



A STUDY OF TARIFFS IN INDIAN HOTELS

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Executive Summary

The practice of many hotels in India of posting different tariffs for guests, in dollars for non-residents in India and in rupees for residents, has become a subject of intense controversy in recent times. On January 8, 1998, the Department of Tourism – the predecessor of the current Ministry of Tourism – issued a notification to the effect that “The operation of single tariff is mandatory on all the hotels which are classified by the Department of Tourism, Government of India.” This notification in fact was a sequel to two earlier notifications on July 26, 1993 and March 17, 1997 to all recognised hotels requiring them to follow a policy of uniform tariff across all customer groups. The primary aim of this study is to examine the general tariff structure in Indian hotels. The practice of dual tariffs, its impact on effective price for different categories of hotel guests, composition of demand, and the future of the hotel industry, and the need for regulation, if any, constitute the particular focus of the study. In addition, the study also examines the institutional framework within which the hotel industry in India operates, in the process identifying some of the institutional impediments to development of the industry.

The setting up costs of hotels (excluding land) in India lies at the higher end of the spectrum, when compared with other Asian countries. Inadequacy of basic infrastructural facilities, like power and water supply contribute to this phenomenon. High land costs in metropolitan areas further exacerbates the problem. In addition, the incidence of corporation tax varies across locations as well as with the age of the hotel. On the other hand, in the daily operations of hotels, evidence suggests that Indian hotel industry also faces high lodging taxes. All these factors are likely to affect profitability and investment decisions. However, a more detailed analysis of the incidence of taxes needs to be undertaken before any concrete conclusions can be drawn about the economic effects of the present tax regime.

This report is based on data from 22 hotels from the three major hotel chains in India, and covers a period of upto nine years from 1989 to 1997. Given the differences in the observed pattern of behaviour of variables, locations have been classified into three categories: gateway cities (location 0) and leisure destinations (location 2) on two extremes, and “other” locations (location 1) in the middle. The hotels recognise many categories of clients, and provide fairly

customised deals to each class. Since the recent controversy is primarily about the duality of quoted rates for residents and non-residents, for the present study, the clients have been categorised into three classes: free foreign individual travelers (FFIT), foreign group inclusive travelers (FGIT), and domestic travelers (DT). While the controversy about differentiated rates is focussed on dual tariffs in the context of the rack rates (which are tariffs quoted in printed brochures of hotels), it is important to note that in reality some hotels recognise as many as seven customer categories. Furthermore, the rack rates appear to serve as reference rates alone with only a small proportion of the customers in any category paying the full rack rate. The actual price paid by the average customer is significantly lower than the rack rate with the widespread use of discounts.

The pricing system prevailing in the hotel industry is best characterised as third degree price discrimination under monopolistic competition¹. Monopolists are notorious for “abusing” their market power, fixing “exorbitantly high” prices, and charging different customers different prices. While examples of pure monopolies are rare, there are several markets characterised by imperfect competition. Such imperfections are particularly prevalent in markets with differentiated products or services that are substitutes, but not perfect substitutes, for each other. Hotels provide one such example of imperfect markets. No two hotels share exactly the same location, and location is important. Furthermore, rooms, service, and ambience differ from hotel to hotel. Pure price discrimination, which is differences in mark-up of price over cost, tends to be associated with abuse of monopoly power and loss of efficiency. It is commonly assumed that with entry of more firms and firms earning normal returns – as opposed to super-normal profits – prices should be uniform across customers. However, theoretical models suggest that price discrimination is possible even in markets with many firms and each firm earning zero economic profits. The extent of price discrimination in such a situation depends on differences in tastes among customer categories and cost differences among firms.

The post-discount actual price paid by the customers is not only very different from the pre-discount rack rates, but the ordering of customers in a hotel within the former can be different

¹ Under *third degree* discrimination, different purchasers pay different prices, but each purchaser pays a constant amount for each unit bought.

from that within the latter. For example, though the rack rate for FGITs exceeds the rack rate for the DTs, with hefty discounts, the FGITs often pay a lower actual price than the DTs. The price realised from customers is sensitive to seasons: going up in the peak tourist season in winter, and coming down during summer.

The study attempts to analyse the pricing behaviour of hotels across the three client groups: FFIT, FGIT and DT. The actual price is measured as the average realised rate (ARR) for each category. The existing literature on determinants of prices in domestic airline routes in the United States appears to provide an appropriate framework for our analysis. Air ticket prices on domestic routes in the United States are well known for varying across airlines, across different days of the week, and across different buyers. What is crucial – and what hotels seem to share with airlines – is that different sellers provide “related” but not “identical” products, and prices differ among buyers in segmented markets for the same product.

The study focuses on the determinants of pair-wise ARR differences among FFIT, FGIT, and DT. The analysis shows that both $ARR(FFIT) - ARR(DT)$, and $ARR(FGIT) - ARR(DT)$ in a hotel in any location tend to depend on market shares; the role of costs is limited. Increasing competition leads to a decrease in ARR-differentials across customer groups. The relation between cost and ARR-differential, however, varies from location to location as well as across seasons. It may be noted that a positive effect of cost on price differential of say FGIT-DT implies that the additional cost is recovered relatively more from FGIT.

Evidence of a fragmentary nature seems to suggest that there are differences in cost in servicing a foreign and an Indian guest. But the cost difference alone is unlikely to be sufficient to explain the extent of price discrimination in Indian hotels.

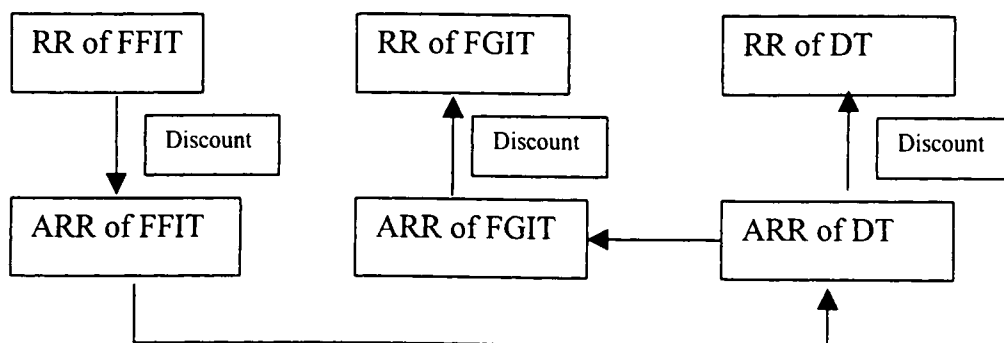
In the context of the Indian hotel industry, the observed differences in ARR among customer groups seem to be a reflection largely of market power of the hotels. The welfare effect of price discrimination and the root cause of the discrimination itself are ambiguous for three reasons. First, with increasing competition in the Indian hotel industry, some hotels can quote uniform tariffs for all customer categories and capture a larger market share, if they so wish. In fact some hotels – all hotels of the ITDC group and even some private hotels – are

already practising a policy of uniform tariff. In spite of this, if the market is sustaining the practice of multiple tariffs in others, it is difficult to conclude that price discrimination is just a reflection of monopoly power. Second, the empirical evidence suggests that the ARR-difference among different customer categories does diminish consistently with increasing competition. Third, hotels provide differentiated products and no two hotels are identical in terms of service or facilities. Customer groups have varying preferences. Varying intensities of demand by different customer groups for the services of a hotel can result in varying ARR-differentials across hotels.

Discounts are governed primarily by the following factors: location of the hotel, client attribute, tax base for luxury tax and whether the hotel belongs to the Oberoi/Taj/ITC group of hotels.

Given the complex set of variables in the decision making process of the hotels, it is important to integrate the various components – rack rates, realised rates and discount factors - into a unified framework. This study proposes the following framework. Realised rate story establishes that the ARR differential is determined by considerations of market share and cost. Once the ARR for one of the groups of clients is determined, the realised rates for the other two would follow suit. If discount rates are more or less determined by market conditions, this would mean that, given the realised rates, the rack rates would get correspondingly determined. This would imply that there is one degree of freedom left here.

Flow Diagram – Determination of ARR and RR



The hotel needs to determine one ARR or RR and the rest would fall into place. Here it is argued that it is possible to model tariffs in the hotel industry as if the hotel chooses to fix RR

of say FFIT, which reflects on the quality of the hotel. The fact that the ranking of the hotels in terms of RR does not change across client groups suggests that the quality signal is consistent across the three groups. Therefore, ranking of hotels by one client group is sufficient to capture the overall quality of the hotel. Applying the industry determined discount rates on this RR, the ARR for FFIT would be determined. From this would follow the ARR of the other two client groups, determined by market share of the hotel and cost per room (estimated equations). Once again using the discount rates, the rack rates of these two client groups are residually obtained.

Is there a need for regulating whether the hotels can or cannot quote multiple rack rates for different customer categories? The answer seems to be an unambiguous no for three reasons. First, a comparison of the rates of growth of rack rates for the three groups of customers shows that rack rates increased the fastest for the domestic traveler, followed by the foreign individual traveler. In fact after correcting for inflation, the rack rates for FGIT register a decline in summer and a marginal increase in winter, between 1992-93 and 1997-98. This suggests that the market mechanism has its own dynamics in customising the rack rates. Second, even if the hotels are made to quote a uniform rack rate for all categories, they cannot be prevented from granting differentiated discounts to the various groups. Third, there is fairly consistent evidence of competition driving the differential in ARRs down during 1989-97.

I. Introduction

I.1. Introduction

The price for a good or service should reflect the “true social cost” of producing it. Otherwise, there is a loss in social welfare through under- or over-consumption. Is the price for a commodity or service the “right” price that should prevail? This is a perennial question that crops up in many contexts, particularly markets with imperfect competition. Monopolists are notorious for abusing their market power, fixing “exorbitantly high” prices, and charging different prices to different customers. While examples of pure monopolies are rare, there are several markets characterised by imperfect competition. Such imperfections are particularly prevalent in markets with differentiated products or services that are substitutes, but not perfect substitutes, for each other.

Hotels provide one such example of imperfect markets. No two hotels share exactly the same location, and location is important. Furthermore, rooms, service, and ambience differ from hotel to hotel. A number of Indian hotels, for example, practice a “dual tariff policy” by putting up two prices for any given category of rooms: a rupee price for the Indian clients and a dollar price for the foreign guests that is considerably higher in rupee terms than that for their Indian counterparts. This dual tariff policy has been the focus of an intense controversy in recent times with the Department of Tourism and Hotels “instructing” the Indian hotels to abolish the system, which is currently under litigation in Court.²

The Hotel Association of India (HAI) asked the National Institute of Public Finance and Policy (NIPFP) to

- To study the existing tariff structure in the hotel industry and examine its implications for the industry on the one hand, and the Indian economy on the other and to make recommendations,

² On January 8, 1998, the Department of Tourism – the predecessor of the current Ministry of Tourism – issued a notification to the effect “The operation of single tariff is mandatory on all the hotels which are classified by the Department of Tourism, Government of India.” This notification, in fact, was a sequel to two earlier notifications on July 26, 1993 and March 17, 1997 to all recognised hotels requiring them to follow a policy of uniform tariff across all customer groups.

- To undertake a broad review of policies concerning the hotel industry in the context of tourism and to assess the extent to which these policies have helped the industry to develop in the country,
- To study the structure of taxes, concessions and rebates as imposed on or extended to the hotel industry, with a view to determine their justification, usefulness and adequacy.

The study was started in 1998, and, with the help of the HAI, the NIPFP collected data on 48 hotels all over India, and held several meetings with hoteliers and other relevant officials in related fields. The aim of this report is to provide results of the investigation of pricing policies of Indian hotels, and the examination of its implications for the industry on the one hand and for tourism and the economy in general, on the other. In addition, this report briefly looks into the institutional set-up within which the Indian hotel industry operates. While this analysis brings to the fore some of the likely impediments to the development of the industry, a more exhaustive and detailed analysis is essential for identifying the exact impact of each of these factors.

I.2. History of Hotels in India: A Perspective

Hotels are not altogether a new idea in India. From ancient times, we find engrossing account of widespread travel across the vast region. There are many religious and historical references to *dharmashalas*, *musafirkhanas*, *sarais*, taverns and hotels in India as early as the 16th and 17th century. In the early eighteenth century, there were plenty of taverns in India with fashionable names like Portuguese George's, Parsee George's etc. While some of these taverns may have conformed to the concept of western style hotel, it is doubtful that many others did.

Western style residential hotels are of comparatively recent origin in India. They were first started almost one and a half century back mainly for dignitaries and princes. The credit for opening the first of this kind of a hotel under the name of British Hotel in Mumbai in 1840, goes to Pallonjee Pestonjee. The British, mainly for their own use or for foreign visitors, also introduced hotels in India in the nineteenth century. Until about the early twentieth century,

barring the Taj Mahal in Mumbai, almost all the hotels in India were owned and operated by the British and Swiss families.

The twentieth century constitutes a turning point in the history of the hotel industry in India. There was accelerated growth in industry with the rise of groups such as the Taj Group, the Oberoi Group and the Welcome Group (ITC hotels). With emphasis on economic growth in the post-independence period came the recognition of the basic strengths, the variety and benefits of promoting tourism in India. This is evident from the plan documents. The relevance of the tourism infrastructure – particularly hotels – to other activities also came into focus with international conferences, such as the UNCTAD and ASIAD, organised in Delhi. In light of the inadequacy of hotel accommodation, public sector stepped in to fill the gap.

Simultaneously with the promotion of public sector hotels, the government has been offering various incentives to the private sector such as making land available on lease, and long-term credit from the specialised Tourism Finance Corporation of India. The Government also introduced a system of giving “recognition” to hotels and vouchsafing for their quality through a system of awarding star classification from 1963-64. Recognition by the Government is a prerequisite for a hotel to be eligible for fiscal incentives such as income tax concessions under the Income Tax Act, Sections 80HHD and 80IB, and Export Promotion Capital Goods (EPCG) Scheme of the Government of India.

There has been significant expansion in the activity of hotel chains, and all chains – the Oberoi, the Taj, ITC hotels, Bharat hotels and the Leela – appear to be committed to large-scale investments in expansion and renovation. Furthermore, internationally known groups have lent their brand equity and marketing expertise. These include Holiday Inn, South Pacific, Sheraton, Intercontinental, Ramada, Marriot, Accor, Best Western and Quality Inn. Hilton has made its entry with a management tie-up. There appears to be quite a few hotels providing the international traveller at the top-end of the market assurance of service at the international standards that they are used to. The number of recognised hotels has gone up from 186 in 1963-64 to 647 in 1989, to 1,160 in 1998 and 1232 in 1999.

I.3. Some Important Policy Issues

The step-up in private sector investment and activity in the hotel industry has led to a rethinking of the role of public sector hotels. While the contribution of the Ashok Group and Hotel Corporation of India in catalysing the growth of hotels in India is recognised, the commercial performance of such hotels has been a source of concern. Furthermore, there has been a growing emphasis on market-based development and refocusing the government to social sector activities – such as education and health – and to infrastructure such as roads and water supply, and away from business that can be left to the private sector. In this context, the Disinvestment Commission has identified hotels industry as a good candidate for withdrawal of the state.

The progressive withdrawal of the State from hotels enhances the need for monitoring the progress of the sector, and providing an appropriate policy framework including the fiscal and regulatory regimes. Hotels are an important component of tourist infrastructure. Tourism – both domestic and international – can not develop without adequate hotel facilities. A foreign tourist will not come unless there is availability of a hotel room of her choice and within her budget at the desired destination. Furthermore, rapid development of domestic trade and industry requires commensurate availability of hotel facilities for the traveling trader and manufacturer. According to the Note of HAI, presented at the State Tourism Ministers' Conference (August 6, 1998), the estimated requirement of hotel rooms in the year 2000 is 1.25 lakh, while the capacity in 1998 stood at sixty five thousand. It is therefore, imperative to increase the number of hotel rooms.

In the new era of private sector hotels only, three aspects of the hotel industry in India appear to be important for analysis. First, there is a prima facie relative scarcity of hotel rooms in India. The number of hotel rooms in India was 68,324 in August 1999, compared to 2,49,098 in Thailand, 98,440 in Malaysia, and 7,01,736 in China, in 1997, as per WTO. For a country of its size, the hotel industry appears to be severely underdeveloped. What are the reasons for this scarcity? Or, is there no scarcity as manifested in less than full occupancy in hotels?

Second, there appears to be a scarcity of mid-level, budget hotels. Presently in India the big chains account for about 30 percent of the total accommodation available. The big hotel chains blend impeccable western services with Indian warmth and hospitality for the discerning international and domestic travelers. But, availability of top class hotels in the five star or five star deluxe categories is not enough to attract the tourists – both domestic and foreign. The majority of tourists belong to the so-called middle income group, and require budget hotels in the two, three and four star categories for accommodation and travel. Why is there a relative lack of supply in the two, three, and four star segments?

Third, there is a popular perception that hotels charge excessively high rates. Like most other sectors, the hotel industry was under price regulation until 1991. The administrative organ in charge of the price regulation was the Department of Tourism.³ Since 1991, the hotels have been practising a dual tariff policy for domestic and foreign tourists. At the time of its introduction, the rack rate for foreigners quoted in dollars exceeded the rupee rack rate quoted to domestic guests by 24 per cent. The excess was justified by the asymmetric application of an expenditure tax of 20 per cent on domestic guests alone.⁴ While the Department of Tourism has been issuing notifications since 1993 pressing for a uniform tariff, the practice of dual tariff extended to the ITDC group of hotels as well. Quoting a dollar rate to foreigners came handy to hoteliers in an era of a rapidly depreciating rupee. While the rupee price could be held constant for domestic guests, with depreciation, an unchanged dollar price for foreigners brought in more rupees for every foreign guest that came to the hotel.

But, is the dual tariff policy a “fair” policy? Whether the system is “fair” or “unfair” is a matter of debate, and the issue itself is almost metaphysical. While a foreigner can feel “cheated” for being charged a higher price for the same room as her Indian counterpart, it may be argued that as a proportion of her income she may be paying the same price as the Indian. This equivalence in terms of proportion of income may argue in favour of a dual tariff policy, particularly in a period of exchange rate volatility. Consider a situation where the rupee exchange rate is Rs. 30 per US dollar, and the room rate is a uniform Rs. 3,000 for both foreigners and Indians. If the rupee depreciates from Rs.30 per US dollar to Rs.40 per

³ In January 1998, the Department of Tourism was made into the Ministry of Tourism.

US dollar, the foreigner effectively gets a discount in room rate from \$100 to \$ 75. Had the room rate been a uniform \$100, the Indian would have to pay a higher price of Rs. 4,000 compared to Rs. 3,000 in the pre-depreciation era. A uniform room rate of either Rs. 3,000 or \$100 for both groups will lead to either a discount to the foreigner or a penalty on the Indian when the exchange rate depreciates.

The argument in favour of dual tariff in terms of keeping the price as a proportion of income of the foreigner and the Indian constant, however, loses its strength because it applies to all tradables, for example, say apples. There is a presumption in the argument that the uniform price in the pre-change situation was “correct”. Changes in exchange rate often reflect a response of the economy to correct the relative prices of various commodities – particularly exportables and importables on the one hand, and non-tradables on the other. A depreciation is expected to tilt the production-consumption structure in favour of importables and exportables and improve the balance of payments position. Keeping the effective price of hotel rooms unchanged for foreigners and Indians in terms of their respective purchasing powers defeats the very purpose that the depreciation is supposed to achieve, namely shifting the demand for hotel rooms from Indians in favour of foreigners and increasing the inflow of foreign exchange.

Much more important than the metaphysical issue of “fairness” of the dual tariff policy is the question how such a policy is sustained in a market structure with multiple hotels. A foreign guest fetches more money to the hotel than an Indian. Why does the competition among hotels not reduce the rate down for foreigners and bring about a uniform tariff for all categories of consumers? For example, the price of apples in India – which is a competitive market – is more or less the same for foreigners and Indians.⁵

⁴ The expenditure tax was extended to cover foreign tourists as well in 1995. The Budget of 1994-95 reduced the rate of the tax to 10 per cent.

⁵ Strictly speaking, the price of apples is the same for foreigners and Indians only when the quantities bought is large. As everyone knows, the price varies from market to market, with higher prices in markets in rich neighbourhoods. Furthermore, fruit vendors are notorious for practising price discrimination -- charging a higher price to all customers, particularly foreigners, who appear rich.

I.4. The Objective and Scope of the Report

The primary objective of the study is to investigate the pricing policies of Indian hotels and examine its implications for the industry, on the one hand and for tourism and the Indian economy, on the other. The study aims at finding a rationale and the need, if any, for a change over from the dual tariff structure to a single tariff structure having regard to the future full convertibility of the rupees. In addition, it also aims to analyse the current pattern of central and state taxation policies, especially with regard to the expenditure tax and luxury taxes impacting the hotel industry and to come out with some prescriptions on the rational tax structure.

The plan of this report is as follows. Chapter II provides an overview of the institutional setup and tax regime within which the Indian hotel industry operates. Chapter III is a discussion of the price data with some description of the complexity of the nature of the industry. Chapter IV contains a probable explanation of the pricing behaviour both in terms of actual price charged and the rack rates. Chapter V concludes with some general observations.

II. Institutional Framework and the Tax Regime

It is now an established fact that tourism can contribute significantly to the national economy. Based on satellite accounting, the report of the World Travel and Tourism Council, "Travel and Tourism in India: The Economic Impact and Potential" projects that the share of travel and tourism in aggregate GDP can potentially increase from 5.6 per cent in 1998 to 6.6 per cent in 2010. Correspondingly, its share in total employment would increase from 5.8 to 6.8 per cent. Report of the National Committee on Tourism (1988) observed that "provision of proper accommodation of acceptable standards, in particular for international travelers would largely determine the pace and level of growth of tourist traffic to India".

Satellite Accounting: Travel and Tourism

Satellite accounts are rearrangements of information from the national economic accounts and other sources for the purpose of analysing specific economic activities in greater detail. In the case of travel and tourism, this accounting technique is based on a demand side concept of economic activity (i.e., the economic activities of visitors and travel companies). Demand for travel and tourism is defined as the travel-related expenditures made by all visitors, before, during, and immediately after each trip taken. Tourism demand consists of business travel and travel by government employees inside and outside the country, resident household travel inside and outside the country, and travel in the country by non-residents (international visitors).

The methodology is based on the estimates of two items: the direct consumption of travel and tourism sector and the services that facilitate demand for travel and tourism in a particular country.

An appropriate institutional framework, particularly regulation, and tax regime are crucial for building up the hotel industry and allowing it to play its rightful role in the development of the economy. Some regulation is essential for orderly development of the industry. But excessive regulation and cumbersome procedures can increase the cost of doing business, retard growth and slow down the development of the tourism sector itself. Some of these issues of optimal regulation and policy framework have been addressed in some earlier reports as well including "Draft National Tourism Policy, 1997" brought out by Department of Tourism.

Like in the case of regulation, an optimal tax regime can go a long way in promoting growth of the hotel industry. In line with other sectors, hotel industry must contribute to the revenues of the government, and hence to the national development effort. But excessive taxation can discourage the growth of the industry and even result in lower than optimal revenues for the government. It is important to recognise that hotel tariffs in India – post tax – need to be competitive in the world to attract international tourists.

This chapter sets out to identify some of these institutional impediments to development of the hotel industry. Section 1 examines the problems in setting up a new hotel, Section 2 discusses the “recognition” mechanism, Section 3 enumerates the nature of the tax regime for hotels, Section 4 contains a short discussion of the promotional expenditure and section 5 role of public sector enterprises in hotel industry.

II.1 Setting up a New Hotel

- Land

Acquisition of land is one of the major stumbling blocks faced by the hotel industry. Every city is expected to have a master/town plan which specifies the land use pattern by locality. The city is divided into a number of zones, and all economic activity is not permitted in all zones. Specifically, hotels cannot be opened in residential zones in a number of cities. For instance, in Delhi, land for hotels is classified as for commercial use. Given the high demand for land in commercial zones, this restricts the ability of the hotel industry to obtain land at reasonable cost. This constraint is reinforced by the restrictions on the form of utilisation of the available land. In Delhi for instance, the hotels have to satisfy

1. maximum ground coverage of 30 per cent,
2. maximum floor area ratio of 1.5, and
3. maximum height of 50 meters.

All these together imply a restriction on the number of rooms that can be constructed on a given plot of land, resulting in turn in a higher land cost per room. Estimates suggest that while international norms place land cost at 10 to 15 per cent of the project cost, at a number of locations in India, land costs range from 25 to 35 per cent. In Mumbai and Delhi, the ratio is significantly higher at around 50 per cent.

- Clearances required

In the process of setting up a new hotel in India, the entrepreneur has to take a number of clearances from various government institutions, at the central, state and local levels. A document presented by the Hotel Association of India at the State Tourism Ministers' Conference (June 27, 1997) refers to 38 such clearances required in the course of setting up a new hotel. Table II.1 lists some of these. As is universally recognised, multi-window clearances would impose significant transactions costs, both in terms of time and expenditure.

Table II.1: A Sample of Clearances Required For A New Hotel Project

	<i>Sanction</i>	<i>Authority</i>
1	Project Approval	Ministry of Tourism
2	Approval of Building Plans and FSI/FAR	Local Bodies/State Government
3	Clearances under Urban Land Ceiling Act	State Govt.
4	Height Clearance	Local Bodies and Ministry Of Civil Aviation, for hotels in the proximity of airports
5	Urban Arts NOC	Urban Arts Commission
6	Approval for Fire Safety Installation	Chief Fire Officer of State Govt.
7	Approval for Electrical installation	Local Bodies/ City Electricity Distribution Company/ SEBs.
8	Import Licence for Capital Goods or Certain Restricted Items of Raw Material	Ministry of Tourism, DGFT
9	Sanction for Water Supply Requirement	Local Bodies
10	Approval for Lifts Installation	Local Bodies/State Govt.
11	Temporary Power	State Municipal Bodies
12	Borewell	State Municipal Bodies
13	Restaurant Licence	Local Bodies /Police
14	Building Completion Certificate and Occupancy Certificate	Local Bodies
15	Pollution NOC	Concerned Sate Govt. Authority And Ministry Of Environment
16	Monitoring Water & Air Pollution Payment of Cess in Some States	State Pollution Control Board
17	Port Trust	Respective Port Trust Authorities
18	Police NOC	State Govt.
19	Local Sales Tax Registration	State Govt.
20	Entertainment Tax	State Government Entertainment Tax/ Commercial Taxes Department
21	Central Sales Tax Registration	Ministry Of Finance
22	Contract Labour Registration	Labour Commissioner
23	Provident Fund Registration	State Govt.
24	ESIC Registration	ESIC
25	Availing of Tax Incentives	Ministry of Tourism
26	Income Tax-PAN	Ministry Of Finance
27	Income Tax-TAN	Ministry Of Finance
28	Shops and Establishment	State Govt.
29	Money Changer Clearance	Reserve Bank of India

- Infrastructural costs

Acute scarcity of basic amenities, especially water supply, electricity and sanitation, in urban areas in India contributes to additional infrastructural costs for the hotels. Since the clientele of the hotel expect adequate and appropriate delivery of these services, comparable to their international counterparts, Indian hotels have to invest for ensuring uninterrupted delivery of water and electricity.

All these factors together contribute to increasing the cost per room in India.⁶ (Table II.2). With high fixed cost per room, entrepreneurs tend to opt for 5 star and 5 star deluxe hotels in order to ensure an economic return on the investment.

Table II.2: Indicative Construction Costs excluding land(year 2000)
(US\$ per square metre)

	3-star	4-star	5-star
Hong Kong	1810	2000	2300
Singapore	1240	1520	1800
Beijing	1250	1420	1600
Jakarta	750	1100	1350
Kuala Lumpur	830	1100	1320
Manila	960	1100	1280
Bangkok	850	970	1100
India	1075	1506	2154

Sources: 1. The HVS Internal Journal (Singapore), June 2000,
2. FH&RAI: Guidelines for Setting up a Hotel Project (November, 1996)
3. Chartered Financial Analyst, December 1998

Notes: Figures for India are derived using minimum area standards for single rooms.

II.2 Recognition Formula

The approval by the Department of Tourism is optional. However, such approval is in the interest of the hotel as it constitutes a certificate of suitability of the hotel for occupancy by tourists, both foreign and domestic. Further, besides being eligible for the various government incentives and concessions, approved hotels get world-wide publicity through tourist

⁶ 1, 2 and 3 star hotels as well as Heritage hotels do receive some relief in the form of interest subsidy. For the former, an interest subsidy of 3 per cent is available while for the latter a 5 per cent rate of subsidy is effective on loans taken from Tourism Finance Corporation, Industrial Finance Corporation and State Financial Corporations, provided the hotels are located outside the four metropolitan cities.

literature published by the Department of Tourism and distributed by the Government of India Tourist offices in India and abroad.

To qualify for approval, hotels are required to maintain standards of service and amenities appropriate to the star category they have been planned for. There are six categories ranging from the 1 star category hotel which offers just clean and comfortable accommodation without frills to the 5 star deluxe category having luxury features. A new category of heritage hotels has also been introduced for hotels set up in palaces/castles/forts built prior to 1950. The department of tourism has laid down item-wise criteria for each category. As an illustration, we present below the criteria for 5 star category.

Five Star Hotels: The Ministry of Tourism recognises a hotel to be in the five star category subject to the following conditions: The façade, architectural features and the general construction of the building should have the distinctive qualities of a luxury hotel of this category. The hotel should have at least 25 lettable bed rooms, all with well appointed attached bath rooms with long bath or the most modern shower chambers, with 24 hours of service of hot and cold running water.

All public and private rooms should be fully air-conditioned (except in hill stations) and should be well appointed with superior quality carpets, curtains, furniture, fittings, etc., in good taste. The hotel should have a well-designed and properly equipped swimming pool except in hill stations. It should also have a well-equipped bar/permit room, beauty parlour, barber shop, florist and a shop for toilet requisites and medicines in the premises in addition to other facilities available in a four star category.

A five star deluxe hotel is a qualitative extension of the five-star category while quantitatively, the basic features are the same. In such a hotel, the comparative all round standards of service and amenities are of a very superior quality.

II.3 Tax Regime

Hotel industry is subjected to a plethora of taxes by the governments at the centre and states.

The sales of hotels are subjected to the following taxes:

- Expenditure tax: Room tariffs above Rs. 2000 are subject to a 10 per cent tax. This is a central government levy. However, hotels in hilly or rural areas or a place of pilgrimage are exempt from expenditure tax with effect from 1.4.1988 till 31.3.2008.
- Luxury tax: this is a state levy, and hence varies both in form and level across states. Some of the states charge the luxury tax on rack rates, while in others, the tax is on the realised rate. Table II.3 shows the incidence of luxury tax in different states.

Table II.3: Luxury Tax Rates in Different States (1997)

States	Rates (%)	Tax Base
Tamil Nadu	20	Printed Tariff
Uttar Pradesh	5	Actual Tariff
Maharashtra	10	Actual Tariff
Karnataka	10	Printed Tariff
Delhi	10	Printed Tariff
Kerala	15	Actual Tariff
Goa	15	Actual Tariff
Andhra Pradesh	10	Printed Tariff
Madhya Pradesh	10	Actual Tariff
West Bengal	10	Actual Tariff
Rajasthan	6	Actual Tariff

Note: Printed Tariff means tax base on RR
Actual Tariff means tax base on ARR

- Food and beverage taxation: This is again a state level tax, with the incidence varying considerably across states.⁷ In Maharashtra for instance, food and beverages are taxable at 20 per cent. Similarly, in Karnataka, while food is subjected to a 21 per cent sales tax, beverages face varying tax rates, not less than 10 per cent.
- Service tax: Banquets and outdoor catering activities of the hotels are subjected to a 5 per cent tax.
- Excise on cakes and pastries: Cakes and pastries produced by the hotels are subjected to an 8 per cent excise, over and above the sales tax leviable.

⁷ See Report of the Task Force on Infrastructure for Tourism, 1999, (Chairman: R. Bhoothalingam) for details.

International comparisons suggest that in Indian hotels the incidence of room tariff related taxes is comparable to that in Europe and Latin America. This incidence is considerably higher than the incidence of such taxes on hotels in East Asia. Table II.4 presents some illustrative numbers. Since hotels in India compete more closely with the hotels in Asia for clients, this can place the Indian hotels at a relative disadvantage.

Table II.4: Comparison of Lodging Tax (Fall/October 1999)

Cities/Countries	Percentage of Total Lodging Cost
Copenhagen/Denmark	20.00
Prague/Czech Republic	18.03
Buenos Aires/Argentina	17.36
New Delhi/India	16.67
Mumbai/India	16.67
Jakarta/Indonesia	9.91
Kuala Lumpur/ Malaysia	4.76
Hongkong	2.91

Source: <http://www.traveltax.masu.edu/barometer>

Note: This table is a part of the World Travel and Tourism Center (WTTC) Tax Barometer. The Tax Barometer is composed of four trip elements: lodging, car rental, meals, and airport arrival and departure. Each element of the trip is priced according to a standard purchase by a hypothetical "WTTC traveler" in each destination. Taxes imposed on these purchases are then identified, recorded, and developed into a sector index. Next, these elements are aggregated into a composite index for the destination, based on the average cost of each element included in the standardized trip.

Domestic purchases by the hotels are once again subjected to excise and sales tax when relevant, while imports are subjected to customs duty. However, the export and import policy does offer some concessions to the hotel industry. Under the Export and Import Policy, hotels and restaurants are entitled to import essential items under marketable import licenses. Further, hotels can import certain specified items under concessional customs duty. Capital goods can also be imported at a concessional rate subject to an export obligation which is four times the CIF value of imports to be fulfilled over a period of five years (EPCG scheme.) Further, under paragraphs 5.19 and 5.20 of the handbook of procedures (Vol.1) issued by DGFT, hotels are entitled to import essential goods upto a value of 25 per cent of foreign exchange earned by them during the preceding licensing year.

In the field of direct taxes, the income of the hotel industry is subject to the standard Corporation Tax, which is the same across industries. The rate of corporation tax at present is

35 per cent with a 10 per cent surcharge. Within this tax, there are a few incentives for new hotels under section 80IB. (See Table II.5 for details.) These provisions discriminate between new and old hotels as also between new hotels across locations, introducing possible violation of the efficiency principle. Hotels in these different locations differ both in costs and in revenues. The total effect of the tax incentives – including the distortion introduced – on the overall growth as well as the pattern of investment in the hotel industry requires a more detailed analysis.

Table II.5: Tax Incentives for the Hotel Industry

Section	Description	Deduction
80 IB	<p>An approved hotel owned by a company with a minimum paid-up capital of Rs.5 lakh, not formed by the splitting up or reconstruction of an existing business:</p> <p>(a) Located in a hilly or rural area, or a place of pilgrimage or any other specified place, which starts operating between 1.4.1990, and 31.3.1994</p> <p>(b) Located in a hilly or rural area, or a place of pilgrimage or any other specified place (excluding hotels located within the municipal jurisdictions of Calcutta, Chennai, Delhi and Mumbai) which starts operating between 1.4.1997, and 31.3.2001.</p> <p>(c) Located at any other place which starts operating between 1.4.1991 and 31.3.1995</p> <p>(d) Located at any other place excluding hotels located within the municipal jurisdictions of Calcutta, Chennai, Delhi and Mumbai) which starts operating between 1.4.1997, and 31.3.2001</p>	<p>For (a) and (b), 50 per cent of profits and gains for 10 assessment years.</p> <p>For (c) and (d), 30 per cent of profits and gains for 10 assessment years.</p>

A hotel can also claim deduction in respect of earnings in convertible foreign exchange under section 80HHD. The amount of deduction allowed is fifty per cent of the profits from services rendered to foreign tourists only, plus the amount transferred to the reserve fund from such profits. It may be pointed out that this deduction is not available for profits from other sources. This provision creates another kind of distortion making the rate of profits net of tax sensitive to the proportion of foreign clients in total clients.

Hotels are also subject to liberal depreciation rules under section 32 of the IT Act. For instance, buildings used as hotels are allowed the enhanced depreciation rate of 20 per cent compared to 5 per cent for other buildings.

II.4 Promotional Expenditure

Hotels and tourism accounts for 6 per cent of GDP and no less than an equivalent share of total tax revenue⁸. Given its enormous potential in the country, efforts to promote the industry need to be taken seriously. Effort, reflected in expenditures on tourism, is evident both at the central and state government levels, with considerable variation in the level of expenditure at the state level (Table II.6). Further, in a comparison of promotional expenditure by national governments in different countries (see Table II.7), India figures at the middle level. If one considers total government expenditure on tourism in the country, the relative position improves considerably. Further, given the high fiscal deficit both at the central and the state

II.6: Tourism Promotion Expenditure: 1998-99

(Rs Lakh)

	Revenue Expenditure	Capital Expenditure	Total Expenditure
Andhra Pradesh	4562.37	0.00	4562.37
Assam	260.50	120.68	381.18
Bihar	495.56	664.57	1160.13
Goa	259.93	288.41	548.34
Gujrat	903.66	500.00	1403.66
Haryana	38.53	352.40	390.93
Karnataka	1165.46	0.23	1165.69
Kerala	2781.88	1742.68	4524.56
Maharashtra	585.05	60.00	645.05
Madhya Pradesh	64.82	0.00	64.82
Orissa	452.31	292.34	744.65
Punjab	46.19	171.50	217.69
Rajasthan	647.38	394.09	1041.47
Tamil Nadu	584.86	199.00	783.86
Uttar Pradesh	918.90	4238.16	5157.06
West Bengal	603.43	45.00	648.43
Central Govt.	11039.00	2175.00	13214.00

Source: Finance Accounts, 1998-99, for central and state governments.

⁸ Hotel and tourism sector contributes roughly 6 per cent of GDP in India. Since GDP from agriculture is subjected to a lower rate of taxation, the effective contribution of the non-agricultural sectors to tax revenue is expected to exceed their share in total GDP.

level, and the need for stepping up government expenditures for provision of basic amenities like education, health and roads in the country, it may be difficult to augment promotional expenditure of the government on tourism in any major way. Efforts to promote this sector would therefore partly have to come from better value for money for the government funds spent for this purpose, and partly from the concerted effort of the private sector in this industry. Here exploring and exploiting the potential offered by internet would be useful.

Table II.7: Comparison of Tourism Promotion Expenditure (1995)

Country	US \$million
Australia	87.9
UK	78.7
Spain	78.6
France	72.9
India	63.3
Singapore	53.6
Thailand	51.2
Netherlands	49.7
Austria	47.2
Ireland	37.8
Portugal	37.2

Source: Mahajan and Aibara (1998)

Notes: Figure for India corresponds to total revenue expenditure on tourism, centre and states together.

II. 5 Public Sector in Hotels

Hotels had been primarily a preserve of the private sector. The role of the State had been hitherto restricted to the construction and operation of some rest houses and tourist bungalows. The paucity of hotel accommodation in Delhi for organising the UNESCO conference in 1956 led the Government to construct Hotel Ashok in New Delhi. Various other hotels were also constructed under the Ashok Group in various other cities. Government hotels, which were run as departmental enterprises, were corporatised in 1966 when the ITDC commenced functioning with effect from October 1. The ITDC became a pacesetter in pioneering ventures in tourist destinations and in tourism publicity backed by the country's largest accommodation chain Ashok Group.

Overtime, there has been an increase in private participation in hotels. In the last few years, all the new hotels have been in the private sector. On the other hand, the performance of public sector organisations involved in this industry has not been good. (Table II.7). Six of the nine national public sector organisations operating in this field have registered a net loss. This is true in varying degrees for the

India Tourism Development Corporation Limited

ITDC was constituted with the following objectives:

- to construct , manage and market hotels, Beach Resorts, Restaurants;
- to provide transport, entertainment, shopping and conventional services;
- to produce , distribute, sell tourist publicity material ; and
- to render consultancy - cum-managerial services in India and abroad.

The present net-work of ITDC services consists of Ashok Group of Hotels (including 2 Beach Resorts), restaurants, Ashok Travel and Tours units, Tourist Service Stations, Duty/Tax Free Shops and Sound and Light Shows. ITDC also manages joint venture hotels at Guwahati, Ranchi, Puri, Pondichery, Bhopal and Itanagar.

The turnover of the corporation fell to Rs. 279.44 crore during 1998-99 from Rs. 297.10 crore in the previous year. This corresponds to a decline in occupancy rate from 42% to 37%. The result has obvious repercussions on the net profits of the corporation, which registered a decline from Rs. 43.40 crore to Rs.9.94 crore.

Source: Public Enterprises Survey, 1998-99, Vol. 2.

state government owned public sector enterprises as well. For instance, Kerala Tourism Development Corporation has registered accumulated losses of 8.42 crore in 1993-94 against paid up capital of Rs 9.21 crore. Similarly, Karnataka Tourism Development Corporation is operating with an accumulated loss of Rs 3.4 crore against a paid up capital of 5.99 crore. Rajasthan Tourism Development Corporation too is following the same path, and has

Table II.7: Performance of Hotel Industry: 1998-99

(Rs. in crores)		
Name of Enterprise	Paid up/Issued share capital	Net Profit/ Loss
India Tourism Development Corporation Ltd.	67.52	9.94
Hotel Corporation of India Ltd.	40.6	0.68
Indo Hokke Hotels Ltd.	1.72	0.37
Ranchi Ashok Bihar Hotel Corporation Ltd.	0.72	-0.2
Utkal Ashok Hotel Corporation Ltd.	4.80	-0.69
Assam Ashok Hotel Corporation Ltd.	1.00	-0.25
Donyi Polo Ashok Hotel Ltd.	1.00	-0.15
Madhya Pradesh Ashok Corpoartion Ltd.	1.60	-0.36
Pondichery Ashok Hotel Corporation Ltd.	0.60	-0.12

Source: Public Enterprises Survey, 1998-99, Vol 2.

recorded net loss in 1996-97. Rajasthan State Hotels Corporation however, doing better with net profits of 0.22 crore on paid up capital of 1.07 crore.

In light of the above, hotels are recognised as one activity fit for State withdrawal. The Disinvestment Commission has recommended a two-pronged strategy for public sector hotels. First, hotels in prime locations like Delhi and Bangalore may be handed over to established hotel chains through a competitive bidding process. The handing over on long-term structured contracts on lease-cum-management basis could involve an up-front fee and an annual fee with an in-built indexation for annual revisions. The fees are expected to be significantly higher than the current level of profits from these hotels. Second, other hotels may be split into separate corporate identities, with the government's shares in such companies being divested completely.

III. Data: Some Preliminary Observations

III.1. The Data

The analysis of hotel tariffs in this report is based on data from 22 hotels (first 22 hotels of Table III.1) from the three major hotel chains in India, the Oberoi, the Taj and the Welcome Group, and covers a period of nine years from 1989-90 to 1997-98. A year relates to the fiscal year starting April 1 and ending on March 31 the following year. Thus, 1989-90 relates to April 1, 1989 – March 31, 1990. Although data were requested from a number of hotels, responses were received from 48 only (Table III.1). Furthermore, complete and reasonably consistent information on the relevant variables necessary for a study of pricing behaviour was received only from 22 (the first 22 in Table III.1). All the 22 hotels analysed in this report belong to the five-star and five-star deluxe category. The nature of the data collected is described in Appendix 1. This chapter describes some basic characteristics of the data.

III.2. Rack Rates and Realised Rates

The controversy about differentiated rates is focussed on *rack rates* – tariffs quoted in printed brochure of hotels. Rack rates differ across different customer categories. But, it is important to note that the actual price paid by hotel guests can be very different from the relevant rack rates. The rack rates appear to serve as reference rates alone with only a small proportion of the customers in any category paying the full rack rate. The actual price paid by the average customer is significantly lower than the rack rate with the widespread use of discounts.

Table III.1: List of hotels – some general information

Sl. No	Name of the hotel	Location	Group name	Star category	Year estd.	No. of rooms ^a	Year of Change in star rating
1	Taj Mahal Hotel	Lucknow	Taj	5*D	NA	110	4* till 1995
2	Taj Residency	Indore	Taj	5* (1)	1995	78	
3	Taj Residency	Nashik	Taj	5*(1)	1996	68	
4	Taj Residency	Calicut	Taj	5*(1)	1997	74	
5	Hotel Taj Ganges	Varanasi	Taj	5*	1971	130	5* since 1986
6	Maurya Sheraton Hotel & Towers	New Delhi	Welcom	5*D	1977	440	
7	Mughal Sheraton	Agra	Welcom	5*D	1976	287	
8	Rajputana Palace Sheraton	Jaipur	Welcom	5*D	1992	216	
9	Chola Sheraton	Chennai	Welcom	5*	1975	101	
10	Park Sheraton Hotel and Towers	Chennai	Welcom	5*	1981	283	Applied for 5D
11	The Trident	Chennai	Oberoi	5*	1983	166	
12	The Oberoi	Bangalore	Oberoi	5*D(1)	1992	160	
13	The Oberoi Grand	Calcutta	Oberoi	5*D	NA	216	5* till 1990.
14	The Oberoi	New Delhi	Oberoi	5*	1965	290	
15	The Oberoi	Mumbai	Oberoi	5*D	1986	337	
16	The Oberoi Towers	Mumbai	Oberoi	5*	1973	575	
17	Windsor Manor Sheraton & Towers	Bangalore	Welcom	5*D	1982	240	
18	Taj Malabar Hotel	Cochin	Taj	5*D	1986	99	5* till 1990
19	Taj Palace Hotel	New Delhi	Taj	5*D	1982	420	
20	Taj Residency	Ernakulam	Taj	5*	1994	108	4* till 1994.
21	The President Hotel	Mumbai	Taj	5*	1968	310	
22	Taj Coromandel	Chennai	Taj	5*D	1974	202	
23	Taj Residency	Hyderabad	Taj	5*	1988	118	
24	Lake Palace Hotel	Udaipur	Taj	5*D	1963	84	5*D since 1988
25	Taj Residency	Aurangabad	Taj	5*	1993	40	
26	Taj Residency	Bangalore	Taj	5*	1983	163	5* since 1987-88
27	Taj Residency	Visakhapatnam	Taj	5*D	1987	94	5*D since 1994
28	Fort Aguada Beach Resort	Goa	Taj	5*D	1974	135	
29	Jai Mahal Palace Hotel	Jaipur	Taj	5*D	1986-87	102	5*D since Jan'97
30	Taj Garden Retreat	Varkala	Taj	4*	1996	26	
31	Taj West End	Bangalore	Taj	5*D	100 years old	129	3* till 1995
32	Ambassador Hotel	New Delhi	Taj	5*	1950	88	4* till 1997
33	Connemara Hotel	Chennai	Taj	5*	NA	148	4* till 1995
34	Manjarun Hotel	Mangalore	Taj	Not rated	1993	101	Not rated
35	The Taj Holiday Village	Goa	Taj	5*	1980	142	
36	Taj Bengal	Calcutta	Taj	5D	1989	231	
37	Taj Garden Retreat	Madurai	Taj	Heritage Classic	1990	50	2* till 1995.
38	Taj Mahal Hotel	New Delhi	Taj	5*D	1978	300	
39	Rambagh Palace Hotel	Jaipur	Taj	5*D	1959	106	
40	Fisherman's Cove	Chennai	Taj	5*	1986	80	
41	Gateway Riverview Lodge	Chiplun	Taj	3*	1988	37	
42	Taj Garden Retreat	Kumarakom	Taj	"Heritage Grand"(1)	1993	22	
43	Hotel Chandela	Khajuraho	Taj	5*D	29 years old	95	5*D since 1983
44	Gateway Hotel on Residency Road	Bangalore	Taj	4*	1989	98	
45	Raj Mahal Palace Hotel	Jaipur	Taj	Heritage	1976	20	
46	Taj Garden Retreat	Coonoor	Taj	2*	1991	33	
47	The Trident	Agra	Oberoi	3*	1993	140	NA
48	The Oberoi Maidens	New Delhi	Oberoi	4*	1925	50	

Notes:

1. # : as on 31st Dec' 97

2. (1) implies "awaiting classification".

III.3. Different Categories of Customers

The hotels recognise many categories of clients, and provide fairly customised deals to each class. A study of Indian hotels by HSBC and HVS International⁹, for example, shows that hotels recognise nine distinct categories of customers¹⁰, each of whom is offered a special price deal. Since time series data for each of these groups is difficult to obtain, the present study restricts itself to a classification into two distinct groups: Foreign and Indian. In addition, the foreigners are classified into two categories: the individual traveler and the group traveler. Hence, we have three groups of customers in the sample: free foreign individual travelers (FFIT), foreign group inclusive travelers (FGIT), and domestic travelers (DT).

A basic premise in the context of Indian hotel industry is that they practise price discrimination, and there are two different rack rates for foreigners and Indians. The rack rate for foreigners, quoted in dollars when converted into Indian rupees, exceeds the rack rate for Indians by a considerable amount. It is important to recognise that the rack rates can vary even for different categories of foreigners and Indians. For example, the data show that the average rack rates for FFIT and FGIT are different. Furthermore, with the rack rates serving as reference rates alone and different categories of consumers managing to extract different rates of discounts, the ordering of the actual price paid by the average customer in different categories can be different from the ordering of the corresponding rack rates.

III.4. Two Seasons

Because of the extreme temperatures, there is a pronounced decline in tourist arrivals during summer, and hotels face a pronounced seasonality in the demand for their services. Accordingly, the data have been analysed for two seasons: winter (the peak season) and

⁹ Indian Hotel Industry Survey, 1997-98, FHRAI (1999).

¹⁰ Airline crew, business traveler (domestic), business traveler (foreign), domestic tourist (leisure), foreign tourist (leisure), meeting participants (less than 100), meeting participants (more than 100), tour groups (domestic), and tour groups (foreign).

summer (the lean season). Winter is defined as October 1 to March 31 and summer as April 1 to September 30.

III.5. Location –An Important Determinant of Pricing

Location is crucial for the economics of hotels. A hotel located in a metropolitan city like Mumbai can fetch a very different clientele and returns than the same hotel, with identical facilities located in a leisure destination such as Agra or a middle-sized city such as Ernakulam. Given the differences in the observed pattern of behaviour of variables, locations have been classified into three categories: gateway cities (location 0) and leisure destinations (location 2) on two extremes, and “other” locations (location 1) in the middle.

Delhi and Mumbai have been classified as gateway cities. A large proportion of the foreigners arrives in these two cities before proceeding to other places in India. These cities which serve as “gateways” to India are supposed to be prime locations because of buoyant demand and supply bottlenecks.

FGITs are supposed to be pure tourists and a location has been classified as a leisure destination if FGITs constitute at least 40 per cent of foreign tourists in that location in winter. Goa is the solitary exception, and has been classified as a leisure destination on the basis of a priori knowledge even though FGITs constitute only 16 percent of foreign tourists in winter. Thus the three categories are gateway cities, leisure destinations and other locations referred to as 0, 1 and 2 in our analysis. A list of all the locations of the 18 hotels analysed in this report along with their classification is given in Appendix Table A1.

III.6. Observed Average Rack Rates

For the period 1992-98, the averages of the rack rates calculated for the three groups – FFIT, FGIT and DT – for all hotels season-wise and in each of the three location classes are reported in Table III.2. These weighted averages have been obtained by using the number of

room-nights sold in the relevant category as weights. The reported rack rates do not include taxes.

As can be observed from Table III.2, both in summer and winter, the average rack rate quoted to FFIT is the highest followed by FGIT and DT in that order, except for the latest two years of 1997-98 (Figures 1 and 2). The rack rates for DT were higher than FGIT for the years 1996-97. Further, the winter rates are higher than the summer rates for all three groups: FFIT, FGIT and DT. After correcting for domestic inflation, the increase in rack rate for FFIT and DT have been sizeable. Further, the increase has been the largest for DT. On the other hand, the real rack rate for FGIT in summer registered a decline between 1992-93 and 1997-98.

Figure 1

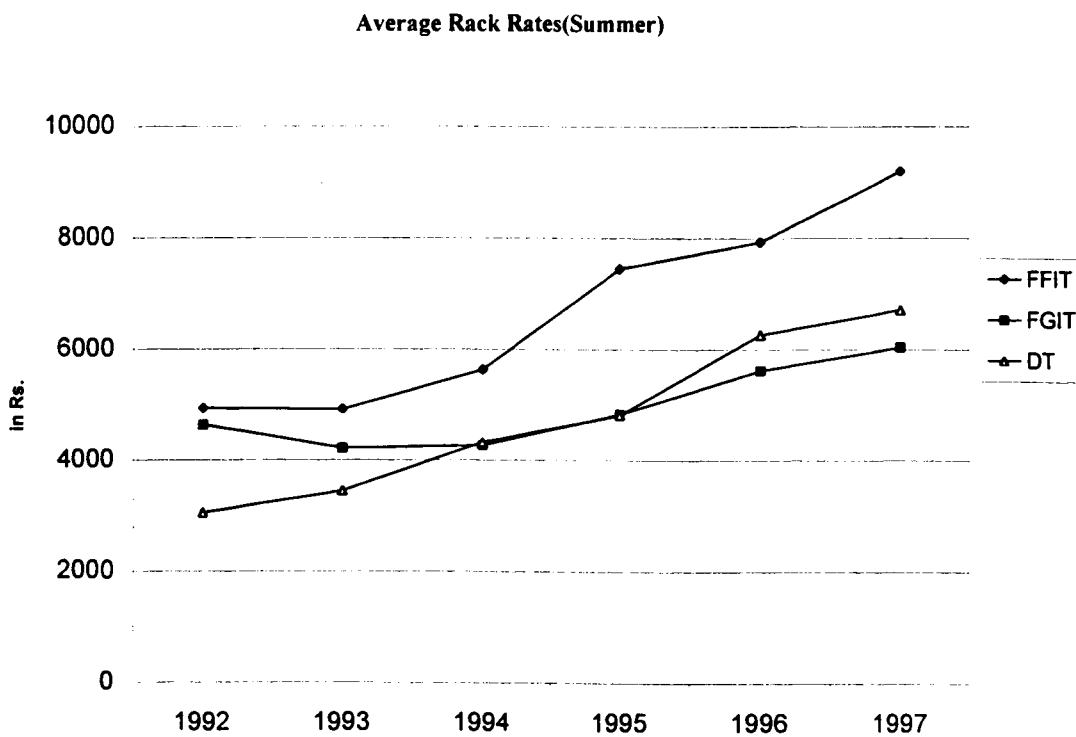


Figure 2

Average Rack Rates(Winter)

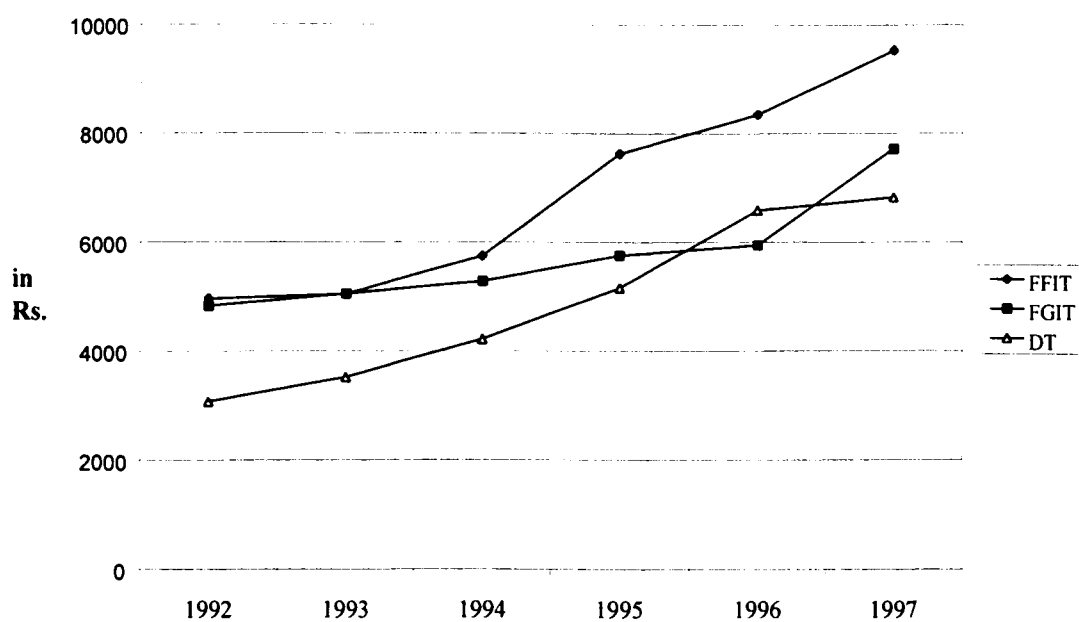


Table III.2: Weighted Average Rack Rates

(In rupees per room night)

Free Foreign Individual Tourist (FFIT)								
	Summer				Winter			
	All Hotels	0	1	2	All Hotels	0	1	2
1992-93	4938	5255	2161	5466	4963	5299	2974	5466
1993-94	4915	5441	2940	5358	5041	5590	3295	5358
1994-95	6279	6891	3922	4315	6618	7345	4325	3471
1995-96	7800	8845	5039	4053	8439	9633	5573	4049
1996-97	8595	9999	5552	4235	9280	10674	6437	4803
1997-98	9284	10638	6454	4333	9535	10641	7702	4848

Foreign Group Inclusive Tourist (FGIT)								
	Summer				Winter			
	All Hotels	0	1	2	All Hotels	0	1	2
1992-93	4636	4399	2790	5466	4829	4782	2912	5466
1993-94	4210	3977	2799	5358	5051	5142	2973	5358
1994-95	4405	4767	3338	4270	5137	5953	3626	4565
1995-96	5036	5420	4102	4909	5995	8410	4156	4808
1996-97	5986	7888	4878	5048	6296	9152	4954	5055
1997-98	6811	7944	4577	5035	7716	10282	4891	4714

Domestic Tourist (DT)								
	Summer				Winter			
	All Hotels	0	1	2	All Hotels	0	1	2
1992-93	3059	3659	1388	2950	3074	3494	1717	2950
1993-94	3448	4247	1923	3350	3518	4120	2102	3350
1994-95	4266	5186	2414	3384	4197	4906	2646	3027
1995-96	4857	6312	3070	3262	5308	6599	3312	3635
1996-97	6109	8237	4069	3942	6913	8916	4294	4132
1997-98	6420	9128	4297	3966	6821	9205	4653	4405

III.7. Observed Average Realised Room Rates

Rack rates do not reflect the prices actually paid by the customers. An estimate suggests that hardly six per cent of the clients pay the full rack rates. The use of discounts is not only quite wide spread in hotels, but the rate of discount varies widely across customer categories (Table III.3). During 1992-97, FGITs managed to get an average rate of discount of 43 per cent during summer and 35 per cent in winter, and turn out to have been the hardest bargainers among the three groups.¹¹ As can be seen from Table 3 and Figure 3, between the FFIT and DT, the DT managed to extract a higher discount only in summer. The average discount for DT was about 34 per cent in summer and 22 per cent in winter, with FFIT having 29 per cent in summer and 22 per cent in winter. The rates of discount in general are much lower in

¹¹ In the absence of comparable data on all the relevant variables, the rates of discount could not be computed for for 1989-90 to 1991-92.

winter, the peak season, than in summer. There is no visible trend in the rate of discount over time.

Table III.3: Discounts Offered
Free Foreign Individual Tourist (FFIT)

Year	Absolute difference (in Rs.)		As a per cent of rack rates	
	Summer	Winter	Summer	Winter
1992-93	1336	863	27	17
1993-94	1194	890	24	18
1994-95	2354	2006	37	30
1995-96	2811	1818	36	22
1996-97	2541	2259	30	24
1997-98	2137	1997	23	21

Foreign Group Inclusive Tourist (FGIT)

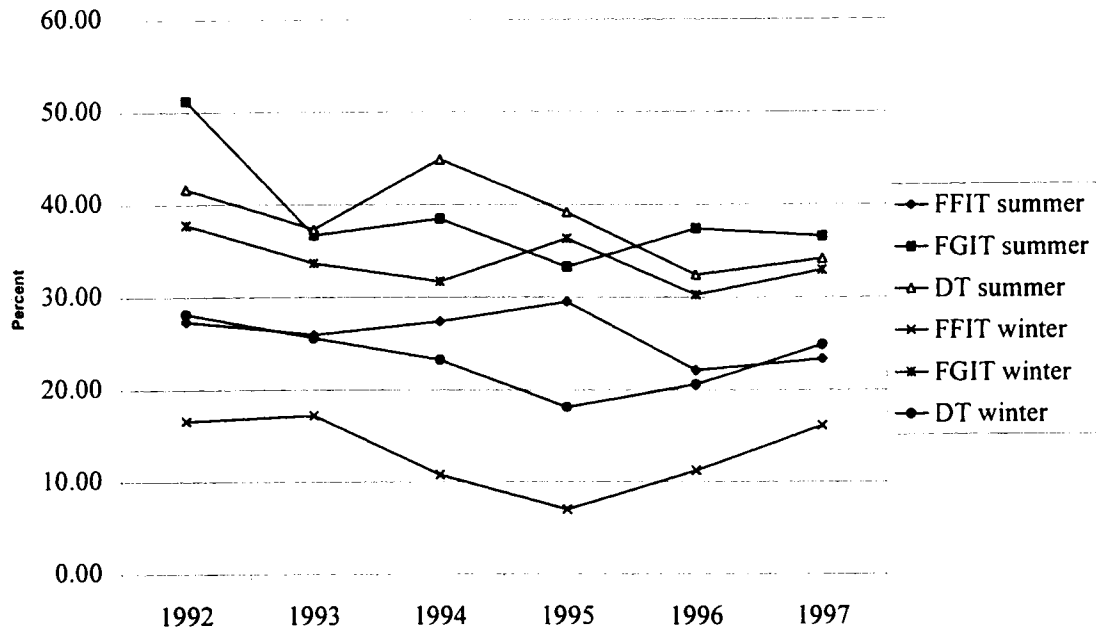
Year	Absolute difference (in Rs.)		As a per cent of rack rates	
	Summer	Winter	Summer	Winter
1992-93	2366	1815	51	38
1993-94	1537	1669	37	33
1994-95	2116	1782	48	35
1995-96	2349	2073	47	35
1996-97	2456	2076	41	33
1997-98	2173	2586	32	34

Domestic Tourist (DT)

Year	Absolute difference (in Rs)		As a per cent of rack rates	
	Summer	Winter	Summer	Winter
1992-93	1217	850	40	28
1993-94	1245	892	36	25
1994-95	1657	874	39	21
1995-96	1596	870	33	16
1996-97	1725	1430	28	21
1997-98	1946	1542	30	23

Figure 3

Discount Rates



The discount rate varies across locations (Table III.4). A classification of hotels by locations reveals that the rates of discount are highest in location 2, specially for FFIT and FGIT, and the discounts are relatively higher in summer. The FGIT, for example, obtained a discount of as much as 59 per cent in leisure destinations in the summer of 1995-96.

Table III.4: Discounts Offered: Location-wise
(As per cent of rack rates)

Free Foreign Individual Tourist (FFIT)

	Summer			Winter		
	0	1	2	0	1	2
1992-93	27	21	39	16	26	27
1993-94	26	12	30	17	19	27
1994-95	39	24	45	30	31	28
1995-96	36	33	45	21	26	20
1996-97	30	25	37	24	27	24
1997-98	24	18	30	17	31	24

Foreign Group Inclusive Tourist (FGIT)

	Summer			Winter		
	0	1	2	0	1	2
1992-93	50	44	53	36	32	43
1993-94	34	33	43	31	17	41
1994-95	35	35	56	29	28	42
1995-96	22	42	59	31	29	38
1996-97	26	44	53	23	37	41
1997-98	27	40	46	32	28	38

Domestic Tourist (DT)

	Summer			Winter		
	0	1	2	0	1	2
1992-93	42	23	42	28	24	31
1993-94	39	26	34	25	21	31
1994-95	41	29	39	19	25	27
1995-96	32	33	40	14	21	27
1996-97	27	28	37	20	22	25
1997-98	33	24	33	22	24	24

A straightforward comparison of rack rates for the different categories of tourists can be misleading in determining who actually pays what. For example, even though the rack rates are higher for FGITs than for DTs, the average realised room rate (ARR), which is the actual amount paid after discount, was lower for FGITs than for DTs.¹²

The ARR seems to vary widely across hotels. For example, during 1992-97, the annual average coefficients of variation for ARR in summer for FFIT, FGIT and DT were 39 per cent, 43 per cent, and 40 per cent, respectively (Table III.5). There is evidence of an increase in price dispersion over time except for FFIT in summer. Prima facie, it may be argued that the increasing price dispersion is an indication of increasing competition in the hotel industry. This issue is taken up in greater detail in chapter 3.

¹² These ARR's are net of taxes, i.e., exclude taxes.

**Table III.5: Coefficients of Variation in ARR
(in percent)**

	<i>Summer</i>			<i>Winter</i>		
	<i>FFIT</i>	<i>FGIT</i>	<i>DT</i>	<i>FFIT</i>	<i>FGIT</i>	<i>DT</i>
1992-93	40.86	39.62	30.61	34.15	33.09	25.52
1993-94	33.60	36.25	33.02	29.61	24.42	29.76
1994-95	34.10	36.08	35.20	38.68	34.93	35.82
1995-96	42.84	45.24	43.58	42.16	42.25	44.79
1996-97	42.75	50.36	51.82	40.44	45.73	49.27
1997-98	40.57	53.24	46.52	42.07	49.44	49.21

If we compare the coefficients of variation of ARR for the three groups and for the three locations separately, they are considerably lower for all the three groups in locations 0 and 1, when compared to that for the pooled sample (Table III.6). This provides some justifications for disaggregating the data by location. The large coefficients of variation for leisure destinations, that is location 2, indicate the need for further disaggregation of location 2, but this is beyond the scope of this study.

Table III.6: Coefficients of Variation in ARR: Location-wise

	<i>Summer</i>								
	<i>FFIT</i>			<i>FGIT</i>			<i>DT</i>		
	<i>0</i>	<i>1</i>	<i>2</i>	<i>0</i>	<i>1</i>	<i>2</i>	<i>0</i>	<i>1</i>	<i>2</i>
1992-93	36.46	52.49	....	30.25	26.05	....	19.17	33.05	....
1993-94	35.89	24.25	....	24.15	39.05	....	20.33	22.56	51.16
1994-95	27.19	22.49	49.28	19.78	22.94	53.54	17.89	30.44	28.16
1995-96	27.40	19.51	55.15	26.61	31.65	55.28	16.93	23.53	28.88
1996-97	23.86	22.98	48.71	16.80	27.52	56.05	20.10	23.33	41.86
1997-98	21.02	28.11	55.56	20.68	24.50	65.25	21.02	26.16	55.62

	<i>Winter</i>								
	<i>FFIT</i>			<i>FGIT</i>			<i>DT</i>		
	<i>0</i>	<i>1</i>	<i>2</i>	<i>0</i>	<i>1</i>	<i>2</i>	<i>0</i>	<i>1</i>	<i>2</i>
1992-93	30.27	30.13	....	28.37	35.89	....	16.18	26.41	....
1993-94	25.47	19.19	....	18.87	9.83	....	18.06	18.14	41.86
1994-95	22.99	14.22	48.31	15.66	17.63	52.32	17.07	27.56	24.78
1995-96	19.31	25.46	42.06	16.71	23.82	44.61	17.70	23.52	37.47
1996-97	18.01	27.94	37.59	15.22	26.71	42.07	19.18	22.79	43.22
1997-98	19.74	32.07	45.94	20.46	25.70	57.38	22.81	33.82	42.13

III.8. Occupancy

The occupancy rate is defined as the number of room-nights sold as a proportion of the total room-nights available. From Table III.7 it may be observed that the average summer occupancy rate is around 53 per cent, almost half the rooms remain empty during the summer months. Occupancy improves during winter, but still a quarter of the rooms remains vacant even during the peak season. Compared to the 1995 average occupancy rate in Japan and Malaysia of 67.8 per cent and 65.5 per cent, respectively, the occupancy rate in Indian hotels appears normal. It should be recognised that hotels invariably have to contend with the problem of peak-load demand, and therefore in seasonal or annual occupancy figures, 100 per cent is not expected.

Table III.7: Average Occupancy Rates and Share of Foreigners

(In per cent of total roomnights available)

Summer					
Year	FFIT	FGIT	DT	Total	(FFIT+FGIT)/Total
1989-90	30.48	12.86	16.43	59.77	72.52
1990-91	26.12	6.97	14.29	47.37	69.84
1991-92	27.64	6.27	15.72	49.63	68.33
1992-93	32.35	5.75	15.22	53.32	71.46
1993-94	24.99	5.03	15.39	45.41	66.11
1994-95	29.02	7.35	19.04	55.41	65.63
1995-96	29.96	6.82	21.98	58.76	62.60
1996-97	28.66	7.15	20.17	55.98	63.97
1997-98	25.74	6.29	18.02	50.05	64.00
Winter					
Year	FFIT	FGIT	DT	Total	(FFIT+FGIT)/Total
1989-90	39.26	27.64	19.30	86.20	77.61
1990-91	29.53	14.91	16.56	61.00	72.86
1991-92	39.83	12.73	18.54	71.10	73.93
1992-93	36.52	11.15	22.65	70.32	67.79
1993-94	36.33	11.99	23.93	72.25	66.88
1994-95	35.08	10.86	25.98	71.92	63.88
1995-96	39.11	15.38	29.06	83.56	65.22
1996-97	37.46	14.02	26.81	78.28	65.76
1997-98	33.28	14.27	26.12	73.67	64.55

The occupancy rate during summer seems to have increased over time from 47 per cent in 1990 to a high of 59 per cent in 1995, before declining to 50 per cent in 1997. Although occupancy during winter also increased to an all-time high of 84 per cent in 1995, there has been no discernible trend in winter occupancy.

The hotels analysed in this report appear to cater primarily to foreigners. As much as 60-75 per cent of the rooms occupied were sold to the foreigners.

III.9. Cost

Like in any other industry, costs are a major determinant of pricing in hotels. The variable cost of a hotel can be broken down into four components – provisions, security, administration and marketing (see appendix for the composition of the cost items). Staff per room in Indian hotels at 3 are reportedly large by international standards (the international average stands at 1). The large retinue of staff in Indian hotels reflects the abundant availability of skilled personnel at relatively cheap rates and also helps the hotels to provide intensive personalised service. Expenditure on administration and provisions constitutes more than 80 per cent of the total variable cost in all locations. The composition, however, varies across locations. While administration dominates in location “0”, provisions become almost as important in locations “1” and to some extent in locations “2” (Table III.8).

Table III.8: Share in Total Cost
(In per cent)

Items of Cost	0	1	2
Provisions	15.12	42.05	40.74
Security	2.71	3.89	2.72
Administrative	77.25	42.80	51.04
Marketing	4.92	11.26	5.50

Price disparity across customers sometimes reflects differences in costs in servicing the different customers. Strictly speaking, price discrimination takes place when and only when the difference in prices for two customers exceed the corresponding difference in costs of servicing the two customers. Although there is fragmentary evidence of some extra cost – for example, in paying commission to foreign agents for securing business from incoming

foreign tourists, buying extra insurance cover for foreign clients, and providing free to-and-fro transportation between the hotel and airport – in servicing foreign tourists, no hard data exist on such costs. In their accounts, hotels do not break up their costs in terms of servicing categories of clientele.

There appears to be some correlation between occupancies on the one hand and administrative costs on the other (Table III.9). This holds true for both FFIT and DT but not for FGIT. Security also turns out to be an important determinant of FFIT occupancy. However, which way the causality runs – whether to attract customers, hotels have to spend more on administration, or higher occupancy forces hotels to spend more on such items – is not important in the context of the present report. What is important is whether this association influences the pricing behaviour of the hotels.

Table III.9: Correlation between Occupancy and Items of Cost

	Summer					Winter				
	Prov.	Security	Admn.	Mktg	Total	Prov.	Security	Admn.	Mktg	Total
FFIT	-0.19*	0.20*	0.24*	0.09	0.13	-0.25*	0.17	0.17	0.19*	0.09
FGIT	0.14	-0.28*	-0.18	-0.16	-0.06	0.10	-0.29*	-0.22*	-0.21*	-0.10
DT	0.11	-0.01	0.06	-0.08	0.09	0.21*	0.28*	0.24*	-0.06	0.28*
Test of Significance										
FFIT	-2.03	1.91	2.72	0.99	1.53	-2.65	1.62	1.87	2.17	1.01
FGIT	1.36	-2.56	-1.85	-1.77	-0.68	0.95	-2.66	-2.36	-2.40	-1.11
DT	1.19	-0.12	0.61	-0.91	1.08	2.23	2.74	2.70	-0.61	3.29

Note: * indicates a statistically significant correlation.

III.10. Profits

The price-earnings ratio of 25.3, the profitability in Indian hotels do not seem to suggest very high profits (Table III.10 for comparison with other industry). The debt equity ratio, however, seems comparable to other industries.

Calculation of profitability has to be restricted to operating profits and pre-tax profit as accounts of individual hotels belonging to a group are not always prepared on a stand-alone basis. Moreover, the hotel chain operating a hotel does not necessarily own the hotel: maintenance contracts and lease arrangements are also observed. Profits per room in location “0” turn out to be higher than in the other two locations (Table III.11). Further, this difference in profits has increased over time.

Table III.10: Selected Financial Indicators

Industry	Debt Equity Ratio#	Price Earnings Ratio*
Cement	4.40	54.1 (ACC)
Commercial Vehicles	11.19	41.8 (Ashok Leyland)
Steel	3.19	17.1 (TATA Steel)
Computer software and Hardware	2.66	23.9 (TATA Infotech), 53.8 (NIIT)
Maurya Sheraton	3.22 (1997)	25.3 (ITC Hotels)
Taj Mahal, Mumbai	4.22 (1996)	

Notes: * As on June 16, 1999(Economic Times and Business Standard),

As on March 31, 1998 (CMIE, Corporate Sector, May, 1999).

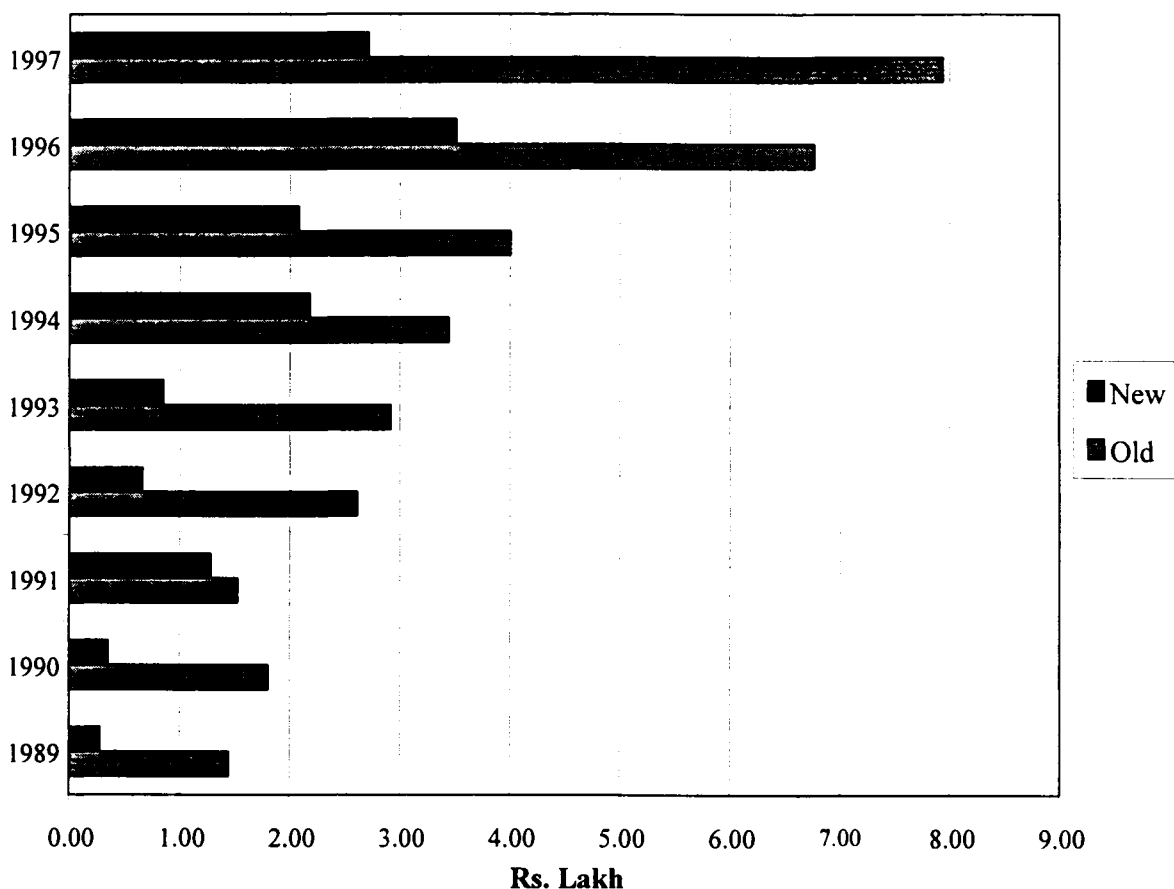
Table III.11: Average Profits Per Room in Different Locations (in Rs. lakh)

Years	Operating Profit			Pre-tax Net Profit		
	0	I	2	0	1	2
1989-90	1.7	0.9	1.0	1.4	0.2	0.7
1990-91	2.0	1.2	1.3	1.8	0.3	0.9
1991-92	2.0	1.6	1.1	1.7	0.7	0.5
1992-93	3.3	2.0	1.4	3.0	1.0	0.9
1993-94	4.0	2.2	1.1	3.9	1.1	0.6
1994-95	5.5	2.9	1.3	4.6	2.0	0.8
1995-96	5.4	4.4	1.3	3.4	3.1	0.9
1996-97	8.8	6.1	2.2	5.5	4.6	2.0
1997-98	11.4	5.3	2.6	7.1	3.7	2.3

Age appears to be an important determinant of profitability in the hotel industry. Hotels have a long pay back period because of the large investments in land, buildings and infrastructure. As in other capital intensive industries, the initial large volume of debt, and the resultant high debt servicing costs, lower the pre-tax profits of the hotels in the initial years. New hotels with age less than 10 years tend to have lower profits than old hotels. The higher profits per room in hotels in location “0” than in hotels in the other two locations may reflect the higher

average age of hotels in location “0” and not necessarily a higher level of efficiency in such hotels. Higher average age along with high profits per room should have attracted further investment in new hotels in gateway cities. However, while there has not been any substantial increase in the number of hotel rooms in gateway cities till 1997, by the year 2000, it is expected that the number in five star hotels would increase by about 70 percent. The increase is likely to be higher if all categories of recognised hotels are taken into account.

Figure 4: Pre-Tax Profits per Room



III.11. A Summary

In terms of the tariff policy of hotels, the results of eyeballing the data can be summarised as follows:

- i. Rack rates are not reflective of the actual differences in prices facing the customers.

- ii. Rate of discount is not uniform across groups or within a group across seasons.
- iii. Actual prices paid by the customer can be influenced by at least three factors:
 - Customer attribute
 - Location attribute
 - Season attribute

These observations establish that the differential in effective prices paid by any two groups of customers is not necessarily a reflection of the corresponding differential in rack rates. The two crucial questions, therefore, are: Why does the ARR, the actual price charged, vary across groups of clients in a hotel? Why do hotels announce rack rates that differ from ARR by large amounts? In the next chapter we address these issues.

IV. Determination of Prices

IV.1. Some Preliminaries

Pigou (1920) defined three forms of price discrimination. Under *first degree* or *perfect* price discrimination, the seller charges different prices for each unit of the good so that the price reflects the maximum willingness to pay for that unit. Under *second degree* discrimination or *non-linear* pricing, pricing depends on the number of units bought, but not across consumers. Under *third degree* discrimination, different purchasers pay different prices, but each purchaser pays a constant amount for each unit bought. These definitions relate to a monopoly based market structure, which constituted the base for initial research on price discrimination (Schmalensee, 1981; Varian, 1985). There is evidence of price discrimination in many markets. Take for example student discounts in city buses, senior citizen's discount in the Indian Railways and Indian Airlines, airlines charging lower "tourist class" price for passengers whose trip lasts for more than seven days.¹³ Although the popular definition of price discrimination is in terms of a commodity or a service being sold to different customers at different prices, the presence of transportation and other selling costs creates problems with such a simplistic definition.¹⁴ Thus, following Stigler (1987), price discrimination is best defined as two or more "similar" goods selling at prices that are in different ratios to marginal costs. As can be seen, the definition of "similar" goods or service can be a vexing problem.¹⁵

Subsequent research has enlarged the scope of discrimination to other markets with imperfect competition. Imperfect markets from the supply side can be of three types: monopoly, monopolistic competition, and oligopoly. A single firm dominates a monopolistic market. In a monopolistically competitive market, several firms sell similar, but not identical, products,

¹³ Examples of price discrimination between rupee and dollar prices abound in other sectors as well: Indian Airline fares, prices of various government publications such as Economic Survey and the Reports on Currency and Finance.

¹⁴ For example, strictly speaking, equal price of a commodity – say, coal and steel, under an extreme form of freight equalisation scheme – irrespective of the delivery costs to all consumers in all locations is a form of price discrimination. It is a discrimination against consumers who are closer to the production centres of the commodity.

¹⁵ Price discrimination is a much-researched subject in economics. Varian (1989) provides a good overview of the literature.

and each firm is a relatively small part of the industry and can justifiably ignore the impact of its own decisions on the other firms' behaviour. In an oligopolistic market, each firm constitutes a fairly substantial share of the market. In imperfectly competitive markets other than pure monopoly, however, price discrimination requires either that the products be differentiated or the markets be segmented. The decision to differentiate the products depends on two opposing forces: on the one hand, product differentiation permits the supplier to discriminate without the fear of losing its customers, i.e., the effect of cross price elasticity is minimised; on the other hand, an oligopolist might try to match the product attributes of its rivals to enlarge its potential market share (Kreps, 1990, p.343). On the other hand, segmented markets ensure that price differential exists but is uniform across firms. Adding a dimension of differentiated products sustains non-uniform price differentials across firms.

Holmes(1989) formalises the basis for price discrimination when duopolist suppliers face segmented markets. He formalised the combined effect of the two possible types of price elasticity based discrimination: industry demand elasticity and cross price elasticity. The first measures the tendency of the consumers to stay home when the price goes up, the second to switch suppliers. Therefore, a firm's price elasticity of demand in a market can be expressed as the combination of these two components. Holmes(1989) highlights that these two components may not influence the price in the same direction. It should be pointed out that he assumes that the suppliers produce single differentiated products. Therefore switching suppliers is equivalent to switching commodities.

Borenstein and Rose(1994) expanded this framework to incorporate multi-product suppliers and uses this framework to explain airline price dispersion. Here industry elasticity of demand refers to price elasticity of demand for a specific route, while cross price elasticity refers to elasticity of demand for a specific flight time – a product. Therefore, switching suppliers and switching products may not be identical. The first type of discrimination is referred to as monopoly type discrimination and the second type is referred to as competitive type discrimination. The paper empirically establishes that price dispersion increases with concentration if industry elasticities are the prevalent basis for segmentation (monopoly type discrimination) and decreases with concentration if cross-elasticities (competitive type discrimination) are the basis.

The main objective hereafter is to provide a theoretical justification for hotels to price different clients separately. Any firm would optimally like to engage in price discrimination if the following necessary conditions are satisfied: (1) the firm has *some* monopoly power and (2) if the firm can successfully segment the market.

IV.2. Nature of the market for hotel rooms

In the context of the above discussion, it is important to understand the exact market structure of the hotel industry in India. Hotels provide “similar” but not “identical” services. Every hotel – in terms of criteria such as rooms, décor, service, and dining facilities – has its own distinctive characteristics, and consumers develop “brand loyalties”. This rules out any possibility of characterising hotels as being situated in a perfectly competitive market. Further, since the number of five star hotels in any given location tends to be small, the necessary criterion for classification as a monopolistically competitive market is not satisfied. In other words, the hotel industry appears to be best characterised as an oligopolistic market with differentiated products.

Hotels in India charge different room rates to different customers, where the rates are not perceived to be in proportion to the marginal costs of providing the rooms to the customers. Price discrimination requires not only market power but also an ability to sort customers. The sorting is usually according to criteria that are imperfectly correlated with willingness-to-pay. The Indian hotels use Indians and non-Indians as the sorting criterion. The criterion is “exogenous” in nature, and does not reflect any conscious choice of the customer. But, it has the advantage of easy implementability in terms of skin-colour, language, etc. *Therefore, the nature of discrimination that this report addresses is one between two sets of clients in a hotel: foreigners and Indians and within foreigners two subsets- FFIT and FGIT.* The determinants of discrimination, e.g. differences in industry elasticities of demand and in brand loyalty/cross price elasticities, are discussed in the next section.

There is free entry in the Indian hotel industry, and there are signs of enhanced competition over time. In spite of this, there is continuing price discrimination. A priori, it might appear

that competition should eliminate price discrimination and ensure a uniform price. In the following sections we try to provide a theoretical basis to illustrate that this is not the only possible outcome: alternative possibilities are demonstrated. The basic framework draws upon Holmes (1989). This theoretical construct is subjected to empirical tests using data for Indian hotels.

Hotels can be thought of as catering to three segregated markets, FFIT, FGIT and DT. The industry elasticity of demand here would refer to the demand for five star and five star deluxe hotels in any given location by a *particular client group*. On the other hand, cross-price elasticity refers to mobility of this client group across hotels. The monopoly type of discrimination is made possible by the existence of three groups of consumers, with differing industry elasticities of demand. In addition, the hotels could be practising the competitive form of discrimination as well in order to capitalise on the cross-price elasticities, i.e., to attract a particular group of customers from other hotels in the same location. In addition, cost variations across clients could also constitute a basis for price differences.

IV.3. The Model

Let the market for hotel rooms consist of two completely segmented sub-markets i.e., two groups of customers ($i = 1, 2$). Furthermore, consider a duopoly with each of the two hotels ($j = 1, 2$) operating in each of these segments. The products in this market are hotel specific. It is assumed that the hotels are playing a Bertrand Game, i.e., the hotels choose their prices, and the number of roomnights sold is demand determined. Let D_{ij} , the demand for rooms in hotel “j” by customer group “i”, be given by

$$D_{i1} = \alpha_{i1} - \beta_i * P_{i1} + \gamma_i * (P_{i2} - P_{i1}) \quad (1)$$

$$D_{i2} = \alpha_{i2} - \beta_i * P_{i2} + \gamma_i * (P_{i1} - P_{i2}) \quad (2)$$

Equivalently, we can write

$$D_{i1} = \alpha_{i1} - (\beta_i + \gamma_i) * P_{i1} + \gamma_i * P_{i2} \quad (1a)$$

or

$$D_{i1} = \alpha_{i1} - \beta_i' * P_{i1} + \gamma_i * P_{i2} \quad (1b)$$

where $\beta_i' = \beta_i + \gamma_i$.

Total change in demand for the jth hotel, due to a change in its own price

$$\frac{\partial D_{ij}}{\partial P_{ij}} = -\beta'_i \quad (3)$$

However, the change in industry's demand ($D=D_{i1}+D_{i2}$) is only

$$\frac{\partial D}{\partial P_{ij}} = -\beta'_i + \gamma_i = -\beta_i \quad (4)$$

In other words, a change in P_{ij} leads to a demand gain for the kth hotel by γ_i . Therefore, the total effect on D_{ij} of a change in P_{ij} , can be decomposed into two terms:

- i. Decrease in industry demand: $\beta'_i - \gamma_i$
- ii. Loss of demand in favour of competitor: γ_i .

It may be noted that this demand function, which is symmetric in β and γ across hotels, has been introduced only for algebraic simplicity. The qualitative results of the model remain unchanged even without the symmetry assumption. Different α_i 's ensure that prices are different across hotels.

The jth hotel's objective is to choose prices so as to maximise profits (π_j).

$$\pi_j = \sum_i D_{ij} * P_{ij} - c_j * \sum_i D_{ij} \quad (5)$$

where c_j is the cost of providing a hotel room.

It is assumed that the average cost is constant for the hotel, and does not change either across groups or with the size of aggregate demand¹⁶.

This maximisation exercise yields prices of the jth hotel as functions of its own demand parameters and the competitor's price.

$$P_{ij} = \frac{(\alpha_{ij} + c_j * \beta'_i + \gamma_i * P_{ik})}{2 * \beta'_i} \quad j \neq k; \quad j, k = 1, 2 \quad (6)$$

Similar expression holds for P_{ik} .

From these two "reaction functions", the equilibrium prices can be derived as follows:

¹⁶ Hoteliers argue that average cost is different across groups ($c_{i1} \neq c_{i2}$). However, since we do not have any empirical base to test this claim, the present exercise assumes away differences in average costs.

$$P_{i1} = \frac{1}{2 * \beta'_i * \theta_i} * (\alpha_{i1} + c_1 * \beta'_i + \frac{\gamma_i}{2 * \beta'_i} * (\alpha_{i2} + c_2 * \beta'_i))$$

$$P_{i2} = \frac{1}{2 * \beta'_i * \theta_i} * (\alpha_{i2} + c_2 * \beta'_i + \frac{\gamma_i}{2 * \beta'_i} * (\alpha_{i1} + c_1 * \beta'_i))$$
(7)

where $\theta_i = 1 - \gamma_i^2 / 4 * \beta_i'^2$. Since these prices are derived from the “reaction functions”, neither of the hotels has an incentive to deviate from this price strategy¹⁷.

It may be noted that using (5) above, price differential in the jth hotel is:

$$P_{1j} - P_{2j} = \frac{1}{2 * \beta'_1 * \theta_1} [\alpha_{1j} + c_j * \beta'_1 + \frac{\gamma_1}{2 * \beta'_1} * (\alpha_{1k} + c_k * \beta'_1)]$$

$$- \frac{1}{2 * \beta'_2 * \theta_2} [\alpha_{2j} + c_j * \beta'_2 + \frac{\gamma_2}{2 * \beta'_2} * (\alpha_{2k} + c_k * \beta'_2)]$$
(8)

The two important determinants of this differential are cross price and industry elasticities. The price differential is different across hotels because the products are also different. From the above expression, it is clear that in the absence of product differentiation ($\alpha_{ij} = \alpha_{ik}$, $i = 1, 2$ and $c_j = c_k$), the price differential would be the same across hotels.

Further, the above suggests that the relationship between own cost and the price differential is

$$\frac{\partial(P_{1j} - P_{2j})}{\partial c_j} = \left(\frac{1}{2 * \theta_1} - \frac{1}{2 * \theta_2} \right)$$
(9)

Increase in own costs would generate a higher price differential only if $\theta_1 < \theta_2$. This is equivalent to

$$\frac{\gamma_1}{2 * \beta'_1} > \frac{\gamma_2}{2 * \beta'_2}$$
(10)

From (6), it may be noted that $\gamma_1 / 2 * \beta'_1$ is the price response of P_{1j} of hotel “j” to a unit increase in the price P_{1k} of hotel “k” ($j \neq k$). Similarly, $\gamma_2 / 2 * \beta'_2$ is the price response of P_{2k} of hotel “k” to a unit increase in the price P_{2j} of hotel “j”. Thus the two sides of inequality (10) measure the relative price response of the competitors for group 1 and group 2. This condition implies that jth hotel can afford to differentially raise the price of group 1 if the competitor’s price follows relatively closely for this group. It may be noted that c_j is cost per occupied room.

¹⁷ Economic literature refers to such an equilibrium as a “Nash Equilibrium” where neither hotel has any incentive whatsoever to choose a different price.

Therefore a positive relationship implies that increase in P_{1j} is higher than increase in P_{2j} . A similar relation can be derived with respect to competitor's cost, that is c_k ¹⁸.

An important part of the story is to check the effect on price differentials of a movement from duopoly to monopoly, i.e., an increase in the market share. The monopolist's demand function can be derived by adding up the demand functions of the two duopolists.

$$D_i = (\alpha_{ij} + \alpha_{ik}) - 2 * \beta_i * P_i \quad (11)$$

Profit maximisation by the monopolist would yield

$$P_i = \frac{\alpha_{ij} + \alpha_{ik} + 2 * c * \beta_i}{4 * \beta_i} \quad (12)$$

The price differential therefore becomes

$$P_1 - P_2 = \frac{1}{4} * \left(\frac{\alpha_{1j} + \alpha_{1k}}{\beta_1} - \frac{\alpha_{2j} + \alpha_{2k}}{\beta_2} \right) \quad (13)$$

Comparing equations (8) and (12), the effect of an increase in the market share on the price differential could be either positive or negative depending upon the parameters of the demand functions. To illustrate this point, we provide an example, where the only variation is in cross price coefficient of one group (γ_2) (Table IV.1). The example shows that when γ_2 is high, a movement from duopoly to monopoly results in an increase in the price differential. At low γ_2 s, however, the reverse holds good. The intuition is when γ_2 s are high, the possibility of discrimination on the basis of cross price coefficients is low. Since the monopolist has no competitors by definition, this deterrent to discrimination disappears.

Table IV.1: Simulation Results

	β_1'	β_2'	γ_1	γ_2	θ_1	θ_2
Case 1	0.5	0.45	0.2	0.05	0.9991	0.9999
Case 2	0.5	0.7	0.2	0.3	0.9991	0.9964

	Duopolist 1			Duopolist 2			Monopoly		
	Price 1	Price 2	Difference	Price 1	Price 2	Difference	Price 1	Price 2	Difference
Case 1	3.78	5.03	1.24	5.78	7.32	1.54	7.17	6.75	0.42
Case 2	3.78	3.88	0.10	5.78	5.26	-0.52	7.17	6.75	0.42

Note: 1. Costs are in Rs thousand.

2. Parameter values are: $\alpha_{11}=3$; $\alpha_{12}=5$; $\alpha_{21}=4$; $\alpha_{22}=6$; $\beta_1 = 0.3$; $\beta_2 = 0.4$; $c_1 = 1$; $c_2 = 1.2$

¹⁸ It can be shown that the effect of a higher c_k on the price differential is positive iff condition (10)

The simulation results capture the effect of a difference in the γ 's, i.e., in the cross price term. A higher γ_2 results in a relatively higher price differential in monopoly. This is because, in case 2 for a duopoly, the higher cross price term keeps prices for group 2 low, with hotels fearing a loss of clients to competitors. But, as case 1 illustrates, depending on the parameter values, the extent of discrimination may also go up with increasing competition and a move from monopoly to a duopoly.

The usual expectation is that an increase in competition, here identified as a movement from monopoly to duopoly, leads to lower differential between groups of customers, the above discussion establishes that this is not unambiguously true¹⁹. The specifics of the particular industry therefore emerge as important determinants of price discrimination. In this context, in the following section, we attempt to capture the characteristics of the Indian hotel industry.

IV.4. Determinants of ARR: Empirical Results

The above discussion clarifies that any price dispersion can be explained on the basis of market power, elasticity of demand and cost differentials. In the case of Indian hotels, we focus on two crucial prices differences, namely the difference between ARR for FFIT and for DT, and the difference in ARR for FGIT and DT. Given the variation in pricing over seasons, we analyse the two pair wise price differentials separately for the two seasons, namely winter and summer. In this context, the following functional form is proposed:

$$DP_{ijt} = \alpha + \beta \cdot MS_{jt} + \gamma \cdot TC_{jt} \quad (14)$$

where

DP_{ijt} = percentage difference in price between the i th pair at the j th hotel in period t ; ' i ' takes values 1 and 2 for (FFIT, DT) and (FGIT, DT) pairs respectively;

MS_{jt} = share of the j th hotel in total rooms available in that location at time t , as a proxy for monopoly power of the hotel;

TC_{jt} = total cost per roomnight sold of the j th hotel.

holds.

¹⁹ See Borenstein and Rose (1994) and Holmes(1989).

Additionally, since the behaviour could vary across locations and across hotel groups, the following dummies have been used to capture these effects.

LOC0 = “1”, for location ‘0’, and “0” otherwise.

LOC1 = “1” for location ‘1’ and “0” otherwise.

DTAJ = “1” for Taj group and “0” otherwise.

DITC = “1” for Welcom group and “0” otherwise.

Equation (14) was estimated separately for these two pairs by running ordinary least squares (OLS) regressions with the data available on 22 hotels. A summary of results is reported in Table IV.2 (see Annexure 2 for complete regression results).

Table IV.2: Summary of Results

		(FFIT-DT)/DT			(FGIT-DT)/DT		
		Oberoi	ITC	Taj	Oberoi	ITC	Taj
Winter	Market Share	Positive	Positive	Positive	Positive	Positive	Positive
Summer	Market Share	Positive	Positive	Positive	Positive	Positive	Positive
		Gateway	Tourist	Others	Gateway	Tourist	Others
Winter	Market Share	--	Positive	Positive	--	Positive	Positive
Summer	Market Share	--	Positive	Positive	--	Positive	Positive
		(FFIT-DT)/DT			(FGIT-DT)/DT		
		Oberoi	ITC	Taj	Oberoi	ITC	Taj
Winter	Cost	--	Negative	Positive	--	--	--
Summer	Cost	--	--	--	Negative	Positive	--
		Gateway	Tourist	Others	Gateway	Tourist	Others
Winter	Cost	Negative	--	--	--	--	--
Summer	Cost	--	--	--	Negative	Negative	Negative

Note: --- : stands for coefficient not statistically different from zero.

Market share appears to play an important role in determining the price differential between FFIT and DT as well as between FGIT and DT. Market share exerts a positive influence or pressure on the price differentials across three hotel groups after controlling for locations. Similarly, controlling for the behavioural differences across hotel groups, the relationship is positive in all three locations. In other words, an increase in competition consistently leads to a lower price differential. The strength of this feature however, varies

across hotel groups as well as across locations. However this result does not hold for gateway cities, in either season.

The impact of cost is found to be significant in only two cases: FFIT-DT differential in winter and for FGIT-DT differential in summer. In the first case, the impact of cost is negative for ITC group of hotels and for hotels located in gateway cities, while it is positive in the case of Taj group of hotels. On the other hand, for FGIT-DT differential in summer, cost has a negative effect in all the three locations as well as for Oberoi group of hotels. But the impact is positive in the case of ITC group of hotels.

It should be pointed out that a positive relationship between cost and price differential does not suggest that the prices of one or the other group has been altered in isolation. Specifically, if cost has a negative effect on the FFIT-DT differential, it *only suggests* that the corresponding changes in prices are asymmetric across these two client groups.

IV.5. Determination of Rack Rates

It is usually argued that hotels use rack rates as a signalling device for quality of the hotel. If this is true, the relative ranking of hotels as per rack rates and realised rates should remain the same. Table IV.3 corroborates this claim. It may be pointed out that this result holds even for tax inclusive ARR. Rank correlation between rack rates and realised rates are not significantly different from 1 across client groups and across seasons. Moreover, the ranking of hotels does not change significantly across client groups, providing further support to the claim that rack rate signals quality, which is intrinsic to the hotel and remains unchanged across client groups (see Table IV.4).

Table IV.3: Rank Correlation Between ARR (net of taxes) and Rack Rate

	FFIT	FGIT	DT
Summer	0.93	0.89	0.80
Winter	0.86	0.94	0.85
t-ratios (Ho: $\rho = 1$)			
Summer	-0.83	-0.95	-1.47
Winter	-1.10	-0.66	-1.19

Table IV.4: Rank Correlation Between Rack Rates

	FFIT-FGIT	FFIT-DT	FGIT-DT
Summer	0.95	0.79	0.86
Winter	0.91	0.84	0.92
t-ratios (Ho: $\rho = 1$)			
Summer	-0.93	-1.82	-1.49
Winter	-1.20	-1.59	-1.15

However, the interplay of rack rates and ARR is a complicated one, working through discounts and needs to be explored in greater detail.

IV.6. Determination of Discount rates

As established above, the ranks of the hotels in terms of ARR remains more or less the same as those in rack rates. This would suggest that the hotels are not choosing the discount rates arbitrarily. There would appear to exist some upper and lower bounds on the discount rates. It is hypothesised that these bounds on discount rates are predominantly market determined, depending upon certain parameters:

1. Location of the hotel, in terms of gateway, luxury and other destinations
2. Difference in tax base: in some states the luxury tax is imposed on rack rates and in some others it is effective on the ARR, this is likely to influence the pattern of discounts. Since the clients in the hotels which face an RR based luxury tax would be exposed to a higher tax inclusive ARR, *ceteris paribus*, the hotels might like to compensate for that through higher discount, without diluting the quality signal, i.e., the rack rate. This relaxation in the discount rate would however, be subject to the constraint that the relative ARR ranking of the hotel remains the same as the relative RR ranking.
3. Client group.

Testing the above hypotheses yields the following results (Detailed results in Annexure 2)

- On an average, hotels facing a rack rate based luxury tax offer a higher discount rate (the difference is about 4 per cent in winter and 8 per cent in summer).
- Discount rates are highest in tourist locations, especially in summer.
- Comparing across client groups, discounts vary considerably. FGIT have received the highest discount rates followed by DT, and then by FFIT. Table IV.5 presents the test statistic for discount differentials.

Table IV.5: Discount Differential: Wald Test for Equality of Coefficients (F-statistic)

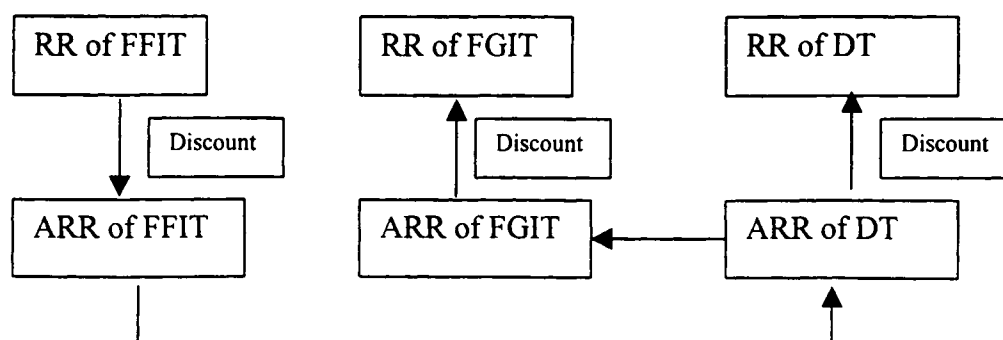
	Summer	Winter
FFIT-FGIT	27.13	25.17
FFIT-DT	1.86*	0.12*
FGIT-DT	15.95	21.92

Note: * indicates that the differences are not statistically different from zero.

IV.7. Determination of Prices: The Complete Story:

Realised rate story so far established that the ARR differential is determined by considerations of market share and cost. So once the ARR for one of the groups of clients is determined, the realised rates for the other two would follow suit. If discount rates are more or less determined by market conditions for the industry as a whole, this would mean that, given the realised rates, the rack rates would get correspondingly determined. This would imply that there is one degree of freedom left here. The hotel needs to determine one ARR or RR and the rest would fall into place. The fact that the ranking of the hotels in terms of RR does not change across client groups suggests that the quality signal is consistent across the three groups. Therefore, ranking of hotels by one client group is sufficient to capture the overall quality of the hotel. The scenario sketched out here hypothesises that the hotel chooses to fix RR of say FFIT.²⁰ Applying the industry determined discount rates on this RR, the ARR for FFIT would be determined. From this would follow the ARR of the other two client groups, determined by market share of the hotel and cost per room (estimated equations). Once again using the discount rates, the rack rates of these two client groups are residually obtained.

Flow Diagram – Determination of ARR and RR



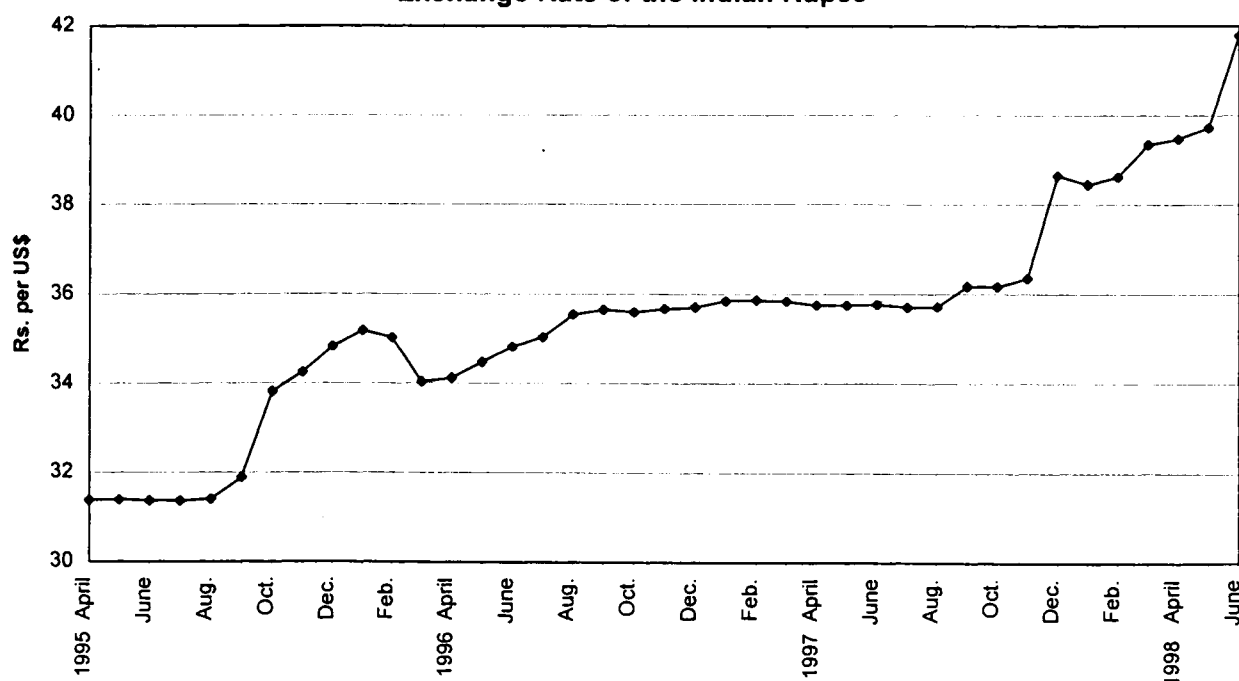
²⁰ Since the hotels face international competition for FFIT and FGIT, if RRs are to reflect the quality of the hotel, this scenario may not be unrealistic.

V. General Observations

V.1. How to deal with exchange rate volatility

Differentiated tariffs – particularly tariffs for foreigners denominated in dollars, while that for Indians quoted in rupees – were introduced in 1991 at a time of sharp downward adjustment of the exchange rate.²¹ Some stability of the exchange rate has been achieved in the subsequent period. For example, the nominal exchange rate (Rs./dollar) remained stable within a narrow band during the period March 1996 to November 1996 (Figure 5). This period was preceded and followed by some depreciation of the rupee, because of internal factors and as well as external shocks such as the currency crisis in South-East Asian countries. The movements of the nominal exchange rate have been mostly downward, with upward movements restricted to very short spells.

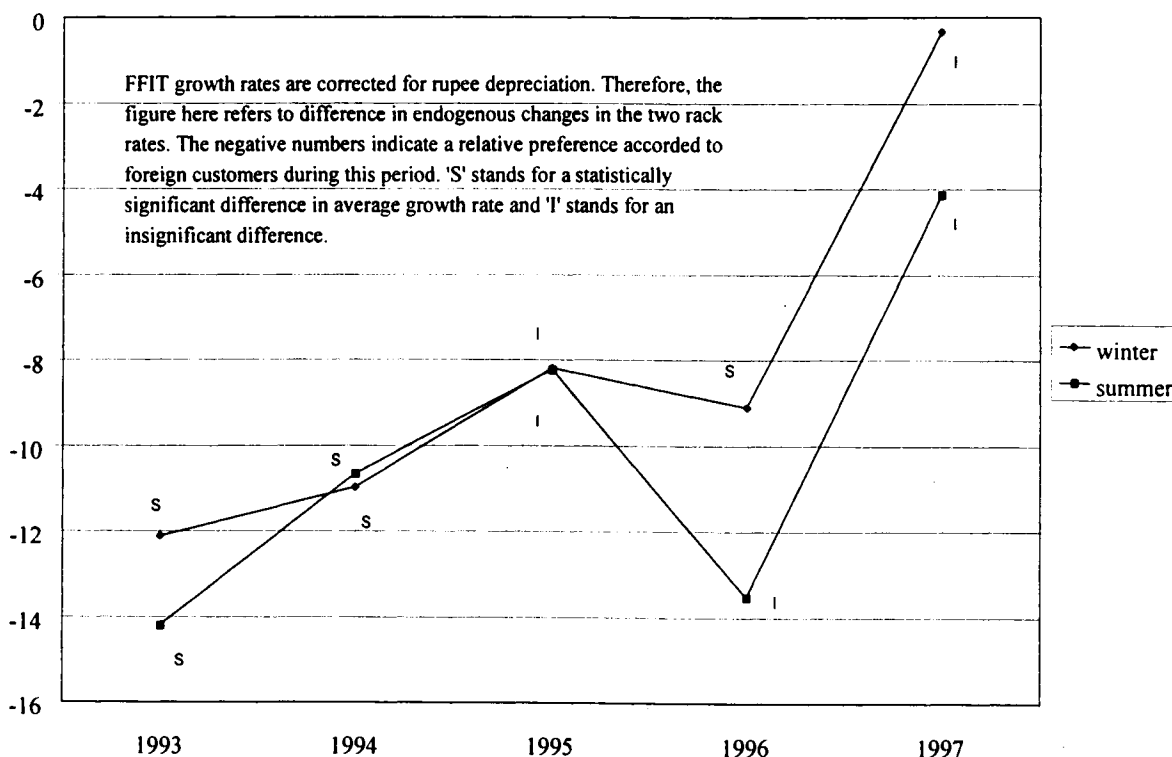
Figure 5
Exchange Rate of the Indian Rupee



²¹ A downward adjustment in the exchange rate is a depreciation of the rupee from say Rs. X per US \$ to Rs. X+Y per US \$. In Figure 5 such an adjustment shows up as an upward move of the graph.

The almost one way movement of the exchange rate makes hedging against an exchange risk a difficult affair. A dollar rack rate for foreigners and a rupee rack rate for domestic clients can be seen as a strategy of the hotels to partly insulate themselves against the unpredictable exchange rate depreciation. The hotels have some cost in foreign exchange, and the inflows from FFIT and FGIT in foreign exchange help them to mitigate the loss that they would have incurred otherwise because of an increase in the rupee value of expenditure in foreign exchange. However, the hotels have not appropriated the entire gain from exchange rate depreciation. Comparing the two rack rates in rupees, after adjusting for exchange rate depreciation, it is found that the FFIT rack rate has been rising slower than the DT rack rate (Figure 6). Thus, some of the gains from depreciation have been actually passed on to the foreign client.

Figure 6
Difference in growth rates of rack rates for FFIT and DT)



If hotels are to opt for a uniform rupee rack rate, the hotels run the risk of a depreciation induced loss in profitability (even in rupee terms) because of the increase in the cost of imported inputs. Some alternatives for insulation against such losses are:

Option 1: Offering two alternatives to foreign clients booking in advance:

- Contract fixed in dollar terms at the exchange rate prevailing at the time of booking with a high rate of discount, or
- Contract fixed in rupees with a lower rate of discount.

Option 2: Frequently revising rack rates in line with depreciation to maintain profitability.²²

V.2. Price Controls

By conventional standards, price discrimination reduces welfare when the weak market sales decrease substantially as a result of price discrimination and when new markets do not open up as a result of discrimination. Welfare increases unambiguously if there is free entry and increased competition. However, the present analysis following the Holmes- Borenstein and Rose paradigm, argues that the above results do not hold unambiguously. For example, discrimination does not necessarily decline with an increase in competition, implying that the welfare implications of such a change are uncertain. Therefore, theoretical justification for encouraging competition in the system is considerably weakened, i.e., there is little rationale for external intervention in the functioning of the market.

If at all external intervention in the form of price controls have a role to play, it can only be in the context of natural monopolies. The hotel industry is not a natural monopoly. Although there are some barriers to entry (high cost and delays in hotel construction), it does not resemble a natural monopoly. Any policy of control, therefore, must have other justifications.

While price discrimination can appear to be an unfair practice, this perception alone cannot constitute a rationale for eliminating such discrimination. In the context of the hotel industry, if a customer thinks that she did not get a “fair deal” she may not make a repeat visit.

²² The second option maybe more appropriate for handling the problem of walk-in customers.

Moreover, since not all hotels follow the dual tariff policy, the foreigners can also self-select to stay in non-discriminatory hotels.

This report has raised many important issues and questions such as if a foreigner pays more than an Indian for the same room in a hotel, why does another hotel not bid away these foreign clients by quoting a lower price? Why is increased competition not moving the tariff towards uniformity? This report has attempted to address some of these questions.

V.3. Regulation, Infrastructure and Promotion

The other aspect of interaction between the government and the industry relates to the facilitation of growth of the industry. Provision of basic infrastructure, efficient and effective management of regulatory machinery and directly promotional activities constitute three forms of facilitation. Satellite accounts for the travel and tourism sector indicate high potential for growth in GDP as well as in the employment potential through this sector. One bottleneck to attaining this potential would be the inadequacy of infrastructural facilities, a feature recognised a number of earlier studies and documents as well. Large investments are called for in sectors such as water supply and sewerage, which are of importance not only to this sector but to the economy as a whole.

The government, both at the central and the state level does offer a number of incentives to the hotel industry both in the form of tax incentives as well as interest subsidy for promoting private investment. However, the requirement of large number of clearances both before and during the operation of a hotel impose considerable transaction costs. While a number of these clearances are important as part of the regulatory machinery for quality control, simplification and streamlining of procedures might provide the route to minimising transaction costs.

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Annexure 1: Notes on the Adjustments made in the Data

A. Average Room Rate (ARR)/ Rack Rate:

The current form of the data:

❖ *FFIT and FGIT in dollars*

❖ *DT in Rupees*

1. For the following hotels the ARR figures for FFIT, FGIT and DT, have been given as net of Commissions paid and taxes.

LPU, JPI, RHJ, TRCt, TRVi, AMD, TPD, PRMu, GRVa, TRI, TCCh, TREr, WEB, HCKh, TBCa, RMPj, TGMa, GRCn, TRAu, MUSA, RPSJ and PSCH.

2. For the following ITC hotels the ARR figures for FFIT, FGIT and DT have been given as gross of Commissions paid and taxes.

MASD, CHSC and WMSB.

3. For the following hotels the Figures for ARR have been given as gross of commissions.

GRBa, TRB, TMLu, THG, MHMa, TMCo, TGVa, GRKu and all the Oberoi hotels (8).

For TRB the figures are inclusive of taxes also. For this ARR has been made net of taxes.

4. The net ARR (for FGITs only) have been converted into gross using the formula:

Gross ARR = Net ARR * (1/ .9) for the hotels listed in 1 above. This follows from the assumption that hotels pay commissions (10%) only for FGITs.

5. For the following hotels the ARR figures for FFIT and FGIT were given in Rupees which have been converted into dollars using the exchange rate in order to make them comparable to others. The figures for DTs have been consistently given in Rupees.

PRMu, THG, TCCh, GRVa, GRCn and TGMa

6. For the hotels of the Oberoi Group the annual rack rate figures provided have been used for both the seasons. And the same rack rate is used for both FFIT and FGIT.

7. For the Oberoi group of hotels the average annual ARR figures provided have been adjusted to derive the seasonal averages for the three categories of tourist.

B. Room Nights Sold:

The current form of data: Number of Room Nights sold in Summer / Winter

1. Figures on Room Nights sold given by the hotels have been classified into three different categories on the basis of whether the figures relates to total per season or total per day or total per month.

- *Total for the season:* GRCo, GRCn, OMD, GRBa, GRKu, GRVa, PSCH, PRMu, TRAu, TRI, OGC, MASD, FAG, LPU, TCCh, TRVi. For GRCo monthly figures on the room nights sold were given which have been added up (six months for each season) to get the total for any season.

- *Total per month:* MHMa, RMPj, TGMa, CHSC, AMD, COCh, FCCh, TGVa, THG, TRB, TRCt, TREr, TRH, TRNa, MUSA, RPSJ, WMSB, HCKh, JPJ, RHJ, TBCa, TMD, TMLu, TPD, WEB, TA, OD, OTMu, TCh, OBA, OMU.

For this category, the figures have been multiplied by 6 to get the total room nights sold for the season.

- *Total per Day:* TMCo. The figures for this have been multiplied by 6*30 to get the total for the season.

C. Room Operating Cost:

The present form of Data: Per Day Per Room (PDPR) cost in Rupees.

1. The following are the list of categories into which the hotels have been classified on the basis of the cost figures provided and the corresponding adjustments that have been made.

- *Total Cost Per Occupied Room:* TREr, HCKh, TRVi, JPJ, TMCo, GRVa, TMLu, GRKu, PRMu, TGVa, RMPj, TGMa, MHMa, TRI, LPU.

Here the figs have been converted into PDPR figures by the following formula:

PDPR cost = (Total cost per occupied room * Total room nights sold) / (No of rooms available* 365).

- *Total Cost Per Room:* TRCt, WEB, COCh, TRNa, RHJ, OGC, THG, TRAu and TMD.

Here the figures have been divided by 365 to get the PDPR cost figures.

- *Total Cost:* TRH, TRB, FAG, AMD, GRCn, TBCa, GRBa, TPD, TCCh, FCCh, PSCH, TA, TCh, OBA, OD, OMU, OTMu, CHSC and OMD.

For these the figures have been divided by "365 * total no of rooms available" to derive the PDPR cost figures

- *Per Day Per Room Cost:* MASD, MUSA, RPSJ, WMSB.

1. For PSCH, the cost figures for provision are inclusive of the costs incurred on security.

2. The cost figures for all hotels of the Oberoi group and ITC (except PSCH) were in Rupees. For PSCH the figures were Rupees (Thousand).

Figures for the following hotels of the Taj Group were in Rupees:

LPU, TRAu, TRB, TRVi, JPI, TMCo, TPD, TRER, GRVa, THG, WEB, AMD, COCh, TRI, TRNa, MHMa, PRMu, TGMa, TMLu, GRCn, GRKu, HCKh, TGVa, TBCa and RMPj.

Figures for the following hotels of the Taj Group were in Rupees lakhs:

FAG, TRH, TCCh, TMD, TRCt, FCCh and GRBa.

D. Taxes (Expenditure Tax and Luxury Tax):

Expenditure Tax: This is a central govt. tax, which is always on the Actual Tariff (ARR). The rate has been brought down from 20% to 10% since 1994-95 (source: Central Government Budget Report, 1994-95).

Luxury Tax: This is levied by the State govt. and the rates vary from state to state. The state rates have been applied uniformly to all the hotels in the state for which we have data. The tax rates, available years of data, the tax bases and the source of information have been detailed in Chapter II.

The various adjustments that have been made are as follows:

1. FFIT and FGIT ARR's have been adjusted for both the expenditure and luxury tax from 1995 onwards. The same before 1995 have been adjusted for luxury tax only as there was no expenditure tax on foreigners before 1995.
2. The ARR's for DTs have been adjusted for both the taxes.
3. There is no Luxury tax for TRI.
4. GRCn, TGMa and TRCt do not come under the Expenditure Tax bracket.

Table A1.1: Hotel Codes

Sl. no	Name of the hotel	Location	Group name	Hotel code
1	Taj Mahal Hotel	Lucknow(1)	The Taj Group	TMLu
2	Taj Residency	Indore(1)	The Taj Group	TRI
3	Taj Residency	Nashik(1)	The Taj Group	TRNa
4	Taj Residency	Calicut(1)	The Taj Group	TRCt
5	Hotel Taj Ganges	Varanasi(2)	The Taj Group	TGVa
6	Taj Bengal	Calcutta(2)	The Taj Group	TBCa
7	Maurya Sheraton Hotel & Towers	New Delhi(0)	The Welcom Group	MASD
8	Mughal Sheraton	Agra(2)	The Welcom Group	MUSA
9	Rajputana Palace Sheraton	Jaipur(2)	The Welcom Group	RPSJ
10	Chola Sheraton	Chennai(1)	The Welcom Group	CHSC
11	Park Sheraton Hotel and Towers	Chennai(1)	The Welcom Group	PSCH
12	The Trident	Chennai(1)	The Oberoi Group	TCh
13	The Oberoi	Bangalore(1)	The Oberoi Group	OBA
14	The Oberoi Grand	Calcutta(2)	The Oberoi Group	OGC
15	The Oberoi	New Delhi(0)	The Oberoi Group	OD
16	The Oberoi	Mumbai(0)	The Oberoi Group	OMU
17	The Oberoi Towers	Mumbai(0)	The Oberoi Group	OTMu
18	Windsor Manor Sheraton & Towers	Bangalore(1)	The Welcom Group	WMSB
19	Taj Residency	Hyderabad(2)	The Taj Group	TRH
20	Lake Palace Hotel	Udaipur(2)	The Taj Group	LPU
21	Taj Residency	Aurangabad(2)	The Taj Group	TRAu
22	Taj Residency	Bangalore(1)	The Taj Group	TRB
23	Taj Residency	Visakhapatnam(1)	The Taj Group	TRVi
24	Fort Aguada Beach Resort	Goa(2)	The Taj Group	FAG
25	Jai Mahal Palace Hotel	Jaipur(2)	The Taj Group	JPJ
26	Taj Malabar Hotel	Cochin(1)	The Taj Group	TMCo
27	Taj Palace Hotel	New Delhi(0)	The Taj Group	TPD
28	Taj Residency	Ernakulam(2)	The Taj Group	TREr
29	Taj Garden Retreat	Varkala(1)	The Taj Group	GRVa
30	Taj West End	Bangalore(1)	The Taj Group	WEB
31	Ambassador Hotel	New Delhi(0)	The Taj Group	AMD
32	Connemara Hotel	Chennai(1)	The Taj Group	COCh
33	Manjarun Hotel	Mangalore(1)	The Taj Group	MHMa
34	The President Hotel	Mumbai(0)	The Taj Group	PRMu
35	The Taj Holiday Village	Goa(2)	The Taj Group	THG
36	Taj Coromandel	Chennai(1)	The Taj Group	TCCh
37	Taj Garden Retreat	Madurai(1)	The Taj Group	TGMa
38	Taj Mahal Hotel	New Delhi(0)	The Taj Group	TMD
39	Rambagh Palace Hotel	Jaipur(2)	The Taj Group	RHJ
40	Fisherman's Cove	Chennai(1)	The Taj Group	FCCh
41	Gateway Riverview Lodge	Chiplun(1)	The Taj Group	GRCn
42	Taj Garden Retreat	Kumarakom(1)	The Taj Group	GRKu
43	Hotel Chandela	Khajuraho(2)	The Taj Group	HCKh
44	Gateway Hotel on Residency Road	Bangalore(1)	The Taj Group	GRBa
45	Raj Mahal Palace Hotel	Jaipur(2)	The Taj Group	RMPj
46	Taj Garden Retreat	Coonoor(1)	The Taj Group	GRCo
47	The Trident	Agra(2)	The Oberoi Group	TA
48	The Oberoi Maidens	New Delhi(0)	The Oberoi Group	OMD

Note: Figures in brackets in column 3 refer to locational classification of the hotel. '0' stands for gateway cities. '2' for luxury locations and '1' for other destinations.

Annexure 2: Regression Results

A2.1. Regression Estimates of Equation 14

FFIT-DT Summer

Sample: 1 131

Variable	Coefficient	t-Statistic
C	-210.39	-4.97
MS	1156.83	5.67
LOC1	227.98	7.34
LOC0	249.18	5.75
LOC1*MS	-600.94	-6.90
LOC0*MS	-1087.65	-3.60
DTAJ	3.940	0.16
DITC	36.29	1.48
DTAJ*MS	-521.12	-3.31
DITC*MS	-486.47	-3.06
R-squared	0.50	Adjusted R-squared 0.46

FFIT-DT winter

Sample: 1 133

Variable	Coefficient	t-Statistic
C	-242.08	-8.32
TC	-0.003	-0.36
MS	1361.18	10.00
LOC0	312.78	9.25
LOC1	224.39	8.67
LOC0*MS	-1160.38	-5.28
LOC0*TC	-0.02	-2.68
LOC1*MS	-642.49	-9.06
DITC	50.22	2.95
DTAJ*MS	-649.76	-5.87
DTAJ*TC	0.0165	2.23
DITC*MS	-512.68	-4.24
DITC*TC	-0.02	-1.61
R-squared	0.70	Adjusted R-squared 0.67

FGIT-DT Summer

Sample: 1 110

Variable	Coefficient	t-Statistic
C	-155.96	-2.315148
MS	1105.36	3.582862
TC	-0.02	-2.929956
LOC0	208.11	3.080154
LOC1	144.85	2.824864
LOC0*MS	-1059.15	-3.217798
LOC1*MS	-313.74	-2.662857
DTAJ	4.42	0.220049
DITC	-10.79	-0.483667
DTAJ*TC	0.02	2.165652
DTAJ*MS	-773.30	-3.731672
DITC*TC	0.03	3.220357
DITC*MS	-669.05	-3.367172
R-squared	0.32	Adjusted R-squared 0.24

FGIT-DT Winter

Sample(adjusted): 1 118

Variable	Coefficient	t-Statistic
C	-263.11	-5.42
TC	-0.01	-2.54
MS	1394.43	6.11
LOC0	301.86	6.11
LOC1	203.04	5.45
LOC0*MS	-1430.78	-5.33
LOC1*MS	-468.62	-5.09
DTAJ	60.11	3.57
DITC	51.75	2.79
DTAJ*MS	-902.38	-5.81
DITC*MS	-757.83	-4.95
R-squared	0.37	Adjusted R-squared 0.31

A2.2 Determinants of Discount Rate

For this exercise a pooled data set has been used, over all client groups and all hotels.

Summer

Variable	Coefficient	t-Statistic
DV	7.85	3.41
Loc0	-4.63	-1.92
Loc1	-11.55	-4.38
DTAJ	-3.74	-1.79
DITC	1.13	0.41
Constant FFIT	31.64	13.17
Constant FGIT	42.25	17.31
Constant DT	34.33	14.60
R-squared	0.26	Adjusted R-squared 0.24

Winter

Variable	Coefficient	t-Statistic
DV	3.95	1.78
Loc0	-2.58	-1.02
Loc1	-3.25	-1.20
DTAJ	-1.40	-0.65
DITC	8.79	3.25
Constant FFIT	20.75	8.44
Constant FGIT	30.98	11.98
Constant DT	21.43	8.82
R-squared	0.26	Adjusted R-squared 0.24

Here

DV = '1' for hotels facing a rack rate based luxury tax, '0' otherwise.