

# A Study of Revenue Management of Tirumala Tirupati Devasthanam: Management Control of Religious Trust in India

**Prakash Gautam**

Department of Economics, Soka University, Tokyo, Japan

*e16d0601@soka-u.jp*

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## Abstract

*Management control is associated with the institutionalization of trust inside an organization. It is a control of economic and administrative functionalities like revenue management, future plans to expand income, target-setting as well as public facilities and amenities. Pilgrimage tourism is a fast-growing service industry in modern India, and the majority of them are Hindu because more than 80% of Indian people believe in Hindu. Tirumala Tirupati Devasthanam (TTD) stands to be the biggest religious trust in India. On this background, this study will clarify the two aspects of the management control of TTD: (i) revenue management and commercial profit, (ii) economic and business impact to the local community. Based on the secondary data, this study focused on revenue management of TTD.*

*First, the author explored that TTD has created a religious market around the world. The excellent management control of TTD with the help of IT in the present period changed into one of the richest temples of Hindu religion. The trust started the pricing of religious objects, changes in marketing policies, diversification strategies, and use of IT lead its success. Second,*

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## Corresponding Editor

Ramesh Raj Kunwar  
*kunwar.dr@gmail.com*

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*it explains the idea that the economic impacts and revenue management of pilgrimage tourism with the example of the TTD. Due to the increasing number of pilgrimages in the area, the number of population is increasing, and social infrastructure is also developing. Based on the study result, this study suggests that to establish a new revenue management system/team.*

### **Introduction**

*Management is the science of formulating, implementing and assessment cross-functional decisions that will enable an organization to reach its goals and objectives. Further, benefits and process specifying the company's goals, nurturing policies and strategies to reach these goals and obtaining and making available these resources to perform the policies and strategies to achieve the company's goals (Sourkouhi, 2013). In the religious organization, it refers to the anticipation of demand, optimization of availability and pricing, the achievement of the best possible financial result and management of revenue. Further, it utilizes a series of levers, such as pricing, inventory, marketing, and distribution channels to maximize revenue (Smith, 1994). In the pilgrimage tourism, the income refers to the entrance fees, Toll-tax, rental serve for religious activities, etc. during the arrival of the pilgrimage in a particular temple or religious place. Management of these revenues for profit maximization on behalf of that religious place is revenue management of that pilgrimage destination. Therefore, it can be said that revenue management is an area of management even in pilgrimage destination like in the TTD.*

TirumalaTirupatiDevasthanam (TTD) is an independent Hinduism Trust in Andhra Pradesh in southeastern India. It manages 12 temples as well as their sub-shrines and employs about 14,000 People. In the early stage, there has been a tremendous change in the management of the temple. It can be roughly divided into four phases by Anirvinna(1998) and Kumar (2015) as follows.

- The Royal patronage periods
- The Colonial period
- The period when Mahants (the head of a monastery) had their mastery over the temple (A.D.1843-A.D.1932)
- The present TTD's period as a trust recognized by the State Government of India since 1932.

The present TTD comprises of many departments like engineering, transport, education, revenue, and general administrations, etc. From the respective departments, The TTD has invested in many local projects besides necessary arrangement to the visiting pilgrims. Some of them include the construction of motor roads and railways, hospitals, school, universities.

In recent years, TTD has emerged as a successful financial institution. Over the past years, many studies were conducted on different perspectives of the TTD. However, the study on revenue management perspectives has not been conducted yet. Thus, in this study, the author analyzes the revenue strategies after 1951. For this purpose, based on the data collection from the TTD website and published literature, the author first conducted a literature review and analyzed the revenue management strategies of the TTD, then based on the results the implication for pilgrimage sites will be presented.

### **Literature review of religious tourism and economic impact on TTD**

The modern Indian religious tourism industry has evolved greatly from the pilgrimage tradition and continues to thrive in an economy of devotion to religion. Religious actors promote this industry by providing religious services, accommodation, and transportation in pilgrimage sites, bringing clear “religious” and “informal” directions. In addition, following the colonial legacy, quasi-religious entrepreneurs continue to enjoy state exemptions for income generated by religious contents and continue to abandon civil responsibilities (Shinde, 2012).

Pilgrimage is one of the oldest and most basic forms of population movement known to human society from ancient times to modern times. And the legal, social, cultural and economic implications have always been, and continue to be substantial. This study aims to examine key issues, arguments, and conceptualizations in the scholarship on pilgrimage in order to understand better how it has changed over the years. The results show that the transition to post-modern approaches in pilgrimage research, and the boundaries between tourism and pilgrimage from the perspective of secular and religious pilgrimage, are becoming increasingly ambiguous (Collins-Kreiner, 2010). Pilgrimage tourism is a type of tourism that fully or strongly motivates tourists to achieve religious attitudes and practices. It is one of the oldest types of visiting old attractions and global experiences of spiritual growth. (Vijayanand, 2014).

The TTD Dissemination of information is a key role. Pilgrims from different places, different language, and different cultures, different backgrounds, different attitudes are visiting Tirumala every day. They are very anxious about the information and guidance. Dissemination of information to the pilgrims is the duty of the organization to facilitate them and make their pilgrimage more convenient (Raveendra, 2014).

Religious tourism includes many types of trips, that are religious places or places that have acquired images of religious symbols or motivated by a religious interest in the destination (Blackwell, 2007). The most known definition of pilgrimage is the journey to a place with religious significance to perform religious rites and rituals or to fulfill a spiritual need. In comparison, a religious tourist visits these sacred places

for a range of reasons, but mainly cultural and educational (Sharpley&Sundaram, 2005).

A comprehensive perspective of the motivations was discussed by aiming tourism expert Chaspoul (1993) who identified four main interests for religious tourism:

- spiritual perspective -to venerate and approach to divinity,
- the sociological perspective- to learn and understand better the history and dogmas of the religious group which belongs to,
- the cultural perspective- to visit places, sanctuaries, monuments to understand the religious symbols, cultural events, ethnological impact, etc.,
- a geographic perspective that identifies changes in the behavior of religious groups and adapts tourism proposals to market needs.

There is a detailed description of the temple in an old book about Tirumala, the historical genesis of the sacred Sri Venkateswara Temple complex and its administration under various rulers of the region (Iyengar, 1939). Next book, about TirupatiBalaji, attempted to explain briefly the nature and significance of the temple; it is at once a monograph and an informative booklet (Rao, 1949). Tirumala temple's history, rituals, practices in general, and the pilgrimage practices of different cultures and groups (Varadacharya,1999; Raveendra, 2014). The former executive officer and former chairman of the TTD presented his personal views on the proper administration of temples and the utilization of temple funds for social and welfare activities. It is a standard reference work on the temple administration including the conduct of the temple rituals, code of conduct for temple servants, worshippers, and trustees, other religious functionaries and the daily schedule of the rituals, accommodation, darshan (worship) and other religious activities (Rao, 1977).

The first attempt to understand the finances of the TTD even by the early 'sixties.' Confined to the finances of the TTD during 1951-1963, the study provided a basic analysis of the receipts and the expenditures of the TTD, besides its investments. The chief merit of the study lies in the fact that it has generated interest in the finances of the TTD. Based on its analysis, the study identifies several potential areas of revenue augmentation and expenditure economy. The study cautions against such revenue maximization and expenditure economy that would go against the religious objectives. The old study, however, is no longer relevant to the current fiscal concerns of the TTD. The TTD finances had undergone phenomenal changes during those years. There had been a steep rise in not only the numbers of pilgrimage but also in the revenues and expenditure. The functional responsibilities of the TTD have not only expanded rapidly but also have become more secular and general. The financial

investments of the TTD have also witnessed rapid and voluminous changes during the last years(Subbaramaiah, 1968).

The particular reference of the TTD examined the finances from 1973-1974 to 1982-1983. The study makes only a passing reference to the receipts and the expenditures of the TTD. Even the limited analysis was not based on time-series data. This study also not relevant to the current fiscal policy concerns of the TTD (Rao, 1992). Kumar (2015) showed TTD's revenue and expenditure from 1951 to 2012; however, the revenue and expenditure per person are not clarified. Further, the analysis of price value by inflation is insufficient in this study.

**Methodology**

This paper comprises of two areas of study. The first area with the revenue management and second area clarify the economic and business impact of pilgrimage tourism to local society. Both areas are based on the secondary data mainly obtained through the internet, books, advertisements, and research articles. The annual financial data were collected from the budget copies, annual reports, financial statements of the TTD, various records, files, other documentary materials newspaper, online news, the home page of the TTD, some published and unpublished literature. The author conducted direct interviews with local residents and pilgrims. And using the data up to 2011 because it is not easily available due to the economic nature of internal data which generally do not publish by the management committee of the temples in India except budget. Only for the budget, we further used the data of 2016 and 2017. However, the revenue data is not available for these years.

The data analysis was performed by using Microsoft Excel 2013 and Inflation Calculator a tool to calculate the inflation (freely available on the website). The data presentation was performed in the tables and figures.

For the inflation calculation, the author applied the following two different techniques:

First, using the compound interest formula.

FV=Future Value

PV=Present Value

i=Interest rate

n=Number of year

$$FV = PV(1 + i)^n \dots\dots\dots(1)$$

Second, using the consumer price index (CPI) formula,

$$\text{Final value} = \text{Initial value} \times \frac{(\text{CPI final})}{(\text{CPI Initial})} \dots\dots\dots(2)$$

In this paper, the author calculated inflation to understand the real value of price and to find out its revenue and expenditure. More specifically, the purchasing power of money in 1961 is not equal to the purchasing power of money in 2011. By the help of inflation calculation, we can compare the real value. Thus, the inflation calculation is conducted in this study.

There are some limitations on accessing data in the religious places such as pertaining to the investment portfolio were not accessible as the management does not permit any disclosure. Despite the data limitations, TTD has two types of donation income; capital income and revenue income. However, in this study, the author used only the revenue income and expenditure.

### **Management control of the TTD**

#### **History**

The history of the management of the TTD, right from the period of records available, is classified into roughly four categories and reviewed in the study. Management of the TTD by Kings and Rulers, Management of the TTD by the East India Company, Management of the TTD under Mahants, Management of the TTD by the Government after Mahants. In this research, we analyze history after 1932.

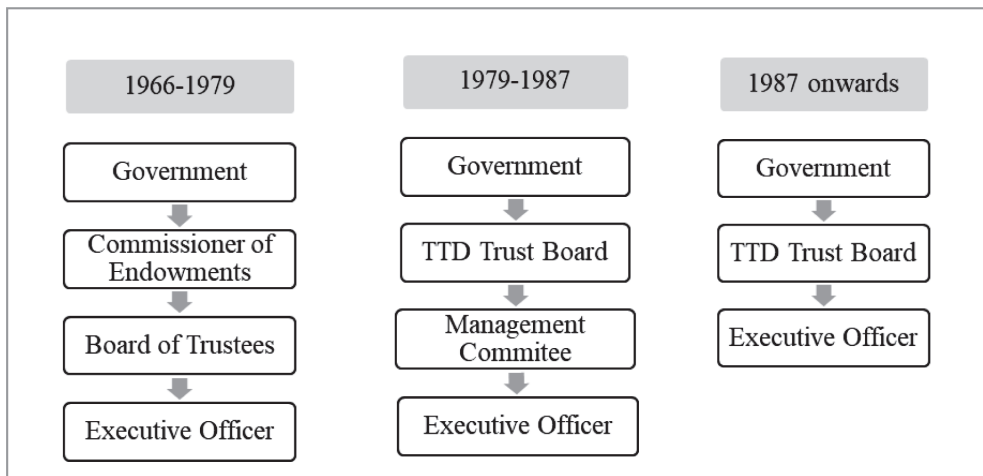
#### **Management by the government from 1933**

With the enactment of the Madras Act, 19 of 1933, the management of the TTD and their assets were taken away from the Mahants and vested in the TTD Board of Trustees which was formed by the provincial Government of Madras (Kumar, 2015). This Board was constituted as a Corporate Body having perpetual succession and a common seal, and it administered the TTD through a Commissioner appointed by the Government. The administration was entrusted to a Board of Trustees and an Executive Officer appointed by the State Government to implement the policies of the Board subject to the control of the Commissioner and the State Government. The Act of 1933 has no doubt placed the actual management of the temple under the Commissioner who was certainly better fitted for the task than the Mahants. But, the Act itself was limited in scope as the framers were interested more with the idea of using the funds for secular objectives than with the investigation of these revenues and the purposes for which the original donors of the funds and lands intended them to be used.

After the establishment of the State of Andhra Pradesh in 1953, The Hindu Religious and Charitable Endowments Act of 1951 was adopted by the Government of Andhra Pradesh. Then the Government had replaced it by a comprehensive enactment called 'The Andhra Pradesh Charitable and Hindu Religious Institutions and Endowments Act, 1966 (Act 17 of 1966)' which came into force on 26-1-1967.

Chapter 14 of the 1966 Act had dealt with the administration of the TTD. The other general provisions of the Act and the rules framed under the Act, 19 of 1951. The act was made applicable to the TTD wherever the relevant rules were not framed under the 1966 Act. Figure 1 shows the structure of the TTD trust after 1966. As shown in the figure, while transforming the internal structure, it is becoming the current TTD. And since 1987 there has been no change in the structure of the trust, and it is ongoing until now.

**Figure1. Changes in management organization of the TTD**



*Source: Based on the information collection, the author created*

### **Management by the government from 1966-1979**

In the period from 1966 to 1979, Under the Andhra Pradesh Charitable and Hindu Religious Institutions and Endowments Act, 1966, Section 86 provided for the constitution of the Board of Trustees by the Government which might consist of not more than 11 persons. An Executive Officer had to be appointed by the Government who will be the Chief Executive of the TTD, and he must be a person professing Hindu religion. All the properties of the TTD were vested in the Board of Trustees by the provisions of the Act. It had to manage the properties of the TTD and apply their funds by the provisions of the Act, and the Board of Trustees were empowered to exercise all powers for the betterment of the administration of the TTD. The Act provided for the constitution of a civic committee for the Tirumala hill area.

### **Management by the government from 1979-1987**

In the period from 1979 to 1987, the government has brought out this separate act of the governance of the TTD for the following reasons:

- (i) The TTD became a major religious institution in the State with vast resources and extensive properties
- (ii) The provisions of the Act of 1966 were found insufficient and not been possible for the TTD to make quick decisions in the matter of administration wherever considered necessary,
- (iii) There are considerable difficulties to control and supervision by the Commissioner of Endowments had been leading to administrative inefficiency in such a huge organization like the TTD.

In this period, the TTD management focused on infrastructure development and corporate social responsibility of local society. For example, provide relief to the ailing and sick people by constructing shelter houses and hospitals, provide educational facilities by establishing various colleges and schools at several places including Tirupati and Tirumala, also construct prayer halls and marriage halls at several places of Andhra Pradesh. The TTD give encouragement and assistance to Indian culture and heritage and propagate Hindu religion. To disseminate the information about the pilgrimage to the various shrines and publish mythological and spiritual books, adopt certain villages near Tirupati for development, to provide various welfare programs to the staff of the TTD, like water facilities and medical facilities, provide statutory contributions to the state government and participate in the nation-building activities. Moreover, TTD provides all the required facilities to the visiting pilgrims of Tirumala and Tirupati, and to conduct various religious conferences and encourages artists in different fields.

In this period, there is a committee constituted by the government for the TTD called 'The Tirumala Tirupati Devasthanams Management Committee' which is a body corporate having perpetual succession and a common seal with a power to acquire, hold and dispose of the property and shall sue and be sued by the said corporate name. The committee consists of the chairman of the TTD board who is ex-officio chairman of the committee, the commissioner who is a member ex-officio, the executive officer who is the ex-officio member secretary of the committee and two other members of the board nominated by the state government. The committee shall manage the properties, funds, and affairs of the TTD and arrange for the conduct of daily worship and ceremonies and the festivals in each temple according to its customs and usage. It has the power to fix the fees for the performance of Archana, ritual, Utsavam, or any service-connected with the TTD.

The management committee shall consider the budget presented by the executive officer of the TTD. The committee will also have to submit to the trust board a report on the administration on the affairs of the TTD during a year within three months after the end of the financial year. It is felt necessary that after presenting the budget



every year, the administration should publish detailed note on the financial matters of the TTD in all newspapers for enabling the financial transparency. Being a public religious institution, this may be found desirable as its income is mostly dependent on public patronage and devotion. At present, only the budget figures are made available to the public.

### **Management by the government from 1987 onwards**

As shown in Figure 1, the management control of the TTD is still managed by the government. The newly abbreviated structure is based on the TTD Act of 1987. In this period, the system of accounting maintained by the TTD was by the procedure laid down by the Local Funds Department of Andhra Pradesh State Government. The administrative structure of the TTD in the late 1950s and 1960s were not as huge as it is now. The revenue was not even ten percent of the present magnitude. As the administration did not have several departments and establishments, a single-entry accounting system was adopted at that time. A consolidated statement of the profit and loss statement and the balance sheet, were prepared every year as part of the accounting requirement. There was not a scientific system for preparing detailed budgets.

Due to this reason, a new double-entry accounting system was introduced in the TTD as a consequence of 1974 (Kumar, 2015). The accounting system of the TTD was divided into seven separate groups, in which there were about 65 independent units and departments, functioning under the overall supervision and control by the executive officer. A new scheme of accounting was intended to reflect the financial position of the TTD and the working results of its operations at any given point of time with reasonable accuracy.

The 65 independent establishments of the TTD were brought under 31 accounting units. Each accounting unit was required to maintain separate books of accounts and the related records and had a separate bank account. The banks transferred all the receipts received at the unit level, to the central office on the day of the collection itself. All the heads of items of assets, liabilities, receipts, disbursements, and investments were given general ledger account numbers. The TTD prepared books of original entry for recording necessary information relating to the original transactions. Separate forms were prescribed for each book of original entry. Each book of original entry was self-balancing such that the total debit entries were found equal to the total of credit entries.

As a result of the new accounting system, the TTD funds have been pooled and deposited in savings bank accounts so that they can earn interest on bank balances. The new system has also facilitated the investment of surpluses in long-term bank deposits, popularly known as FDRs (Fixed Deposit Receipts). This has enabled the

TTD to maximize the interest earnings on the surplus funds. More significantly, the new system has widened the portfolio choice of the TTD.

The act instructs that the TTD shall have its funds including amounts received in the form of donations and gifts, Kanuka's (the money sent by the friends or family to worship to the God who could not go the temple physically by themselves), any income from any other source shall make all payments forms. The funds shall be operated by the officers appointed by the board of trustees as per the procedures laid down for this purpose. All funds shall be deposited in the banks or treasury or invested in securities approved by the government.

The act also instructs that the financial adviser and chief account officer of the TTD keep regular accounts of all receipts and expenditures of each fiscal year separately in the prescribed form. Further, the Act states that the auditors approved by the government, shall audit the accounts annually and submit their report on the annual accounts, to the Government of Andhra Pradesh.

### **The revenue management**

#### **Source of revenue**

Arjitham receipts (Darshan or Sevas to the Lord on payment of a fee as fixed by the Temple Management), Sale of prasadam (a material substance of vegetarian foods), laddu and Vada (sweets from the Indian continent), special darshan receipts, receipts from Kalyanamandapams (wedding hall) and choultries (a resting place, an inn or caravansary for travelers),

Kalyanakatta (tonsuring service) receipts, Sale of human hair, canteen sales, grants received, and fees collected by educational institutions, Toll-gate receipts, and income from investments or fixed deposit receipts are the important sources of the revenue of the TTD (TTD Budget, 2016-2017).

The growth of revenue from different sources are increased rapidly during the last four decades. Not all sources of revenue have grown at the same rate. In fact, the relative importance of different sources of revenue has changed significantly, due to the changes of excellent management control and also the help of IT in the present period, it has changed into a rich Hindu temple all over the world. Trust's annual budget is higher than the division of the Indian national budget for the tourism sector.

The TTD's 2011 budget was announced, and the amount was 1,641.76 crore of Indian rupee for the fiscal year 2011-2012<sup>1</sup>. At that time, the amount allocated to

<sup>1</sup> The Tirumala Tirupati Devasthanams (TTD), which manages the hill shrine of Lord Venkateswara at Tirumala near here, on Friday approved a Rs 1,641.76-crore budget for the fiscal year 2011-12. After a monthly meeting, the TTD Executive Officer, Mr. I. Y. R. Krishna Rao, told presspersons that the cash offerings made in the temple hundi alone are estimated at about Rs 675 crore. The interest on the TTD's investments in cash and gold deposits made at several nationalized banks is estimated to earn it about Rs 431.73 crore, he said. The revenue from the sale of worship tickets, including paid rituals tickets and special entrance darshan tickets, is expected at Rs 207 crore during the financial year, Mr. Rao added (BusinessLine, 11 Feb 2011).

the tourism sector throughout the country of India was less than the TTD annual budget(Khan et al., 2014).

The scale of the increase in the number of pilgrims coming to Tirumala is clearly seen in Figure 1. The number of pilgrims that visited the temple from average 226,000 in 1951-1952 to 7,952,000 in 1980-1981 and increased 23,725,000 in 2001-2002. Furthermore, in the present days, 70,000(25,200,000 in 2017) pilgrims visited the TTD every day<sup>2</sup>. This dramatic increase has been continuous since 1971. During peak days like Brahmotsavams, New Year's Day, Vaikunta Ekadashi and Radhasapthami, more than one lakh devotees per day visit the temple to pay homage to the lord. For a whole year, there is nearly houseful situation at Tirumala.

**Table 1. Number of pilgrims and income of the TTD (1951-2012) Unit: Indian Rupees**

Year	Number of pilgrims	Hundi collections	Total Receipts	Total expenditure	Total profit
1951-952	226,000	1,200,000	3,300,000	4,100,000	-800,000
1961-962	1,167,000	6,200,000	24,300,000	30,200,000	-5,900,000
1971-972	3,394,000	26,000,000	65,900,000	60,900,000	5,000,000
1981-982	7,952,000	90,900,000	264,200,000	241,800,000	22,400,000
1991-992	11,801,000	406,500,000	1,214,900,000	905,400,000	309,500,000
2001-002	23,725,000	2,243,000,000	4,877,500,000	3,998,400,000	879,100,000
2011-012	*25,550,000	*****	16,323,874,022	11,761,117,400	4,562,756,622

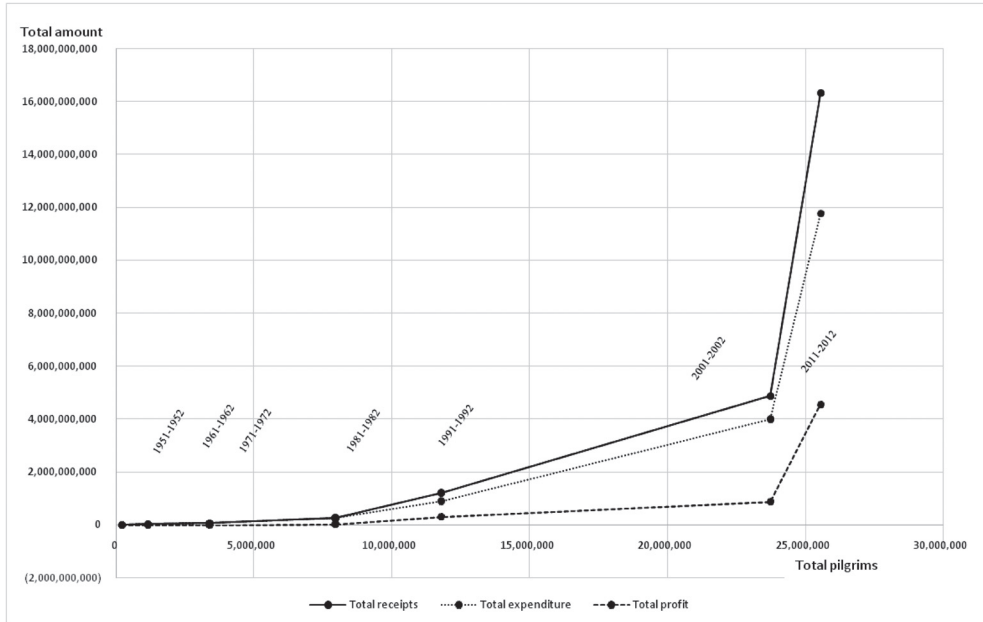
Source: Kumar (2015). Modified some by the author, and \*Rao (2011)

Along with the increase in the number of pilgrims, the TTD receipts and expenditures on both revenue and capital accounts too had registered an amazing increase. The total revenue increased from Rs. 3,300,000 in 1951-1952 to Rs. 264,200,000 in 1981-1982 and to Rs. 16,323,874,022 in 2011-2012. The expenditure to have grown exponentially to a record level of Rs. 11,761,117,400 in 2011-2012. The Hundi offerings made by the pilgrims also increased from Rs. 1,200,000 in 1951-1952 to 2,243,000,000 by 2001-2002. Analysis of the above data shows that the number of pilgrims increased to 25,550,000 in 2011-2012. And the total profit for the same year also increased to 4,562,756,622 Indian Rupee.

<sup>2</sup> The strategy is very clear to make India's richest temple adopt analytics for crowd management and pilgrim safety. PV Sessa Reddy, general manager, IT in-charge, TTD says it is necessary to have an online system to have a better interface with the people. Consider this: The average pilgrim strength visiting the temple, which used to be around 30,000 pilgrims a day during 2006, is now over 70,000. On average, 2.5 crore people visit the temple every year (The Financial Express, 22 Jan 2018, written by Mahalaxmi).

**Figure 2: Total pilgrims, total receipt, expenditure, and profit of TTD**

Unit: Indian Rupees



Source: Made by the author.

In Figure 2, round dots are pointing the period of each ten years. And it constantly increases in the number of pilgrims coming to the TTD is clearly shown. This dramatic increase has been sustained since 1971-1972.

**Table 2. Number of pilgrims and per person cost (1951-2012)**

Unit: Indian Rupees

Year	Number of pilgrims	Total receipts	Total expenditure	Per pilgrim receipt	Per pilgrim expenditure	Growth Rate of Revenue Every 10 years	Present Value of Price (Per Person cost)	Present Value of Price (Per Person income)
1951-1952	226,000	3,300,000	4,100,000	14.60	18.14	****	****	****
1961-1962	1,167,000	24,300,000	30,200,000	20.82	25.88	636%	1,079.49	871.90
1971-1972	3,394,000	65,900,000	60,900,000	19.42	17.94	171%	407.17	429.79
1981-1982	7,952,000	264,200,000	241,800,000	33.22	30.41	301%	309.24	340.17
1991-1992	11,801,000	1,214,900,000	905,400,000	102.95	76.72	360%	330.24	441.75
2001-2002	23,725,000	4,877,500,000	3,998,400,000	205.58	168.53	301%	304.27	394.21
2011-2012	25,550,000	16,323,874,022	11,761,117,400	638.90	460.32	235%	460.32	638.90

Source: Kumar (2015). Modified some by the author.

Table 2 presents revenue and expenditure based on the number of pilgrims for the last 70 years in 10 years' time interval. The expenditure and revenue are also calculated in per person basis; the calculation was done by inflation calculator - a free software. Concerning the expenditure until 1971, the TTD was in loss; however, after the new management system of the 1966-1979 period, the temple started to get a profit upon its expenditure. Although the data shows that the cost is rising every year, the profit is also rising. This data is inconsistent with the nature of generation profit-oriented business/corporation. In the case of TTD, even if the cost is raised, the profit also increased together but not in a big difference.

The 2011 year was used to calculate inflation. The result shows that 26 rupees in 1961 are equal around 1079.49 current Indian rupees. In other words, the purchasing power of Indian Rupees 26 in 1961 equals Indian Rupees 1,079.49 in 2011. If we calculate in the unit base, As the total cost of per rupee is equal to Rs. 41.52. More specifically, the inflation rate in India between 1961 and 2011 was 4,051.9%. The average annual inflation rate between these phases was 7.74%.

The inflation calculation was performed based on the formula mentioned in the methodology section and the tool called inflation calculator.

The following indicator and value are provided by the inflation calculator<sup>3</sup>.

Indicator	Value
Total Inflation (1961-2011)	4,051.9%
Annual inflation avg. (1961-2011)	7.74%
CPI 1961	1.7
CPI 2011	70.77
Indian Rupees 1 in 1961	Indian Rupees 41.52 in 2011

Using the above results Future value of inflation is calculated using the compound interest formula:

FV=Future Value (value on 2011)

PV= Present Value(value on 1961)

i= Interest rate (inflation)

n=Number of times (years)the interest is compounded

FV=PV(1 + i)<sup>n</sup>, where:

FV = PV (1 + i)<sup>n</sup>

= 26 (1 + 0.07737)<sup>50</sup>

= 1,079.493793

<sup>3</sup> Inflation calculator - Indian Rupee <https://www.inflationtool.com/indian-rupee?amount=26&year1=1961&year2=2011>

By using the consumer price index (CPI), the inflation calculation is as follows

$$\text{Final value} = \text{Initial value} \times \frac{(\text{CPI final})}{(\text{CPI Initial})}$$

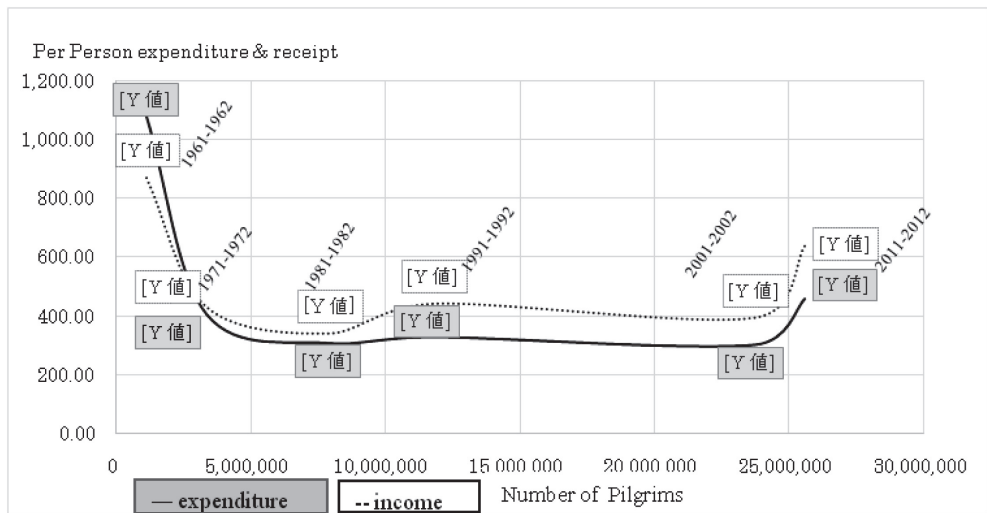
in this case,

$$= 26 \times 70.77 \div 1.7$$

$$\approx 1,079.49$$

In this case, the future value signifies the final amount obtained after applying the inflation rate to our initial value. In other words, the future value is the amount in 2011 that equals IRS 26 in 1961 in terms of purchasing power. There are 50 years between 1961 and 2011, and the average inflation rate was 7.737%. Therefore, we can resolve the amount like in Figure 3.

**Figure 3. Changes in the expenditure and receipt of per person in present value by the number of pilgrim's unit: Indian Rupees**



Source: Author's calculation based on the data of Kumar (2015).

Figure 3 shows the per-person expenditure and receipts. The expenditure curve shows that the amount of expenditure for the first ten years from 1961-1972 was decreased and also remained constant until 2001-2002. Regarding the revenue, it was lower than the expenditure until 1971, but it crossed the expenditure line that year onwards. The amount of revenue was also constant for the next 30 years. After 2003 onwards both revenue and expenditure started to increase. This suggests that revenue management in the next few years is necessary.

### **Socio-economic influences on local society**

Most studies that measured specifically the impacts of religious tourism agree that sacred destinations are strongly affected by religious tourists visiting them (Collins-Kreiner et al., 2006; Walpole and Goodwin, 2000). According to Shinde (2011), the role of religious organizations and charitable trusts in the religious tourism industry in India that involves more than 100 million tours to pilgrimage sites every year. It proves that such visitor influx is sustained partly due to the active engagement of charitable trusts in religious tourism.

Tirupati has been growing at a phenomenal pace from a small town of 25,000 people in 1951 to a bustling urban center with a population of 230,000 in 2001, almost ten times increased (Shinde, 2007). A dramatic increase in the population is seen as part of the relocation drive after starting accepting residents from Tirumala in 1981. Since then, Tirupati has become a migration target. More than 42% of the net increase in 1981-1991 was due to migration. This is also in part due to the establishment of social infrastructure (schools, hospitals, university) by the TTD, and recently, a new industrial park opened near Tirupati. (Nagabhushanam, 1999).

Influence of visitor flows is clearly reflected in the high proportion of local occupation in the tertiary sector (Nagabhushanam, 1999). It increased from 70% of the workforce in 1971 to more than 80% in 1991. The TTD directly employs more than 14,000 people in its institutions and indirectly employs about 23,000 people through its social institutions and investment in the development of facilities and amenities for pilgrims (Nagabhushanam, 1997). More than twice, this number is engaged in trade, commerce, and personal services in pilgrim-based activities.

### **Utilizing information technology (IT) on the TTD**

The TTD uses IT over time, and it is used for the development of trust. Biometric counters are established on these footpaths, registration with the TTD Website is mandatory for booking Srivari Ajitha Sevas, accommodation, wherein pilgrim is provided with username and password. Only one Seva will be chosen for one registered user within 180 days of quota availability. Only one accommodation will be chosen for one registered user within 90 days of quota availability. After the successful booking of pilgrims, an e-mail confirmation will be generated to respective

e-mail Id's and pilgrims reporting time details will mention in the booking receipt. E-Darshan counters are installed at 81 locations throughout India. They are promoting the TTD by preparing TV channels, mobile terminal apps, radio stations, etc. in the way of modern advertising (TTD homepage, 2019). As mentioned by Salehi and Farahbakhsh (2014) advertisement plays an important role to increase the number of tourists at the hosting destination, we can say that the number of pilgrims in TTD has also positively affected.

### **Conclusion**

First, the author wants to conclude that the management organization at TTD is simple, quick and straightforward based on present advancement. This can be visualized by their quick performance like by employing of the IT, online reservation, online Hundi, E-Darshan counters. Moreover, in terms of revenue management, analysis of TTD's revenues service suggests that a positive profit started from 1971-1972 and which continues till today. However, a careful analysis reveals that after 2003, although both revenues and expenditure has increased, the gap between them is shrinking. This may lead to less profit to the temple in the future. Therefore, this study suggests that to establish a new scientific revenue management system/team. A new system should explore all the possible ways to optimize their resources to reduce the possible future financial crisis.

Further, this study also sheds light on the monetary circulation of the TTD because trusts such as the TTD plays a very important role in supporting such type of service industries. Pilgrimage tourism is also considered to have the form of a monopolistic market in economic terms. The monetary circulation is directly linked to the TTD's sustainability, but indirectly, it has become a social development for local people and a new religious business tool. This model investing money for the employment generations in the locality helps to circulate the money for developing countries like India. This kind of practice can be done in the Hindu temples Buddhist stupas. There are a lot of Guthis (trusts) in Nepal like Sworgadwari, Pashupatinath, Muktinath, Lumbini, and so on can be managed in the TTD model. The Kanuka, Hundi, and other donations can develop service industries which will contribute to the economic diversification in the local areas. Ultimately, it will help to make the transparent system for each temple, which will help to collect more revenue and capital. The collected revenue and capitals can be invested for the benefit of local people.

Finally, management in terms of a social and economic impact on the local community as well as pilgrims is also studied. The results show that the number of populations was increased. Further, the effectiveness of advertising has led to an increase in the number of pilgrims, which helped to upgrade the lifestyle of the local



people. It can also be observed through an increase in the employment rate, which is related to the living standard of local people.

The author wants to declare that although this research is related to Hinduism and pilgrimage tourism, it does not discriminate other religions in any way.

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