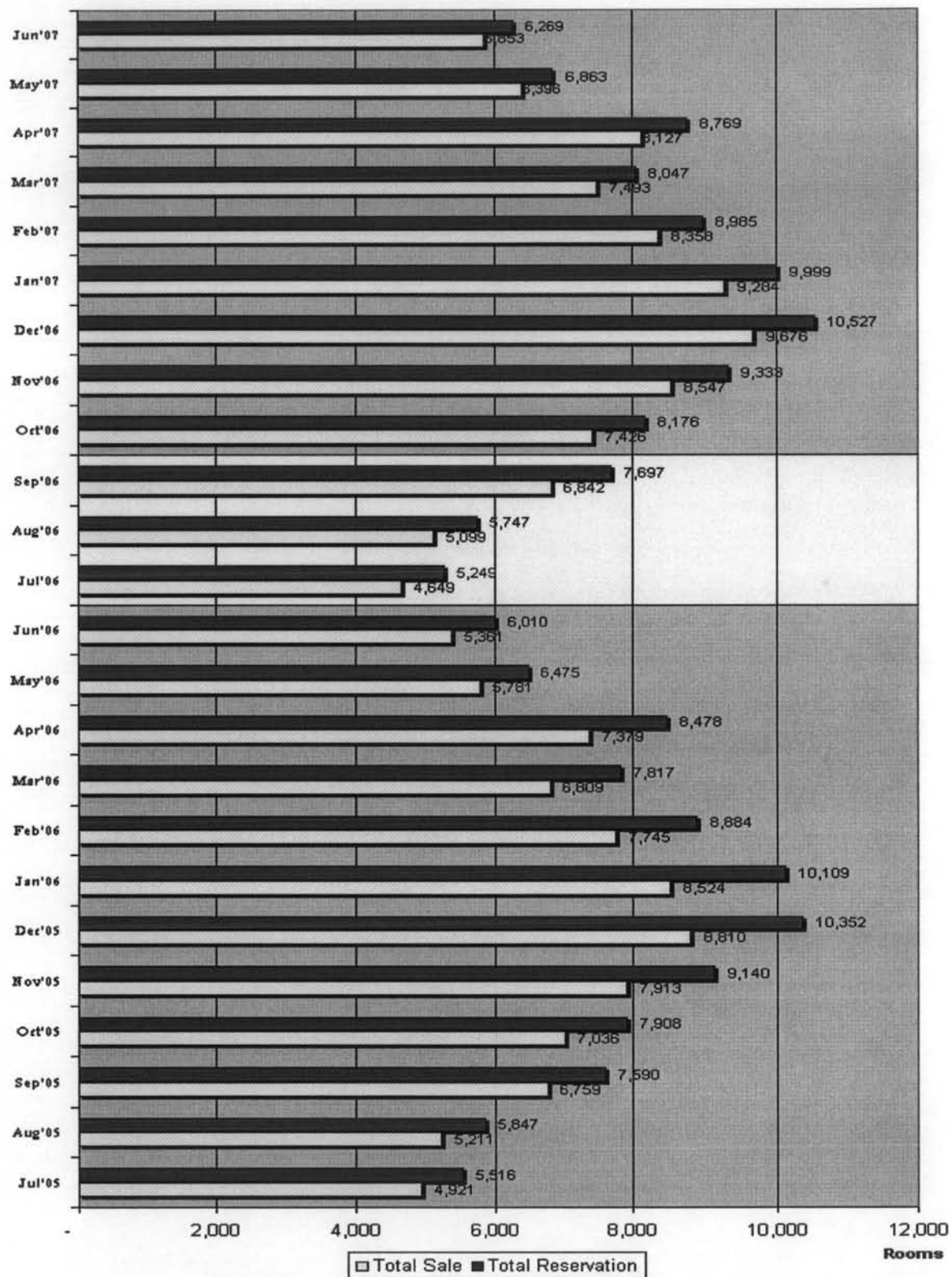
5.1.3 The Increasing Accommodation Sales

Figure 5.4a: Total Sale vs. Total Reservation (Monthly)

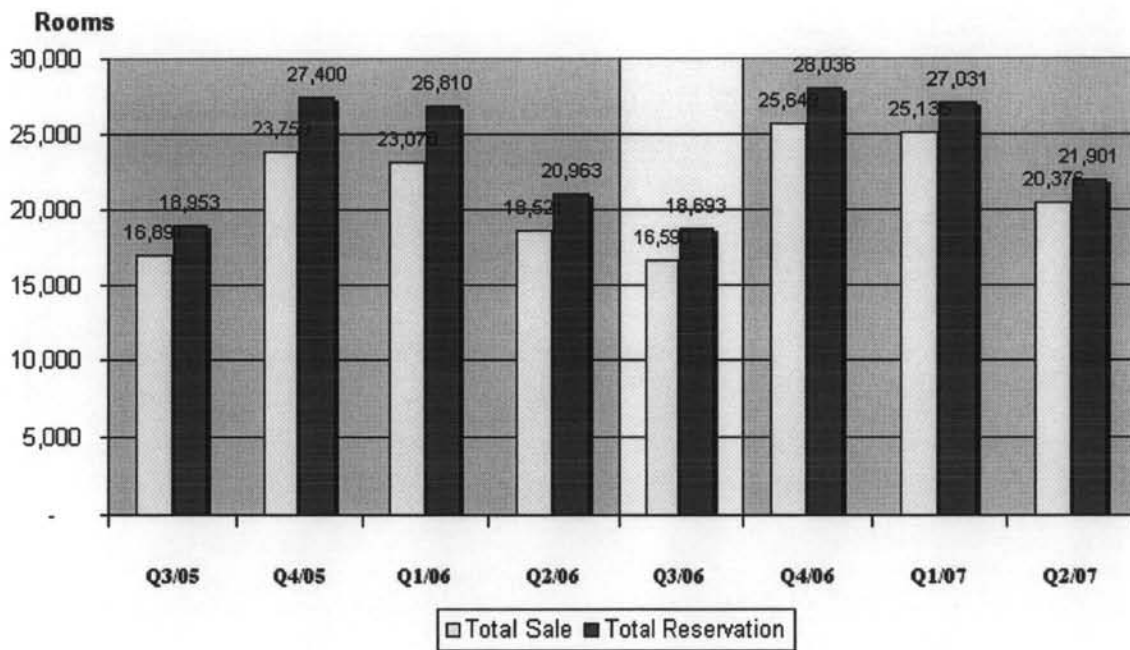**Courtesy of:** Sales and Marketing Department of the ABC Hotel, 2007

Rooms

Figure 5.4b: Total Sale vs. Total Reservation (Quarterly)
Courtesy of: Sales and Marketing Department of the ABC Hotel, 2007

These two Figures above present the sale rate of the hotel which is the main hotel's revenue counting from the quantity of actual staying of hotel's guests. It is compared to the reservation rate in every month and every three months correspondingly. In this occasion, researcher would like to explain it by separating into three periods which are before implemented the system, being implemented the system and, lastly, after implemented the system. To illustrate more, the duration before applied the implementation is from October 2005 to June 2006 with the comparison to the period in October 2006 to June 2007 which is the phase after implementation has been taken (please see Appendix C for more information). Surprisingly, there are differences in both sale rate and reservation rate in every month. After the implemented system, both hotel's rates have increasingly grown if compare to the period before the implementation. Besides, the divergence of both rate in each month, which is supposed to be the cancellation rate, have been decreased. As a result of such implementation, not only it has created high efficiency and effectiveness in hotel's management plan, but also it could reduce any losses from some hotel's customers in case of not showing on the time of their booking date. Moreover, hotel can sell more services to many other hotels' guests. The more the hotel serves the more revenue it

gains. Nevertheless, in this mentioned comparison, researcher will not include the duration of the implementation from July 2006 to September 2006 (about 3-month time). This is because the hotel was still open for public during the time that the implementation being taken, therefore, it might cause some inconvenience and difficulties. For example, it may take time-consuming process of finding information because the system was not completed yet. This affects the hotel on the reduction of its services' effectiveness. In addition, it creates uncertainty in sale rate if compare to the time that the system had not been implemented. However, that is why the researcher chose the low season to start implementing the system in order to avoid any unexpected effects which may cause to the hotel as well as to reduce any unwelcome consequences in the hotel from the implementation.

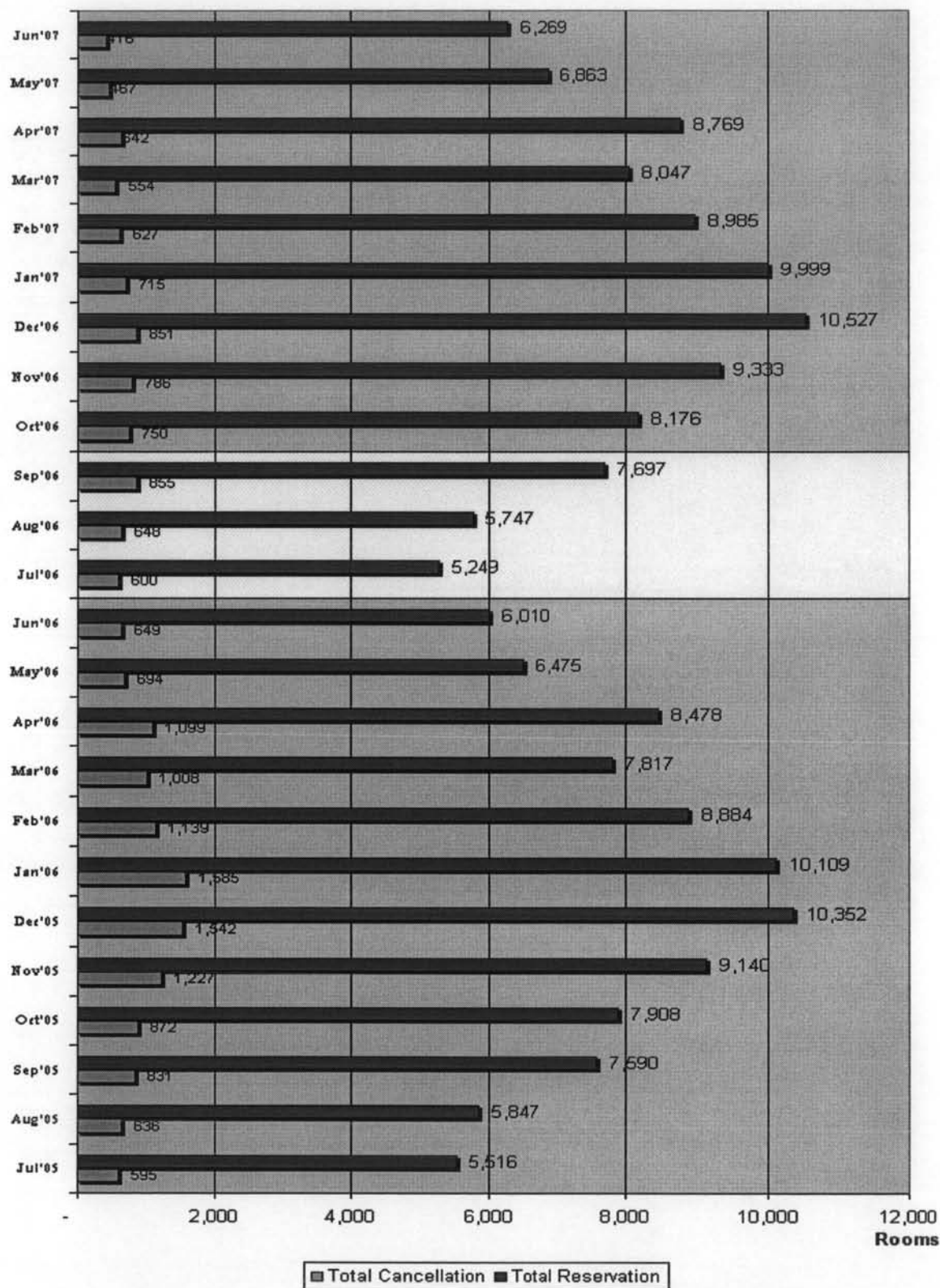## 5.1.4 The Decreasing in Cancellation Rate

Figure 5.5a: Total Cancellation vs. Total Reservation (Monthly)

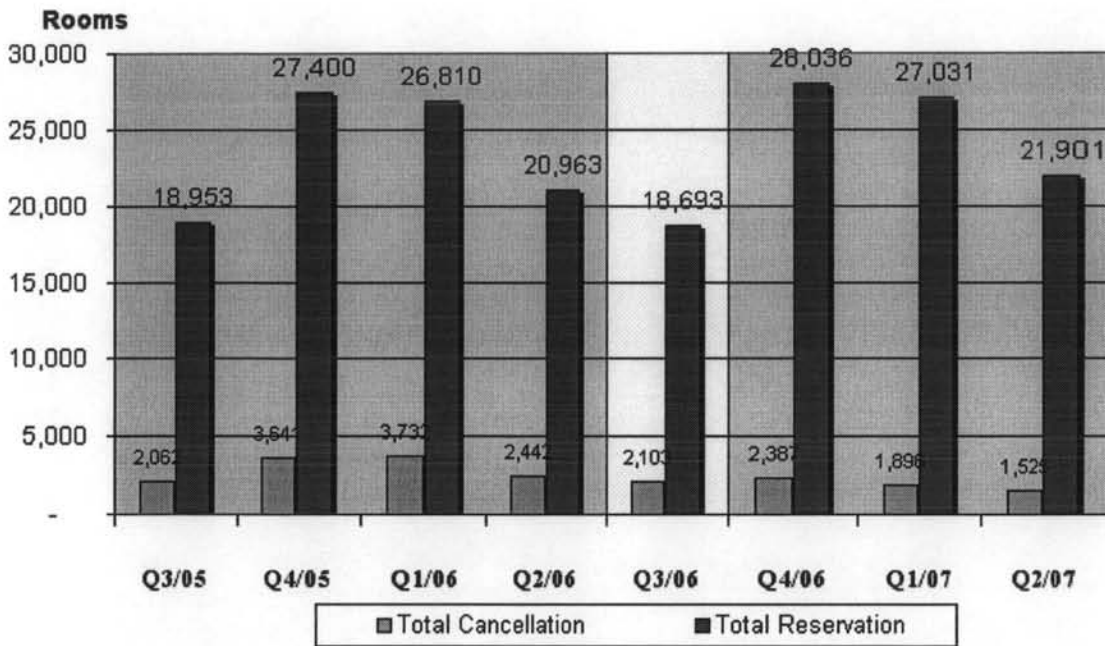**Courtesy of:** Sales and Marketing Department of the ABC Hotel, 2007

Figure 5.5b: Total Cancellation vs. Total Reservation (Quarterly)
Courtesy of: Sales and Marketing Department of the ABC Hotel, 2007

From these two multiple bar charts, we can see the cancellation rate of room booking in hotel's clients. It is compared to all booking channels and divided into two periods which are every month and every three months, respectively. In this connection, researcher would like to explain about it on the duration from October 2005 to June 2006 which is the time before the implementation was taken. Also, researcher intends to compare it with the period after the implementation of the system lasting from October 2006 to June 2007 (please see Appendix C for more information). Differences in total cancellation and reservation in every month during the time of implementation can be noticed clearly. Obviously, the total cancellation of the hotel has gradually dropped after implemented the system if compare to the duration prior to the implementation. This is because it used to be a high number of cancellations in room reservation. One of major reasons is that, as mentioned earlier, there was no real and certain punishment for a group of people who book a room unintentionally with the hotel (in whatever channels they likely use). For example, some customers prefer to book a room in advance with no intention to stay in a hotel on the time that they register. While other clients fancy to reserve a room just to respond to their pleasure and curiosity because they might want to know more about what it will be like as well

as it is fun to do so. However, after the system implemented to solve such problems, researcher intentionally creates "penalty policies for reservation" in order to tackle or prevent specifically these clients. In conclusion, we can obviously see, there has been a lower rate of cancellation after the implementation of the system as illustrated in Figure 5.5a and 5.5b above.

5.2 The Performance Results and Customer Satisfaction after Applying the Computerised Reservation System

According to this section, the research finding of primary research data will be provided in order to evaluate the relevant people's perception after the database management software namely "Fidelio", training programme, job descriptions, the standards of procedures, the new reservation model, and the online reservation prototype were implemented. In data analysis, the collected data is analysed by using the SPSS programme which evaluates all data in term of statistic results such as frequency, descriptive, crosstab and one sample t-test.

Moreover, all data will be interpreted in appropriate conclusion and recommendation in further study. According to the primary research data collected, the procedure is designed by using the questionnaire as a research instrument (please see Appendix D for more information). The two different types of questionnaires are designed as quantitative data analysis tool and conduct to two different groups of target samples which are the group of employees in reservation department and the group of experienced customers.

Firstly, the group of target sample is all employees in reservation department. All are classified by four job characteristics as a reservation manager, a reservation assistant manager, reservation supervisors, and reservation clerks totally by 14 persons of this group. In term of research methodology, all questionnaires were be conducted in order to understand the employee's perceptions toward new reservation system that are consisted of training programme, job descriptions, standards of procedures, and the modified reservation model.

For the same purpose, the other group is the group of experienced customers, this group is selected for any customers who have ever made reservations at the hotel both before and after the online reservation was implemented. Most of them are the frequent guests who have come to conference nearby the hotel. All respondents in this group will be studied in term of the perception toward the factors related to reservation service providing. The questionnaires were received from 240 out of 300 experienced customers.

In data analysis, the results of SPSS programme will be evaluated by two sections of target samples as and employee attitudes and customer attitudes (please see Appendix E for more information).

5.2.1 Employee's Attitudes

According to the designed questionnaire, there are three sections of question format as employee's background, general attitudes toward the traditional reservation system and perception toward the new computerised reservation system. This is aimed to understand the all relevant characteristics and attitudes of this group. In each section of designed questionnaire, it can be analysed as follow.

- **Employee' Profile**

Regarding to the sample characteristic, there are four questions which were designed in this section as gender, education, job position and duration of work in the organisation. The research finding is shown that the numbers of male and female in this sample are equally, which are seven of each. The second criterion is illustrated the academic background of employees in this sample; the result shows that most of target samples, 9 persons (64.3%), are graduated in bachelor degree as the highest education level. Following the number of employees who completed master degree or higher, and diploma degree at 28.6% and 7.1% respectively.

In term of job position, out of 14 employees, they are classified as a reservation manager and a reservation assistant manager in the same level. Four persons work as reservation supervisors and the remaining of eight persons work as reservation clerks.

Finally of sample's characteristic, they are analysed on period of work in ABC hotel. The results show that half of employees in this sample, seven persons (50%), have been working between 1-2 years in this organisation. While 4 persons (28.6%) have been working at ABC hotel for 3-4 years and following by the duration of work of employees who have been working at ABC hotel lower than 1 year and more than 4 year, which are 14.3% and 7.1% respectively. All of employee's characteristics can refer to Table 5.1.

Table 5.1: Employee's Profiles (Demographic Factors)

			Frequency	Percentage (%)
Demographic Factors	**Gender**	Male	7	50
		Female	7	50
	Education	Diploma	1	7.1
		Bachelor degree	9	64.3
		Master degree or higher	4	28.6
	Job Position	Manager	1	7.1
		Assistant manager	1	7.1
		Supervisor	4	28.6
		Clerk	8	57.1
	Work Duration	Lower than 1 year	2	14.3
		1-2 years	7	50.0
		3-4 years	4	28.6
		More than 4 years	1	7.1

- **General Studied of Employee's Perception**

According to the second part of questionnaire format, there are two questions that are aimed to study about the attitudes of all employees on experienced working procedures before the training of the database management programme and the appropriate reservation system were created (see also Figure 5.6). Firstly, the question is asked with the aim of studying the problem from traditional reservation system. The

result shows that all of target sample (100%) perceived that they had faced some problems before employing the implementation.
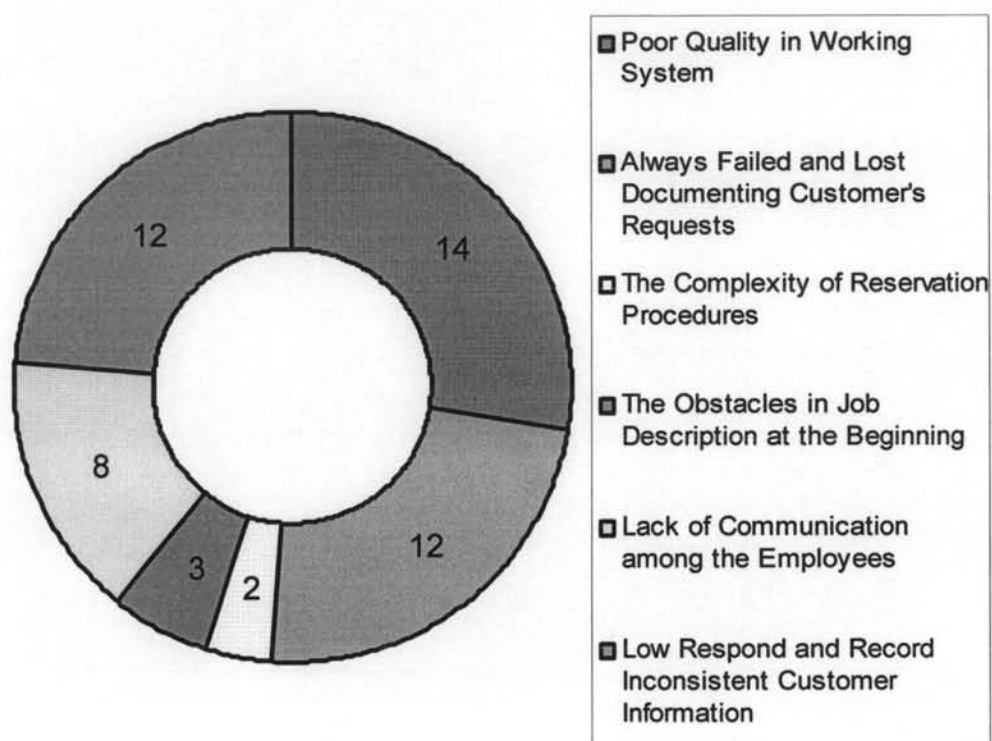
Figure 5.6: Problems Occurred in Reservation System

All of the problems could be classified in the next question. In term of problems occurred, the "poor quality in working system" is a problem that happened to all employees.

The next one is "low respond and record inconsistent customer information", most of employees encountered to this problem. Furthermore, the problem of "always failed and lost documenting customer's requests" is also one of the critical concerns that occurred with the employees. Both problems are evaluated from totally 12 employees. According to the mentioned factors, paperwork is not be an effective source to collect data since it could be lost or failed when the working period has been changed.

The third critical concern is a factor of "lacking the communication among all employees"; about 8 persons believe that the old reservation procedure separates them

to work individually. There is no sharing of information, problem discussion or any communications between each other.

Finally, the factors of "complexity in reservation procedures" and "obstacles in job description" are perceived in low level at totally 3 and 2 persons respectively.

- **Employee's Perception on Newly Computerised Reservation System**

According to the latest reservation system, the researcher has studied the employee's perception toward the new reservation system which is implemented. During the system implementation, there are five steps of this reservation system that are implemented as training programme, job description and standards of procedures, reservation model, reservation policies, and online reservation prototype. Out of these steps, there are only three steps which are evaluated from employee's perception as training programme, job descriptions and procedures, and reservation model. In term of online reservation prototype, it will be evaluated from customer's perception while reservation policies will be evaluated from the sale volumes of reservation system.

In this section, the employee's perception will be evaluated toward each step of reservation system. From the results of the problems occurred (Figure 5.6), it is necessary to understand the nature of problems and solve them in an effective manner. A new reservation system is an effective tool that is added and implemented to the reservation database system. In the last section of questionnaire designed, the questions are asked about the attitude levels toward the computerised reservation system which is implemented. The questions will be designed as sub-factors that related to the programmes implemented that are consisted of the criteria as "interactive", "systematic/automation", "quality of employee", "atmosphere", and "communication/synergy". Regarding to research purposed, all questions are asked in order to define the employee's perception toward each step of new reservation system.

Training Programme on Database Management Software

Regarding to this topic, the researcher has developed the analysis in order to understand the employee's attitude toward training programme of new reservation system. This analysis is evaluated in order to study the training programme whether it is perceived in high level or not. If the employee's attitude toward training programme is perceived in high volume, it can be concluded that the training programme is a necessary process in organisation development.

In data analysis, the questions of training programme are designed as the first question of each criteria studied. In term of data analysis, the appropriate statistical method would be descriptive statistic that is used to evaluate the attitude level of each factor. The results of this method are described in Table 5.2.

Table 5.2: Descriptive Statistic of Training Programme of each Criterion Studied

Factor	MEAN Value
Interactive	*3.50*
Systematic/Automation	*4.14*
Quality of Employee	*3.64*
Atmosphere	*3.79*
Communication/Synergy	*4.07*

In data analysis, these MEAN values will be evaluated at average level. As of the questionnaire designed, the average value is set at 2.00 which can refer to any value that closed to this figure will be evaluated at average level. However, in term of training programme, the MEAN value of each function is evaluated at high level especially of systematic/automation and communication/synergy (higher than 4.00). It means that the training programme of computerised reservation system can serve the employee to better work than the traditional reservation system. Most of them can work as systematic and have to share any information and problem to each others. Furthermore, training programme also improve the working system as well in term of interactive, quality of employee, and atmosphere.

Job Descriptions and Standards of Procedures

After the training programme is implemented as effective way, the researcher has developed the analysis toward job descriptions and standards of procedures. All employees will be understood about their job descriptions and procedures after completing training programme. In research methodology, the second question of each criteria study is designed for this purposed and is shown the results in Table 5.3.

Table 5.3: Descriptive Statistic of Job Descriptions and Procedures of each Criterion Studied

Factor	MEAN Value
Interactive	*3.36*
Systematic/Automation	*4.64*
Quality of Employee	*3.71*
Atmosphere	*4.00*
Communication/Synergy	*4.29*

As of the statistic results, the employee's attitude toward each factor is evaluated at high level especially of "systematic/automation", "atmosphere" and "communication/synergy" while "quality of employee" is also quite high. There is only "interactive" which is lower than 3.5. This can be concluded that when the employees were trained, they will understand their job descriptions and procedures very well. However, the computerised reservation is a new system in this hotel, the working process for most employees has not run smoothly yet.

Reservation Model

After finishing of job descriptions and procedures, the reservation model can be implemented. Regarding to the data analysis, the employee's attitude are resulted in Table 5.4.

Table 5.4: Descriptive Statistic of Reservation Model of each Criterion Studied

Factor	MEAN Value
Interactive	2.79
Systematic/Automation	4.00
Quality of Employee	3.64
Atmosphere	4.14
Communication/Synergy	4.29

As of the results, MEAN values are illustrated as the same with the first two steps. All criteria will be evaluated the perception level as the same or increasing in MEAN values except "interactive". However it is also evaluated higher than average value of "2.00". Therefore, the reservation model can be evaluated in an effective tool in term of developing as computerised reservation system.

In conclusion, the computerised reservation system is perceived in high quality toward the employee's perception. Most of employees believe that this system can serve them to improve the reservation system as much as possible. However in the result of interactive aspect, the result shows the lowest level of employee perception. This may be caused by the employees cannot adjust their work with the new implementation programmes. All related work should be suspended for adjusting period. It cannot be completed in a short time.

After each step of new reservation system was implemented, the researcher has evaluated the overall perception toward each criteria studied and satisfaction of overall value of new reservation programmes. According to the statistic study, the appropriate statistic method which is used in these questions is one sample t-test and descriptive analysis. The one sample t-test is used to analyse the perception or attitude level with average value when the standard deviation cannot be evaluated while descriptive statistic will be used to evaluate the level of perception when perception level is not equal to the average value.

As of the statistic result, one sample t-test will be proved with the significant value of 0.05 confident levels. If the significant value is lower than 0.05, it refers that the perception level is not equal to the average value. In contrast, it will be perceived with average if the significant value is higher than 0.05. In statistic test the average value is not necessary to be the middle number of perception level. Regarding to the question's designing, the tested statistic values of these questions will be "2" that mean the fair value (1 = poor, 2 = fair, 3 = good, 4 = very good, and 5 = excellent).

In term of descriptive statistic Table, this will be used to analyse when the perceived value is not equal to the average. If the MEAN value is higher than "2", it refers that attitude level is positive. Conversely, it will be negative when the MEAN value is lower than "2".

In the statistic results, there are five criteria study that are concerned to the implementation of computerised reservation system as "interactive", "systematic/automation", "employee's quality", "atmosphere", and "communication/synergy". In addition, the employees also ask the level of perception toward the satisfaction level of computerised reservation system. All of data analyses are illustrated in the following Table 5.5 and 5.6.

Table 5.5: One Sample t-Test Statistic of each Factor in Reservation System

Test Value = 2.00

	t	df	Sig. (2-Tailed)	MEAN Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Interactive	4.195	13	0.001	1.2143	0.5890	1.8396
Systematic/Automation	11.984	13	0.000	2.2619	1.8541	2.6697
Quality of Employee	5.401	13	0.000	1.6667	1.0000	2.3334
Atmosphere	14.382	13	0.000	1.9762	1.6793	2.2730
Communication/Synergy	19.457	13	0.000	2.2143	1.9684	2.4601

Table 5.6: Descriptive Statistic of each Factor in Reservation System

	N	MEAN
Interactive	14	3.2143
Systematic/Automation	14	4.2619
Quality of Employee	14	3.6667
Atmosphere	14	3.9762
Communication/Synergy	14	4.2143

According to the statistic results, the significant values of all variable are lower than 0.05 confidence level. Therefore, it can be concluded that the perceived values of each criteria study are not equal to the average. The data in the descriptive Tables will be used to analyse the level of each perception. As regards to each criterion study, the MEAN value is illustrated high level of perceived value that are higher than "2" (average value).

Furthermore, it can be evaluated that the development system is very effective in implementing as computerised reservation system. It can help the employees improve their work performances. Most of works are performed with systematic than the previous. Moreover, it also increases the relationship and communication among all employees in reservation department.

Due to the completion of each criterion, the last question is asked to test the perception directly toward to computerised reservation system. The statistic result is shown in Table 5.7.

Table 5.7: Descriptive Statistic of Computerised Reservation System

	N	MEAN
You satisfy the improvement by using computerised reservation system	14	3.93

According to statistic result, the significant is 0.000 lower than 0.05 confidence level; therefore, it can be conclude that the level of perception in computerised reservation system is not equal to the average. Moreover, the MEAN value in descriptive statistic is equal to 3.93. It can be described as a high level of perception toward the computerised reservation system.

In addition, the researcher has developed the finding by comparing the job related and satisfaction level of the computerised reservation system. This is aimed to study the level of perception on computerised reservation system from different of job positions and different of work durations.

The most appropriate statistic method is crosstab and the results are shown as following.

Table 5.8: A Comparison of Job Position and Satisfaction Level of Computerised Reservation System

| | | *"You Satisfy the Improvement by Using Computerised Reservation System"* | | | | |
		Poor	**Good**	**Very Good**	**Excellent**	**Total**
Job Position	Manager	0	0	0	1	1
	Assistant Manager	0	0	1	0	1
	Supervisor	0	0	3	1	4
	Clerk	1	1	5	1	8
	Total	1	1	9	3	14

According to the results of job positions and satisfaction levels (Table 5.8), the results show that most of employees whose position in different levels of reservation department (manager, assistant manager, supervisors and clerks) will perceive the satisfaction to computerised reservation system in high level, while there is only one employee who perceives the computerised reservation system in poor level.

Table 5.9: A Comparison of Duration of Work and Satisfaction Level of
Computerised Reservation System

		"You Satisfy the Improvement by Using Computerised Reservation System"				
		Poor	**Good**	**Very Good**	**Excellent**	**Total**
Work Duration	Lower than 1 year	0	0	1	1	2
	1-2 years	1	1	5	0	7
	3-4 years	0	0	3	1	4
	More than 4 years	0	0	0	1	1
	Total	1	1	9	3	14

In term of the duration of work, the results show that when the employees who have been employed at ABC hotel for a long period, they perceive the satisfaction on computerised reservation system in high level. There is only one employee who works in length of 1-2 years has perceived the poor level of computerised reservation system performance.

In conclusion of employee section, the results are shown that all employees perceived the quality of work performances after implementing computerised reservation system with a high level. The system can improve the work performances on both individual and organisation. However, for some new employees, they may lack of understanding on the programme and need more training and evaluating on programme performance. These can help the organisation develop their perceptions toward computerised reservation system in high level.

5.2.2 Customer's Attitudes

According to the target samples of customers, the questionnaire has been developed in order to understand their characteristics and perceptions. In questionnaire format, there are three sections which are customer's profile, buying behaviour, and attitude toward online reservation system. In data collection process, out of 300 target respondents, there are only 240 respondents who participate in questionnaire survey

without any errors and biases. Regarding to data analysis, the research finding of each section can be represented as following.

- **Customer's Profile**

According to this section, all data findings can be referred by Table 5.10. In questionnaire designed, the first criterion study is gender. The research finding is shown that most of respondents are classified as male rather than female at totally 53% and 47% respectively. The second criterion is nationality of the customers. Out of 240 target respondents, there are 70% of them to be classified as Thai people and the remaining 30% are foreigners. Regarding to the third factor (age range), most of customers are aged between 31-40 years old at totally 46%. The second one is the group between 21-30 years old at 29% and follow by group of 20 years old or below, 41-50 years old and more than 50 years old at totally 16%, 7% and 3% respectively.

In term of education level, most of target respondents are graduated in bachelor degree at 77.5% and following by diploma, master degree, and high school level at 14%, 6% and 2.5% respectively.

Table 5.10: Customer's Profile

			Frequency	Percentage (%)
Demographic Factors	**Gender**	Male	126	52.5
		Female	114	47.5
	Nationality	Thai	163	67.9
		Foreigner	77	32.1
	Age Range	20 years old or below	35	14.6
		21-30 years old	69	28.8
		31-40 years old	111	46.3
		41-50 years old	17	7.1
		More than 50 years old	8	3.3
	Education	High school	6	2.5
		Diploma	33	13.8
		Bachelor degree	186	77.5
		Master degree or higher	15	6.3
	Monthly Income	Below 20,000 Baht	84	35.0
		20,000-50,000 Baht	103	42.9
		50,001-100,000 Baht	50	20.8
		More than 100,000 Baht	3	1.3

Finally of this section, the income level of target respondents is studied. The result is shown that most of them earn the income between 20,000 and 50,000 Baht at frequency of 43%. The second one is the group of income at lower than 20,000 Baht per month at 35%. The last two groups are 50,001-100,000 Baht at 21% and more than 100,000 Baht per month at 1%.

- **Buying Behaviour**

According to this section, the questionnaire is designed to study the buyer behaviour on reservation service and other relevant behaviour. In the first question, the question is designed to study the frequency in travelling in a year. The result is shown that 80%

of target customers would travel by once a year. The second level of frequency is 15% who travel for 2-5 times per year. The third group is the customers who travel for 6-10 times each year and more than 10 times in each year at equal frequency of 2%. (See also on Table 5.11)

Table 5.11: How Often Do You Travel?

		Frequency	Percentage (%)	Valid Percentage (%)	Cumulative Percentage (%)
Valid	Once a year	193	80.4	80.4	80.4
	2-5 times/year	35	14.6	14.6	95.0
	6-10 times/year	7	2.9	2.9	97.9
	More than 10 times/year	5	2.1	2.1	100.0
	Total	240	100.0	100.0	

The next question, target respondents are asked about the source of information that how they get the hotel's data. As the result, most effective source of information is Internet at the frequency of 63%. This may be caused by the new hotel Website; most customers will gather the hotel's information and directly reserve rooms through the Website rather than other sources. The second source is travel agency and catalogue with the frequency of 30%. The third one is advertising at 8% and follow by acquaintance at 2%. (See also in Table 5.12)

Table 5.12: How Did You Get to Know about the ABC Hotel?

		Frequency	Percentage (%)	Valid Percentage (%)	Cumulative Percentage (%)
Valid	Acquaintance	4	1.7	1.7	1.7
	Advertising	18	7.5	7.5	9.2
	Travel agency or catalogue	67	27.9	27.9	37.1
	Internet	151	62.9	62.9	100.0
	Total	240	100.0	100.0	

In the term of reason to visit the hotel, the research finding is shown the results in Table 5.13. All target respondents visited the hotel for three reasons (business, conference and leisure) in equally frequency at approximately 33%.

Table 5.13: Purpose of Your Visit

		Frequency	Percentage (%)	Valid Percentage (%)	Cumulative Percentage (%)
Valid	Business	78	32.5	32.5	32.5
	Conference	84	35.0	35.0	67.5
	Leisure	78	32.5	32.5	100.0
	Total	240	100.0	100.0	

According to the last question of this section, the questionnaire is designed to study the reason of room reservation through online reservation. The research finding is shown as "convenience" to be the core factor that influences the customers to use this programme at frequency of 25%. The second influence factor is "accessibility" with the frequency of 21%. The third one is about the "feedback" that can get the reply answer as fast as possible, at frequency of 19%. For the remaining factors are "creditability", "information availability" and "cost advantage" at frequency of 14%, 12% and 9% respectively. (See also on Table 5.14)

Table 5.14: The Reasons for Using Hotel's Online Reservation Service

		Frequency	Percentage (%)	Valid Percentage (%)	Cumulative Percentage (%)
Valid	Convenience	60	25.0	25.0	25.0
	Accessibility	50	20.8	20.8	45.8
	Creditability	34	14.2	14.2	60.0
	Cost advantage	21	8.8	8.8	68.8
	Immediate feedback	46	19.2	19.2	87.9
	Information availability	29	12.1	12.1	100.0
	Total	240	100.0	100.0	

- **Customer's Perception on each Factor of Online Reservation System**

According to this section, the questionnaire is designed in order to understand the level of customer's perception toward the online reservation of the hotel system. Regarding to questionnaire format, it is classified all criteria study with six variables as "convenience", "accessibility', "creditability", "cost advantage", "immediate feedback", and "information availability". The overall satisfaction level toward online reservation system is being asked in this questionnaire as well. According to the research finding, the results are shown as following.

As of the first research finding, the perception of target customers will be evaluated in term of satisfaction level on each factor of studying. As the same of employee's attitudes, the appropriate research result is one sample t-test with tested value of "2".

According to the data finding (Table 5.15 and 5.16), the significant values of each factor is 0.000 that are lower than 0.05 confidence level. Therefore, it can be concluded that the satisfaction of any factor in online reservation is not equal to the fair value. The satisfaction level may be positive or negative depended on MEAN value of the descriptive Table.

Table 5.15: One Sample t-Test of All Variable toward Customer's Perception

Test Value = 2.00

	t	df	Sig. (2-Tailed)	MEAN Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Convenience	23.629	239	0.000	1.1542	1.0579	1.2504
Information availability	27.339	239	0.000	1.2528	1.1625	1.3430
Creditability	28.300	239	0.000	1.2819	1.1927	1.3712
Cost advantage	28.028	239	0.000	1.3000	1.2086	1.3914
Immediate feedback	32.519	239	0.000	1.4229	1.3367	1.5091
Accessibility	33.679	239	0.000	1.3014	1.2253	1.3775

Regarding from descriptive Table (Table 5.16), the MEAN value of each factor is higher than 2.00 that can be evaluated in positive satisfaction level. However the level of satisfaction is arranged at approximately value of "3" ("3" means good value) in criteria study. Therefore, it can be concluded that the online reservation prototype cannot satisfy them in the highest level as employees. It should be taken time to develop in term of customer aspects.

Table 5.16: Descriptive Statistic of each Factor Using Online Reservation System

	N	MEAN
Convenience	240	3.1542
Information availability	240	3.2528
Creditability	240	3.2819
Cost advantage	240	3.3000
Immediate feedback	240	3.4229
Accessibility	240	3.3014

After, the results of satisfaction levels on each factor are performed, the last question of this questionnaire should be evaluated at the same method. The question is asked

the level of satisfaction toward the overall aspects of online reservation system. The results of Table 5.17 and 5.18 depicts the satisfaction level is not equal to the fair value. The customers believe that the online reservation can help the hotel improve the service quality in term of reservation system at very good level (approximately "4")

Table 5.17: One-Sample t-Test of Satisfaction toward Online Reservation System

Test Value = 2.00

	t	df	Sig. (2-tailed)	MEAN Difference	95% Confidence Interval of the Difference	
					Lower	Upper
In term of online reservation, you perceived its quality rather than direct reservation.	25.149	239	0.000	1.77	1.63	1.91

Table 5.18: Descriptive Statistic for Satisfaction on Online Reservation System

	N	MEAN
In term of online reservation, you perceived its quality rather than direct reservation.	240	3.77

In-depth study on each factor, it is very necessary to understand what are the influence factors ("convenience", "accessibility", "creditability", "cost advantage", "immediate feedback", and "information availability") which effect the perceived in online reservation at high level. In statistic method, the appropriate study in relationship of two types of variable would be multiple linear regressions. This method is used to understand the impact of two or more independent variables on one dependent variable. In analysis method, the independent variables can be classified as influence factors in perception ("convenience", "accessibility", "creditability", "cost

advantage", "immediate feedback", and "information availability"), while dependent variables will be classified as a satisfaction on online reservation system.

According to the research findings, there are group of Tables below are represented in data analysis. The ANOVA Table (5.19) is employed to analyse the relationship between group of independent variables and dependent variables. In analysis method, the significant value can be evaluated this relationship. If the significant value is lower than 0.05 confidence level, it refers that at least one independent variable can be predicted the satisfaction level of reservation programme in customer perception. As of next Table (5.20), this Table describes the relationship on individual independent factor when the ANOVA Table has been proved. The significant value of each variable will be determined the relationship on perception in reservation system.

Table 5.19: ANOVA(b) Table

Model		Sum of Squares	df	MEAN Square	F	Sig.
1	Regression	57.240	6	9.540	9.785	0.000(a)
	Residual	227.156	233	0.975		
	Total	284.396	239			

a. Predictors: (Constant), Accessibility, Convenience, Cost Advantage, Immediately Feedback, Information Availability, Creditability.
b. Dependent variable: In term of online reservation, you perceived its quality rather than direct reservation.

Table 5.20: Coefficients(a) Table

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.205	0.398		3.031	0.003
Convenience	0.055	0.114	0.038	0.483	0.630
Information availability	-0.293	0.129	-0.190	-2.273	0.024
Creditability	0.411	0.142	0.264	2.899	0.004
Cost advantage	0.058	0.135	0.038	0.431	0.667
Immediate feedback	0.386	0.126	0.240	3.058	0.002
Accessibility	0.146	0.166	0.080	0.880	0.380

a. Dependent variable: In term of online reservation, you perceived its quality rather than direct reservation.

According to statistic results, the significant value of ANOVA Table is shown as 0.000. It refers that there is at least one factor which influences the perceived reservation's quality in high level. However there are six factors which are implemented as the elements of the prototype. As the result, it does not mean that all elements can affect the customer perception in high level, it is very necessary to the researcher to understand about these factors in details. According to the coefficient Table above, this Table can be used to describe the elements of each variable in term of relationship toward high level of customer perception. As of the result, not all elements of reservation Website can influence the customer perception in high level. There are only three factors that can influence the customers to perceive the quality of reservation Website in higher level than traditional reservation system. It is consisted of information availability, creditability of the reservation's Website, and immediate feedback. Therefore, it can be summarised that online reservation system is perceived in high level when these three mentioned factors can be perceived in high attitudes.

5.3 Summary of the Chapter

It can be said that after the new system was applied, the positive result and better level in reservation rate, cancellation rate and sale volume can be seen. For example, there has been a 7 per cent reduction in the cancellation rate. In addition, when the penalty policies are employed, there has been a lower rate of total cancellation. As a result, the hotel's revenue in every year has been assumingly increasing with the average of 6 per cent. Compare to the traditional system, the new implemented system not only higher efficiency and effectiveness in hotel's management but also possibly prevent hotel's losses. The changing in reservation channels can usefully facilitate the hotel's customers, though there is no obvious result.

According to the conclusion of questionnaire survey, it can be evaluated that the computerised reservation system can motivate the satisfaction level on both of employees and customers in high level of agreement.

In term of employee's perception, they believe that the computerised reservation system can help them to understand and manage their works more systematic than the previous. Many customers' data, as well as, incorrect reservation data can be resolved by this system. Furthermore, computerised reservation system also benefits the employees to work as teamwork with better communication among them. However, the satisfaction level is seemed to be motivated in different ways under different levels when job positions and work durations are different. The results show that the system would be effective in the group of high position of employees and the group of employees who have been working for a long time. On the other hands, it can be concluded that the computerised reservation system is not effective as a whole group of relevant employees. However, it is not necessary to consider from this point since the number of employees in this research is very small (n=14) and the limitation is occurred in minority with only one or two employees. Therefore, it can be concluded that the computerised reservation system is implemented in the right way and helps the company develop the related factors.

In term of the customer perception, most of the target customers believe that the reservation Website can help the company to improve their services on reservation system, particularly in term of information availability in reservation Website, creditability of reservation information and programme, and immediate feedback in answering the reservation results. These can be evaluated as the main factors that impact the satisfaction level of reservation system to be higher than the previous. Furthermore, it can be quoted by the source of information gathering which is tended to be Internet rather than the other sources (travel agency, catalogue, advertising and acquaintance).

Figure 5.7: Comparison of Customer Satisfaction before and after Implementation

According to bar chart above, the level of customer's satisfaction on how they feel about before and after applying the implementation of direct online booking system is showed. Its level ranges respectively from excellent, very good, good, fair and poor. As presented in Figure 5.7 above, all of these statistics are collected from 240 hotel's guests who have used hotel's services in both before and after the implementation of the online reserved system. In the past, there was not any online direct booking. At the time before the implementation took place, the highest level of clients' satisfaction is 'fair', in contrast with the online system applied; its highest point is 'very good'. In addition, comparing solely in 'poor' indicator and looking at the percentage of

customer satisfaction in the duration between before and after the system implemented, better result can be seen subsequent to the applying of the implementation. All in all, it can be said that after the direct online booking system has been implemented, we can see the better client's satisfaction.

However, there are some factors of reservation Website which are perceived in no relationship through the satisfaction level as convenience, accessibility, and cost advantage. All of these factors are tested as independent variables but they do not show any relationships on customer satisfaction. Regarding to the first two factors (convenience and accessibility), the source of travel agencies is still considered as a vital basis for hotel's guests to make reservations. Most customers still reserve the available rooms from this source (approximately 30 per cent of target respondents). It must be accepted that this source provides more convenience and accessibility than direct reservation on Website. Therefore, the convenience and accessibility of reservation Website would not be the advantages of this source. In term of cost advantage, the hotel does not provide any extra promotions on this reservation system like any other hotels. Therefore, the reservation Website could not take any advantages from this point. However, all influence factors are perceived in high level of customer perception. Thus, ABC hotel should not neglect these factors in implementation plan. All factors should be concerned in order to develop an effective reservation system in the future plan.