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Advertising Media Selection in the Tourism Industry

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Abstract

In selecting channels for communicating to the prospective customers, there is a wide range of choices. While considering advertising media, the providers can consider high-tech possibilities involving computers or low-tactics such as fliers, leaf outs and booklets. Not every advertising tactic will be appropriate for every business in every situation. The state of Kerala is one of India's largest developed tourism destinations. The purpose of the present study is to analyze the advertising media selection process in the different tourism sectors of Kerala. The methodology undertaken has basically been to do a cross-sectored study of the advertising media selection within the different classified and non-classified tourism units in Kerala. While comparing the 'advertising media selected' by the different categories of tourism units, significant differences were found among the units in the case of 'National and International Print Media, Television, Outdoor and Direct Mail advertising'.

Key words: Advertising media selection, classified and non-classified tourism units, effectiveness of advertising media

I. Introduction

Tourism advertising is an area that has been researched intensely in international level. However this has not been the case in India. The choice of media types is wide. Six types which are commonly used in travel and tourism are analysed here. Finding effective memorable ways to operate on consumers' minds is the creative aspect. Arranging to be seen and heard is the job of media selection and buying space.

Marketing communication forms a core principle of the delivery tourism product and services. There is a need to introduce new products or services and create advertising channels to promote existing and new ones. For tourism destination marketers, it is imperative to know what forms of advertising should be used to attract and convince consumers to make travel-purchasing decisions. This study compares six major types of tourism advertising media. The purpose is to explore which form is most effective in getting consumers to make tourism-purchasing decisions from the marketer's perspective.

II. Review of Literature

Marsha et al. (2005) examined the persuasive effects of message presentation (i.e. advertising or publicity) on the effectiveness of marketing a tourist destination. Results of the study show that publicity created significantly higher mean scores than advertising for three of the four dependent variables tested. This study confirms that publicity is an important element in the tourism marketing mix. David and Mary (2008) examined media selection practices by tourism business competing in Alaska. Two media selection decisions, media use and media mix, were investigated. A market structure analysis revealed that both media selection practiced were affected by organizational, task, and demand characteristics facing firms. The market structure analysis also suggested that media mix decisions were likely to be more highly constrained that are individual media use decisions.

How to communicate the right information about a tourism destination through the right form of

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media are pertinent advertising decisions, as the information that consumers acquire about possible tourism destinations may help sensitize the consumer favorably towards a vacation location, and therefore assist them in choosing a vacation destination (Gartrell, 1994).Densil and Andrew (2010) assessed the impact of advertising, along with a number of economic variables, on tourist arrivals in Jamaica. The results revealed that it is exchange rate, not advertising that is most influential in stimulating tourist arrivals to Jamaica.The Internet serves as a major marketing and communication tool in the tourism industry. The study conducted by Shwu-Ing Wu (2008) focused on determining how Internet-based advertising has influenced travel agencies operating in the tourism industry.

International experience reveals that movies constitute an important marketing tool which can effectively serve the strategy for promotion of tourism destinations. Vagionisand Loumioti (2011) explored the prospects of movies as a tool of modern tourist marketing.Hudson and Ritchie (2006), suggest that film tourism is the tourism that is generated as a result of the appearance of a destination or attraction in the cinema, video or television.Seabraaet.al (2007) reveals that using non-media information sources for planning tourist trips influences fulfillment of expectations. The use of non-media information sources also has a direct impact on the future use of mass media information sources for future tourist trip planning, as well as an indirect impact through expectations fulfillment.

III. Purpose of the Study

The purpose of the study is to analyse the advertising media selection process in the different tourism sectors of Kerala. The state of Kerala is one of India's largest developed tourism destinations. Kerala is blessed with golden beaches, beautiful lakes, splendid waterfalls, calm backwaters, cascading rivers, well-kept wildlife sanctuaries, tempting hill resorts, graceful valleys, numerous historical areas, pilgrim centers, art forms and festivals in which tourists are especially interested in. Yet, Kerala has not achieved the much expected growth rate. Kerala has tremendous potential for promoting tourism in the state, which will provide employment, increase business and earn foreign exchange for the country. But this can be made practicable only if the State takes proper care in addressing all issues connected with this sector. How tourism products are advertised in Kerala? is therefore, an important consideration. In this context, a study is needed on the media selection for advertising tourism products by various tourism units in Kerala.

IV. Objectives of the Study

1. To make a cross sectored analysis of the media selection for adverting tourism products by different classified and non-classified categories of tourism units in Kerala.
2. To compare and analyse the advertising media selection of different categories of tourism units in Kerala according to their marketing experiences.

V. Methodology

The present study is an empirical one based on survey method. The methodology undertaken has basically been to do a cross-sectored study of the advertising media selection within the different classified and non-classified tourism units in Kerala.The aims of this research were achieved by means of a survey that was distributed among 217 tourism Marketing Managers. An effort was also made to broad base the sample in major 'identified tourism centers'. The study focuses on six forms of media that were used to advertise a particular tourism product.

VI. Sample Frame

Of the total 217 tourism units constituting the sample, there are 38 (17.51 per cent) respondents

from Classified Hotels and Resorts and 32 (14.75 per cent) from Non-classified Hotels and Resorts. Data were collected from 65 (29.95 per cent) Ayurveda Health Centers, out of which 35 (16.13 per cent) are from classified category and 30 (13.82 per cent) from non-classified category. Out of the total respondents, 52 units (23.96 per cent) are from House Boat Operators category and in this category 18 units (8.29 per cent) from classified and 34 units 15.67 per cent) from non-classified category. From the Approved Tour Operators and Travel Agents category there are 30 respondents (13.82 per cent).

VII. Results and Discussion
VII (A). Advertising Channels Selection

In selecting channels for communicating to the prospective customers, there is a wide range of choices. While considering advertising media, the providers can consider high-tech possibilities involving computers or low-tactics such as fliers, leaf outs and booklets. Certainly each communication vehicle has both advantages and drawbacks, that's why it is wise none to be used exclusively but in one combination or another. Not every advertising tactic will be appropriate for every business in every situation. Again, before making media selection for delivering advertising message, determine the number of potential customers they can reach, returns on investments, and the best cost-effective method for conveying advertising strategy.

To find the nature of media selection for advertisement among tourism units, an analysis based on the common types of advertising media is made. For this the prominent advertising media are grouped as given below.

1. Print – Regional, National and International

2. Television – Regional, National and International

3. Radio – Regional, National and International

4. Outdoor

5. Internet

6. Direct Mail

7. Others

Table 1 shows the comparison of 'advertising media selected' by the different categories of tourism units. It reveals that there is significant difference among the units in the case of 'National and International Print Media, Television, Outdoor and Direct Mail advertising'. For these types of media the $\div^2$ value is significant at 1 per cent level. But in case of 'Regional Print Media, Radio and Internet', they do not show significant differences. In Table 2 the media selected for advertisement by different categories of tourism units are ranked by using 'spearman's rank correlation'. It shows the higher concentration of tourism units in 'outdoor' media for advertising their products. 79.3 percent of the respondents (when all the categories are combined) selected 'outdoor' as one of their advertising media followed by 'internet' and 'direct mail' with 75.1 percent and 73.7 percent. In all, only 4.6 percent of respondents use 'radio' for advertising.

Table 1: Comparison of Advertising Media Selected - According to Category of Units

Media	Hotels and Resorts	Ayurveda Centers	House Boat Operators	Approved Tour Operators and Travel Agents	Total	Chi
Print-Regional	51 (72.9)	40 (61.5)	33 (63.5)	14 (46.7)	138 (63.6)	6.426
Print-National	46 (65.7)	54 (83.1)	31 (59.6)	27 (90)	158 (72.8)	14.292**
Print-International	13 (18.6)	52 (80)	1 (1.9)	24 (80)	90 (41.5)	106.728**
Television-Regional	24 (34.3)	11 (16.9)	5 (9.6)	10 (33.3)	50 (23)	13.441**
Television-National	20 (28.6)	37 (56.9)	7 (13.5)	25 (83.3)	89 (41)	49.805**
Television-International	1 (1.4)	8 (12.3)	(0)	11 (36.7)	20 (9.2)	38.112**
Radio-Regional	1 (1.4)	1 (1.5)	2 (3.8)	(0)	4 (1.8)	1.816
Radio-National	2 (2.9)	1 (1.5)	(0)	(0)	3 (1.4)	2.278
Radio-International	2 (2.9)	1 (1.5)	(0)	(0)	3 (1.4)	2.278
Outdoor	63 (90)	58 (89.2)	48 (92.3)	3 (10)	172 (79.3)	101.781**
Internet	55 (78.6)	49 (75.4)	33 (63.5)	26 (86.7)	163 (75.1)	6.369
Direct mail	47 (67.1)	47 (72.3)	49 (94.2)	17 (56.7)	160 (73.7)	17.43**
Others	1 (1.4)	(0)	1 (1.9)	(0)	2 (0.9)	1.652

*Source: Survey data   * Significant at 0.05 level   ** Significant at 0.01level.*
Note : Figures in brackets indicate percentages to respective category of respondents

The ranked positions of 'advertising media selected' as per Table 2 werecompared and presented in Table 3. This shows significant similarities between different categories of tourism units in the matter of 'media selected for advertising', except between Approved Tour Operators & Travel Agents and Hotels & Resorts and between Approved Tour Operators & Travel Agents and House Boat Operators. The correlation value between Hotels & Resorts and Ayurveda Centers is 0.81 which is significant at

1 per cent level. Similarly the ranked positions are significantly correlated between Hotels & Resorts and House Boat Operators, Ayurveda Centers and House Boat Operators and Approved Tour Operators and Travel Agents and Ayurveda Centers. The correlation value is 0.86, 0.7 and 0.74 respectively, which are also significant at 1 per cent level. Therefore, it can be concluded that tourism units in different categories are selecting more or less the same media for advertising their products.

Table 2: Ranking of Advertising Media Selected According To Category of Units

Sl No	Media	Category of Units								Total	
		Hotels & Resorts		Ayurveda Resorts		House Boat Operators		Approved Tour Operators & Travel Agents			
		%	Rank	Percent	Rank	Percent	Rank	Percent	Rank	%	Rank
1	Print-Regional	72.9	3	61.5	6	63.5	4	46.7	6	63.6	5
2	Print-National	65.7	5	83.1	2	59.6	5	90.0	1	72.8	4
3	Print-International	18.6	8	80.0	3	1.9	9.5	80.0	4	41.5	6.5
4	Television-Regional	34.3	6	16.9	8	9.6	7	33.3	8	23.0	8
5	Television-National	28.6	7	56.9	7	13.5	6	83.3	3	41.0	6.5
6	Television-International	1.4	12	12.3	9	0.0	12	36.7	7	9.2	9
7	Radio-regional	1.4	12	1.5	11	3.8	8	0.0	11.5	1.8	10
8	Radio-National	2.9	9.5	1.5	11	0.0	12	0.0	11.5	1.4	11.5
9	Radio - International	2.9	9.5	1.5	11	0.0	12	0.0	11.5	1.4	11.5
10	Outdoor	90.0	1	89.2	1	92.3	2	10.0	9	79.3	1
11	Internet	78.6	2	75.4	4	63.5	3	86.7	2	75.1	2
12	Direct mail	67.1	4	72.3	5	94.2	1	56.7	5	73.7	3
13	Others	1.4	12	0.0	13	1.9	9.5	0.0	11.5	0.9	13

Source: Survey Data

Table 3: Rank Correlation Matrix
(Advertising Media Selected According to Category of Units)

Category of units	Hotels and Resorts	Ayurveda Centers	House boats	Approved Tour Operators & Travel Agents
Hotels and Resorts	1			
Ayurveda Centers	0.81**	1		
House Boat Operators	0.86**	0.7**	1	
Approved Tour Operators & Travel Agents	0.55	0.74**	0.53	1

*Source: Survey Data   *Significant at 0.05 level,   **Significant at 0.01 level*

VII (B). Effectiveness of Advertising Media Selected

In tourism research, evaluating the effectivenessof travel destination advertisements has focusedlargely on the extent to which a promotional campaign "stimulates"visits to a particular destination. A variety ofapproaches have been taken, including advertising trackingstudies, conversion studies, and other forms of programme evaluation(Burke and Gitelson 1990; Messmer and Johnson1993; McWilliams and Crompton 1997).To compare the perceived effectiveness of advertising media, the tourism units were asked to state 'three most effective' advertising media they had been using. The respondent's opinion about the most effective advertising media was then ranked and given in Table 4. The table suggests that 'International Print' media is most effective for tourism business as this has the highest mean of 0.71 and apparently with the 'First Rank' position. It is evident that 'regional television' and 'regional radio' advertisements are not effective as these two media got the least rank positions of 'ninth' and 'tenth' with mean value of 0.07 and 0.00.

Table 4: Ranking of Most Effective Advertising Media

Sl.No	Media	Mean	Rank
1	Print - International	0.71	1
2	Direct mail	0.35	4
3	Television - National	0.35	5
4	Print - National	0.43	3
5	Internet	0.63	2
6	Print - Regional	0.18	6
7	Outdoor	0.11	8
8	TV - International	0.14	7
9	Radio - Regional	0.00	10
10	TV - Regional	0.07	9

Source : Survey Data

While comparing the 'advertising media selected' by the different categories of tourism units, significant differences were found among the units in the case of 'National and International Print Media, Television, Outdoor and Direct Mail advertising'. In case of 'Regional Print Media, Radio and Internet', they did not show any significant differences. When 'spearman's rank correlation" was applied, it was found that there was a higher concentration of tourism units in 'outdoor' media for advertising their products.

It was also observed that significant similarities existed between different categories of tourism units in the matter of 'media selected for advertising', except between Approved Tour Operators & Travel Agents and Hotels & Resorts and between Approved Tour Operators & Travel Agents and House Boat Operators. Similarly, the ranked positions are significantly correlated between Hotels & Resorts and House Boat Operators, Ayurveda Centers and House Boat Operators and Approved Tour Operators & Travel Agents and Ayurveda Centers. When another type of comparison between different classified

categories of tourism units had been made, a slightly assorted picture was obtained.

The ranking suggests that 'International Print' media is most effective for tourism business as this has the highest mean of 0.71. The category wise ranking reveals that for Hotels & Resorts and House Boat Operators, 'internet' is the most effective advertising media. On the other hand, 'international print' is the most effective advertising media for Ayurveda Centers and Approved Tour Operators & Travel agents. It is inferred that the different sectors of tourism units show no uniformity in their opinion about effectiveness of the advertising media.

VIII. Conclusion

The purpose of tourism destination advertising is to convince consumers to actually travel to particular tourism locations. It is crucial to use the most effective forms of media to advertise tourism destinations in ways that are appealing and attractive to consumers. This study explored the effects of six types of tourism advertising media. The study reveals that there were significant differences among various classified categories of tourism units in their selection of advertising media. This leads to the conclusion that tourism units in different classified categories are selecting varied types of media for advertising.

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Private Super Markets and Margin Free Markets in Kerala:
A Comparative Study of Factors Influencing Consumers

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Abstract

Retailing occupies a predominant position in the economies of almost all the developed countries. It is one of the fastest growing sectors and contributes more than one-fourth of the GDP of many countries in the world. The sector gives nearly 20 per cent of the employment in the world. In India, organised form of retailing stared in 1990s and presently possesses nearly ten percent of total retail turnover and grows at a CAGR of 24 per cent – the highest rate in the world. In Kerala, organised retailers consists of supermarkets owned by private chains as well as independent large retailers, Margin free markets and government controlled retailers. Here, Private Supermarkets are supposed to compete with Margin Free Markets. In this study, the factors influencing the choice of stores among the consumers of Private Supermarkets and Margin Free Markets are identified and examined using 17 variables. The variables, as part of dimension reduction, are grouped into three prominent groups using the statistical tool Exploratory Factor Analysis. It is found that for the factors 'Assortment and Service' and 'Quality of Goods', Private Supermarkets are far better than Margin Free Markets. But in the case of the factor, 'Price of Goods', Margin Free Markets are better than Private Supermarkets as the former one sells goods at lesser prices than the latter.

Key words: Organised retailing, Private supermarkets, Margin free markets,

I. Introduction

Retailing is one of the largest industries in the world and significantly contributes towards the economic growth of many countries. It is also the fastest changing and dynamic industry in the world today. According to recent reports, the US$9 trillion retail industry is the world's largest industry and the sector is still growing. According to Forbes Magazine, 47 of the 'Global Fortune 500 Companies' and 25 of Asia's top 250 companies are retailers. Retailing is a significant contributor to the worlds GDP (about 28 per cent) and contributes more than 20 percentage employment. Organised retailing is the form prevalent in most of the developed counties in

the world. It accounts for more than 50 per cent of the retailing business. In Europe, it is about 70 per cent, 50 per cent in Malaysia, 40 per cent in Thailand, 40 per cent in Brazil and Argentina and 25 per cent in China.

The Indian retail market, over the last decade, has shown greater acceptance for organized retailing formats. Domestic retailing is emerging from a multitude of unorganized family-owned business to organized modern retailing. Indian retail sector accounts for 22 per cent of the country's GDP and contributes to 8 per cent of the total employment. Hyper markets, currently accounting for 14 per cent of mall space, are expected to witness high growth. More than 90 per

cent of retailing in India fall into unorganized sector. Organised retailing, initially concentrated in large cities but later the trend was changed and supermarkets and chain stores started to expand their activities to semi-urban and rural areas. Organized retailing in India is expected to grow 25-30 per cent yearly. Industry experts predict that the next phase of growth in the retail sector will emerge from the rural markets. Kerala has accepted the entry of organized retailers at a high level. Modern retail formats- supermarkets and hypermarkets are started to function in the state in an extraordinary nature in the form of both chains and independent entities. More than 1100 Private Supermarkets function in the state including 470 Margin Free Markets claiming that they sell a large assortment with high quality at low prices.

II. Statement of the Problem

Kerala is rather considered a consumer state. Nearly 4 lakh small independent retailers engage in the retailing sector and a lion share of them are dealing with food, grocery or household items. They have been replaced at a higher rate by large formats such as supermarkets and hypermarkets with the claim that they sell large variety and considerable number of goods at lower prices. The supermarkets in the state consist mainly of two categories based on their nature and management aspects, viz. Private Supermarkets and Margin Free Supermarkets. Both classes of retailers are seen different in related variables such as pricing, quality of products, assortment of products, display, customer service, etc. It is also seen that in many

places they compete each other. In this study, an analysis is made with respect to the performance of both the classes of modern retailers by considering their customer responses on the selected 17 variables.

III. Objective and Methodology

The study intends to identify and examine the factors influencing the choice of stores among the consumers of Private Supermarkets and Margin Free Markets in Kerala based on the perception of their common consumers. Exploratory Factor Analysis is done on the consumers' perception to identify the factors responsible for the performance of these stores. The perception on performance variables were collected from 432 customers who have been buying their household needs both from Private Supermarkets and Margin Free Markets. A multi-stage random sampling method is used for arriving the sample customers. The sample is collected from the selected 25 places consisting three districts of Kerala, namely: Thiruvananthapuram, Ernakulam and Kozhikode. Secondary data were collected from journals, websites, books, etc. Statistical tools such as mean, cumulative mean, F and three-way ANOVA are also used in the study to substantiate the findings.

IV. Results and Discussions

Kaiser-Meyer-Olkin measure is used for testing to identify whether the data can be used for factor analysis or not. The data considered is satisfied with the test as the value is 0.963, which is above 0.7, an accepted level (Table 1).

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.963
Bartlett's Test of Sphericity	Approx. Chi-Square	16925.354
	df	595
	Sig.	.000

Source: Survey data

IV (A). Identification of Factor Variables

The Total Variance explained in Table 2 is drawn as under to reduce the number of variables in to factors variables which will represent all variables. Factor Analysis is a dimension reduction technique designed to represent a wide range of variables on a smaller number of dimensions.

<div align="center">

Table 2: Total Variance Explained

</div>

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14.483	41.380	41.380	14.483	41.380	41.380	14.379	41.082	41.082
2	9.399	26.855	68.236	9.399	26.855	68.236	9.448	26.995	68.076
3	1.022	2.920	71.156	1.022	2.920	71.156	1.078	3.079	71.156
Extraction Method: Principal Component Analysis.									

Source: Survey data

As per the total variance explained in Table 2, three factor variables explain 71.156 per cent of the loading and therefore, the three variables will represent all the seventeen variables. To identify the variables to be included in the three factor variables, Rotated Component Matrix is drawn and based on the co-efficient values of variables, they are grouped together and is necessary to name the factors.

Table 3 gives out the first factor variable representing 11 variables (those given bold in component 1 column) which are related with assortment of goods, attractiveness in display and service, therefore, the factor is named '**Assortment and Service**'. The second factor contains 4 variables, given in component 2 column in Table 3, represents the quality of the items dealt by supermarkets and so the factor is named **'Quality of Goods'**. Certainly, **'Price'** is the third factor which contains 2 variables.

V (B). Assessment of Variation in the Customer Perception Level of Factor Variables

The performance of Private Supermarkets and Margin Free Markets perceived by customers may vary between them. Similarly, considering them separately as two groups, their performance may also vary among urban, semi-urban and rural areas of Kerala, and also considering southern, central and northern regions as well as various income groups.

V (B) 1. Factor 1-Assorment and Service in Private Supermarkets: Variation in the Perception of Customers among Areas, Regions and Income levels.

It is observed that there exists difference in the customer perception of Factor variable-Assortment of Goods of Private Supermarkets and Margin Free Markets among urban, semi-

Table 3. Rotated Component Matrix

Variables	Component		
	1	2	3
Attractiveness in display	**.937**	.051	-.011
Availability of brands	**.934**	.040	.025
Quality of Packing	**.929**	.043	-.006
Space layout in store	**.929**	.046	-.008
Quality of food grains	0.26	**.926**	-.044
Speedness in billing	**.922**	.032	-.007
Quality of convenience goods	0.32	**.922**	-.048
Cleanliness in the shop	**.920**	.036	-.015
Price of convenience goods	-0.15	-.005	**. 919**
Availability of fresh stock	.187	**.919**	-.013
Location advantages	**.912**	.036	-.012
Price of food grains	-0.47	-.009	**. 907**
Customer personal care	**.900**	.036	-.018
Working hours	**.887**	.049	-.101
Complaint redressel	**.887**	.017	.042
Quality of Packing	.153	**.819**	.121
Facilities available	**.780**	.058	.071
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 4 iterations.			

Source: Survey data

urban and rural areas, three regions and five income groups. For assessing the variation, the mean values of the factor is drawn area wise, region-wise and income level of the customers. To statistically substantiate the difference, A Three-way ANOVA is resorted. The following hypothesis is important in this respect:

H0: There is no difference between the observed mean of Factor 'Assortment and Service' of Private Supermarkets among areas, regions and income levels

H1: There is difference between the observed mean of Factor 'Assortment and Service' of Private Supermarkets among regions, areas and income levels.

List of Variables in the Factor Variables

Factor 1	Factor 2	Factor 3
Assortment and Service	Quality of Goods	Price of Goods
Attractiveness in display	Quality of food grains	Price of Food grains
Availability of brands	Quality of convenience goods	Price of Convenience Goods
Parking facilities	Availability of fresh stock	Discount
Space layout in store	Quality of packing	
Speediness in billing		
Cleanliness in the shop		
Location advantages		
Customer personal care		
Working hours		
Complaint redressel		
Facilities available		

Table 4: Assortment and Service Area-wise Mean of Private Supermarkets

Area of customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Urban	56.114	.544	55.045	57.183
Semi-urban	57.253	.554	56.164	58.343
Rural	56.711	.547	55.637	57.786

Source: Survey data

Table 5. Assortment and Service – Region- wise mean of Private Supermarkets

Region of Customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Central	57.968	.530	56.926	59.009
Southern	54.828	.550	53.748	55.909
Northern	57.282	.565	56.172	58.393

Source: Survey data

Table 6: Assortment and Service – Income-level Mean of Private Supermarkets

Monthly Income of Customers	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
less than 5000	55.309	1.854	53.664	60.953
5000-10000	55.776	.682	54.434	57.117
10000-20000	56.231	.384	55.475	56.986
20000-30000	57.173	.401	56.385	57.960
Above 30000	57.976	.683	55.633	58.319

Source: Survey data

Table 7. Tests of Between-Subjects Effects: Assortment and Service of Private Supermarkets

Source	Type I Sum of Squares	df	Mean Square	F	Sig.
Area	70.049	2	35.024	1.466	.232
Monthly income	223.131	4	55.783	2.336	.055
Region	748.216	2	374.108	15.664	.000
Error	9959.236	417	23.883		
Total	1376555.000	426			
a. R Squared = .095 (Adjusted R Squared = .077)					

Source: Survey data

Table 7 gives the variation in the customers' perception level of Private supermarkets on factor variable 'Assortment and Service' among three areas, regions and income levels. Considering the area-wise means, semi-urban has got highest mean, which is 57.253 than other areas (Table 4). Region-wise, the mean of central area (57.968) is more than other regions (Table 5). Similarly, the mean of highest income groups is more than other customers (Table 6). But the ANOVA Table 7 shows that, statistically, the variation exists in the means between regions (F 1.466 with df 2, p=0.00<0.05) only and not between areas and income level means (p>.0.05). This clearly depicts that regarding the 11 variables in the factor 'Assortment and Service' of Private Supermarkets in Kerala, selected customers have no difference in the opinion either area or income wise. That is, the performance of Private supermarkets are perceived better and similar in urban, semi-urban and rural areas and all income groups, but have variation among southern, central and northern regions. The null hypothesis is rejected in the case of region and accepted for area and income levels.

V (B) 2. Factor 1-Assorment and Service in Margin Free Markets: Variation in the Perception of Customers among Areas, Regions and Income levels.

To identify the variation of customer perception in the performance of MFM, region, area and income-wise, means of regions, areas and income level are drawn and three way ANOVA is used to test the hypothesis. The following hypothesis is needed to be validated in this respect.

H0: There is no difference between the observed mean of Factor 'Assortment and Service' of MFM among areas, regions and Income levels

H1: There is difference between the observed mean of Factor 'Assortment and Service' of MFM among regions, areas and income levels.

Table 8. Assortment and Service of MFM Region-wise

Region of customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Central	48.715	.474	47.783	49.647
Southern	43.818	.492	42.850	44.786
Northern	49.647	.557	48.551	50.743

Source: Survey data

Table 9. Assortment and Service of MFM Area- wise

Area of customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Urban	45.891	.488	44.931	46.850
Semi-urban	48.242	.518	47.224	49.260
Rural	48.048	.514	47.038	49.057

Source: Survey data

Table 10. Assortment and Service of MFM   Income levels

Monthly Income of Customers	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
less than 5000	46.758	1.660	45.495	52.021
5000-10000	47.261	.630	46.023	48.499
10000-20000	47.064	.376	46.324	47.804
20000-30000	48.900	.376	46.162	47.639
Above 30000	47.984	.618	45.769	48.198

Source: Survey data

Table 11. Tests of Between-Subjects Effects: Assortment and Service-MFM

Source	Type I Sum of Squares	df	Mean Square	F	Sig.
Region	2355.687	2	1177.844	61.631	.000
Area	458.740	2	229.370	12.002	.000
Monthly income	25.713	4	6.428	.336	.853
Error	7166.765	375	19.111		
Total	848702.000	384			
Corrected Total	10006.906	383			
a. R Squared = .284 (Adjusted R Squared = .269)					

Source: Survey data

Considering the marginal means of factor 'Assortment and Service' of Margin Free Markets, the northern region has highest mean, ie. 49.647 (table 8), similarly mean of semi-urban is more than other areas (48.242) and mean of income group 20000-30000 is highest than other groups (48.900). The finding are tested with the help of three way ANOVA (table 11) and found that statistically high level of difference exists between regions and also areas. However, no difference exists between income levels in the factor variable of MFM. The null hypothesis is rejected in the case of area and region, however, the null hypothesis is proved correct in the case of income levels. This shows the level of customer perception is varied among three regions and three areas but no variation can be seen among the income levels of MFM customers.

V (B) 3. Factor 2 – Quality of Goods in Private Supermarkets: Variation in the

Perception of Customers among Areas, Regions and Income levels

To arrive at the variation between the regions in the perception of customers on Quality of Goods among the southern, central and northern regions of private supermarkets, regional means are drawn in table no.12. Similarly means of three areas of residence and five income levels of customers are also drawn separately in table 13 and fourteen. To identify whether a considerable difference in the quality of goods exists in the perception of customers between regions or areas or income groups of customers of Private supermarkets, Three way ANOVA is used. The following group hypothesis is framed and tested:

H0: There is no difference between the observed mean of factor 'Quality of Goods' of PSM among regions, areas and Income levels

H1: There is difference between the observed mean of factor 'Quality of Goods' of PSM among regions, areas and Income levels.

Table 12 : Quality of Goods in PSM- Regional Means

Region of customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Central	21.716	.231	21.261	22.170
Southern	20.818	.240	20.346	21.290
Northern	21.344	.247	20.860	21.829

Source: Survey data

Table 13: Quality of Goods in PSM- Area Means

Area of customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Urban	20.992	.237	20.526	21.459
Semi-urban	21.354	.242	20.878	21.829
Rural	21.532	.239	21.063	22.001

Source: Survey data

Table 14: Quality of Goods in PSM- Income Level Means

Income of Customers	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
less than 5000	21.618	.809	20.027	23.209
5000-10000	21.217	.298	20.632	21.803
10000-20000	21.081	.168	20.751	21.411
20000-30000	21.271	.175	20.927	21.615
Above 30000	21.276	.298	20.690	21.863

Source: Survey data

Table 15: Tests of Between-Subjects Effects: Quality of Goods PSM

Source	Type I Sum of Squares	df	Mean Square	F	Sig.
Region	60.435	2	30.217	6.641	.001
Area	20.534	2	10.267	2.256	.106
Monthly income	4.544	4	1.136	.250	.910
Error	1897.317	417	4.550		
Total	193351.000	426			
Corrected Total	1982.829	425			
a. R Squared = .043 (Adjusted R Squared = .025)					

Source: Survey data

By observing the means of the factor 'Quality of Goods' of three regions, areas and income levels it is seen that the mean of central region, rural area and lowest income groups are higher than those of others. However, the ANOVA table gives regional $F=6.641$ with $p=.001<.05$. This shows a high degree of variation exists in the consumer perception of 'Quality of Goods' between regions. Thus, the null hypothesis is rejected in the case of regions. But, statistically no variation exists between areas and income levels as per table 15. Therefore, the null hypothesis is accepted in both cases.

V (B) 4. Factor 2 – Quality of Goods in Margin Free Markets: Variation in the Perception of Customers among Areas, Regions and Income levels

For the purpose of identifying that any variation exists in the Quality of Goods as perceived by the customers of three regions, areas and various income groups, means of customer responses are calculated and given below in table 16, 17 and 18.

The following group hypothesis is framed and tested:

H0: There is no difference between the observed mean of factor 'Quality of Goods' of MFM among regions, areas and income levels.

H1: There is difference between the observed mean of factor 'Quality of Goods' of MFM among regions, areas and income levels.

Table 16: Quality of Goods in MFM- Income Level Means

Region of customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Central	18.255	.198	17.866	18.644
Southern	16.628	.206	16.223	17.032
Northern	18.182	.233	17.725	18.639

Source: Survey data

Table 17: Quality of Goods in MFM- Income Level means

Area of customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Urban	17.210	.204	16.810	17.611
Semi-urban	17.945	.216	17.520	18.370
Rural	17.909	.214	17.488	18.331

Source: Survey data

Table 18: Quality of Goods in MGM- Income Level Means

Income of Customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
less than 5000	17.982	.693	16.620	19.344
5000-10000	17.945	.263	17.429	18.462
10000-20000	17.452	.157	17.143	17.760
20000-30000	17.549	.157	17.241	17.858
Above 30000	17.512	.258	17.005	18.019

Source: Survey data

Table 19: Tests of Between-Subjects Effects: Quality of Goods in MFM

Source	Type I Sum of Squares	df	Mean Square	F	Sig.
Region	207.898	2	103.949	31.217	.000
Area	51.200	2	25.600	7.688	.001
Monthly income	10.173	4	2.543	.764	.549
Error	1248.707	375	3.330		
Total	119013.000	384			
a. R Squared = .177 (Adjusted R Squared = .160)					

Source: Survey data

As per the ANOVA table 19, region- wise and area wise variation exists significantly as region F=31.217 with p=.000<.05 and area F=7.688 with p=.001<.05. The null hypothesis for region and area for quality of goods are rejected. Therefore, customers of central region and semi-urban area are more satisfied with the quality of products supplied by the Margin Free markets. However, income wise, customer responses with respect to quality of goods are not varied significantly in Kerala considering income of customers and so the null hypothesis for income is accepted. Therefore, it is believed that the customer perception of quality of goods supplied by Margin Free Markets vary among regions and different areas but not by income levels of customers.

V (B) 5. Factor 2 – Price of Goods in Private Supermarkets: Variation in the Perception of Customers among Areas, Regions and Income levels.

The quantum of sales is depending on the pricing policy of the supermarkets. When the price perceived by customers is lower and if it has relation with the quality of goods supplied by a retailer which will surely be a success factor. Private supermarkets sell goods at low prices than traditional stores. However, the perception of customers are varied depend upon on the region they belong, the area of their residence and their income levels. With the help of the following hypothesis the perception of customers on price charged by private supermarkets in Kerala is evaluated.

H0: There is no difference between the observed mean of factor 'Price of Goods' of PSM among regions, areas and Income levels.
H1: There is difference between the observed mean of factor 'Price of Goods' of PSM among regions, areas and Income levels.

Table 20: Price in PSM: Regional Means

Region of customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Central	12.332	.113	12.110	12.553
Southern	11.450	.117	11.220	11.680
Northern	12.217	.120	11.981	12.453

Source: Survey data

Table 21: Price in PSM: Area Means

Area of customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Urban	11.833	.116	11.606	12.060
Semi-urban	12.105	.118	11.873	12.336
Rural	12.061	.116	11.833	12.290

Source: Survey data

Table 22: Price in PSM: Income Level Means

Income of customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
less than 5000	11.823	.394	11.049	12.598
5000-10000	11.986	.145	11.701	12.271
10000-20000	11.900	.082	11.739	12.060
20000-30000	12.082	.085	11.915	12.249
Above 30000	12.207	.145	11.921	12.492

Source: Survey data

Table 23: Tests of Between-Subjects Effects: Price of Goods in PSM

Source	Type I Sum of Squares	df	Mean Square	F	Sig.
Region	68.383	2	34.192	31.678	.000
Area	5.505	2	2.753	2.550	.079
Mon Income	4.963	4	1.241	1.149	.333
Error	450.090	417	1.079		
Total	61993.000	426			
a. R Squared = .149 (Adjusted R Squared = .133)					

Source: Survey data

Table 23 provides F=31.678 with p=.000<.05 for regional means which shows a significant difference exists between regions for the prices charged by different Private Supermarkets in Kerala. The central customers believe that private supermarkets sell goods at higher prices than (mean 12.332) than southern and northern customers, however southern people favors the price levels of private supermarkets. In the case of price factor, no significant difference can be seen between areas and income levels. For region only the null hypothesis is rejected.

V (B) 6. Factor 2 – Price of Goods in Margin Free Markets: Variation in the Perception of Customers among regions, areas and income levels

To identify the variation in the customer perception with respect to price charged by Margin Free Markets in central, southern and northern regions of Kerala as well as three residential areas and various income levels, Three way ANOVA is used with concerned marginal means. The following hypothesis is used for the purpose.

H0: There is no difference between the observed mean of the factor 'Price of Goods' in MFMs among regions, areas and income levels.

H1: There is difference between the observed mean of the factor 'Price of Goods' in MFMs among regions, areas and income levels.

Table 24: Price in MFM: Regional Means

Region of customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Central	11.173	.151	10.875	11.470
Southern	9.231	.157	8.922	9.540
Northern	10.287	.178	9.938	10.637

Source: Survey data

Table 25: Price in MFM: Area means

Area of Customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Urban	10.053	.156	9.747	10.360
Semi-urban	10.194	.165	9.869	10.519
Rural	10.444	.164	10.122	10.766

Source: Survey data

Table 26: Price in MFM: Income Level Means

Income of Customer	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
less than 5000	10.443	.530	9.401	11.484
5000-10000	10.226	.201	9.830	10.621
10000-20000	10.182	.120	9.945	10.418
20000-30000	10.072	.120	9.836	10.307
Above 30000	10.230	.197	9.843	10.618

Source: Survey data

Table 27: Tests of Between-Subjects Effects: Price in MFM

Source	Type I Sum of Squares	df	Mean Square	F	Sig.
Region	266.993	2	133.497	68.597	.000
Area	10.195	2	5.097	2.619	.074
Monthly income	2.142	4	.536	.275	.894
Error	729.792	375	1.946		
Total	40517.000	384			
a. R Squared = .277 (Adjusted R Squared = .261)					

Source: Survey data

While considering the marginal means of the factor 'Price' in Margin Free Markets, it is observed that means of central region (11.173) is more than those of other regions. Similarly rural mean is highest (10.444) and lower monthly income groups responded highest mean (less than 5000- 10.444). However, the ANOVA test reveals for region F= 68.597 with p=.000<.05 means a significant variation exist between regions with respect to the price levels of MFMs. But significant variation in the price levels cannot be traced between residential areas and income levels of customers in the state (p>,05) as the significant level for the cases are greater than the accepted level.

Therefore, the price charged by Margin Free Markets in the central region is higher than other regions as per customer ratings.

V (C). Comparative Assessment between Private Supermarkets and Margin Free Markets

Customer responses with respect to the performance of Private Supermarkets and Margin Free markets on assortment of goods, quality of goods, price levels, service availability, etc were collected on a seven point scale and classified the variables in to three factor variables by using Exploratory Factor Analysis with the help of SPSS. The mean scores of factor variables are drawn separately for the two types of outlets and mean differences are assessed. One sample t- test is used to validate the differences between factor variables applicable to the outlets. The hypothesis used in this part of the study is given below.

H0: There is no difference between the observed means of factors variables between the Private Supermarkets and Margin Free Markets.

H1: There is difference between the observed means of factors variables between the Private Supermarkets and Margin Free Markets

Table 28: One Sample t- test for Comparing Factor Variables

Factor Variables	Mean Private SM	Mean Margin FM	Mean Differences	t- value	Sig.
Assortment and Service	56.617	40.112	15.887	40.112	0.000
Price of Goods	12.011	10.143	1.871	34.629	0.000
Quality of Goods	21.194	17.492	3.704	35.402	0.000

Source: Survey data

While comparing the Private Supermarkets and Margin Free Markets in Kerala it was observed from the responses of customers that Private Supermarkets are far ahead than Margin Free Markets in the case of two factors, namely 'Assortment and Service' and 'Quality of Goods'. However, the Margin Free Markets charge less price for commodities than the Private supermarkets. The null hypothesis is rejected and thus it is substantiated as customers believe that the Private Supermarkets and Margin Free Markets are different while considering brand availability, attractiveness in display, layout of the shop, parking facilities, quality of food and other convenience goods and their prices.

VI. Major Findings

The major findings of the study are given below

1. Assortment and Service, Quality and Price of Goods are the three resultant factors, which represent most of the retail variables.

2. Considering the factor 'Assortment and Service' in the Private Supermarkets, customer perception is significantly varied among the three regions of Kerala, however, the central customers are more satisfied than other two regions. But it was found that variation in the perception of customers is not significant considering urban, semi-urban and rural areas as well as income levels. Taking Margin Free Markets as another type of retailer, their customer perception is significantly varied among regions and area wise, however, no variation exists among income levels of customers considering the factor 'Assortment and Service'. The northern

customers and urban residence were more satisfied than those of others.

3. Quality of Goods supplied by Private Supermarkets is found comparatively better than Margin Free Markets in Kerala. Considering means of responses in regions, areas and income levels of customers of private supermarkets, significant variation exists among regions only. When considering the perception on Margin Free Markets, both regional and area level means of Quality of Goods varied significantly but not in the case of income level of the customers.

4. Price level in the Private Supermarkets is found higher than those of Margin Free Markets. Taking both types of retailers as separate groups, their price level is found to be varied among central, southern and northern regions of Kerala. But no significant variation was found among the urban, semi-urban and central customers with respect to the price levels of them.

5. Private Supermarkets offer more brands and their display and layout are better than Margin Free Markets. PSM offer quality services, parking facilities, etc than those of MFMs.

VII. Conclusion

Organised retailing of Consumer Goods is vibrant and an emerging sector in India. Two classes of organized retailers successfully function in Kerala, namely, Private Supermarkets and Margin Free Markets. Both the types of retailers are found different in their retail strategies. This was substantiated in the study by analyzing the customer responses. In the case of factors 'Assortment and Service' and 'Quality of Goods'

Margin Free Markets have to move forward than Private Supermarkets. While the price levels of Private Supermarkets is found to be very high.

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An Empirical Study to Predict the Self-Employment Intention of Engineering Students Using EAO Model in Kerala

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Abstract

India produces more than five lakh engineers every year but very few of them are employed, the rest are unemployed. The statistics have shown that the market is oversupplied with young and inexperienced engineering graduates .The present study is mainly focusing on engineering graduates in Kerala. In Kerala there are more than 120 engineering colleges and every year more than 35,000 students pass out with engineering qualification but the question is how many of them are employed? Since career opportunities are less in Kerala they migrate to distant places in search of greener pastures. To solve the unemployment issue among graduates, the only solution is self-employment. Hence, it is important to know the self-employment intentions of engineering graduates. In the present study EAO model is used to understand the engineering graduate attitudes toward entrepreneurship and their relationship with self-employment intentions. A survey approach was adopted in the study. The sample size taken for the study was 300 students from different engineering colleges in Kerala on the basis of convenience. The results show that personal control and self-esteem have significant and positive relationships with self-employment intention. Meanwhile achievement and innovation were found to have no significant relationship with self-employment intention. These findings provide important insight to promote and produce a positive image of entrepreneurship as a career.

Keywords: EAO model, self-employment intention, Engineering graduates, Kerala

I. Introduction

Entrepreneurship has played an important role in economic prosperity and social stability in many developed countries. Today India as developing country is faced with massive challenges of high levels of unemployment among the youth, especially engineering graduates, due to lack of work experience, low skills base and education dangers (National employment report, 2011). The formal labour market in India is currently saturated, unable to absorb the ever increasing number of labour force. India produces more than five lakh engineers annually, but only 17.45% is employed. An economy with a large percentage of unemployed qualified candidates is not only inefficient, but socially dangerous (National employment report, 2011).

The present study is focused on engineering graduates in Kerala. With Kerala's 120 engineering colleges producing more than 35000 engineering graduates every year, poses various questions like how many of them are getting employment and how many of them stay back in Kerala .Since career opportunities are less in Kerala they migrate to distant places in search of greener pastures .The only solution for generating

employment is entrepreneurship and now government in Kerala understands this truth. Hence Kerala government is taking number of initiatives like the start-up villages in different parts of the state and making budgetary provisions in its annual budget for encouraging young entrepreneurs. But the question is do the engineering graduates have self employment intention or not?

Many studies have been conducted to investigate the characteristics of entrepreneurs (J. M. Crant 1996; E.J.Douglas and D.A.Shepherd 2002; S.Thrikawala 2011). Robinson et al. (1991) commented that most of the previous studies on entrepreneur heavily emphasized on personality and demographic approaches. But these approaches have some limitations that make them inappropriate to measure the entrepreneurs' characteristics. The work of Robinson et al. (1991) was one of the first to incorporate an attitudinal approach to predict entrepreneurial activity. An advantage of using an attitudinal approach is that it can be more domain-specific, which increases the correlation with actual behavior and reduces unexplained variability. Attitudes tend to change across time and situations through an interactive process with the environment, and once a person's attitude has been measured, a prediction can be made about the person's future actions (Carlson, 1985). Robinson et al. (1991) have developed Entrepreneurial Attitude Orientation (EAO) scale which is tested to be high in validity and reliability. In the present study EAO model is used to understand the engineering graduate attitudes toward entrepreneurship and their relationship with self-employment intentions.

II. Literature Review

Self-employment intention has been defined as the intention to start a new business (H. Zhao, G. E. Hills, and S. Seibert 2005), the intention to own a business (J. M. Crant 1996), or the intention to

be self-employed (E. J. Douglas and D. A. Shepherd2002). This career choice is not in favour of young graduates who observe entrepreneurship as their second or even last choice of employability (S. Thrikawala2011). The individual decision to choose an entrepreneur as a career is sometimes assumed to depend on personality traits. Theory of Planned Behavior I. Ajzen. (June 1, 2013) has become the most popular used theoretical framework in past studies of entrepreneurial intention. According to the Theory of Planned Behavior (TPB), human action is guided by three kinds of considerations: beliefs about the likely outcomes of the behaviour and the evaluations of these outcomes (behavioural beliefs), beliefs about the normative expectations of others and motivation to comply with these expectations (normative beliefs), and beliefs about the presence of factors that may facilitate or impede performance of the behaviour and the perceived power of these factors (control beliefs) I. Ajzen. (June 1, 2013). Behavioural beliefs produce a favourable or unfavourable attitude toward the behaviour, normative beliefs result in perceived social pressure or subjective norm, and control beliefs give rise to perceived behavioural control. Attitude toward the behaviour, subjective norm, and perception of behavioural control determine intention. The more favourable the attitude and subjective norm, and the greater the perceived control, the stronger should be the person's intention to perform the behaviour.

There are many discussions on entrepreneurship intention around the world which focus on attitude toward the behaviour in an attempt to differentiate between entrepreneurs and non-entrepreneurs. However, there are no studies being conducted in Kerala among engineering graduates self-employment intentions. Thus, it is the aim of this research to shed some new insights to the current entrepreneurship literature about self-employment intention of engineering graduates of Kerala. Z. M. Zain, A. M. Akram, and K. E. Ghani (2010)

did a survey among business students and found out that there was a significant relationship between personal traits factor or attitude toward the behaviour and the self-employment intention. However, they examine this personal traits factor in general as the way an individual thinks and behaves without focusing on achievement in business, innovation in business, perceived personal control of business outcomes, and perceived self-esteem in business (EAO model).

M. N. Mohd Shariff and M. B. Saud (2009) did a research using the EAO model on final year business management undergraduates. Their result show that there is a significance difference between undergraduates minored in entrepreneurship courses and non-entrepreneur undergraduates in terms of self-esteem and personal control, with the mean for the entrepreneur undergraduates group being higher in personal control. Hence, there is no significance difference in terms of innovation and achievement. F. T. Xue, K. T. Yoon, and C. L. Liang (2011) who did a survey on universities students from two public universities and two private universities claimed that there was a positive significant relationship between the need for achievement and entrepreneurial intentions of students to start a business. However, the moderate relationship between the need for achievement and entrepreneurial intention shows there is a variation on level of need for achievement. The findings of M. N. Mohd Shariff and M. B. Saud (2009) are also quite contradicted with what have been found by J. Koe Hwee Nga and G. Shamuganathan (2010).

J. Koe Hwee Nga and G. Shamuganathan (2010) who did a survey on college and undergraduates from private higher educational institutions using the "Big Five" personality measure (Big Five model) found out that personality traits such as agreeableness, openness and conscientiousness generally gave a positive influence on social

entrepreneurship dimensions. The items under openness and conscientiousness are quite similar with innovation and achievement items in the EAO model respectively. The study found that openness exerted significant positive influence on financial returns and social vision whereas conscientiousness was found to exert a positive influence on sustainability and financial returns. In addition, K. Jusoff, M. Ismail, S. A. Khalid, M. Othman, N. A. Rahman, K. M. Kassim, and R. Shekh Zain,(2009) also did a survey using the "Big Five" personality measure on undergraduates in institution of higher learning agreed that entrepreneurial intention was positively correlated with openness but not conscientiousness. N. Ismail, N. Jaffar, S. Khan, and T. S. Leng, (2012) did a survey on undergraduates in three private universities agreed that there was no significant effect of need for achievement towards entrepreneurial intention besides internal control. They claimed that both independent variables may be affected by other variables. According to K. Jusoff, M. Ismail, S. A. Khalid, M. Othman, N. A. Rahman, K. M. Kassim, and R. Shekh Zain, (2009) conscientiousness was associated with diligence, organization and persistence which suit to self employment but at the same time it also suit in a larger organization whereas open individuals tend to be curious, imaginative, adventures and receptive to business opportunities. Besides openness, K. Jusoff, M. Ismail, S. A. Khalid, M. Othman, N. A. Rahman, K. M. Kassim, and R. Shekh Zain,(2009) also found that extraversion was significant which describes the extent to which people are active, energetic and enthusiastic.

III. Conceptual Framework and Hypothesis Development

A. Entrepreneurial Attitude Orientation (EAO) Model

This study adopts the Entrepreneurial Attitude Orientation Model to predict the engineering

graduates' self-employment intention in Kerala. The EAO Model is developed by Robinson et al. (1991) with the purpose to offer an alternative approach to study entrepreneurship. It contains four subscales which are:

1) Achievement in business, referring to concrete results associated with the start-up and growth of a business venture.

2) Innovation in business, relating to perceiving and acting upon business activities in new and unique ways.

3) Perceived personal control of business outcomes, concerning the individual's

perception of control and influence over his or her business.

4) Perceived self-esteem in business, pertaining to the self-confidence and perceived competency of an individual in conjunction with his or her business affairs.

B. Hypotheses Development

With reference to the Theory of Planned Behavior (TPB) by I. Ajzen. (June 1, 2013), the following diagram (see Fig. 1) depicted the model of this study:

Fig.1.The model of this study
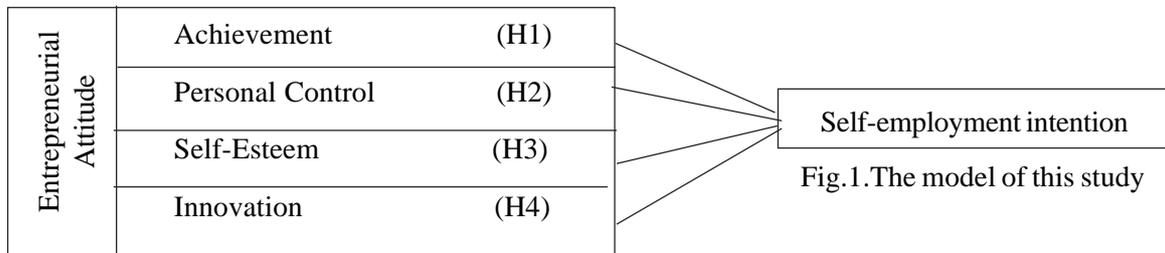
The hypotheses for this study are stated as:

1) H1: Higher levels of achievement are associated with higher levels of self-employment intention

2) H2: Higher levels of personal control are associated with higher levels of self-employment intention

3) H3: Higher levels of self-esteem are associated with higher levels of self-employment intention

4) H4: Higher levels of innovation are associated with higher levels of self-employment intention

IV. Research Method

IV (A). Research Design and Instrument

A survey approach is utilized in this study by giving questionnaires directly to the engineering graduates. The questionnaire was developed by modifying those of Robinson et al. (1991) to suit the focus of this study in Kerala. The questionnaire

is divided into three parts. The first part consists of questions related to demographic variables while the second part consists of the entrepreneurial attitude (i.e. the EAO scales). The final part solicits the respondents' self-employment intentions.

IV (B). Sample

The sample of this study is the engineering graduates in Kerala. Convenience sampling method is employed in the study. The sample size is 300.

IV (C). Administration of the Research Instrument

The questionnaires were distributed personally to the engineering graduates in their respective institutions with the permission of institution management. A pilot test was conducted with 50 respondents. The feedback from the pilot testing required minor amendment on the questionnaire and it was modified on the bases of the requirements.

IV (D). Variables of the Study

The dependent variable is the self-employment intention of the engineering graduates. This variable is measured on a 5-point Likert scaling ranging from strongly disagree to strongly agree, by providing the respondents 16 statements related to self-employment intentions. For each statement the respondents were required to circle one number on the scale.

The independent variables of this study are the entrepreneurial attitude of the engineering graduates. Specifically, they are achievement in business (Achievement), innovation in business (Innovation), perceived personal control of business outcomes (Personal Control) and perceived self-esteem in business (Self-esteem). These variables are measured using the EAO scale in 5 point likert scale. There are in total 75 statements given to the respondents which represented by twelve statements on Personal Control, fourteen statements on Self-esteem, twenty three statements on Achievement and another twenty six statements on Innovations. For each statement the respondents were required to circle one number on the scale.

V. Data Analysis

V (A). Demographic Profile

The profile of the survey respondents comprised of 139 (46.33%) females and 161(53.67%) males. The responds age group ranged between 19 -22 years. SPSS 21 version is used for analyzing the data.

V (B). Factor Analysis and Reliabilities

Principal component factor analysis was performed on independent variables (i.e. Achievement, Personal Control, Self-esteem and Innovation) and on dependent variable (i.e. self employment intention) to define the underlying structure among the variables in the analysis (Table 1). Column 2 of (Table 1) shows the finalized number of items included for each variable. The values of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy for each variable were all above 0.50, while each of the Bartlett's test of sphericity was significant at 5 percent. For the purpose of the hypothesis testing only statements with factor loadings more than 0.60 were taken (Table 2). In conclusion, nine out of twenty three statements on achievement were included in the final analysis. For innovation, from twenty six only five has being included. For personal control, from twelve statements only five were included and for self-esteem from fourteen statements only five were included in the final analysis. For self employment intention, among sixteen items only three were included.

Table 1: Results of Factor Analysis and Reliability for the EAO Scales and Self-Employment Intention

Construct	Number of items with factor loading greater than 0.60.	KMO	Cronbach Alpha
Independent Variables			
Achievement	9	.872	.887
Personal Control	5	.736	.714
Self-Esteem	5	.942	.908
Innovation	5	.807	.815
Dependent Variable			
Self-Employment Intention	3	.729	.703

The result of factor analysis is summarized in Table 2. A single factor solution emerged with an Eigen value greater than one is taken for the study. The reliability tests based on Cronbach's alpha measurements were conducted on dependent variable (i.e. self-employment intention) and the independent variables (i.e. Achievement, Personal Control, Self-esteem and Innovation). As shown in the last column of (Tables 1), the reliability coefficients ranged from 0.703 to 0.908, indicating that all the reliability coefficients exceeded the minimum acceptable level of 0.6. Hence, one can conclude that the items measuring entrepreneurial attitudes and self-employment intention was assessed to be reliable.

V (C). Regression Analysis

Table 4 presents the regression estimation for self-employment intention. From the table, it is understood that R^2 (= 0.066) which implies that 6.6 percent of self-employment intention can be explained by the four independent variables. The proposed model was adequate as the F-statistic (= 21.643) was significant at the 5 percent level. This indicated that the overall model provides a statistically significant relationship between entrepreneurial attitudes and self-employment intention. From Table 3 Personal control and self-esteem were found to have a significant and positive relationship with self-employment intention. Therefore, hypothesis H2 and H3 were supported. However, achievement and innovation was found to have no significant relationship with self-employment intention. Hence, H1 and H4 were not statistically supported. As shown in Table 3, the VIF values for independent variables ranged from 1.550 to 1.735, providing the solid evidence against the presence of multicollinearity.

Table 2: Constructs for the EAO Scales and Self-Employment Intention

Construct	Survey items and corresponding loadings
Achievement	I believe that concrete results are necessary in order to judge business success 0.752. I often sacrifice personal comfort in order to take advantage of business opportunities 0.645 I think that to succeed in business these days you must eliminate inefficiencies 0.644 I always feel good when I make the organizations I belong to function better 0.714 I feel proud when I look at the results I have achieved in my business activities 0.651 I believe the most important thing in selecting business associates is their competency 0.669 I feel good when I have worked hard to improve my business 0.779 I get a sense of accomplishment from the pursuit of my business opportunities 0.712 I always try to make friends with people who may be useful in my business 0.637
Personal Control	I create the business opportunities I take advantage of 0.848 I know that social and economic conditions will not affect my success in business 0.876 I believe that in the business world the work of competent people will always be recognized 0.751 I feel resentful when I get bossed around at work 0.683 I feel very good because I am ultimately responsible for my own business success 0.623
Self-Esteem	I usually perform very well on my part of any business project I am involved with 0.844 I believe successful people handle themselves well at business gatherings 0.765 I believe it is important to make a good first impression 0.711 I believe that to succeed in business it is important to get along with the people you work with 0.813 I believe that the authority I have in business is due mainly to my expertise in certain areas 0.705
Innovation	I seldom follow instructions unless the task I am working on is too complex 0.808 I enjoy being able to use old business concepts in new ways 0.782 I believe that organizations which don't experience radical changes now and then tend to get stuck in a rut 0.793 I enjoy being the catalyst for change in business affairs 0.705 I enjoy finding good solutions for problems that nobody has looked at yet 0.745
Self-Employment Intention	I will choose my career as an entrepreneur 0.786 I prefer to be an entrepreneur rather than to be an employee in a company 0.836 I am prepared to do anything to be an entrepreneur 0.868

Source: SPSS generated result out of authors' data

Table 3: Results of Regression Analysis

Model	coefficient	t-statistic	Collinearity tolerance	Statistics VIF
(Constant)	3.666			
achievement	0.079	0.959	0.724	1.581
innovation	0.051	0.534	0.633	1.579
Personal control	0.103	1.246*	0.645	1.550
Self esteem	0.113	1.981*	0.576	1.735

Table 4: Test Results

R^2	Adjusted R^2	F Value	Sig
0.066	0.063	21.643	0.00
Note:*significant at 5 per cent level/ Dependent Variable: self employment intension			

Source: SPSS generated result out of authors' data

VI. Discussion

This study found that entrepreneurial attitudes such as personal control and self-esteem have statistically significant relationships with self-employment intention. However, achievement and innovation were found to have no significant relationship with self-employment intention. Thus, only H2 and H3 are accepted. H1 and H4 are rejected. The finding shows that engineering graduates with high personal control and self esteem have high self employment intention and on the other hand the finding on achievement and innovation indicates that the engineering graduates who are perceived to have high achievement and innovation in business however do not have intention to be self-employed or in other word to operate own business. This may be caused by other variables, for example achievement and innovation may be affected by the personal control or self-esteem. Hence, although the engineering graduates who have perceived high achievement in business and innovation in business, does not make any difference on their entrepreneurial intention. In addition as mentioned by, K. Jusoff, M. Ismail, S. A. Khalid, M. Othman, N. A. Rahman, K. M. Kassim, and R. Shekh Zain (2009),achievement and innovation in business factor is also needed in a larger organization that may push an individual away from self-employment. This finding on achievement supports the claims of N. Ismail, N. Jaffar, S. Khan, and T. S. Leng (2012), K. Jusoff, M. Ismail, S. A. Khalid, M. Othman, N. A. Rahman, K. M. Kassim, and R. Shekh Zain, (2009), and M. N. Mohd Shariff and M. B. Saud(2009) . The finding on personal control and self-esteem support the findings of M. N. Mohd Shariff and M. B. Saud (2009) that entrepreneurship is affected by ones' personal control and self-esteem. In conjunction to the EAO model it is revealed that the engineering graduates who perceived that they have strong control and strong influence over his or her business have greater intention to be self-employed. For self-esteem, the findings support the gist of the EAO model that graduates who have high self-employment intention are those who have high level of self-confidence and competency in business affairs. In line with the assumption of the EAO model, this finding demonstrated that engineering graduates who were highly intended to be self-employed were those who have high level of self-confidence and competency.

VII. Conclusion

The results of this study has conformed to the literature that entrepreneurial attitudes do have positive relationship with self-employment intention. Universities nowadays have position themselves as a hub of entrepreneurship by nurturing an entrepreneurial environment. Besides more entrepreneurial curriculum or seminar to educate and guide students, it is now up to the university policy makers and government to team up in promoting and producing a positive image of entrepreneurship as a career. This is because even though students have the relevant entrepreneurial knowledge and skills, if they do not possess positive image about entrepreneurship, they might not be interested to venture into the field.

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Econometric Analysis between Spot and Futures Market in Indian Derivative Segment

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Abstract

Johansen's Co-integration technique followed by the Granger Causality test was employed to examine the relationship between NSE spot and futures market for selected scrip of Nifty of NSE. An empirical analysis was conducted for the closing price of near month prices from 9th November 2001 to 31st March 2012 and it is collected from National Stock Exchange (NSE) website. The analysis revealed that there exists a bi-directional causal relationship between spot and futures derivative market. Also an existence of co-integration between spot and futures market is also implied.

Keywords: *Derivatives, Futures, Nifty, Spot Market*

I. Introduction

Derivative markets contribute to the development of the financial infrastructureof a country by making links among cash markets, hedgers, and speculators. Local derivativemarkets have grown rapidly over the 1990s in emerging economies, especially in large emerging economies that have removed capital controls and developed their own underlying securities markets. The increasing use of derivative products offer alternatives for efficientriskmanagement, facilitate capital flows into emerging economies, and create conditions for raising system risk and magnifying negative effects during episodes of financial crisis.

Financial derivatives are important to hedging and risk management because they facilitate capital flows to developing economies. However, they also create the possibility of raising risk in financial systems, generating more unpredictable crisis dynamics, and providing a transmitting channel for contagion. Studies of emerging market crises revealed that financial derivatives can play both positive and negative roles.

The future market trading in Indian financial markets was introduced in June 2000 and options index was commenced from June 2001 and subsequently the options and futures on individual securities trading was commenced from July 2001 and November 2001, respectively. The future derivative trading on stock indexes has grown rapidly since inception and provides important economic functions such as price discovery, portfolio diversification and opportunity for market participants to hedge against the risk of adverse price movements. Hence, the movements of spot market price have been largely influenced by the speculation, hedging and arbitrage activity of futures markets. Thus, understanding the influence of one market on the other and role of each market segment in

price discovery is the central question in market microstructure design and has become increasingly important research issue among academicians, regulators and practitioners alike as it provides an idea about the market efficiency, volatility, hedging effectiveness and arbitrage opportunities, if any. Price discovery is the process of revealing information about future spot prices through the future markets. The essence of the price discovery function hinges on whether new information is reflected first in changes of future prices or changes of spot prices. Hence, there exists lead-lag relationship between spot and futures market by information dissemination. All the information available in the market place is immediately incorporated in the prices of assets in an efficient market. So, new information disseminating into the market should be reflected immediately in spot and futures prices simultaneously.

Accordingly, there exist diversified theoretical arguments pertaining to the causal relationship between spot and futures markets by information dissemination. The main arguments in favour of futures market leading the spot market are mainly due to the advantages provided by the former which includes higher liquidity, lower transaction costs, lower margins, easy leverage positions, rapid execution and greater flexibility for short positions. Such advantages attract larger informed traders and make the futures market to react first when market-wide information or major stock-specific information arrives. Thus, the future prices lead the spot market prices.

On the other hand, the low cost contingent strategies and high degree of leverage benefits in futures market attracts larger speculative traders from a spot market to a more regulated futures market segments. Hence, this ultimately reduces informational asymmetries of the spot market through reducing the amount of noise trading and helps in price discovery, improve the overall market depth, enhance market efficiency and increase market liquidity. This makes spot market to react first when market-wide information or major stock-specific information arrives. Hence, spot market leads the futures market. Besides, there exists a bidirectional relationship between the futures and spot markets through price discovery process. Both the spot and future markets are said have informational efficiency and reacts more quickly to each other.

The above diversified theoretical arguments raises the major question that which market price reacts first whether (a) futures prices tend to influence spot prices or (b) spot prices tend to lead futures prices or (c) a bidirectional feedback relationship exists between spot and futures prices. An overwhelming number of studies have examined the price discovery process involving well established United States, European and Asian futures markets providing different results.

II. Statement of the Problem

The study of the relation between stock market index and index future prices has attracted theattention of researchers, financial analysts and traders since last two decades. The investigationof the Co-integration and causal relation between futures and spot prices is very significantespecially in an emerging market economy like India. Indian capital market has witnessedsignificant transformations and structural changes due to implementation of financial sectorreform measures by the Govt. of India since early 1990s. In this process, index futures tradingwere launched on June 9, 2000 at BSE and on June 12, 2000 at NSE and India started trading inderivative products. The introduction of stock index futures has profoundly changed the nature oftrading on stock exchanges.

Futures market offer investors flexibility in altering the composition of their portfolios and

alsoprovide opportunities to hedge the risks involved with holding diversified equity portfolios. As aconsequence, significant portion of cash market equity transactions are tied to futures marketactivity.

By using index derivatives, investors can easily and rapidly carry out strategies on thebasis of their expectations about the general market trends, without having to considertransaction costs (including mainly the bid-ask spread) and specific changes in each stockthat constitutes the index. Long and short positions can be established more easily andless expensively in futures market, more so than in the spot market, trading based on revised expectations can take place more frequently in the futures market. Therefore, futures prices may move first, followed by spot price movements in response to changes in expectations about the stock market.

Differences in liquidity between the spot and futures markets could also induce a lead-lag relationship. If the average time between trades for constituent firms in the index is longer than the average time between trades for the futures contracts, information will beimpounded in futures prices more rapidly than the spot prices, resulting in a lead-lag relationship between spot and futures prices. The lead-lag relationship is a function of the relative liquidity of the two markets rather than their absolute liquidity.

A stronger lead from spot market to futures market may not be inconceivable since the value of the spot index and its more recent changes represent part of the information set used by futures traders. Changes in the spot market may induce changes in the futures market sentiment that would be reflected in subsequent futures price changes, giving rise to a tendency for index futures to lag index spot. The present study examines the robustness of the previous findings about the contribution of derivatives, to the price discovery process, using index securities. It investigates the lead lag relationship between Nifty futures index and Nifty spot index by using high frequency data. Engle and Granger's Co-integration Analysis and Error Correction Model is applied to study the interrelationship between the two markets.

III. Literature Review

There exist a number of studies in India and abroad concerning the investigation of the lead-lagrelation between spot and index futures markets. Abhyankar (1995) observed that there areseveral reasons that why the lead-lag relationship may exist. First, the lead-lag relationshipbetween the spot index and future markets may be caused by infrequent trading of the compositestocks. Second, liquidity difference between these two markets may be the cause for the lead-lag relationship. Third, market frictions can make the future markets more attractive to traders withprivate information to exploit the information advantage.

Sah and Omkarnath (2005) examined the nature and extent of relation between NSE-50 Futuresand volatility of S&P CNX Nifty. This empirical study suggested that futures market activitydestabilized the underlying market. The direction of causation was bi-directional in case of nearmonth; however, causality ran from Nifty Futures to volatility of S&P Nifty in case of far monthcontract.

In India, little work has been done in this area. The lead-lag analysis by Thenmozhi (2002) showed that the returns on futures lead the spot market returns. The study lent credence to the belief that the futures market tends to lead spot market and the index futures market serves as a primary market of price discovery. The study also showed that the cash index does not lead the futures returns. Though the futures lead the spot market returns by one day, the exact time by which the futures lead the spot market returns

was not identified as the study was conducted using daily returns due to lack of data in terms of minute-by-minute or hourly returns.

Mukherjee and Mishra (2006) used intraday data from April to September 2004 to investigate the lead-lag relationship between Nifty spot index and Nifty futures. They found that there was a strong bidirectional relationship among returns in the futures and the spot markets. The spot market was found to play a comparatively stronger leading role in disseminating information available to the market and therefore said to be more efficient. The results relating to the informational effect on the lead-lag relationship exhibit that though the leading role of the futures market wouldn't strengthen even for major market-wide information releases, the role of the futures market in the matter of price discovery tends to weaken and sometimes disappear after the release of major firm specific announcements.

The two studies on the lead lag relationship in the Indian market have come up with diametrically opposing views. According to Thenmozhi, futures markets lead the spot market. Whereas, according to Mukherjee and Mishra the spot market had a major role to play in price discovery and leads over the futures market. The general conclusion of previous research is that the returns in the futures market seem to lead cash market returns and there is some evidence of the predictive ability from cash to futures returns.

A new study of Kasman andKasman (2008) examined the impact of futures on volatility of theunderlying asset (via GARCH model) including the question of whether a co-integrating relationexists between spot prices and futures prices (via ECM model). They concluded that there is along run relation (nearly one-to-one) between spot and futures prices and causality runs fromspot prices to future prices, but not vice-versa.

Debasish and Mishra (2008) examined the lead-lag relationships between the NSE Nifty stockmarket index and its related futures and options contracts, and also the interrelation between thederivatives markets. The study finds that both the index futures and index options contracts leadthe cash index. In a recent work Debasish (2011) examines the long-term relationship betweenspot prices and futures prices. The study finds a single long-term relationship for each of theselected companies across the six sectors.

It is clear from the aforesaid literature review that though the pricing formula for futures derivesthe fair value depending on the spot market prices, the empirical work shows us that futuresprices mostly lead the spot prices. However, the literature is very thin in the sense that there existalmost no studies examining the relation between spot and index futures markets in the aftermathof global financial crisis. Furthermore, there exist only a few such studies in the context ofIndia's capital market. Therefore, the main purpose of this paper is to investigate whether futures'prices lead the spot prices for NSE 50 (Nifty) in India or the other way around.

IV. Data and Methodology

The very objective of this paper is to examine the dynamics of the relation between spot andindex futures markets in India. Precisely, this paper examines the relationship betweenthe Spot and the Futures based on Nifty at the National Stock ExchangeLtd (NSE) of India using daily observations from 9th November 2001 to 31st March 2012. The data is collected from the NSE database for the sampleperiod. The estimation methodology employed in this study is the Co-integration and Granger Causality Tests. The entire estimation procedure consists of three steps: first, unitroot test; second, Co-integration test; third, the Granger Causality Test.

V. Empirical Analysis

At the outset, it is required to determine the order of integration for each of the two series used in the analysis. The Augmented Dickey-Fuller and Phillips-Perronunit root test has been used for this purpose and theresults of such test are reported in Table 1. It is clear that the null hypothesis of no unit roots for both the time series are rejected at their first differences since the ADF and PP test statistic values areless than the critical value at 5 per centlevel of significance. Thus, the variables are stationary and integrated of the same order, i.e., I(1) after rejecting the null hypothesis.

Table 1: Results of Augmented Dickey-FullerandPhillps-PerronUnit Root Test

Variables in their First Differences with no trendand intercept	ADF Statistic	PP Statistic	Critical Values	Decision
Futures	-147.7405	-704.5251	At 1% = -2.565009 At 5% = -1.940831 At 10% = -1.616696	Reject Null hypothesis of no unit root
Spot	-219.7609	-219.7516	At 1% = -2.565009 At 5% = -1.940831 At 10% = -1.616696	Reject Null hypothesis of no unit root

Source: Authors' computation

In the next step, the Co-integration between the stationary variables has been tested by theJohansen's Trace and Maximum Eigen value tests. The results of these tests are shown in Table2. The Trace test indicates the existence of twoco-integrating equation at 5 per cent level ofsignificance. And, the maximum Eigen value test makes the confirmation of this result. Thus, thetwo variables of the study do haveequilibrium relationship between them.

Table 2: Results of Johansen's Co-integration Test

Hypothesized Number of Co-integrating Equations	Eigen Value	Trace Statistics	Critical Value at5% (p-value)	Maximum Eigen statistics	Critical Value at5% (p-value)
None	0.163831	8845.498	15.49471(1.0000)	8817.587	14.26460(1.0000)
At most 1*	0.000566	27.91136	3.841466(0.0000)	27.91136	3.841466(0.0000)
*denotes rejection of the hypothesis at the 0.05 level					

Source: Authors' computation

A pair wise Granger Causality test was done to establish the cause and effect relationship between spot index and futures index. The existence of causality between spot and futures market are tested in the next step using Granger Causality test.

The result in Table 3 indicates spot market price does not Granger Cause the futuresmarket is rejected at the 5 per cent level of significance. In addition, it is inferred that futures market prices does not Granger Cause the spot market prices is accepted at the 5 per cnt level of significance. Thus it can be proved that there exists a bi-directional causality between spot and futures.

Table 3: Result of Granger Causality Test

Null Hypothesis	F-Statistic	Probability	Decision
Spot does not Granger cause Futures	2749.93	0.0000	Reject
Futures does not Granger cause Spot	0.54448	0.7427	Accept

Source: Authors' computation

Based on this causality tests, it can be said that change in the futures prices causes change in spot market prices in the long-run only, but not in the short-run. And, change in the spot market prices causes change in the prices in futures market in the short-run only, but not in the long-run.

VI. Conclusion

This study investigates the relationship between spot and futures series fromNovember 2001 to March 2012. The stationary test results provided evidence that both the selected markets werestationary at first order I(1). Hence, the Granger causality test and Johanson co-integration test werefollowed. From the study we found that, in short term,future price series drive (Granger cause) the spot marketand vice versa for both the markets. Co-integration test suggested that there exists a close liaison between spot and futures market in the Derivative segment of the Indian Market.

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Attitude of Kerala Youth towards Tourists

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Abstract

Tourism is a curious phenomenon both for tourists and hosts. In tourism, the attitude, concern, participation and sense of responsibility of host matters a lot in creating a favorable environment. If people have a positive attitude towards tourism and tourists, this encourages them to be conscious of preserving the tourism resources of the country. Therefore, it is essential to shape a positive attitude among the host people towards tourism/tourists. The youth population in the host community has more responsibility in this regard for developing sustainable tourism in a destination. This paper analyses the attitude of youth community towards tourists visiting Kerala with descriptive and inferential statistical tools. The results of the study disclose that, irrespective of their gender and residential location, youth are found to be having the attitude of welcoming the presence of tourists in their area. In respect of mentality of providing helps to tourists also youth are found to be having a positive attitude.

Keywords: *Tourism in Kerala, Attitude towards Tourism, Responsible Tourism*

I. Introduction

Today tourism has assumed considerable significance globally. World Tourism Organisation (2014) estimates that international tourist arrivals (overnight visitors) grew by five per cent in 2013, reaching a record 1087 Million. Tourism is perhaps the world's biggest business activity. It is likely to remain a significant economic activity through the twenty first century. The world has seen tourism as a challenge to enhance opportunities both to tourists and residents. Tourism plays a crucial part in the economy of many countries. Over 125 nations consider tourism important and for at least one third of them, tourism constitutes leading industry providing employment and foreign exchange. There may be no other international trading activity, which involves economic, social, political and environment elements as tourism.

Tourism is a curious phenomenon both for tourists and hosts. In tourism, besides the economic activities, the attitude, concern, participation and sense of responsibility of hosts and the guests matters a lot in creating a favorable environment which is tourists, hosts and eco–friendly. In hosting national and international tourists, entire population of the destination is involved in one way or other way. The finest physical facilities are of no importance if the tourists are not welcome or are resented; therefore, even a friendly smile of a resident youth may matters a lot in satisfying the tourists. Tourism loses its edge when the local population with positive attitude towards tourism/ tourists is missing. More specifically, a host community having the spirit of welcoming the guests with attitude of being helpful, gracious, friendly, co-operative, and also having the information and proud of about the local tourism products, is very essential for providing better competitiveness for any tourism spot. If people have a positive attitude towards tourism/ tourists, it will encourage them to be conscious of preserving the tourism resources of the country. Therefore, it is essential to shape a positive attitude among the host people towards tourism /tourists. The youth population in the host community has more responsibility in this regard for developing sustainable tourism in a destination.

II. Review of Literature

On reviewing the literature on host community's attitude and perceptions towards tourism, a number of divergent views are seen. Ross and Wall (1999) remarked that the success of tourism depends on a harmonious relationship between residents, resource protection and tourism. Timothy, Jing and Hwa (2007) recognized that there is a strong relationship between residents' socio-economic characteristics and their perceptions of tourism-related issues. Cooke (1982) considered that residents view tourism more favorably when they perceive themselves as being able to influence decisions and outcomes related to development. Mathieson and Wall (1982) evaluated that the emergence of negative attitudes toward tourists among residents might degrade the tourism product offered at a destination, which highlights the importance of considering residents' attitudes toward tourism to the destinations that seek further tourism growth and plan to develop their tourism potential. Haralambopoulos and Pizam (1996) found that the perceived impacts of tourism depend on a variety of circumstances and characteristics associated with the nature of tourism activities, the type of community, and the different groups of residents within a community. Brain, Abhram and Ady (1993) found in his study that youth, especially students of hospitality and tourism perceive solid waste disposal, conditions of employment, employment discriminations, employment theft, false advertisements, vender honesty, sanitation vacillations and AIDS to be the major ethical issues in tourism industry.Johnson, Snepenger, and Akis (1994) considered the residents' attitudes toward tourism as a result of self-image and group-identity feelings rather than a belief that tourism will result in personal benefits and therefore, residents' awareness of social and environmental costs of tourism do not necessarily lead to their opposition

towards the expansion of the industry. Leonard (2008) highlighted that in tourism residents are generally in favor of events that have positive social and economical contributions to the destination. Moreover, they are not ambivalent to some of the negative impacts, but are willing to cope with these negative impacts as long as the perceived benefits exceed the negative impacts. Lai and Nepal(2006) are of the view that only by understanding residents' attitudes towards tourism management principles, planners can devise more efficient and appropriate management strategies to deal with possible conflicts between conservation of local resources and economic development of the area, leading ultimately to more smooth running of tourism resources. Andriotis, (2004) found that communities are not fixed in their perceptions and attitudes towards tourism impacts, nor are individuals within these communities likely to share identical attitudes towards tourism.

III. Statement of the Problem

From the studies reviewed above it is clear that communities or groups or individuals within the communities of a host destination may have different perceptions and attitudes towards tourism. But recognizing the perceptions and attitudes of different stake holders towards tourism/tourists is a significant element for framing efficient and appropriate management strategies to deal with the conservation of local resources and development of the economy of a tourist destination. Kerala, where tourism is a promising sector of the economy in terms of its variety of products, can succeed in long term marketing only when the support of different stake holders of the industry is gained. Therefore, it is required that Kerala tourism has to be managed by considering and caring the interest of guests and the hosts. It is in this context that becomes relevant to conduct a study to examine the general attitude of educated youth, a

prominent segment of resident population, towards the domestic and foreign tourists visiting the State. Moreover, when Kerala is having great natural tourism potentials on the one side and an army of educated unemployed youth on the other side, the identification of general perceptions of the of educated youth about tourism and tourists is very relevant as the youth population represent the target group for harnessing future managers or entrepreneurs for the Kerala tourism industry.

IV. Objectives of the Study

The purpose of the study reported in this paper was to examine the attitude of Kerala youth towards tourists visiting their State. The Specific objectives of this study are:

> (a) To assess the general perceptions of educated youth in Kerala towards tourists.
>
> (b) To analyse the association between the demographic characteristics (gender and location of residence) of youth and their overall attitude towards tourists.

V. Data and Methodology

As this study was aimed to assess the attitude of Kerala youth towards tourists, the target was focused on college students who enrolled in universities in Kerala. This study adopted a survey method with a sample size of 110 respondents. The survey was conducted during the first half of 2012. Close-ended questionnaire was designed to collect the data and the field work took place in five randomly selected colleges in Ernakulam and Thrissur districts of the State. Respondents selected by using convenience sampling method were asked to specify the extent to which they agree or disagree with each statement highlighting their attitude towards tourists using a 5-point Likert type scale, i.e., 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree. Both descriptive and inferential statistics were used for the analysis of collected data. For the analysis, the

computed mean scores in the range 1-3, 3-4 and 4-5 are arbitrarily graded as negative attitude, moderately positive attitude and highly positive attitude respectively. The association between the attitude and the demographic variables are analyzed with the help of Chi-square test.

VI. Results and Discussion

To assess the overall attitude of youth community towards tourists, their perception score on the 'presence of tourists in their area', 'their curiosity for interaction with both domestic and foreign tourists', and their 'mentality in providing helps to domestic and foreign tourists' are summated. The results of the study are presented in two parts. While the first part of the paper analyses the descriptive statistics of perceptions of youth on selected factors, the second part tests whether there is any statistically significant differences in the perceptions of sample respondents with regard to their gender and residential location.

The results of the study disclose that, irrespective of their gender and residential location, respondents are found to be having the attitude of welcoming the presence of tourists in their area as reflected in their opinion scores. While considering the standard scale set for the study, the mean scores in this respect are calculated to be four or more for all the selected demographic groups and therefore, the attitude of youth can be inferred as highly positive in this respect. Regarding curiosity of host for interacting with tourists, the study reveals that, youth have a moderately positive attitude in interacting with both domestic and foreign tourists, irrespective of their gender and residential location except in the case of the opinion among male youth towards domestic tourists, where the opinion has been rated as highly positive, with a mean score of 4.02. While making the group wise analysis, the mean scores among rural and male respondents are found to be higher as compared to their urban and female counterparts respectively. In the case

of mentality of providing helps to domestic and foreign tourists also youth are found to be having a positive attitude. However, their levels of positive attitude, analyzed on the basis of mean score in the scale set for the study, are found different towards two groups of tourists. When youth are found having highly positive attitude towards helping foreign tourists, their level of attitude, in this regard, is found only moderately positive towards domestic tourists. The category wise analysis of mean scores indicates that, urban and female youth have a comparatively more positive attitude as compared to their respective rural and male counterparts. With regard to the overall attitude of youth towards tourists, the study reveals a moderately positive attitude with a mean score of 3.95. The same trend is seen irrespective of categorization under the study (Table 1).

Table 1: Perception of Youth towards Tourists

Sl,No	Variable	Perception Score and Mean Score				
		Gender		Location		Total N=110
		Female N=64	Male N=46	Rural N=60	Urban N=50	
1	Presence of Tourists in Their Areas	271 (4.23)	185 (4.02)	254 (4.23)	202 (4.04)	456 (4.15)
2	Curiosity for Interacting with Domestic Tourists	243 (3.79)	185 (4.02)	238 (3.97)	190 (3.80)	428 (3.89)
3	Curiosity for Interacting with Foreign Tourists	233 (3.64)	181 (3.91)	227 (3.78)	187 (3.74)	414 (3.76)
4	Mentality to Help Domestic Tourists	259 (4.05)	175 (3.80)	233 (3.88)	201 (4.02)	434 (3.94)
5	Mentality to Help Foreign Tourists	260 (4.06)	182 (3.96)	239 (3.98)	203 (4.06)	442 (4.02)
6	Over all Attitude	1226 (3.96)	908 (3.95)	1191 (3.97)	983 (3.93)	2174 (3.95)

Source: Primary Data

Note: Figures in Parentheses are Mean Scores

Table 2: Association between Demographic Characteristics (Gender and Location of residence) of Youth and Their Overall Attitude towards Tourists

Profile	Chi-Square Value	df	Asymp. Sig. (2-sided)	Inference at 5 % significance level
Gender	14.115	13	0.336	Not Significant
Residential Location	14.810	13	0.319	Not Significant

Source: Compiled Data

Further, the inferential analysis made by using the most versatile inferential tool Chi-Square test reveals that, both the gender and residential location of youth have no statistically significant association with their attitude towards tourists at any level of significance (Table 2).

VII. Conclusion

The attitude of host community towards tourists is very significant factor in attracting tourists to the destination. The supports of all segments of host community would give strength to implement developmental planning in tourism. In a destination where the host community warmly welcomes the presence of tourists, generously offer their helps, supports, and co-operation, and adopt a friendly behavior, the destination would get a competitive edge over others. The present study conducted among the educated youth highlights the fact that the host community in Kerala has a positive attitude towards tourists. Irrespective of gender disparity and urban- rural differentiation, they welcome the visit of tourists to their area. They also have curiosity to meet and interact with tourists. They are willing to help the tourists, if they are contacted. Such a positive attitude of youth towards tourism/tourists is significant for the planning, developing and maintaining of quality tourism in Kerala. Under the shade of this favorable attitude of host community, it is the obligation of the authorities to initiate effective steps to attract more quality tourists to Kerala for the sustainable development of tourism in the State.

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Effect of Genre of Sponsorship on the Performance of Mutual Funds

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Abstract

In any given country Mutual Funds operate in similar regulatory framework, the investors will be almost homogenous, the markets are rather efficient and the operating expenses will be more or less the same. However, there are differences in the performance of mutual funds. The performance of mutual fund may be influenced by the type of sponsorship. This paper examines the effect of type of ownership on the performance of Mutual Funds.In India mutual funds can be categorized into three on the basis of sponsors viz., bank and institution sponsored, private sponsored and foreign sponsored mutual funds. The performances of mutual funds are evaluated with the help of Sharpe measure, Treynor measure and Jensen measure. The study found that disparity does not exist in the performance of mutual funds on the basis of type of sponsorship. ANOVA test confirms that there is no difference in the performance among Mutual Funds.
Keywords:Mutual Fund, Sharpe measure, Treynor measure, Jensen measure

I.   Introduction

A Mutual Fund is an institution, trust or investment company that drums up financial resources of the community, particularly from the household segment and allocates and directs these scant resources from the idle to the productive sectors for increase of Gross National Product and the growth of the economy in general. Mutual fund en route the pooled money to capital market. Capital market is the most important source of capital formation which paves the way for economic development of any country. By investing in several securities – equity shares, debentures, government securities etc., - Mutual Funds reduce risk through diversification.

Westonand Brigham (1997) hold that "Mutual Funds are corporations which accept dollars from savers and then use these dollars to buy stocks, long term bonds and short term debt instruments issued by business or government units. These corporations pool funds and thus reduce risk by diversification".

Mutual funds as an investment vehicle have gained immense popularity in the current scenario, which is clearly reflected in the robust growth levels of assets under management. At the end of first quarter of 2013, mutual funds that exists worldwide held assets valued at $ 27,856,458 million[1].

India has vast growth potential supported by a strong economy, corresponding with a fairly increasing GDP growth rate[2], satisfactory rate of household savings and investments[3]. By the

end of first quarter of 2013, mutual funds in India held assets valued at $ 102,826[4] million.

The Unit Trust of India (UTI), a government owned firm, was the first institution to come up with a mutual fund scheme in India in the early 1960's. At present, 46 Asset Management Companies (AMCs) are operating in India[5]. Mutual funds in India can be broadly categorized into three on the basis of the nature of sponsorship, viz Bank Sponsored and Institution Sponsored mutual funds, Private Sector mutual funds and Foreign mutual funds.

In finance, an investment is a monetary asset purchased with the idea that the asset will provide income in the future or appreciate and be sold at a higher price[6].Mutual funds in India operate in similar regulatory framework[7], the investors are almost homogenous, the Indian market is relatively efficient[8] and the operating expenses are almost same[9]. However, there are differences in the performance of mutual funds operating in India.The performance of mutual fund may be influenced by the type of sponsorship, *inter alia,* many other factors. This paper examines the effect of type of sponsorship on the performance of mutual funds.

II. Objective and Hypothesis

The objective of this study is toevaluate the effect of type of sponsorship on the performance of selected mutual funds.The following hypothesis has been formulated based on the objective of the study:

H_0: The type of sponsorship and the performance of mutual funds are unrelated.

III. Methodology

The study is analytical in nature using secondary data. The returns of the selected mutual funds are calculated from the Net Asset Values (NAV) values.

III (A). Selection of Study Units

The study is limited to open-ended equity schemes for a period of one year. The open-ended schemes constitute 88% of the total assets held by Asset Management Companies[10].Three mutual fund schemes from each of the three types of sponsorships of mutual funds prevalent in India (i.e.Bank and Institution Sponsored mutual funds, Private Sector mutual funds and Foreign mutual funds) are selected for the study.

III. (B). Collection of Data

The NAVs of the selected schemes were collected from the official website of AMFI. The S&P Bombay Stock Exchange Index values (S & P BSE SENSEX Index) are drawn from BSE

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[1] http://www.ici.org/research/stats/worldwide

[2] In its release of Trade and Development Report 2013, the United Nations Conference on Trade and Development (UNCTAD) said the Indian economy is expected grow at 5.2 per cent in calendar year 2013 as against 3.8 per cent in 2012.
(Source: http://www.thehindubusinessline.com/economy/indias-gdp-growth-likely-to-be-at-52-in-2013-unctad/article5120306.ece)

[3] The Reserve Bank of India's Handbook of Statistics (September 2013) shows that investment in shares and debentures constituted 3.1% of the incremental financial assets of the household sector in fiscal year 2013.
(Source: http://www.livemint.com/Money/rkS7koY3mPmB2LKKEzLyUK/Indian-markets-are-far-more-volatile-than-others.html?ref=dd)

[4] http://www.ici.org/research/stats/worldwide

[5] http://www.amfiindia.com/amfimembers.aspx

[6] http://www.investopedia.com/terms/i/investment.asp

[7] All mutual funds are governed under SEBI guidelines - SEBI (MF) Regulation - 1993

[8]Vaidyanathan&Gali (1994) and Ray & Sharma (2008), inter alia, provided empirical evidence.

directory for the study period to compute market return. The average of the annualised closing yields on ten year government bonds over the last three months is used as the Risk free rate.

III (C) Tools of Analysis

1. ***Standard Deviation*:** Standard deviation is a measure to quantify risk. It reflects the degree to which returns fluctuate.

2. ***Beta Co-efficient*:** Beta measures the sensitivity of the funds to fluctuations in the market index and thereby assesses the market risk of the schemes.

3. ***Sharpe and Treynor Ratios and Portfolio Alpha*:** The Sharpe ratio tells whether a portfolio's returns are due to smart investment decisions or a result of excess risk. Treynor Ratio uses the portfolio's Beta as the unit of risk. The Portfolio Alpha (Jensen index) is a risk-adjusted measure of performance that compares

realized returns with returns that should have been earned per unit of non-diversifiable risk.

4. ***ANOVA*:** In order to test the statistical significance of various ratios ANOVA is applied wherever appropriate, at 5% level of significance.

IV. Empirical Results

IV (A). Return Analysis

The returns of the selected schemes are given in Table 1. The daily price changes in the scheme were measured and the natural log of the ratio of the scheme's price S_t to its previous day's price S_{t-1}. Then the average log returns over the period is calculated. Later it is multiplied by 365 days to get the annual return from the scheme. The formula used is as follows:

$$R_m = \frac{\sum_n R_t}{n}$$

Table 1: Return Analysis of the Schemes

No.	Scheme	Return (%)
1	SBI Magnum Multicap Fund - RP- Growth	10.63
2	BOI AXA Equity Fund -RP - Growth	6.54
3	UTI Equity Fund Growth	11.51
4	Birla Sun Life India Gennext Fund-Growth-Direct Plan	23.64
5	ICICI Prudential Top 200 Fund - Regular Plan - Growth	9.05
6	Axis - Equity Fund - Growth	23.42
7	Morgan Stanley Growth Fund - Regular Growth Plan	17.14
8	Franklin India High Growth Companies Fund - Growth Plan	19.30
9	BNP PARIBAS Equity Fund-Growth Option	13.80

Source: Authors' Computation

Figure 1: Return Analysis of the Schemes
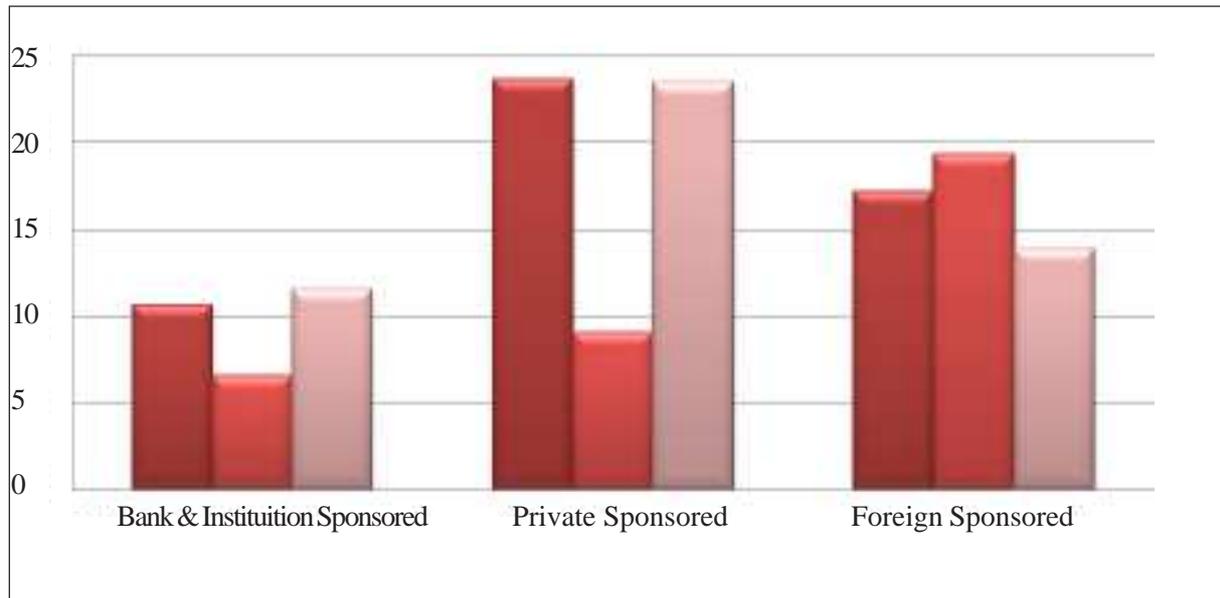
Table 1 and Figure 1 show that, prima facie, there is difference among the returns of the mutual funds in the three sectors. In order to verify the significance of the difference one way ANOVA is conducted by taking the null hypothesis, "there is no significant difference in the return of mutual funds on the basis of sponsorship".The ANOVA results (Table 2) show that the calculated value (2.46) is less than the table value (5.14). So the null hypothesis is accepted and it is concluded that the difference is statistically not significant.

Table 2: ANOVA of Return of the Schemes

Source of Variation	Sum of Squares	df	Mean Square	F	P-value	F crit
Between Groups	139.1143	2	69.55713	2.464574	0.165461	5.143253
Within Groups	169.3367	6	28.22278			
Total	308.4509	8				

Source: Authors' computation

IV (B). Risk Analysis

Standard deviation is a measure to quantify risk. It reflects the degree to which returns fluctuate around their average. To find out how far the returns deviate from the average, the standard deviations of the returns are computed using the following formula.

$$SD = \sqrt{\frac{\sum (R_t - R_m)^2}{n-1}}$$

Table 3: Risk Analysis of the Schemes

No.	Scheme	Risk (%)
1	SBI Magnum Multicap Fund - RP- Growth	10.99
2	BOI AXA Equity Fund -RP - Growth	12.11
3	UTI Equity Fund Growth	10.86
4	Birla Sun Life India Gennext Fund-Growth-Direct Plan	10.74
5	ICICI Prudential Top 200 Fund - Regular Plan - Growth	12.14
6	Axis - Equity Fund - Growth	11.50
7	Morgan Stanley Growth Fund - Regular Growth Plan	11.21
8	Franklin India High Growth Companies Fund - Growth Plan	10.71
9	BNP PARIBAS Equity Fund-Growth Option	9.77

Source: Authors' Computation

Figure 2: Risk Analysis of the Schemes

Bank & Instituition Sponsored   Private Sponsored   Foreign Sponsored
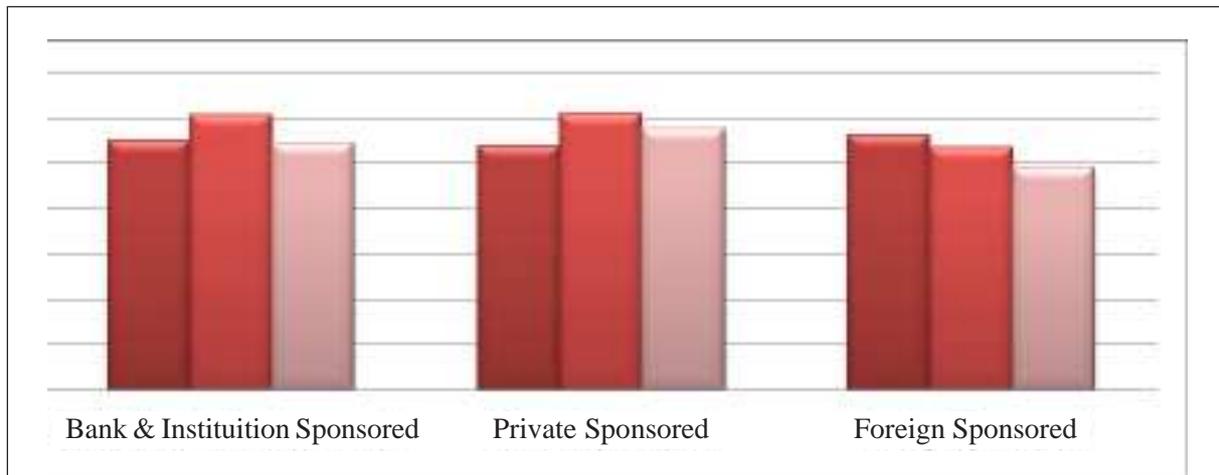
Table 3 and Figure 2 illustrate that there is, prima facie, difference in the risks of the three sectors of mutual funds. In order to statistically test the difference, one way ANOVA is conducted by taking the null hypothesis, "there is no significant difference in the risk of mutual funds on the basis of sponsorship".The ANOVA results show (Table 4) that the calculated value (1.40) is less than the table value (5.14). So, the null hypothesis is accepted and it is concluded that the difference is statistically not significant.

Table 4: ANOVA of Risk of the Schemes

Source of Variation	Sum of Squares	df	Mean Square	F	P-value	F crit
Between Groups	1.399349	2	0.699675	1.396419	0.317736	5.143253
Within Groups	3.006294	6	0.501049			
Total	4.405644	8				

Source: Authors' computation

IV (C). Performance Analysis

Performance is evaluated with the help of Sharpe Ratio, Treynor Ratio and Jensen Alpha.

a. Sharpe Ratio

Sharpe ratio was derived in 1966 by William Sharpe, it has been one of the most referenced risk/return measures used in finance, and much of this popularity can be attributed to its simplicity. The formula used is as follows:

$$Sharpe\ Ratio = \frac{arp - arf}{\sigma p}$$

arp = Average Return of Fund
arf = Average Risk-free return
óp = Standard deviation of Fund's return

Table 5: Sharpe Ratios

No.	Scheme	Sharpe Ratio
1	SBI Magnum Multicap Fund - RP- Growth	0.32
2	BOI AXA Equity Fund -RP - Growth	-0.05
3	UTI Equity Fund Growth	0.40
4	Birla Sun Life India Gennext Fund-Growth-Direct Plan	1.53
5	ICICI Prudential Top 200 Fund - Regular Plan - Growth	0.16
6	Axis - Equity Fund - Growth	1.41
7	Morgan Stanley Growth Fund - Regular Growth Plan	0.89
8	Franklin India High Growth Companies Fund - Growth Plan	1.13
9	BNP PARIBAS Equity Fund-Growth Option	0.68

Source: Authors' Computation

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[1] Section 52 of SEBI (MF) Regulations of 1996 stipulates that Operating expenses, adhering to the limits prescribed by it, can be charged on the income of Fund and should be disclosed in the annual accounts of the AMCs.

[2] www.amfiindia.com/spages/ammay2013repo.pdf . (Table: 4)

Figure 3: Sharpe Ratios
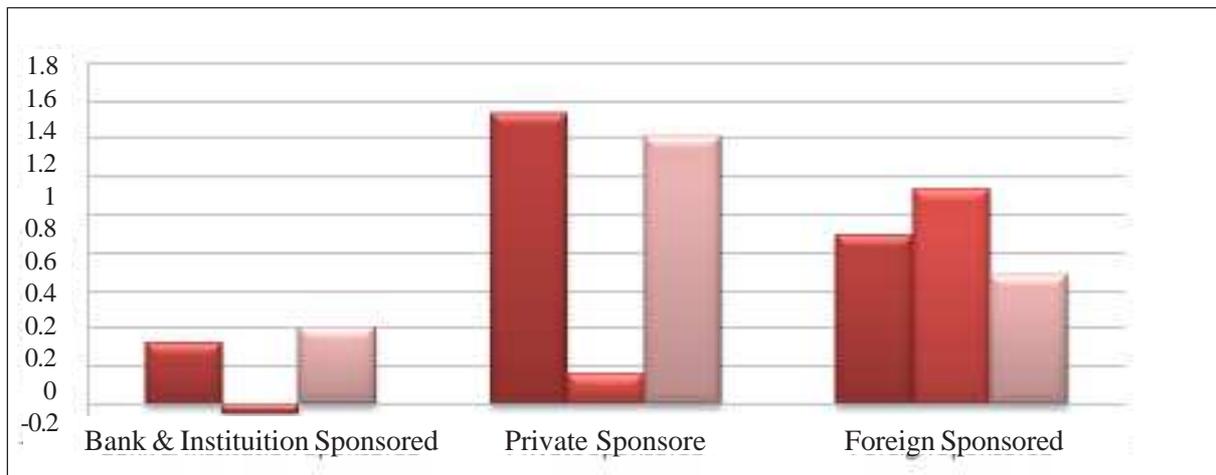
Table 5 and Figure 3 point out that there is prima facie difference in the Sharpe Ratios of the three sectors of mutual funds. In order to test the significance of the difference, one way ANOVA is conducted by taking the null hypothesis that "there is no significant difference in the Sharpe Ratios of mutual funds on the basis of sponsorship".The ANOVA results (Table 6) showthat the calculated value (2.47) is less than the table value (5.14). So the null hypothesis is accepted and it is concluded that the difference is statistically not significant.

Table 6: ANOVA of Sharpe Ratios of the Schemes

Source of Variation	Sum of Squares	df	Mean Square	F	P-value	F crit
Between Groups	1.14064	2	0.57032	2.469792	0.164988	5.143253
Within Groups	1.385509	6	0.230918			
Total	2.526149	8				

Source: Authors' computation

b.Treynor Ratio

Treynor Performance Index, developed by Jack Treynor (1965) is also known as Treynor Composite Performance Measure. It is a measure of reward (or excess return) per unit of risk. The formula used is:

$$Treynor\ Ratio = \frac{arp - arf}{\beta}$$

arp = Average Return of Fund

arf = Average Risk-free return

â = Beta

Table 7: Treynor Ratios

No.	Scheme	Treynor Ratio
1.	SBI Magnum Multicap Fund - RP- Growth	158.94
2.	BOI AXA Equity Fund -RP - Growth	-0.70
3.	UTI Equity Fund Growth	5.58
4.	Birla Sun Life India Gennext Fund-Growth-Direct Plan	25.06
5.	ICICI Prudential Top 200 Fund - Regular Plan - Growth	2.17
6.	Axis - Equity Fund - Growth	19.43
7.	Morgan Stanley Growth Fund - Regular Growth Plan	12.88
8.	Franklin India High Growth Companies Fund - Growth Plan	18.47
9.	BNP PARIBAS Equity Fund-Growth Option	10.30

Source: Authors' Computation

Figure 4: Treynor Ratios
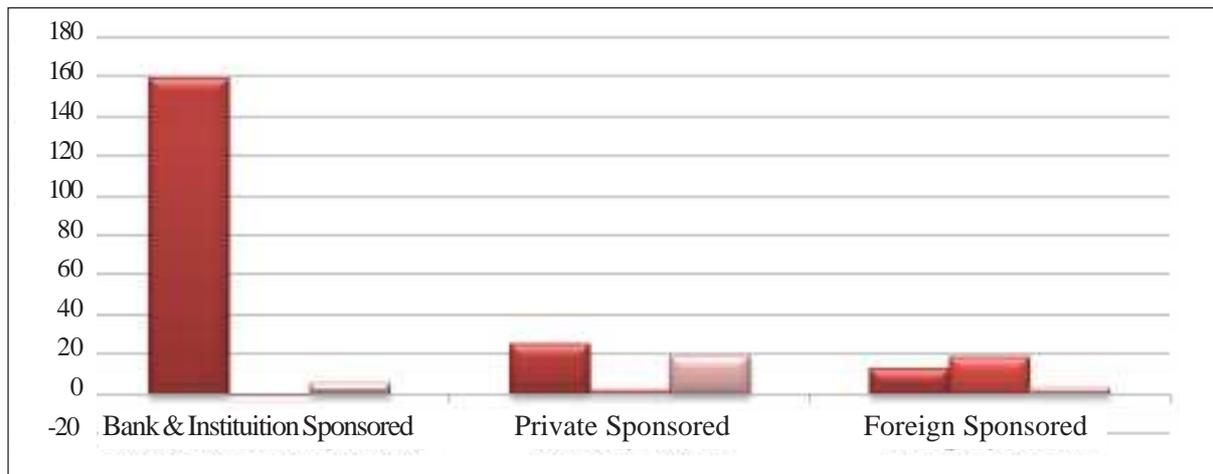
Table 7 and Figure 4 demonstrate that there is prima facie difference in the Treynor Ratios of the three sectors of mutual funds. In order to test the significance of the difference, one way ANOVA is conducted by taking the null hypothesis that "there is no significant difference in the Treynor Ratios of mutual funds on the basis of sponsorship". The ANOVA results (Table 8) show that the calculated value (0.57) is less than the table value (5.14). So the null hypothesis is accepted and it is concluded that the difference is statistically not significant.

Table 8: ANOVA of Treynor Ratios of the Schemes

Source of Variation	Sum of Squares	df	Mean Square	F	P-value	F crit
Between Groups	3186.463	2	1593.232	0.573504	0.591672	5.143253
Within Groups	16668.38	6	2778.063			
Total	19854.84	8				

Source: Authors' computation

c.   Jensen Alpha

The Portfolio Alpha (Jensen index) is a risk-adjusted measure of performance that compares realized returns with returns that should have been earned per unit of non-diversifiable risk. Michael Jensen's performance index is based on the capital asset pricing model and differs from the Sharpe and Treynor measures. The formula used is as follows:

$$Portfolio\ Alpha = arp - [arf + (arm - arf)\beta]$$

arp = Average Return of Fund

arf = Average Risk-free return

arm = Average Market Return

â = Beta

Table 9: Jensen Alpha

| No.	Scheme	Jensen Alpha
1.	SBI Magnum Multicap Fund - RP- Growth	0.00063
2.	BOI AXA Equity Fund -RP - Growth	0.85
3.	UTI Equity Fund Growth	0.82
4.	Birla Sun Life India Gennext Fund-Growth-Direct Plan	0.60
5.	ICICI Prudential Top 200 Fund - Regular Plan - Growth	0.81
6.	Axis - Equity Fund - Growth	0.84
7.	Morgan Stanley Growth Fund - Regular Growth Plan	0.76
8.	Franklin India High Growth Companies Fund - Growth Plan	0.60
9.	BNP PARIBAS Equity Fund-Growth Option	0.69

Source: Authors' Computation

Figure 5: Jensen Alpha
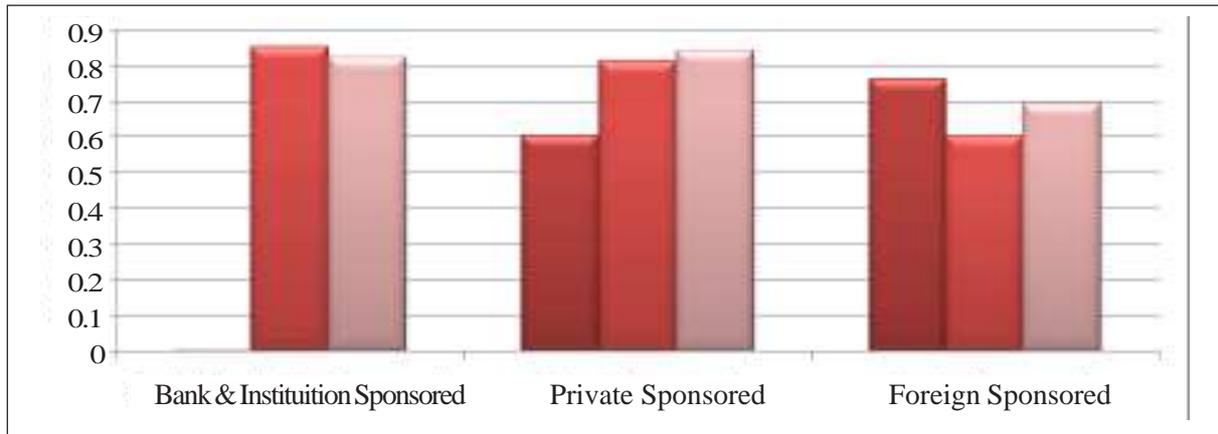
Table 9 and Figure 5 exemplify that there is prima facie difference between in the Jensen Alpha of the three sectors of mutual funds. In order to confirm the statistical significance of the difference, one way ANOVA is conducted by taking the null hypothesis that "there is no significant difference in the Jensen Alpha of mutual funds on the basis of sponsorship".The ANOVA results (Table 10) show that the calculated value (1.68) is less than the table value (5.14). So the null hypothesis is accepted and it is concluded that the difference is statistically not significant.

Table 10: ANOVA of Jensen Alpha of the Schemes

Source of Variation	Sum of Squares	df	Mean Square	F	P-value	F crit
Between Groups	111.6603	2	55.83014	1.677925	0.263757	5.143253
Within Groups	199.64	6	33.27333			
Total	311.3003	8				

 Source: Authors' computation

V.   Conclusion

This paper was examining whether there exists any difference in the performance of the selected mutual funds on the basis of the genre of sponsorship. The study found that disparity does not exist in the performance of mutual funds on the basis of type of sponsorship.

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(Footnotes)

[1] http://www.ici.org/research/stats/worldwide

[2] In its release of Trade and Development Report 2013, the United Nations Conference on Trade and Development (UNCTAD) said the Indian economy is expected grow at 5.2 per cent in calendar year 2013 as against 3.8 per cent in 2012. (Source: http://www.thehindubusinessline.com/ economy/indias-gdp-growth-likely-to-be-at-52-in-2013-unctad/article5120306.ece)

[3] The Reserve Bank of India's Handbook of Statistics (September 2013) shows that investment in shares and debentures constituted 3.1% of the incremental financial assets of the household sector in fiscal year 2013.

(Source: http://www.livemint.com/Money/ rkS7koY3mPmB2LKKEzLyUK/Indian-markets-are-far-more-volatile-than-others.html?ref=dd)

[4] http://www.ici.org/research/stats/worldwide

[5] http://www.amfiindia.com/amfimembers.aspx

[6] http://www.investopedia.com/terms/i/ investment.asp

[7] All mutual funds are governed under SEBI guidelines - SEBI (MF) Regulation - 1993

[8] Vaidyanathan&Gali (1994) and Ray & Sharma (2008), inter alia, provided empirical evidence.

[9] Section 52 of SEBI (MF) Regulations of 1996 stipulates that Operating expenses, adhering to the limits prescribed by it, can be charged on the income of Fund and should be disclosed in the annual accounts of the AMCs.

[10] www.amfiindia.com/spages/ammay2013re po.pdf . (Table: 4)

Implementing CRM in Higher Education
A Case Study of Université des Mascareignes (Ex-SDIM)

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Abstract

Higher Education is globalizing and internationalizing and Mauritius seeks to become a regional hub for education. This research paper seeks to understand and evaluate the potential of implementing a Customer Relationship Management (CRM) framework in higher education in Mauritius with special reference to the Université des Mascareignes (Ex-UDM). The Université des Mascareignes is one of the four public universities in Mauritius. CRM has grown in importance in the non-commercial field, as marketers have realized that, its principles can be applied for customer retention. The research paper will be highly useful as universities have not yet embarked on a full-fledged structured approach to build relationships with students. The main elements identified by the study could be used to bolster relationships and increase customer loyalty. Mauritius seeks to become a knowledge hub and consequently developing effective relationships is of paramount importance. The case of Université des Mascareignes is chosen as it is the first bilingual university in Mauritius.

Keywords: CRM - Higher Education - Customer retention

I. Introduction

Customer Relationship Management (CRM) is a leading new concept to business which has already become established in the literature (Szeinbach, 1997). CRM refers to all business activities directed towards initiating, establishing and developing successful long term relational exchanges (Reinatz and Kumar, 2003). Customer relationship management is a term for the methodologies, technologies and e-commerce capabilities used by firms to manage customer relationships (Rajagopal, Sanchez and Romulo Sanchez, 2005). A restricted view of customer relationship management would be database marketing focusing on how promotional marketing is linked to database management tools. It is important that a company adopts a customer centric model to be successful. To survive in the global market, focusing on the customer is becoming a key factor. CRM is an enterprise wide initiative that belongs to all areas of the organization (Singh D. Agarwal, D. 2003). It reflects the comprehensive strategy and process of acquiring,

retaining, and partnering with selective customers to create superior value for the company and the customer. It does not aim to build closer relationship with all customers, but it recommends that organizations take initiative to identify the most valuable customers by looking for their life time value. Customer Relationship Management (CRM) is about creating, building and enhancing relationships with a view to develop profitable relationships (Gronroos, 2000). The aim is not to focus on the exchange but rather on the development of a fruitful relationship.

CRM has traditionally been applied in commercial fields. This study will shed light on how CRM has grown in importance and can be applied in the field of higher education. However, with the globalization of tertiary education (TEC, 2013); the universities will need to increase student satisfaction and loyalty. The study also becomes significant as some universities have faced problems due to lack of recognition or still due to poor quality of services. The research paper seeks to analyse the impact of introducing customer

relationship management at the Université des Mascareignes. Université des Mascareignes is a Mauritian public university which provides courses in collaboration with Université des Limoges (France). The university is formed by merging Ex-Swami Dayanand Institute of Management and Institut Superieur de Technologie which has existed since the past 18 years (UDM, 2013). UDM offers courses in Management, Information Technology and Sustainable Development. Thousands of students have graduated through the university. UDM seeks to establish a customer-centric approach of teaching and learning at the tertiary level and hence the importance of introducing a customer relationship management framework.

II. Literature Review

Higher education has always been more internationally open to globalization (Marginson and Wende, 2006). Scott (2000) has addressed globalization as the most important challenge faced by universities in their history which has brought a fundamental shift in the organizational character of modern universities. This shift has been metaphorically addressed by Carlson (1975) as a transition from "domesticated environment" before 1990s to a "wild environment" after this time (cited in Preedy, Glatter & Wise, 2003). The elements of globalization in higher education are widespread and multifaceted: it has been estimated that more than 1.6 million students study outside of their home countries, with more than 5,47,000 studying in the USA (Pimpa, 2003). The issues and implications of the global marketisation of higher education and privatization (Arimoto, 1997; Kwong 2000) have been discussed in the context of a number of key concerns; problems of increasing competition between institutions, nationally and internationally (Conway et al. 1994; Kemp and Madden, 1998; Allen and Shen, 1999, funding issues (Brookes, 2003), and widening participation or social segmentation (Ball et al.,

2002; Reay et al., 2002; Brookes, 2003; Farr, 2003). Besides the growing trends of globalization, *informationization* – the development and expansion of information technology (Okuno-Fujiwara & Nakaizumi, 2001) has created a highly competitive and global environment for universities. A consequence of this phenomenon is the increasing amount of free and on-the spot information about programs description, college amenities and schools' ranking available to potential students which have made them choosy about their studies (King, 2008). Hence, as the result of the increasing globalization and informationization and some other factors including population demographics, work force requirements and new methods of delivering education (King, 2008), it is of little surprise if universities' managers and policy makers have started to think of a strategic planning in order to develop and maintain a smart balance between the institutions' capabilities and objectives and its changing external environment (Kotler and Fox, 1995; Nicolescu, 2009). As part of this strategic planning, marketing policy of a university can be considered as an important conveyor of the university's missions to the society by attracting talented and qualified students from all around the world. Yeni and Herington (2009) believe that marketing plans and market-oriented perspective in a university are positively correlated and a market-oriented mode cannot be achieved by merely adding a marketing position or office in a university. According to Preedy, Glatter and Wise (2003) the concept of marketing for most educationists is an imported, even an alien concept and there is a wide range of interpretation of marketing among education experts. Most educational institutions, as Kotler and Fox (1995) stated, have specific offices regarding marketing activities such as admissions, alumni or international offices and they even may employ some advertising and public relations efforts. However, while it is true that they are doing some

marketing activities, it does not mean that they are necessarily market-oriented (Kotler & Fox, 1995). Generally, a market-oriented or a customer-oriented organization is an organization in which all operations are *customer-centric* and the emphasis is on satisfying customers' needs and requirements (Preedy, Glatter & Wise, 2003). In the area of higher education, according to Kotler and Fox (1995), market-orientation implies that all employees understand that providing high quality programs and services are all means of satisfying target markets. "Without satisfied target markets [students], universities would soon find themselves adrift and would sink into oblivion" (Kotler & Fox, 1995, p. 9). According to Pausits and Pellert (2007), "relationships take on the character of companions for life", given that life-long learning approach in the current world has made students to not only study at universities once, but also to have recourse to these institutions again and again over time. To underline the importance of relationship in higher education, Pausits (2007) has also stated that higher education institutions should no longer hold the attitude of being "ivory towers" and have to transform into "relationship-based organizations."

III. CRM and Higher Education

The emergence of CRM applications in colleges and universities refers back to mid 1980s and the late 1990s when educational institutions started to restructure and reengineer their operating processes to reduce costs while raising efficiency (Grant & Anderson, 2002). The efforts made such universities turn to the use of enterprise resource planning (ERP) applications in automating business processes in areas including finance, enrollment and human resources. However, since ERP could only serve internal customers' needs (faculty staff members), there was a need for satisfying external customers' demands (students) (Daradoumis et al., 2010). This need, therefore led to the introduction of CRM in higher education.

CRM in higher education mainly focuses on automation and improvement of institutional processes associated with managing student relationships in areas such as recruitment, marketing, communication management and service and support (Grant & Anderson, 2002, p. 24). According to Buttle (2009), nowadays, universities employ CRM to manage relationships with their students and alumni. He supports his idea by giving an example that, if a student enjoys his or her experiences at a university, he or she might recommend it to his/her personal networks afterwards. Literature indicates that the higher education market is now well established as a global phenomenon, especially in the English speaking nations (Binsardi & Ekwulugo, 2003). Research into higher education choice or consumer behavior, although not extensive, has principally been stimulated by the individual institution's need to anticipate the long term implications of choice and to understand the key factors involved in student choice (Farr, 2003, Foskett and Hemsley Brown, 2001).

In universities, the debate on the application of marketing principles continued in the 1990s (Sharrock, 2000; Hemsley-Brown and Oplatka, 2006). They considered that these principles contradicted educational values, especially since the student is considered as a customer of the institution (e.g Barrett, 1996; Franz, 1998). As Hemsley Brown and Oplatka (2004) point out, when literature originated in the 80s, it was fundamentally theory and norms oriented, based on the application of models initially conceived for business, especially those from marketing communication, to the promotion of educational institutions. Later, the debate was about whether the students fitted into the "customer" label or whether it was about "products" that educational institutions "offered" to the labour market (Conway et al, 1994; Emery et al, 2001). This lack of theoretical modeling forms the basis of the research paper which seeks to develop a

simple but structured approach to deal with students to develop long term relationship with them. The aim is to have an effective 'Student Lifecycle' that will help universities in being effective and efficient. Customer knowledge is a critical asset, and gathering, managing, and sharing it can be a valuable competitive activity for organizations (Khodakarami, 2014). Agatha (2014) explains that there are two types of customers - internal and external. In the educational process, dialogues and debates are always happening between "what was given to the students" with "what student as customers want". Many universities are spending huge amount of money in implementing CRM software so as to increase customer satisfaction.

IV. Research Questions

This research paper seeks to understand and analyze the following research questions:

1. Does CRM help to improve student satisfaction and customer loyalty in higher education?

2. What could be the CRM failures that impede the proper implementation of a CRM framework?

3. What are the strengths of implementing CRM in a public university?

4. What are the main elements that should form part of an effective CRM framework?

V. Research Methodology

The main aim of the research is to evaluate the impact of CRM on the student satisfaction and customer loyalty. The ontological perspective is a positivist approach based on the assumption that the students can evaluate the benefits and problems of the CRM framework. A questionnaire was administered with 105 students to measure their perception about the impact of

CRM on customer loyalty. The questionnaire was pre-tested and the main variables that would be measured are the benefits, the weaknesses, the relationship between relationship building and customer loyalty. A stratified random sampling technique was used as it is more representative. Mauritius being a small island; students come from different cultures and regions which have their own cultural influences on the perception. In addition, students were also selected on the gender proportionality of the student population to provide an objective analysis of the perceptions. The epistemological perspective is that the survey technique can be used to identify the current CRM failures, establish the relationship between relationship building and customer satisfaction based on a positivist approach. The case of Université des Mascareignes is chosen as it is the first bilingual university in Mauritius.

VI. Research Findings

VI (A). Weaknesses of the Current CRM Framework

The study found that 71% of the students were satisfied with the current trainee support provided at the university. Figure 1 clearly shows that the major failure in the student relationship system was the absence of an effective student complaint system and there were no formal complaint system at the Université des Mascareignes. The second major deviation was the lack of proper course information from the moment the students enter the university. This finding supports the view of bloom, that the major problem in tertiary education is the bewilderment due to a wide choice and lack of official guidance (Bloom, 1987). In addition, it reflects the major shortcomings of academic institutions, which focus mainly on course delivery.

Figure 1: Weaknesses of the Current CRM Framework
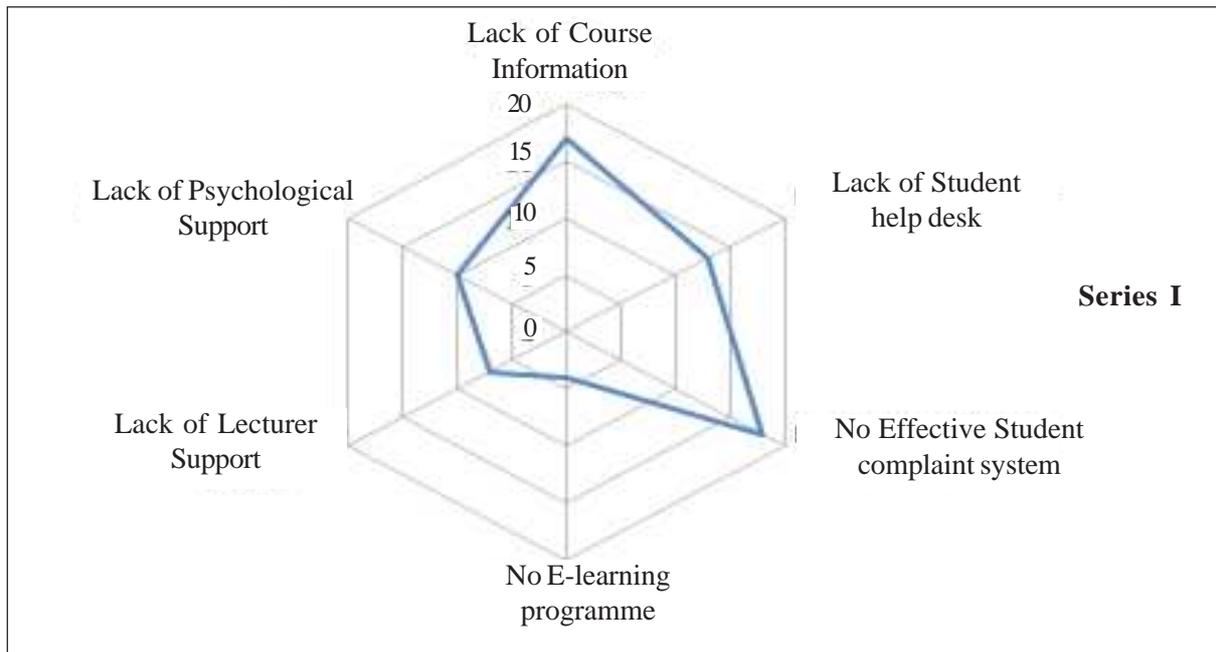
Table 1: Analysing CRM Variables

Dimensions	N	Mean	Std Deviation	Std Error
Impact on Trainee	73	3.36	1.418	.166
Academic Performance	73	3.41	1.373	0.161
Image of training institution	73	3.53	1.375	.161

Table 1 reveals that CRM had a much greater impact on the image of the institution rather than on trainee satisfaction itself. Students also believed that CRM has leverage on academic performance. However, there was a much greater spread on the impact of trainee satisfaction indicating that students were not able to clearly identify the impact it may have on their satisfaction directly.

VI (B). Correlation between CRM and Customer Loyalty

There is high positive correlation (0.69) between trainee support and overall customer loyalty (p value 0.49). Thus, the null hypothesis that there is no relationship between CRM and customer loyalty in an academic institution is rejected. It is found that that there is a positive correlation between CRM and higher education. The literature reviewed also shows instances that higher education institutions are increasingly resorting to marketing strategies and CRM to be competitive, especially, with the advent of globalization and internationalization of education. Figure 2 shows that the present website of the university is not been appreciated by the students. The role of on-line support and E-CRM has been

VI (C). On-Line Support to Students

Figure 2: On-Line Support to Students
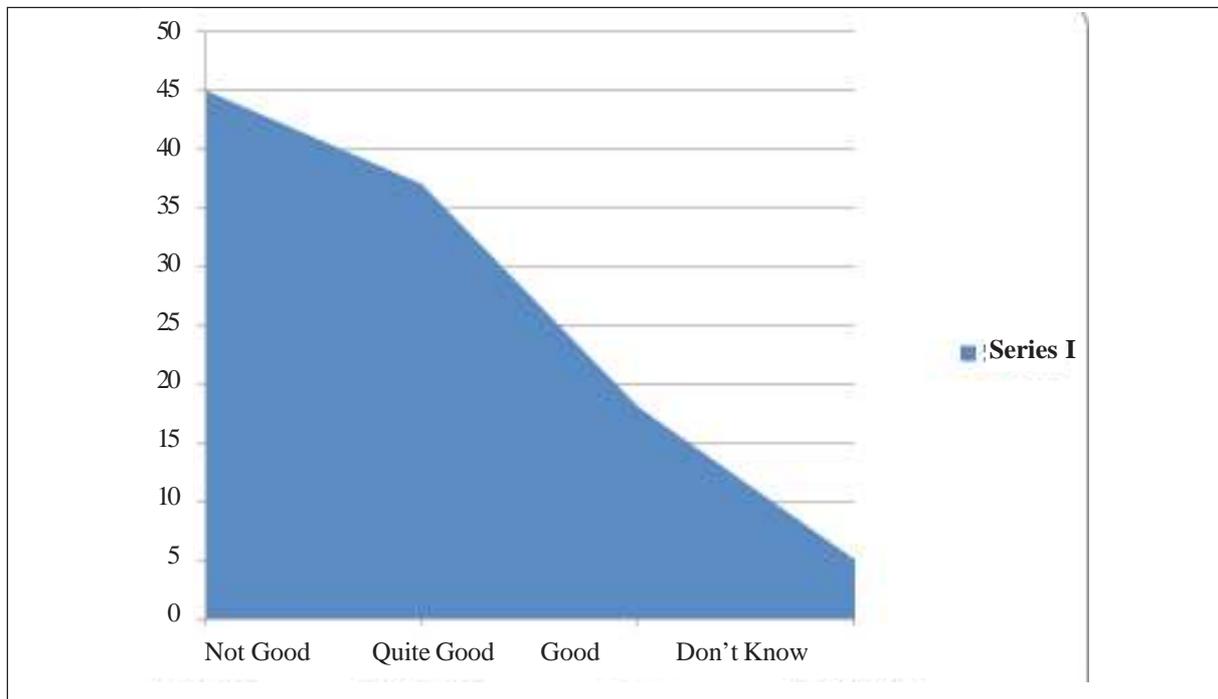
elaborated in many CRM studies. A study by ActivMedia (2003) found that websites focused solely on quality, price, convenience and product availability and is missing in terms of customer loyalty. Overall, the web has become an excellent selling vehicle; however institutions should pay attention to high leverage on-line opportunities where customers are not yet well served by established websites.

VI(D).Suggestions to Improve Communi cation in Universities

Figure 3 shows that students believe in suggestion schemes to improve communication in universities. They also want to have more on-line support. The appointment of a communication officer does not elicit much interest on the part of students.

Figure 4 depicts the major problems of implementing CRM. The study found that the lack of understanding about the concept of CRM is

the most significant problem. The second major problem outlined is the need for additional staff, as CRM cannot be improved without effective people support. This finding also stress the need for staff training in the techniques of relationship building so as improve customer loyalty.

VI (E). Development of a CRM Scorecard Based on Rating

Ten criteria were provided to students, and they were asked to rank on a Likert scale from 1 to 5. These criteria were evaluated based on a manual grading evaluation. The ratings show the following factors to be of utmost importance for CRM in higher education.

Table 2 shows that students consider communication, effective website, feedback system, report on assessments and ICT as the most important variables that affect student satisfaction and loyalty. These may be termed as the critical success factors for CRM in higher education.

Figure 3: Suggestions for Improving Communication in Universities
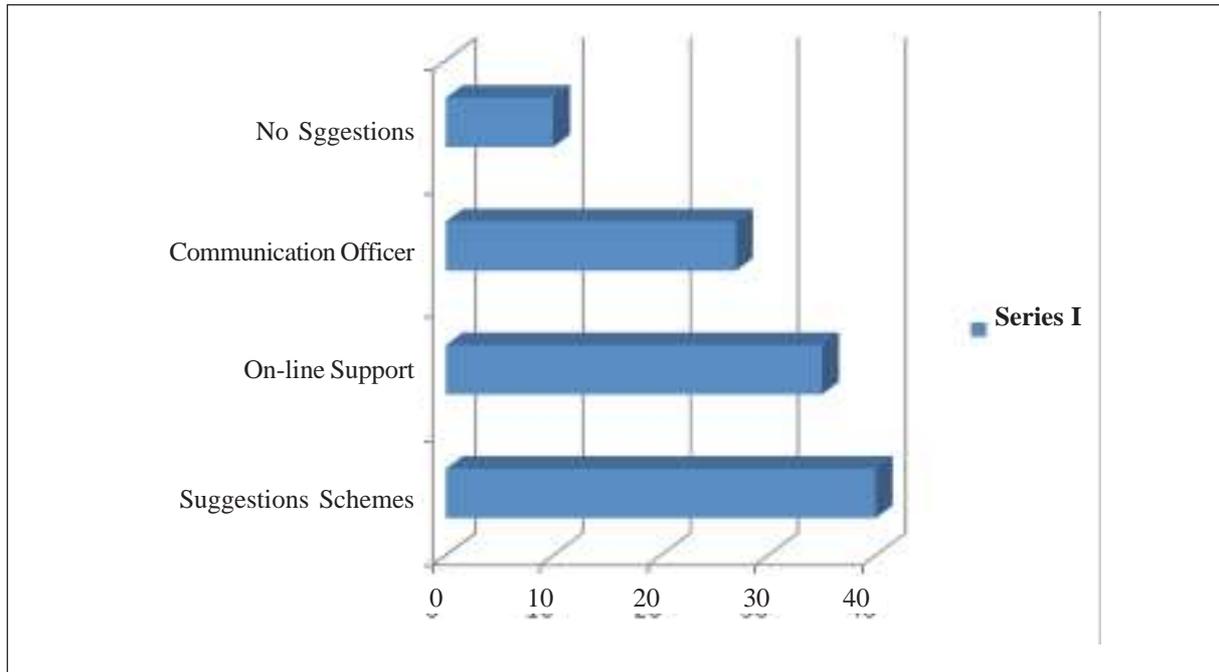
Figure 4: Main Problems in Implementing CRM
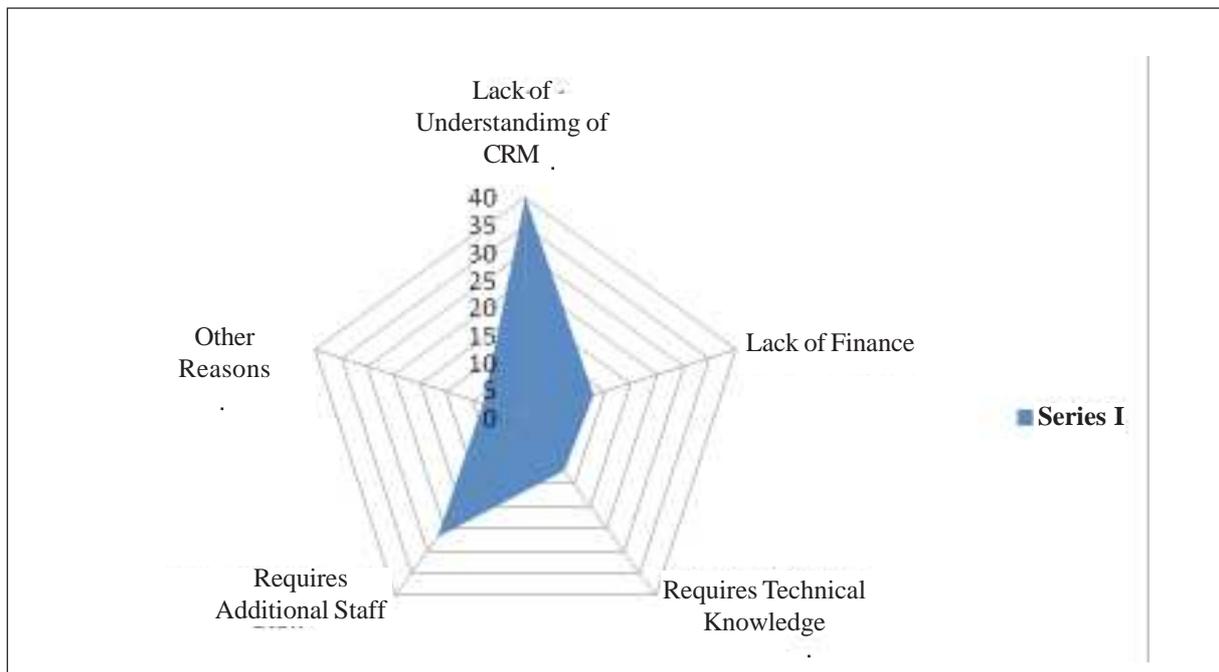
Table 2: CRM Scorecard

Criteria	Rank
Communication with Trainees	1st
Website of University	2nd
Feedback System	3rd
Progress Report on Student Assessment	4th
ICT as Support Tool	5th
Psychological Support	6th
Pedagogical Tools	7th
Effective Curriculum	8th
Administrative Support	9th
Alumni	10th

VII. Findings and Conclusion

This research paper seeks to understand how CRM can influence customer loyalty in highereducation. It also analyses the potential causes of relationship failures and provides suggestions to improve relationship building. The study proved that there is a positive relationship between customer relationship management and customer loyalty. The paper outlines the need for a written student complaint system at Université des Mascareignes. The main intent will be to manage student complaints effectively and efficiently and to improve the current practices at the institute. An effective student information system should also be developed. A CRM software may be purchased for improving student intelligence. The Student Information System (SIS) can be helpful to improve student services, such as admissions, financial aid, registration, transcripts, scheduling, enrolment and courses. The present website of UDM does not respond to the needs of the students. There is need for more interactivity and more updated information. The setting up of a career guidance unit may also be very useful for the students. Even though the study has certain limitations and the findings of the effect of CRM cannot be generalized for other tertiary institutions, certain principles might prove to be universal. There is also a need for a qualitative analysis on the impact of CRM in higher education which might form part of a future research paper.

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Communication

Structural Changes and Growth in Kerala Economy

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Abstract

Economic reforms are primarily intended for achieving higher economic growth. It can make structural changes and shifts in economies over years. During 1990s Kerala wasahead of other states in the country except in the matter of industrialisation. The reforms introduced in the country has its own impact on the different sectors of the Kerala economy. The present paper examines the structural changes and growth of the State during the post-reform period in terms of 1) State Domestic Product and Per capita Income on absolute basis and 2)Sectoral Share of State Domestic Product in comparison to pre-reform period.It was foundthat the mean shares of the primary sector and the tertiary sector in Kerala during Phase I (1993-94 to 2002-03) and Phase II (2003-04 to 2013-13) in the post reform period differ significantly. However, the secondary sector remained stationary without reporting significant changes over the two phases. While the growth of the primary sector and secondary sectors were highly fluctuating, the growth of the tertiary sector was less fluctuating with consistent positive growth

Keywords: *Kerala economy, sectoral changes in economy, reforms in Kerala*

I. Introduction

Kerala is the Indian State which showed the World that economic growth is not a pre requisite for development (Sarngadharan, 1992). It has attracted wide spread and well-deserved international attention for its remarkable achievement in social spheres, particularly in the fields of land reforms, health and education (Thomas, 2005). Being the first Indian State to implement land reforms, the State with highest life expectancy with lowest birth rate, lowest infant mortality, and the only State with hospital facility in every village and the State in which the communication infrastructure is the highest, the growth of industry has been tardy (KSIDC,2004). Probably, except in the matter of industrialisation, Kerala is significantly ahead of the rest of India. Industrialisation in Kerala is unquestionably far from being proportionate with the socio economic achievements for which the State is so fairly famed. A number of scholars had pursued studies on the industrial scenario of the state with different hypotheses and came out with diverse conclusions for the said backwardness. The present paper examines the economic performance of the State during the post-reform period in terms of,

1. State Domestic Product and Per capita Income on absolute basis.
2. Sectoral Share of State Domestic Product in comparison to pre-reform period.

II. Economic Performance – Core Literature

Kerala has featured a significant growth on the economic front during 1990s compared to the growth of the economy during 1970s and 1980s (Govt. of Kerala, 2003, p. 2.). The performance of the State when viewed on aggregate terms is ranked much below the neighbouring States and the all India average. However, its pattern of development with strong government intervention in the social sectors has been unique and has drawn considerable attention - popularly known as the 'Kerala Model' of growth. Its basic characteristic is the paradox of high social development and economic stagnation (Subramanian, 1990, p. 2053; Eapen, 2001, p.47). In terms of certain indicators of social development such as life expectancy at birth, infant mortality rate, decline in birth and death rates and literacy rate, Kerala is significantly ahead of the rest of India and with respect to most of these indicators, it is even ahead of China (Thomas, 2005, p. 763.). A very distinguishing feature of social achievement of Kerala is that, more than the other Indian States, these achievements have cut across caste and gender barriers, and have been carried to regions across the State (Ramachandran, 1996 quoted by Thomas, 2005, p. 763.). However, its per capita income is low and growth in State Domestic Product (SDP) has generally lagged behind the all India average (Panikar and Soman, 1985; Issac, 1993; George, 1993; Ramachandran, 1996; quoted by Eapen, 2001, p.47). But contrary to the general belief that the economy of the State is growing at a rate lower than other States, one of the publications of the Reserve Bank of India, 'Handbook of Statistics on Indian Economy 2000', articulates that the economy of Kerala has perked up and the Net Domestic Product of Kerala registered a growth of 59.08 percent during the period 1989-90 to 1997-98. This is higher than that of Tamil Nadu (58.64%) and Karnataka (51.26%) (Govt. of Kerala, 2000, p. 16).

III. State Domestic Product (SDP) and Per capita Income

The growth of SDP and per capita income at constant prices floor some means for a glimpse on the economic scenario of the State since 1994-95 to 2012-13. During theten year period from 1994-95 to 2003-04, the SDP of the State has registered a fluctuating growth trend registering a highest growth rate of 12.28 per cent (2002-03) and the lowest of 2.60 per cent (2000-01) and an average rate of 6.36 per cent at constant prices. The figures of per capita income growth during the period are, 10.71 per cent, the highest (1994-95), 1.89 per cent the lowest (2001-02) and 5.34 per cent the average.

During the period from 2004-05 to 2012-13, the SDP of the State hasalso registered a fluctuating growth trend registering a highest growth rate of 9.28 per cent (2005-06) and the lowest of 5.79 per cent (2008-09) and an average rate of 7.51 per cent at constant prices. The figures of per capita income growth during the period are, 8.51 per cent, the highest (2005-06), 5.06 per cent the lowest (2008-09) and 6.77 per cent, the average.

Table 1   Growth of State Domestic Product and Per capita Income (at Constant Prices)

Period	SDP		Per capita Income (Rs.)	
At 1993-94 prices	Amt. (crore)	Growth Rate	Amt. (Rs.)	Growth Rate
1994-95	25335	9.12	8327	7.76
1995-96	26398	4.20	8570	2.92
1996-97	27438	3.94	8798	2.66
1997-98	28633	4.36	9079	3.19
1998-99	30644	7.02	9619	5.95
1999-00	32716	6.76	10178	5.81
2000-01	33565	2.60	10510	3.26
2001-02	34509	2.81	10709	1.89
2002-03	39342	12.28	11994	10.71
2003-04	43936	10.46	13209	9.20
Average	32251.6	6.36	10099.3	5.34
Period	SDP		Per capita Income (Rs.)	
At 2004-05 prices	Amt. (crore)	Growth Rate	Amt. (Rs.)	Growth Rate
2004-05	104776	6.79	31871	6.16
2005-06	115500	9.28	34837	8.51
2006-07	124625	7.90	37284	6.56
2007-08	135747	8.19	40288	7.46
2008-09	144094	5.79	42433	5.06
2009-10	157123	8.29	45921	7.60
2010-11	167178	6.01	48504	5.33
2011-12(P)	180812	7.54	52095	6.89
2012-13(Q)	196077	7.79	56115	7.16
Average	147325.8	7.51	43260.89	6.77

Note: 1. (P) = Provisional estimate; (Q) = Quick Estimate.

2. Growth rate is the percentage change over the previous year.

Source: 1. Govt. of Kerala, Economic Review   2. Govt. of Kerala, Statistics for Panning

IV. Sectoral Share of State Domestic Product

The Sectoral share of SDP of Kerala (Table 3) has undergone significant structural changes over the years since 1950-51. The share of the primary sector to SDP which stood as 53.63 percent in 1950-51 made a small rise to 54.74 percent in 1960-61 and then started declining, without exception, to 49.44 percent in 1970-71, 40.27 per cent in 1980-81, 30.14 per cent in 1993-94, 17.09 per cent in 2003-04 and 9.50 per cent in 2010-11. This continuous fall in the share of primary sector had been observed as an inherent feature of a developing economy like India (Parameswaran Nair, 1992, p. 71; Pillai, 1994, p. 60-61). This Sectoral decline could be observed parallel at the national level also. Parameswran (1992) and Pillai (1994) described that this lower percentage of sectoral share of agriculture and allied activities (primary sector) in SDP were not on account of a decline in production of agriculture and allied activities. In fact, in absolute terms, the contribution made by this sector would have substantially increased many folds. The fall is only in relative terms. This fall is only indicative of the greater contribution made by the secondary and tertiary sectors to the SDP. But a glance on the sectoral growth of the primary sector given Table 4 asserts that contrary to the above argument, the growth rate of agricultural production is falling steep especially during the late 1990s and early 2000s.

But considering the sectoral share of the secondary sector (comprising manufacturing, electricity, water supply and construction) which consists of the industry of the state as the major sub sector has recorded a consistent share in SDP from 1980-81 onwards without considerable variations on either side. The share of the secondary sector to SDP was 15.49 per cent in 1950-51, 14.57 per cent in 1960-61, and 16.32 per cent in 1970-71 and to a big jump to 20.57 in 1980-81. Thereafter the sector remained almost consistent in its sectoral share to SDP till 2012-13

ignoring wide variations and adhering to small amendments. It may be noted from the Table 3 that during the fifty-four year period from 1950-51 to 2012-13 the secondary sector has grown only to 20 per cent of SDP (approximate) from 15 per cent (approximate). Commending up on the secondary sector of the State by comparing the performance with the national average of the secondary sector (approximately 30 per cent of GDP), it is of note that the State's share is much lower and does not commensurate with the average performance suggested for the secondary sector of a developing economy (Parameswaran Nair,1992, p. 72). This lower share of the secondary sector and its absolutely narrow increase over years is a definite indication of the slower growth of industry in the State as the major sub sector in the secondary sector. Reference to structural growth rate, the share of the secondary sector wherein industry (manufacturing) is the major sub sector, depicts that the sectoral growth rate is not on par with positive signs of stable development. The growth rate of the secondary sector was 10.14, -6.00 and 4.8 per cent (see Table 4) respectively for the years 2000-01, 2001-02 and 2002-03 (Govt of Kerala, 2003 p. 2). The growth rate of the secondary sector for the periods 2009-10, 2010-11 and 2011-12 was 19.73, 21.13 and 21.15 respectively.

The tertiary sector of the State has confirmed significant growth in its share to SDP by making a high push from 31.15 per cent in 1950-51 to 70.02 per cent in 2011-12. The consistent higher performance of the tertiary sector has positioned the sector to depict a growth rate of 10.48, 9.28 and 9.78 per cent (Table 3) respectively for the years 2000-01, 2001-02 and 2002-03. The territorial sector witnessed a growth rate of 12.15 per cent during the financial year 2009-10.sectoral growth rate in the tertiary sector during the year 2009-10was witnessed 12.15 per cent. This healthy growth of the service sector and the

relatively higher rank of physical quality of life index are the definite indicators that in the field of education, banking and other service sector activities the State is ahead of the other States in the country. The territory sector offers some more improved performance in the future as the two significant areas identified for the future growth of Kerala viz. Information Technology and Tourism are sub sectors of the territory sector (Annual Report -2004, KSIDC).

Table 2: Sectoral Share of Net Domestic Product of Kerala at Constant Prices (%)

Sl. No	Year		Primary	Secondary	Tertiary
1	1950-51		53.36	15.49	31.15
2	1960-61	Pre Reform	54.74	14.57	30.69
3	1970-71		49.44	16.32	34.24
4	1980-81		40.27	20.57	39.16
5	1993-94		30.14	20.90	48.96
6	1994-95		30.70	21.51	47.79
7	1995-96		28.90	21.85	49.25
8	1996-97		28.32	20.98	50.70
9	1997-98	Post Reform Phase I	28.26	20.47	51.27
10	1998-99		27.07	20.84	52.09
11	1999-00		26.01	19.48	54.51
12	2000-01		20.39	20.91	58.70
13	2001-02		19.84	19.79	60.37
14	2002-03		19.72	19.80	59.62
15	2003-04		18.28	20.11	60.17
16	2004-05		16.83	21.94	61.23
17	2005-06		15.48	21.90	62.19
18	2006-07		13.49	21.66	64.86
19	2007-08	Post Reform Phase II	12.29	21.51	66.20
20	2008-09		12.38	20.29	67.33
21	2009-10		11.02	19.73	69.25
22	2010-11		9.50	21.31	69.20
23	2011-12(P)		8.83	21.15	70.02
24	2012-13(Q)		8.44	23.36	68.20

Note: 1. Base Year: For Figures 1970-71, 1993-94, 1999-2000 and 2004-05 were taken.

2. (P) = Provisional estimate; (Q) = Quick Estimate.

Source: 1. Figures up to 1981 from Kerala Economy: Four Decades of Development, 1994, P.P. Pillai, p. 46.

2. Figures from 1982 onwards computed from:

1. Govt. of Kerala, Economic Review 2. Govt. of Kerala, Statistics for Planning

The ANOVA results in Table 3 show that the mean shares of the primary sector and the tertiary sector in Kerala during Phase I (1993-94 to 2002-03) and Phase II (2003-04 to 2013-13) differ significantly. However, the secondary sector remained stationary without reporting significant changes over the two phases (Table 3).

Table 3: ANOVA of Sectoral Share of Net Domestic Product - Post Reform Period Phase I and II

		Sum of Squares	df	Mean Square	F	Sig.
Primary Sector	Between Groups	881.925	1	881.925	58.563	.000
	Within Groups	271.070	18	15.059		
	Total	1152.995	19			
SecondarySector	Between Groups	2.067	1	2.067	2.412	.138
	Within Groups	15.428	18	.857		
	Total	17.496	19			
TertiarySector	Between Groups	786.133	1	786.133	44.997	.000
	Within Groups	314.475	18	17.471		
	Total	1100.607	19			

Source: SPSS generated result using data in Table 2

Figure 1: Sectional Share of SDP - 1960-61
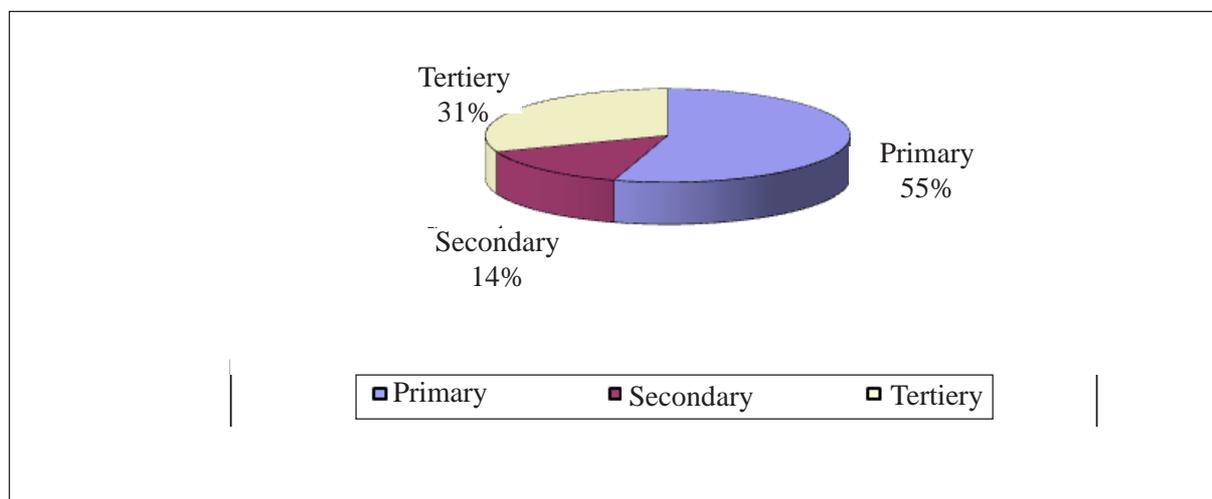
Figure 2: Sectional Share of SDP - 2004-05

Primary
16%

Secondary
19%

Tertiery
31%

| Primary | Secondary | Tertiery |
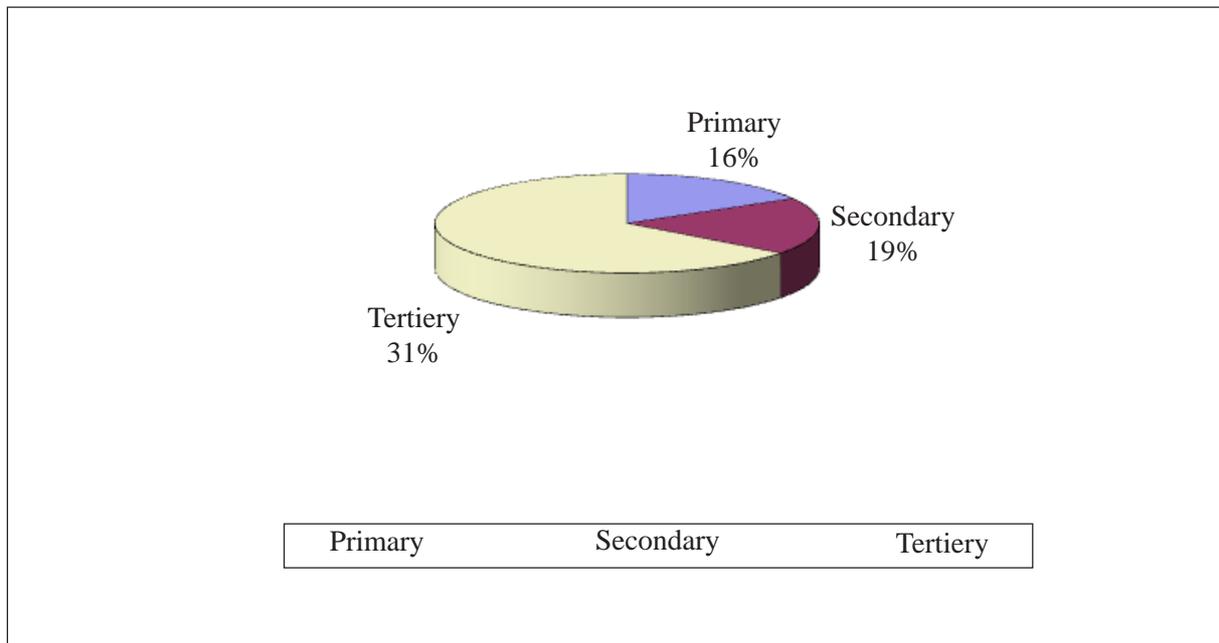
Figure 3: Sectional Share of SDP - 2012-13

Primary   Secondary   Tertiery

8%

24%

68%
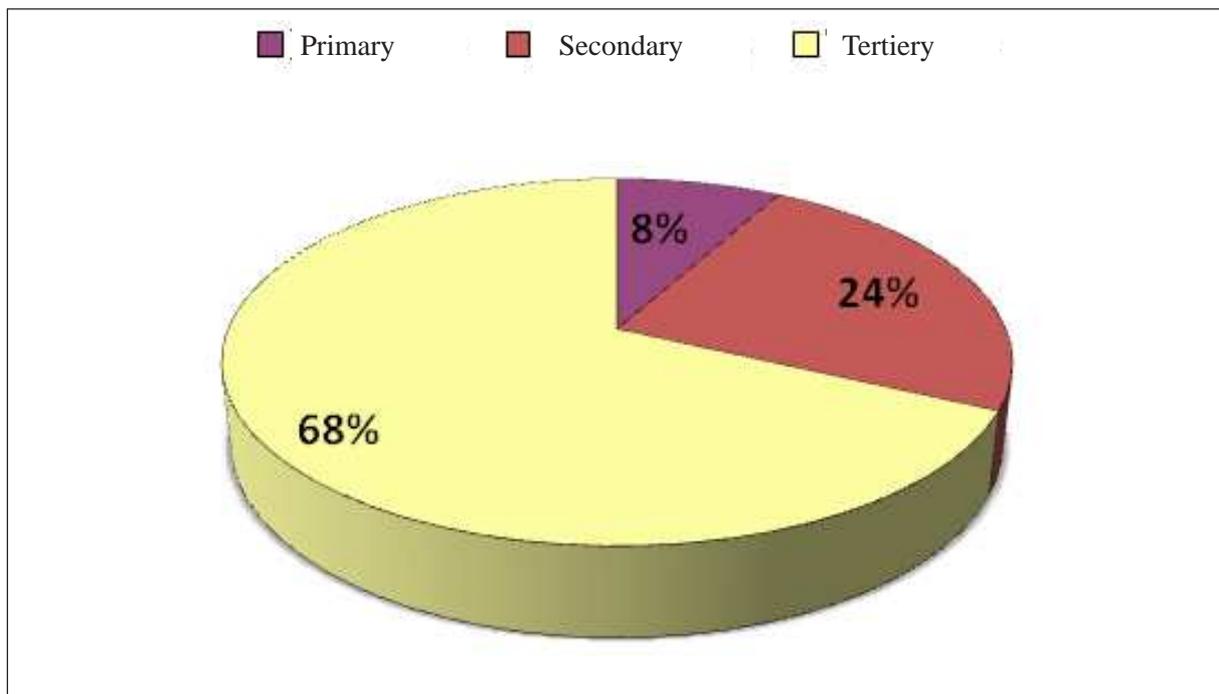
Table 3:Sectoral Growth Rate of Kerala

Year (Base Year 1993-94)	Sectoral Growth Rates			Overall
	Primary	Secondary	Tertiary	
1994-95	9.7	12.3	6.3	8.6
1995-96	-1.4	5.0	7.3	4.0
1996-97	3.0	-0.38	6.6	4.00
1997-98	-5.60	3.00	6.70	2.20
1998-99	2.50	9.00	8.70	7.00
1999-00	2.6	-0.20	11.7	6.80
2000-01	-19.60	10.14	10.48	2.60
2001-02	-1.03	-6.00	9.28	4.00
2002-03	-4.38	4.80	9.78	6.10
2003-04	2.8	10.7	7.7	7.4
Year (Base Year 2004-05)	Sectoral Growth Rates			Overall
	Primary	Secondary	Tertiary	
2004-05	2.5	1.3	13.8	9.2
2005-06	4.19	10.04	11.97	10.23
2006-07	-8.54	6.70	12.53	7.90
2007-08	-0.74	8.21	11.17	8.93
2008-09	6.94	0.10	7.97	6.15
2009-10	-2.98	6.07	12.15	9.04
2010-11	-8.29	14.88	6.32	6.40
2011-12	0.58	7.37	9.44	8.16
2012-13	3.65	19.75	5.63	8.44

Source: Govt. of Kerala, Economic Review, 1995 to 2013

Figure 4: Growth Rate of Primary Sector 1993-94 to 2012-13
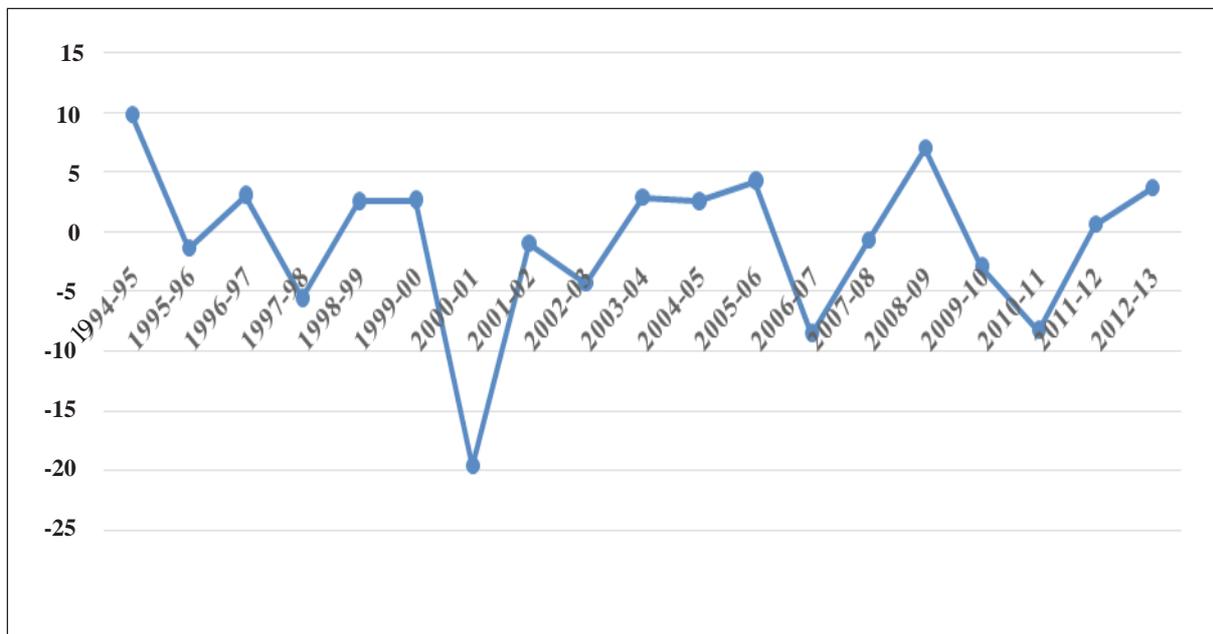
Figure 5: Growth Rate of Secondary Sector 1993-94 to 2012-13
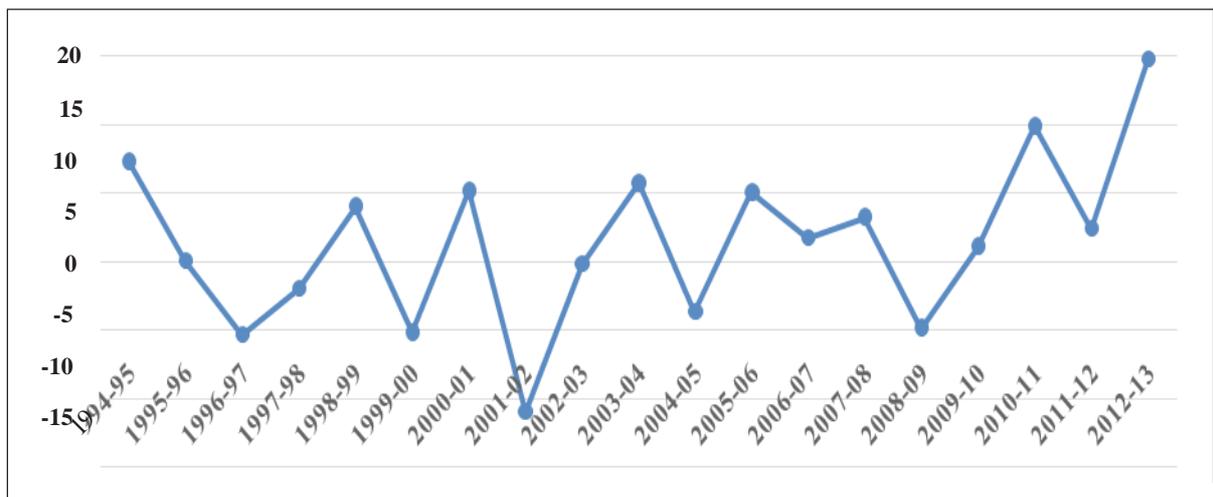
Figure 6: Growth Rate of Tertiary Sector 1993-94 to 2012-13
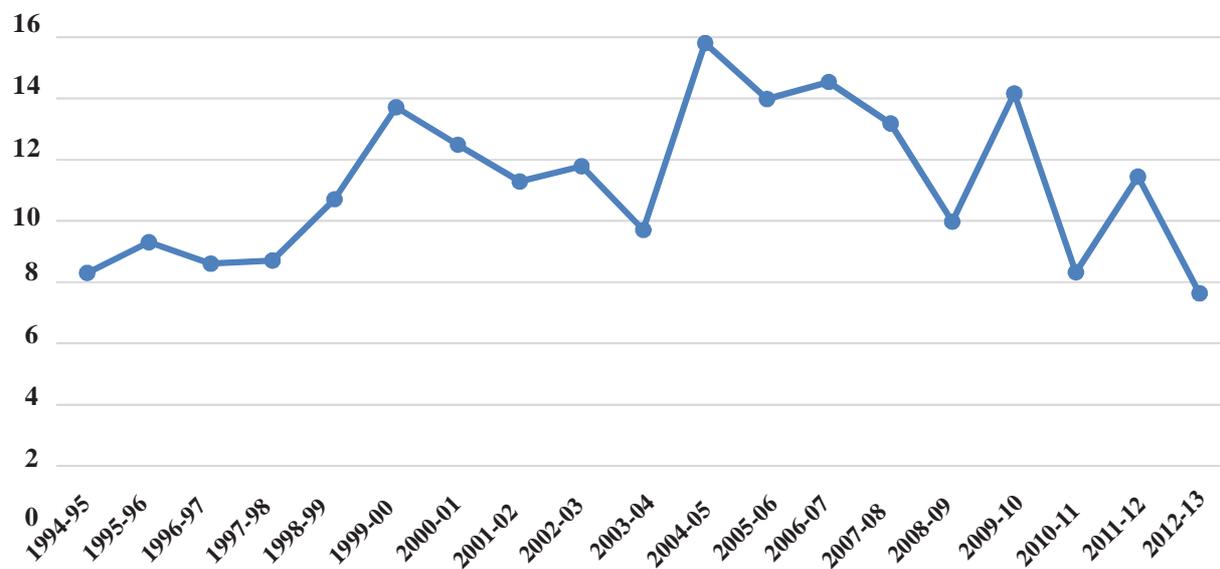
V. Conclusion

The examination of the structural changes and growth of the Kerala economy during the post-reform period in terms of State Domestic Product and Per capita Income on absolute basis, and Sectoral Share of State Domestic Product confirms structural change in the economy.The mean shares of the primary sector and the tertiary sector in Kerala during Phase I (1993-94 to 2002-03) and Phase II (2003-04 to 2013-13) in the post reform period differ significantly.The secondary sector remained stationary without reporting any significant change over the two phases. While the growth of the primary sector and secondary sectors were highly fluctuating, the growth of the tertiary sector was less fluctuating with consistent positive growth.

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Communication

A Study of Pattern, Magnitude and Trend in the Growth of Expenditure of Tirumala Tirupati Devasthanams, Andhra Pradesh

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Abstract

Temple worship is an age old culture in India. Temples in general have been following a pragmatic and a philanthropic policy in their monetary transactions. They stimulate and encourage local trade and industry. The construction, maintenance, daily routine services and administration of temples have offered employment to many. They have started giving importance to economic and social upliftment of the society. They serve as financial institutions; consumers; employers; landlords; centers of learning; economic entity and so on. Among the Hindu religious institutions, the Tirumala Tirupati Devasthanams (TTD) is the biggest religious institution in the country. Its expenditure is being utilised for the maintenance of temples, besides service departments for temples and pilgrims. The TTD is running several educational institutions and also maintains a cultural centre to preserve ancient Indian culture. For the propagation of Hindu religion, several projects have also been organised. There is a full-fledged engineering division, which undertakes construction of cottages, choultries, kalyanamandapams, supply of electricity, water works etc. The present study mainly deals with the objectives, pattern and trend in the progress of expenditure of the TTD. An attempt is made here to analyse the expenditure at the aggregate level; in terms of revenue and capital; temple and non-temple; religious and non-religious; pilgrim related and non-pilgrim related; various heads; departments and surplus/deficit.

Keywords: Tirumala Tirupati Devasthanam, T T D

I. Introduction

India is a sacred land of temples: from Cape Comorin to the Himalayas, the whole of Bharatavarsha is studded with innumerable temples. Temple worship is a very old culture in India. It is not possible to trace the origin of temples. Temples in general have been following a pragmatic and a philanthropic policy in their monetary transactions. Assets and liabilities related to the temple were maintained by the temple treasury which was under the custody of temple committee. To enhance the revenue of the temple, several methods were followed. Thus religious institutions have emerged successfully as financial institutions. It stimulates and encourages local trade and industry. The construction, maintenance, daily routine services and administration of temples have offered employment to many. From the economic point of view, temple is a big landlord. The temples had been centers of learning from times immemorial. Inscriptions on the walls and pillars of many temples present full details of the history of the temples. The temples have started giving importance to economic and social upliftment of the society. They have concentrated on the material and spiritual welfare of all classes of people in the locality. Thus temples, in short, combined the functions of a social institution, the historical preserver of art and architecture   and

the promoter of culture and national integration. In fact, they bring the people of different parts of the country together and make them feel that they form one nation with a common goal of life. It may be summed up that temples serve as financial institutions; consumers; employers; landlords; centers of learning; economic entity and so on.

Among the Hindu religious institutions, TTD is considered to be the biggest religious institution in India. It is a unique institution in the country as it is the greatest earner and spender and has become an economic unit of considerable significance in the country. In fact, among religious institutions, it ranks first in India and second in the world in terms of income, expenditure and wealth. There are 14 temples under its control. Among these, the Srivari temple at Tirumala attracts a large multitude of pilgrims, earns crores of income and incurs a huge expenditure when compared to the remaining temples in Andhra Pradesh (AP) as well as India. The special significance of the temple of Lord Venkateswara at Tirumala lies in the fact that it is perhaps the oldest religious institution in the world. There is some special feature associated with worship in each temple. For instance, the special feature of Tirumala temple is the offering of wealth which takes the form of dropping of cash and jewels into the hundi. In the din and noise of the modern world, only temples provide an atmosphere of sanctity and tranquility. Tirumala, otherwise known as Kaliyuga Vaikunta, is one of the important temples of India boasting of a record revenue. The increasing income of the temples under the management of the TTD made it possible to utilise the funds to provide better amenities to the visiting pilgrims. The income of the TTD is a surplus one in spite of huge expenditure. The expenditure pattern of the TTD is governed by the AP Hindu Religious Charitable Endowments Act of 1966. Being the largest public religious institution in India, it has developed to

become one of the most affluent religious institutions in the country. As an affluent institution, it had to spend about 40 per cent of its expenditure towards facilities to pilgrims, 10 per cent for reserve fund, 30 per cent for the renovation of temples and 5 per cent for the common good fund. The main objectives of incurring expenditure are as follows: (i) maintenance, management and administration of temples specified in the First Schedule; (ii) maintenance, management and administration of educational and other institutions specified in the Second Schedule; (iii) propagation, promotion and popularization of study of Vedas, Hindu religion, philosophy, Indian languages, sculpture, Hindu temple architecture and epigraphy; (iv) construction and maintenance of choultries and guest houses; (v) provision of water supply and other sanitary arrangements to pilgrims; (vi) establishment and maintenance of hospitals and dispensaries; (vii) construction and maintenance of roads and communication facilities for the convenience of pilgrims; (viii) acquisition of any land or other immovable property for the purpose of the TTD; (ix) establishment and maintenance of dairy farm; and (x) any other work undertaken for the purpose of the TTD as authorised by the State Government.

There are a number of studies on the historical, religious, archaeological, sculptural, epigraphical, organisational, human resource and managerial aspects of the TTD and other temples in the country. But only a few studies are found on the finances of religious institutions, particularly those of the TTD. Further, there is no specific study covering only the expenditure pattern of the TTD. In view of this, there is a dire need to carry out a study on the expenditure pattern of the TTD. The present study is carried out on the basis of documentary evidence. The expenditure of the TTD is analysed at constant prices. Money costs increased due to phenomenal increase in prices. Hence, it is desirable to measure them in

real terms. This has to be carried out with the help of price-deflators. In the present study, financial data is deflated by adopting whole-sale price index for all commodities. The average index of whole-sale prices is adjusted for the base year 2004-05 as 100. The indices are furnished in Annexure. Another important consideration in the conversion of monetary figures from current prices to constant prices was the selection of base year, which measures price effect. Generally, it should be a normal year. In the present investigation, 2004-05 is taken as base year. Further, various statistical tools such as co-efficient of variation (CV), compound growth rate (CGR) and mean were applied to analyse the data. An attempt is made to study expenditure at the aggregate level; in terms of revenue and capital; temple and non-temple; religious and non-religious; pilgrim related and non-pilgrim related; various heads; departments; and surplus/deficit.

II. Aggregate Expenditure of TTD

The consolidated expenditure of the TTD, in terms of constant prices, had gradually increased from Rs.639.53 crores during 2007-08 to Rs.1052.50 crores during 2011-12, recording a compound growth rate (CGR) of 12.97 per cent, which is significant at one per cent level (see Table 1). The yearly growth during the period varied between 5.67 per cent and 16.23 per cent. In terms of current prices, expenditure had progressively gone up from Rs.745.88 crores during 2007-08 to Rs.1643.27 crores during 2011-12. The CGR during the period was 20.09 per cent, which is significant at one per cent level. The year to year changes are considerable. For instance, the rate of progress was 27.30 per cent during 2010-11 while it was 25.64 per cent in the following year. The mean expenditure, per year, was Rs.813.17 crores and Rs.1115.23 crore in terms of constant and current prices sequentially. The co-efficient of variation (CV) was the highest in terms of current prices (32.63%) as compared to constant prices (21.03%). It can be concluded that there is a significant progress in the expenditure of the TTD during the period under study.

Table 1: Consolidated Expenditure of the TTD (Rs. crore)

Year	Constant Prices	% of change over previous year	Current Prices	% of change over previous year
2007-08	639.53	-	745.88	-
2008-09	675.78	5.67	851.62	14.18
2009-10	785.45	16.23	1027.45	20.65
2010-11	912.58	16.19	1307.91	27.30
2011-12	1052.50	15.33	1643.27	25.64
Mean	813.17	-	1115.23	-
CV (%)	21.03	-	32.63	-
CGR (%)	12.97	-	20.09	-
't' cal	9.18*	-	8.15*	-
Note: *Indicates significant at one per cent level				

Source: Relevant Budget Estimates, TTD, Tirupati

III. Disaggregation of Expenditure of TTD

The expenditure of the TTD has been disaggregated into several categories and classes on different bases. The analysis is presented in the following pages.

III (A). Capital and Revenue Expenditure

Revenue expenditure includes *dittam*, *vagapadi*, repairs and maintenance, boarding, rent, taxes, insurance, postage, telegrams, telephones, travel, advertisement, audit, legal, mirasy, grants/ contributions and so on. The revenue expenditure has increased from Rs.437.19 crores during 2007-08 to Rs.828.96 crores during 2011-12, establishing a CGR of 16.26 per cent, which is significant at one per cent level (see Table 2). However, there are ups and downs in the yearly increment. The share of revenue expenditure in the expenditure of the TTD was in the range of 68.36-78.76 per cent in the period referred to. Here, capital expenditure means cost incurred on the construction of buildings, electrical installations, acquisition of land, purchase of jewellery, plant and machinery, medical equipment etc. The capital expenditure fluctuated between Rs.184.43 crores and Rs.225.04 crores during 2007-2012. The CGR was 3.70 per cent, which is not significant. The proportion of capital expenditure in the total expenditure was in the order of 21.24 – 31.64 per cent in the aforesaid period. In terms of mean, revenue expenditure, per year, has accounted for 74.78 per cent while the remaining 25.22 per cent has been accounted by capital expenditure. The CV was 25.90 per cent and 9.16 per cent in the revenue and capital expenditures sequentially. It can be inferred that more than 70 per cent of expenditure of the TTD is revenue in nature. The revenue expenditure grows faster than capital expenditure. The progress is significant in the revenue expenditure only. There is consistency in capital expenditure relative to revenue expenditure. It is some what surprising.

Table 2: Capital and Revenue Expenditure (Rs. crore)

Year (1)	Constant Prices		% of col (2) to total (4)	Current Prices	
	Revenue	Capital		Revenue	Capital
	(2)	(3)		(5)	(6)
2007-08	437.19	202.34	68.36	509.89	235.99
2008-09	486.08	189.70	71.93	612.56	239.06
2009-10	601.02	184.43	76.52	786.20	241.25
2010-11	687.54	225.04	75.34	985.38	322.53
2011-12	828.96	223.54	78.76	1294.26	349.01
Mean	608.16	205.01	74.78	-	-
CV(%)	25.90	9.16	-	-	-
CGR(%)	16.26	3.70	-	-	-
't' cal	11.45*	1.50[NS]	-	-	-
Notes: *Indicates significant at one per cent level NS: Not significant					

Source: Relevant Budget Estimates, TTD, Tirupati

III (B). Temple and Non-temple Expenditure

The expenditure from temples has increased from Rs.103.23 crores during 2007-08 to Rs.287.16 crores during 2011-12, except 2008-09 when there was a decline. The CGR during the study period was 30.69 per cent, which is significant at one per cent level (see Table 3). Its share in the total expenditure of the TTD was in the range of 12.57 – 27.28 per cent. The non-related temple expenditure has progressively increased form Rs.536.30 crores during 2007-08 to Rs.765.34 crores during 2011-12, establishing a CGR of 8.46 per cent, which is significant at one per cent level. The proportion of non-temple related expenditure varied in the order of 72.72 – 87.43 per cent. On an average, per year, it was Rs.175.35 crores and Rs.637.82 crores for temples and non-temple related expenditure respectively. In the mean expenditure, temples formed 21.56 per cent and the rest, non-temple related expenditure. The CV was 49.13 per cent and 13.71 per cent in temples and non-temple related expenditure respectively. From the foregoing analysis, it can be concluded that non-temple related expenditure accounts for more than 78 per cent of the expenditure of the TTD. Furthermore, there is consistency in the expenditure towards non-temple related expenditure as compared to temple expenditure.

Table 3: Temple and Non- Temple Related Expenditure (Rs. crore)

Year (1)	Constant Prices		% of col (2) to total (4)	Current Prices	
	Temple	Non- temple related		Temples	Non- temple related
	(2)	(3)		(5)	(6)
2007-08	103.23	536.30	16.14	120.4	625.48
2008-09	84.94	590.84	12.57	107.04	744.58
2009-10	165.21	620.24	21.03	216.11	811.34
2010-11	236.22	676.36	25.88	338.55	969.36
2011-12	287.16	765.34	27.28	448.34	1194.93
Mean	175.35	637.82	21.56	-	-
CV (%)	49.13	13.71	-	-	-
CGR (%)	30.69	8.46	-	-	-
't' cal	5.43*	9.32*	-	-	-
Note: *Indicates significant at one per cent level					

Source: Relevant Budget Estimates, TTD, Tirupati

III (C) Religious and Non-religious Expenditure

The aim of religion is to bring out the divine in man. If the essence of religion is to reach the common people, it should be done in a manner that appeals to the public easily and effectively. Keeping this in view, the TTD has initiated steps to foster and encourage Hindu Dharma and culture in India and abroad. To accelerate religious activities, the TTD has evolved a number of schemes and spent crores of rupees from time to

time. To impart Vedic and Sanskrit knowledge, it runs many educational institutions including Vedic University. Establishment of Vedic University is a milestone in the history of the TTD. The expenses incurred on temples, religious projects, Vedic and agama educational institutions constitute religious expenditure. The remaining expenditure of the TTD is treated as non-religious one. The religious expenditure has increased from Rs.144.80 crores in during 2007-08 to Rs.368.35 crores during 2011-12, except 2008-09 when there was a decline. The CGR during the study period was 26.92 per cent, which is significant at one per cent level (see Table 4). The proportion of religious expenditure in the total expenditure of   the TTD was in the order of 19.52 to 35 per cent. The fall in religious expenditure is mainly due to decrease in the expenditure on temples on the one hand and rise in capital expenditure on non-religious activities on the other hand. The non-religious expenditure has gradually increased from Rs.494.73 crores during 2007-08 to Rs.684.15 crores during 2011-12, recording a CGR of 7.66 per cent, which is significant at one per cent level. In the total expenditure of the TTD, the share of non-religious activities gradually declined from 77.36 per cent to 65 per cent except 2008-09. In terms of mean expenditure, per year, religious activities have accounted for 28.67 per cent and the remaining, non-religious ones. The CV was 43.46 per cent in religious expenditure while it was 12.39 per cent in non-religious expenditure.   It can be concluded that more than 70 per cent of expenditure of the TTD is spent on non-religious activities. There is consistency in the non- religious expenditure relative to religious expenditure.

Table 4: Religious and Non-Religious Expenditure (Rs. crore)

Year	Constant Prices		% of col(2) to total	Current Prices	
	Religious	Non-religious		Religious	Non-religious
(1)	(2)	(3)	(4)	(5)	(6)
2007-08	144.80	494.73	22.64	168.88	577.00
2008-09	131.88	543.90	19.52	166.20	685.42
2009-10	220.06	565.39	28.02	287.86	739.59
2010-11	300.68	611.90	32.95	430.93	876.98
2011-12	368.35	684.15	35.00	575.11	1068.16
Mean	233.15	580.01	28.67	-	-
CV (%)	43.46	12.39	-	-	-
CGR (%)	26.92	7.66	-	-	-
't' cal	6.02*	9.34*	-	-	-

Note: *Indicates significant at one per cent level

Source: Relevant Budget Estimates, TTD, Tirupati

III (D) Pilgrim related and Non-pilgrim Related Expenditure

To have an insight into the magnitude and extent of expenditure incurred on pilgrims to Tirumala and Tirupati, the expenditure of the TTD has been broadly classified into two categories, namely, pilgrim related and non-pilgrim related. The expenditure on pilgrims includes the cost incurred on temples, choultries, canteens, vigilance and security, hospitals and dispensaries and so on for pilgrims. The rest of expenses such as salary and wages, educational expenditure, construction of kalayanamandapams, assistance to SVIMS etc constitute non-pilgrim related expenditure. The expenditure on pilgrims which stood at Rs.315.79 crores during 2007-08 had gone up to Rs.546.67 crores during 2011-12, except 2008-09 when there was a decline (see Table 5). The CGR was 15.88 per cent, which is significant at 5 per cent level. The share of pilgrim related expenditure in the total expenditure of the TTD varied between 39.89 per cent and 51.94 per cent. The non-pilgrim related expenditure has progressively increased from Rs.323.74 crores during 2007-08 to Rs.505.83 crores during 2011-12, establishing

Table 5: Pilgrim related and Non-Pilgrim related during 2007-12 (Rs. crore)

Year	Constant Prices		% of col(2) to total	Current Prices	
	Pilgrims	Non-Pilgrim related		Pilgrims	Non-Pilgrim related
(1)	(2)	(3)	(4)	(5)	(6)
2007-08	315.79	323.74	49.38	368.30	377.58
2008-09	269.56	406.22	39.89	339.70	511.92
2009-10	368.03	417.42	46.86	481.42	546.03
2010-11	440.32	472.26	48.25	631.06	676.85
2011-12	546.67	505.83	51.94	853.52	789.75
Mean	388.07	425.09	47.72	-	-
CV(%)	28.10	16.40	-	-	-
CGR(%)	15.88	10.43	-	-	-
't' cal	3.98**	7.76*	-	-	-
Notes: *Indicates significant at one per cent level					
**Indicates significant at one per cent level					

Source: As in Table 1

a CGR of 10.43 per cent, which is significant at one per cent level. The share of non-pilgrim related expenditure in the total expenditure of the TTD was in the range of 48.06 – 60.11 per cent. On an average, per year, it formed   52.28 per cent and the rest, pilgrim related expenditure. The consistency is more in non-pilgrim related expenditure (16.40%) relative to the pilgrim related expenditure (28.10%). It is surprising to note that instead of pilgrim related expenditure,

non-pilgrim related expenditure constitutes a major share in the expenditure of the TTD. As the TTD is getting most of its income from pilgrims, it is justifiable, if it spends a considerable amount of its income on pilgrims rather than on non-pilgrim related activities. The latter type of expenditure grows faster than the former. It can be summed up that more than 50 per cent of expenditure of the TTD is spent on non-pilgrim related activities.

III. (E). Head-wise Expenditure

All the institutions of the TTD, with nearly 150 sections, were divided into 72 independent accounting units and these have been mainly grouped under seven heads for accounting purposes. The expenditure of engineering division has progressively gone up from Rs.157.77 crores during 2007-08 to Rs.283.60 crores during 2010-11, except 2011-12 when there was a decline (see Table 6). The share of engineering division in the total expenditure of the TTD was in the range of 24.66 – 36.90 per cent in the aforesaid period. The CGR was 6.87 per cent, which is insignificant. General administration includes religious projects, transport, information technology, broadcasting, welfare, public relations, treasury and so on. Its share in the total expenditure of the TTD fluctuated between 21.81 per cent and 28.87 per cent during the study period. The CGR was 2.42 per cent, which is not significant. The service department for pilgrims includes choultries, panchayat, information centre, canteens, press, health, vigilance/security, editorial office, museum and kalyanakatta. The service department for pilgrims constituted 23.06 per cent in the total expenditure of the TTD during 2007-2008 as compared to 12.42 per cent during 2011-12, recording a negative growth. The fluctuations in the yearly figures are noticeable. The proportion of educational institutions in the total expenditure varied between 3.54 per cent and 4.65 per cent during the reference period, recording a CGR of

6.95 per cent, which is significant at one per cent level. Garden, forest and SV.Gosamrakshnasala are placed under service department for temples. All the hospitals and dispensaries of the TTD are taken into the fold of service department for hospitals and dispensaries. The share of each of service department for temples and service department for hospitals and dispensaries was in the order of 2.53 -3.31 per cent and 1.19 -1.76 per cent respectively. The CGR was insignificant in both the departments. On an average, per year, engineering division occupied the first place (29.68%) followed by general administration (25.99%), temples (21.56%), service department for pilgrims (14.29%), educational institutions (4.14%), service department for temples (2.90%) and service department for hospitals and dispensaries (1.44%). The CV was 49.13 per cent in temples, 32.38 per cent in educational institutions, 20.36 per cent in the service department for pilgrims, 20.14 per cent in the engineering division, 19.39 per cent in the general administration, 15.69 per cent in the service department for hospitals and dispensaries and 15.02 per cent in the service department for temples. It may be concluded that, among the head-wise of expenditure of the TTD, engineering division ranks first while service department for temples last. Of all the heads of expenditure, temples and educational institutions register a positively significant progress. There is consistency in the expenditure under the head service department for temples relative to the remaining heads of expenditure.

III (F). Department-wise Expenditure

As the flow of pilgrims to Tirumala and Tirupati gradually increased, the TTD felt the need to raise the number of departments so as to provide better amenities to pilgrims and facilities to its employees. If we look at the past, we can find that there were hardly 3 departments in 1933. These went up to 18 in 1976 and, further, to 35 in 1985. At present,

Table 6: Head-Wise Distribution of Expenditure of the TTD during 2007-12 (Rs. crore)

Year	Constant prices							Current prices						
	Engineering division	General administration	Temples	Service department for pilgrims	Educational institutions	Service department for temples	Service department for hospitals and dispensaries	Engineering division	General administration	Temples	Service department for pilgrims	Educational institutions	Service department for temples	Service department for hospitals and dispensaries
2007-08	157.77 (24.66)	179.65 (28.09)	103.23 (16.14)	147.43 (23.06)	23.15 (3.62)	19.03 (2.98)	9.27 (1.45)	184.01 (24.66)	209.52 (28.09)	120.40 (16.14)	171.94 (23.06)	27.00 (3.62)	22.20 (2.98)	10.81 (1.45)
2008-09	249.33 (36.90)	195.11 (28.87)	84.94 (12.57)	90.25 (13.35)	23.95 (3.54)	21.80 (3.23)	10.40 (1.54)	314.21 (36.90)	245.88 (28.87)	107.04 (12.57)	113.74 (13.35)	30.18 (3.54)	27.47 (3.23)	13.10 (1.54)
2009-10	252.77 (32.18)	199.67 (25.42)	165.21 (21.04)	96.78 (12.32)	31.21 (3.97)	25.99 (3.31)	13.82 (1.76)	330.65 (32.18)	261.19 (25.42)	216.11 (21.04)	126.59 (12.32)	40.83 (3.97)	34.00 (3.31)	18.08 (1.76)
2010-11	283.60 (31.08)	199.06 (21.81)	236.22 (25.88)	115.72 (12.68)	42.40 (4.65)	23.06 (2.53)	12.52 (1.37)	406.46 (31.08)	285.29 (21.81)	338.55 (25.88)	165.85 (12.68)	60.77 (4.65)	33.05 (2.53)	17.94 (1.37)
2011-12	263.39 (25.03)	283.19 (26.91)	287.16 (27.28)	1 30.80 (12.42)	47.31 (4.50)	28.08 (2.67)	12.57 (1.19)	411.24 (25.03)	442.14 (26.91)	448.34 (27.28)	204.22 (12.42)	73.87 (4.50)	43.84 (2.67)	19.62 (1.19)
Mean	241.37 (29.68)	211.34 (25.99)	175.35 (21.56)	116.20 (14.29)	33.60 (4.14)	23.59 (2.90)	11.72 (1.44)							
CV (%)	20.14	19.39	49.13	20.36	32.38	15.02	15.69							
CGR(%)	6.87	5.51	19.03	0.09	20.01	8.34	7.95							
t cal	2.29[NS]	2.42[NS]	5.43*	-0.09[NS]	6.95*	2.97[NS]	1.96[NS]							

Notes : Figures in parentheses indicate the percentage to total

*Indicates significant at one per cent level

NS   :   Not significant

Source: As in Table 1

there are nearly 60 departments. It will not be an exaggeration if we say that the TTD is a 'mini-Government' because of its umpteen number of departments and workforce. Out of the departments of the TTD, the proportion of health in the total expenditure fluctuated between 3.36 per cent   and 3.81 per cent, recording a CGR of 14.63 per cent, which is significant at one per cent level (see Table 7). The share of choultries in the total expenditure varied in the range of 1.70 – 9.06 per cent, recording a negatively insignificant growth. The percentage of each of vigilance, kalyanakatta, garden, medical, press, canteen, editor and forest was below 3 per cent. The CGR is positively significant with regard to kalyanakatta and editor where as in the case of rest, it is insignificant. The share of each of the remaining departments in the total expenditure of the TTD was below one per cent. On an average, per year, engineering department accounted for 29.68 per cent, general administration 25.99 per cent, temples 21.56 per cent, education 4.14 per cent, health 3.56 per cent, choultries 2.99 per cent and vigilance 2.11 per cent. In the case of rest, it was below 2 per cent. The CV was 86.54 per cent in information, 77.82 per cent in choultries, 51.57 per cent in panchayat, 49.13 per cent in temples and below 40 per cent in the rest of the departments. It can be summed up that, of all the departments of the TTD, engineering division ranks first while revenue last. Three departments, namely, engineering, general administration and temples, account for 77.23 per cent of expenditure of the TTD. The consistency is higher in museum when compared to the rest of the departments.

IV. Surplus/Deficit

A comparison between income and expenditure and a relative assessment of receipts and payments would reveal a host of interesting observations, which, in turn, lead to certain conclusions that help in augmenting the revenue or in reducing the expenditure. Accordingly, an attempt is made here. Excess of income over expenditure is termed as surplus and vice-versa deficit. The TTD has earned surplus income despite huge expenditure during the period under reference.   The surplus is utilised for religious and charitable purposes. Priority is accorded to religious purposes as the TTD is a religious institution. Religious purposes include renovation, preservation and maintenance of temples which are in need; propagation of Sanskrit and Vedic culture; and promotion of Hindu religion, arts and classical temple dances. The surplus is also utilised for welfare programmes such as establishment of poor homes for the disabled, orphanages, hospitals, schools and so on.   In the entire reference period income surpassed expenditure and thus resulted in surplus (see Table 8). The surplus of the TTD in terms of constant prices varied between Rs. 391.19 crores and Rs. 556.62 crores during the study period. The year to year changes are considerable. For instance, the rate of progress during 2009-10 was 37.22 per cent while in the remaining years, there was a decline. In terms of current prices, the surplus of the TTD was in the range of Rs.496.20 – Rs.706.77 crores during 2007-2012. It may be summed up that the income has exceeded expenditure and thus surplus resulted throughout the study period without any exception. Further, the magnitude of surplus varied across the period.

Table 7: Department-wise Distribution of Expenditure of the TTD during 2007-12 (Rs. crore)

Departments	Constant prices									Current prices				
	2007-08	2008-09	2009-10	2010-11	2011-12	Mean	CV(%)	CGR(%)	't' cal	2007-08	2008-09	2009-10	2010-11	2011-12
Engineering	157.77 (24.66)	249.33 (36.90)	252.77 (32.18)	283.60 (31.08)	263.40 (25.03)	241.37 (29.68)	20.14	11.54	2.29[NS]	184.01 (24.66)	314.21 (36.90)	330.65 (32.18)	406.46 (31.08)	411.24 (25.03)
General administration	179.65 (28.09)	195.11 (28.87)	199.67 (25.42)	199.06 (21.81)	283.19 (26.91)	211.34 (25.99)	19.39	9.30	2.42[NS]	209.52 (28.09)	245.88 (28.87)	261.19 (25.42)	285.29 (21.81)	442.14 (26.91)
Temples	103.23 (16.14)	84.94 (12.57)	165.21 (21.04)	236.22 (25.88)	287.16 (27.28)	175.35 (21.56)	49.13	30.69	5.43*	120.40 (16.14)	107.04 (12.57)	216.11 (21.04)	338.55 (25.88)	448.34 (27.28)
Education	23.15 (3.62)	23.95 (3.54)	31.21 (3.97)	42.41 (4.65)	47.31 (4.50)	33.61 (4.14)	32.38	20.01	6.95*	27.00 (3.62)	30.18 (3.54)	40.83 (3.97)	60.77 (4.65)	73.87 (4.50)
Health	21.49 (3.36)	22.94 (3.39)	28.97 (3.69)	34.75 (3.81)	36.28 (3.44)	28.89 (3.56)	23.17	14.63	8.11*	25.06 (3.36)	28.91 (3.39)	37.89 (3.69)	49.80 (3.81)	56.64 (3.44)
Choultries	57.92 (9.06)	14.43 (2.14)	14.23 (1.81)	16.80 (1.84)	17.93 (1.70)	24.26 (2.99)	77.82	21.93	-1.48[NS]	67.55 (9.06)	18.18 (2.14)	18.62 (1.81)	24.08 (1.84)	28.00 (1.70)
Vigilance	16.62 (2.60)	18.20 (2.69)	15.65 (1.99)	15.55 (1.70)	19.74 (1.88)	17.15 (2.11)	10.47	1.87	0.57[NS]	19.38 (2.60)	22.93 (2.69)	20.47 (1.99)	22.28 (1.70)	30.82 (1.88)
Kalyanakatta	7.67 (1.20)	10.26 (1.52)	11.14 (1.42)	12.66 (1.39)	15.79 (1.50)	11.50 (1.41)	26.11	16.54	8.81*	8.95 (1.20)	12.93 (1.52)	14.57 (1.42)	18.14 (1.39)	24.66 (1.50)
Garden	10.36 (1.62)	10.21 (1.51)	10.10 (1.29)	11.32 (1.24)	12.93 (1.23)	10.98 (1.35)	10.84	5.46	2.57[NS]	12.08 (1.62)	12.87 (1.51)	13.21 (1.29)	16.23 (1.24)	20.19 (1.23)
Medical	9.26 (1.45)	10.39 (1.54)	13.82 (1.76)	12.52 (1.37)	12.57 (1.19)	11.71 (1.44)	15.74	7.98	1.96[NS]	10.81 (1.45)	13.10 (1.54)	18.08 (1.76)	17.94 (1.37)	19.62 (1.19)
Press	6.62 (1.04)	5.64 (0.83)	6.46 (0.82)	9.82 (1.08)	13.77 (1.30)	8.46 (1.04)	39.81	20.19	3.02[NS]	7.72 (1.04)	7.11 (0.83)	8.45 (0.82)	14.08 (1.08)	21.50 (1.30)
Canteen	11.64 (1.82)	6.98 (1.03)	6.36 (0.81)	7.56 (0.83)	8.59 (0.82)	8.23 (1.01)	25.26	-5.28	-0.80[NS]	13.58 (1.82)	8.80 (1.03)	8.32 (0.81)	10.84 (0.83)	13.41 (0.82)
Editor	4.64 (0.73)	6.21 (0.92)	7.92 (1.01)	11.51 (1.26)	11.32 (1.08)	8.32 (1.02)	36.72	24.01	6.45*	5.41 (0.73)	7.83 (0.92)	10.36 (1.01)	16.50 (1.26)	17.67 (1.08)
Forest	5.41 (0.85)	6.50 ('0.96)	10.54 (1.34)	6.41 (0.70)	6.62 (0.63)	7.10 (0.87)	27.97	3.90	0.32[NS]	6.31 (0.85)	8.19 ('0.96)	13.79 (1.34)	9.19 (0.70)	10.33 (0.63)
Information	19.52 (3.05)	4.12 (0.61)	4.47 (0.57)	4.70 (0.52)	5.57 (0.53)	7.68 (0.94)	86.54	-23.76	-1.48[NS]	22.77 (3.05)	5.19 (0.61)	5.85 (0.57)	6.73 (0.52)	8.69 (0.53)
SV Gosamrakshanasala	3.27 (0.50)	5.09 (0.75)	5.35 (0.68)	5.32 (0.58)	8.53 (0.81)	5.51 (0.68)	34.39	19.62	3.50**	3.81 (0.50)	6.41 (0.75)	7.00 (0.68)	7.63 (0.58)	13.32 (0.81)
Museum	0.68 (0.11)	0.71 (0.11)	0.76 (0.10)	0.87 (0.10)	0.77 (0.07)	0.76 (0.09)	9.58	4.52	1.90[NS]	0.79 (0.11)	0.89 (0.11)	0.99 (0.10)	1.25 (0.10)	1.21 (0.07)
Panchayat	0.36 (0.06)	0.44 (0.07)	0.56 (0.07)	1.20 (0.13)	0.65 (0.06)	0.64 (0.08)	51.57	21.85	1.44[NS]	0.42 (0.06)	0.56 (0.07)	0.73 (0.07)	1.72 (0.13)	1.02 (0.06)
Revenue	0.27 (0.04)	0.33 (0.05)	0.26 (0.03)	0.30 (0.03)	0.38 (0.04)	0.31 (0.04)	15.81	5.88	1.35[NS]	0.31 (0.04)	0.41 (0.05)	0.34 (0.03)	0.43 (0.03)	0.60 (0.04)

Notes : Figures in parentheses indicate the percentage to total at 5 per cent level　　　NS : Not significant　　　*Indicates significant at one per cent level　　　** Indicates significant

Source: As in Table 1

Table 8: Surplus of the TTD during 2007-12 (Rs. crore)

Year	Income		Expenditure		Surplus		% of change (col 6) over Previous Year
	Constant Prices	Current Prices	Constant Prices	Current Prices	Constant Prices	Current Prices	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2007-08	1196.15	1395.07	639.53	745.88	556.62	649.19	-
2008-09	1069.53	1347.82	675.78	851.62	393.75	496.20	-29.26
2009-10	1325.75	1734.22	785.45	1027.45	540.30	706.77	37.22
2010-11	1350.54	1935.60	912.58	1307.91	437.96	627.69	-18.94
2011-12	1443.69	2254.03	1052.50	1643.27	391.19	610.76	-10.68

Source: As in Table 1

V. Conclusion:

The expenditure of the TTD, in terms of constant prices, had increased gradually from Rs.639.53 crores during 2007-08 to Rs.1052.50 crores during 2011-12, recording a CGR of 12.97 per cent, which is significant at one per cent level. In the total expenditure of the TTD, the revenue expenditure constitutes 74.78 per cent and the remaining, capital expenditure. In the total expenditure of the TTD, temple expenditure accounted for 21.56 per cent and the rest, non-temple related expenditure. The religious expenditure accounted for 28.67 per cent of the total expenditure of the TTD and the remaining, non-religious expenditure. The share of pilgrim expenditure formed 47.72 per cent in the total expenditure of the TTD and the rest, non-pilgrim related expenditure. Among the head-wise expenditure of the TTD, engineering division ranked first while service department for temples last. Of all the departments of the TTD, the engineering department ranked first while revenue last. Three departments, namely, engineering, general

administration and temples accounted for 77.23 per cent of the total expenditure of the TTD. In the entire study period, income surpassed expenditure and thus resulted in surplus.

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Communication

Non-Performing Assets of North Malabar Gramin Bank

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Abstract

North MalabarGramin Bank (NMGB) has been playing a dominant role in the economic development of Kerala. It is functioning in the area covering seven districts viz; Kasargod, Kannur,Wayanad,Ernakulam, Kottayam, Alappuzha and Kollam. Its functions spread over both urban and rural areas. NMGB ensures accelerated growth in the rural development. However, the bank faces the problems of overdue. Since 1995, banks in India have made provisions for NPA in order to avoid heavy burden in future. The private banks and new generation banks provide diversified banking facilities and other value added services to its customers. It poses a threat to regional rural banks. This study makes an attempt to analyse the volume and intensity of Non Performing Assets (NPAs) and the impact it has on the profitability of North Malabar Gramin Bank.

Keywords: *Non Performing Assets, Gross Non Performing Assets, Provisions, Net Non-Performing Assets.*

I. Introduction

North Malabar GraminBank (NMGB), established as per Regional Rural Bank's Act 1976 and sponsored by Syndicate bank, started functioning on 12th December 1976 with Kannur as its head quarters. The paid up capital of the bank was Rs.100lakhs, contributed by the Government of India, Syndicate bank and the Government of Kerala in the ratio of 50:35:15 respectively.In the course of 30 years of existence, NMGB had established itself as a fundamentally strong and financially viable Regional Rural Bank in the country. The bank had222 branches (as on 14th June, 2013) spread over seven districts of Kerala viz;Kasargod, Kannur, Wayanad, Ernakulam, Kottayam, Alappuzha and Kollam districts. The bank was in the forefront in implementing poverty alleviation programmes and its lending activities focused on priority sector advances. The bank also participates actively in the flagship programmes of the Government of India and Government of Kerala**.**As per Government of India notification dated 08.07.2013, amalgamation of South Malabar Gramin Bank (sponsored

by Canara Bank) and North Malabar Gramin Bank have been effected into a single entity as Kerala Gramin Bank (KGB) with its head office at Malappuram in Kerala. Kerala Gramin Bank (KGB) is a Regional Rural Bank (RRB) formed on 8th July/2013, under the Sub-Section (1) of Section 3 of the RRB Act 1976 (27 of 1976). Kerala Gramin Bank is the largest Regional Rural Bank in the country with a total business of above 15,000 crore and a network of 505 branches spread all over Kerala. It is having dominant presence in all the 14 districts of Kerala State and is the only RRB in the State.

NMGB ensures accelerated growth in the rural development. However, the bank faces the problems of overdue. Since 1995, banks in India have made provisions for NPA in order to avoid heavy burden in future. The private banks and new generation banks provide diversified banking facilities and other value added services to its customers. This also poses threat to regional rural banks. This study makes an attempt to analyse the volume and intensity of Non-Performing

Assets (NPAs) and the impact it has on the profitability of North Malabar Gramin Bank.

An asset becomes non performing when it ceases to generate income for the bank as per the terms of contract. A non performing asset is defined as a credit facility in respect of which interest/ installment remains 'past due' for a period of two quarters, from the year ending March 31, 1995 onwards. Any amount due to the bank under any credit facility such as term loans, cash credit, overdrafts, bills discounted etc is to be treated as 'past due' when it remains outstanding for 30 days beyond the date. Credit facilities backed by central and state government guarantees need not be treated as non-performing assets (Sundararaman, 2008).

II.Objectives and Methodology

The study aims to analyse the volume and intensity of non-performing assets and its impact on the profitability of NMGB. It is a case study as the study is being confined only to NMGB. Only secondary data have been used for this study. Secondary data were collected from the annual reports of North Malabar Gramin Bank. The study is conducted for a period of eight years from 2004-05 to 2011-12. Mathematical tools like percentage and average are used for the analysis and interpretation of data.

III. Data Analysis and Results

In order to analyse the volume and intensity of non-performing assets of NMGB, Gross Non Performing Assets Ratio (GNPAR), Net Non Performing Assets Ratio (NNPAR), Gross Problem Assets Ratio (GPAR), Net Problem Assets Ratio (NPAR), Depositors Safety Ratio (DSR), Shareholders Risk Ratio (SRR), Provisions Ratio (PR), Sub Standard Assets Ratio, Doubtful Assets Ratio and Slippage Ratioarecomputed. To assess the impact of non performing assets on the profitability of NMGB,

Return on Total Assets (ROTA) before and after provisions for NPA is analysed.

III (A).Gross Non Performing Assets Ratio (GNPAR)

NPA arises from the overdue of loans and advances. Performance of a bank is evaluated on the basis of the optimum utilization of loans and advances. GNPAR is defined as the ratio of Gross NPAs to total advances.As per Table 1, GNPARof NMGB shows a declining trend till 2007-08.It is a favourable trend. It means that NMGB could reduce gross NPA from the period 2004-05 to 2007-08. But from the period 2008-09 to 2011-12, it shows an increasing trend except slight decrease in 2009-10. This shows that NMGB could not follow effectively the norms regarding recovery of NPA. However, the average GNPARis 2.9 per cent whereas the international ratio is 5.0 per cent(Suresh, 2013).The low GNPAR of NMGB indicates high quality of credit portfolio.

III (B). Net Non Performing Assets Ratio (NNPAR)

NNPAR is defined as the ratio of Net NPAs to total advances.The average NNPR of NMGB is 1.8 percent (Table 1). The international ratio is 2.5 per cent(Suresh, 2013).The NNPAR of NMGB is below the international standard indicating high quality of the credit portfolio.

III (C). Gross Problem Assets Ratio (GPAR)

GPAR is the ratio of GNPAs to total assets of the bank.As per table 2,GPAR of NMGB shows a declining trend till 2007-08. This indicates that NMGB could reduce gross NPAs from the period 2004-05 to 2007-08. But, from the period 2008-09 to 2011-12,this ratioshows an increasing trend which means that NMGB could not follow the norms effectively in respect of recovery of NPA during these periods. However, the average GPAR is 2.0 percent.The standard GPAR ratio is 2.0 per cent and less(Suresh, 2013). Hence,

Table 1: GNPAR and NNPAR of NMGB

Year	Gross NPAs (Rs. in crores)	Net NPAs (Rs. in crores)	Total Advances (Rs. in crores)	GNPAR (%)	NNPAR(%)
2004-05	31.6	19.6	711.6	4.4	2.8
2005-06	27.9	15.8	906.5	3.1	1.7
2006-07	23.1	10.8	1147.9	2.0	0.9
2007-08	23.8	10.7	1405.9	1.7	0.8
2008-09	45.9	29.8	1605.5	2.9	1.9
2009-10	54.0	34.4	2025.1	2.7	1.7
2010-11	77.3	50.3	2457.2	3.1	2.0
2011-12	99.1	64.6	2880.3	3.4	2,2
Average	47.8	29.5	1642.5	2.9	1.8

Source: Annual Reports of NMGB

GPAR of NMGB is favourable and confirms liquidity of the bank.

III (D). Net Problem Assets Ratio (NPAR)

NPAR of NMGBshows a declining trend till 2007-08.It shows that NMGB could reduce net NPA from the period 2004-05 to 2007-08. But, from the period 2008-09 to 2011-12, it shows an increasing trend. This points out that the norms are not strictly followed by NMGB regarding recovery of NPA. The average NPAR is 1.2 percent (Table 2). It also indicates liquidity.

Table 2: GPAR and NPAR of NMGB

Year	Gross NPA (Rs. in crores)	Net NPA (Rs. in crores)	Total Assets (Rs. in crores)	GPAR(%)	NPAR(%)
2004-05	31.6	19.6	1002.3	3.2	2.0
2005-06	27.9	15.8	1250.3	2.2	1.3
2006-07	23.1	10.8	1566.0	1.5	0.7
2007-08	23.8	10.7	1999.9	1.2	0.5
2008-09	45.9	29.8	2485.3	1.8	1.2
2009-10	54.0	34.4	2991.3	1.8	1.2
2010-11	77.3	50.3	3613.5	2.1	1.4
2011-12	99.1	64.6	4144.3	2.4	1.6
Average	47.8	29.5	2381.6	2.0	1.2

Source: Annual Reports of NMGB

III (E). Depositors Safety Ratio (DSR)

DSR is the ratio of standard assets to outside liabilities. In this study standard assets mean total advances minus gross non performing assets. Outside liabilities are total liabilities minus shareholders' funds (ie.,share capital plus reserves). As per table 3, DSR of NMGB shows a mixed trend. First it increased till the period 2006-07, and then it showed a decreasing trend in the subsequent two years. Again it started to increase till the end of the study period. The average DSR of NMGB is 73.1 per cent. The standard DSR is above 80.0 per cent(Suresh, 2013). This ratio indicates the degree of safety of the deposits. As this ratio is less than the standard, the safety of the deposit is not strong.

Table 3: Depositors Safety Ratio (DSR) of NMGB

Year	Std Assets (Rs. in crores)	Outside Liabilities (Rs. in crores)	DSR(%)
2004-05	680.0	888.0	76.6
2005-06	878.6	1126.6	78.0
2006-07	1124.8	1423.5	79.0
2007-08	1382.1	1847.9	74.8
2008-09	1559.6	2328.7	67.0
2009-10	1971.1	2823.9	69.8
2010-11	2379.9	3432.9	69.3
2011-12	2781.2	3941.2	70.6
Average	1594.7	2226.6	73.1

Source: Annual Reports of NMGB

Table 4: Shareholders Risk Ratio (SRR) of NMGB

Year	NNPA (Rs. in crores)	SF (Rs. in crores)	SRR(%)
2004-05	19.6	114.3	17.2
2005-06	15.8	123.8	12.8
2006-07	10.8	142.5	7.6
2007-08	10.7	152.0	7.0
2008-09	29.8	156.6	19.0
2009-10	34.4	167.4	20.5
2010-11	50.3	180.7	27.8
2011-12	64.6	203.1	31.8
Average	29.5	155.0	18.0

Source: Annual Reports of NMGB

III (F). Shareholders Risk Ratio (SRR)

SRR is the ratio of net non performing assets to shareholders funds of the bank. SRR of NMGB shows a decreasing trend till the period 2007-08 and then it shows an increasing trend till 2011-12. This ratio indicates the degree of risks associated with the shareholders funds. Hence, the degree of risks of shareholders is higher in the last four years than the previous periods. The average SRR of NMGB is 18.0 per cent (Table 4). As the ideal SRR is less than cent per cent(Suresh, 2013),SRR of NMGB is far better and less risky.

III (G). Provisions Ratio (PR)

PR is the ratio of total provisions against NPAs to the Gross Non Performing Assets of the bank. As per Table 5, PR of NMGB shows an increasing trend till the period 2007-08, and then it shows a decreasing trend except in the period 2009-10. PR indicates the safety measures adopted by the bank. The upward movement of the provisions in the first four years indicatesthat NMGB has made more provisions for the probable advance losses in the first four years, while less provision has been made in the subsequent periods. The average PR of NGB is 41.3 per cent. The

Table 5: PR and SSAR of NMGB

Year	GNPA (Rs. in crores)	Provisions (Rs. in crores)	Sub Std Assets (Rs. in crores)	PR (%)	SSAR (%)
2004-05	31.6	12.0	6.3	38.0	19.9
2005-06	27.9	12.1	7.1	43.4	25.4
2006-07	23.1	12.3	4.3	53.2	18.6
2007-08	23.8	13.1	5.5	55.0	23.1
2008-09	45.9	16.1	18.6	35.1	40.5
2009-10	54.0	19.6	21.0	36.3	38.9
2010-11	77.3	27.0	38.3	34.9	49.5
2011-12	99.1	34.5	41.1	34.8	41.5
Average	47.8	18.3	17.8	41.3	32.2

Source: Annual Reports of NMGB

standard PR is 60.0 per cent and above(Suresh, 2013).It indicates that NMGB is not adopting adequate measures for the future advance losses.

III (H). Sub Standard Assets Ratio (SSAR)

SSAR is the ratio of total Sub Standard Assets to Gross Non Performing Assets of the bank. SSAR of NMGB shows a mixed trend. This ratio indicates the upgradation of the non performing assets. The average SSAR of NMGB is 32.2 per cent (Table 5). The ideal SSAR is 35.0 per cent

and less(Suresh, 2013).It indicates that there is much upgradation of thenon performing assets of the bank.

III (I). Doubtful Assets Ratio (DAR)

DAR is the ratio of Doubtful Assets to Gross Non Performing Assets of the bank. As per table 6, DAR of NMGB shows a decreasing trend in the first four years and then it shows a mixed trend. This ratio indicates the scope of compromise for the non performing assets reduction. The average

Table 6: Doubtful Assets Ratio (DAR) of NMGB

Year	GNPA (Rs. in crores)	Doubtful Assets (Rs. in crores)	DAR(%)
2004-05	31.6	13.3	42.1
2005-06	27.9	8.7	31.2
2006-07	23.1	6.5	28.1
2007-08	23.8	5.2	21.8
2008-09	45.9	11.2	24.4
2009-10	54.0	13.4	24.8
2010-11	77.3	12.0	15.5
2011-12	99.1	23.5	23.7
Average	47.8	11.7	26.5

Source: Annual Reports of NMGB

DAR of NMGB is 26.5 per cent.The standard DAR is 60.0 per cent and less(Suresh, 2013). It indicates that management of non performing assets of NMGB is good.

III (J). Slippage Ratio (SR)

SR is the ratio of total fresh non performing assets added to the total standard loan assets in the beginning of the year. SR of NMGB also shows **Table 7: Slippage Ratio of NMGB**

Year	NPA Beginning (Rs.in crores)	AdditionsAmount (Rs.in crores)	SR(%)
2004-05	57.7	7.0	12.1
2005-06	31.6	8.0	25.3
2006-07	27.9	4.7	16.8
2007-08	23.1	6.2	26.8
2008-09	23.8	141.8	595.8
2009-10	45.9	26.5	57.7
2010-11	54.0	43.3	80.2
2011-12	77.3	47.3	61.2
Average	42.7	35.6	109.5

Source: Annual Reports of NMGB

a mixed trend; moreover it is very high in the period 2008-09. It indicates that NMGB has not taken effective preventive measures during this period. The average SR of NMGB is about 110.0 per cent. This is due to a very high addition in the period 2008-09. The ideal slippage ratio is less than 5.0 per cent(Suresh, 2013).High slippage ratio shows that immediate measures have been taken from the part of NMGB to reduce NPAs.

III (K). ROTA Before and after Provisions for NPA

It is no doubt that the profit of the bank varies with the amount of provisions held in respect of NPAs. In table 8, Return on Total Assets (ROTA) before and after provisions for NPA is given. On an average, NMGB would be in a position to double the ROTA, if the bank avoids provisions.

Table 8: ROTA Before and after Provisions for NPA (in percentage)

Year	ROTA (before provisions)	ROTA (after provisions)
2004-05	2.9	1.7
2005-06	1.7	0.8
2006-07	1.9	1.1
2007-08	1.2	0.5
2008-09	0.8	0.2
2009-10	1.1	0.4
2010-11	1.4	0.4
2011-12	1.6	0.5
Average	1.6	0.7

Source: Annual Reports of NMGB

IV. Conclusion

In the era of new generation banks, severe competition in the marketing segment, especially in the areas of diversification of banking functions and other value added services, is the threat of each and every bank. Accelerated growth of profit and the improvement in the overall performance of the bank are challenging. Non-performing assets directly affect the overall performance of the bank. In this situation, NMGB must be in a position to improve its performance by minimising the problems of NPAs.

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Abstract of Doctoral Dissertation[1]

Total Quality Management
in Higher Secondary School Education in Kerala

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I. Introduction

Education is one of the most crucial factors in empowering people with skill and knowledge and in giving them access to productive employment in the future and the quality of education is absolutely essential for the steady progress of a nation. Educational quality in every stage is thus a serious concern all over the world. This becomes all the more important in the age of globalization which ensures that only the fittest can survive. The changing global scenario and resultant major changes have had their implications in all sectors. The field of education is no exception to this. Therefore, it is inevitable to provide quality education and equip the learner with the ability to face the growing challenges of this complex world. The Education Commission, while describing the role of education in the social and economic transformation of India, has commented that the destiny of India is now being shaped in her classrooms. As per the Human Development Index[2] (HDI) of UNDP, 2011, India ranks 134th with HDI value of 0.547, while the HDI value of the world in the same period is 0.682. This means, India stands behind 133 countries of the world, in terms of HDI value and is grouped among the countries with medium human development. In 1980 the HDI was 0.344 and it is reported to have an average annual growth rate of 1.56 from 2000 to 2011. India's Education Index[3] was 0.232 in 1980 which has improved to 0.450 in 2011. Within India, when different states are compared, there is quite a disparity in the progress of education. Kerala stands miles ahead of the other states of India, in terms of, a number of important social development indicators, education being one among them. Kerala has attained this growth in education, not in a short period of time, but through the enlightened efforts of the rulers, from the very early times and the intellectual pursuit of the people, spread through several centuries. This trend continues even today, as is evident from the initiatives of the government and other educational agencies, which are in a relentless pursuit of improving the quality of education, and

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[1] The thesis was submitted to Mahatma Gandhi University, Kottayam, Kerala, India, in April 2013 for the award of Ph.D Degree and awarded in January 2014. The work was done under the supervision of Dr. Joy Joseph Puthussery, Principal, Bharat Mata College, Thrikkakara, Ernakulam, Kerala, India.

[2] Human Development Index (HDI) is a composite index, measuring average achievement in three basic dimensions of human development – like a long and healthy life, knowledge and a decent standard of living.

[3] Education Index, refers to the mean years of schooling, which is the average number of years of education, received by people aged 25 and older, converted from education attainment levels, using official durations of each level.

have been churning out quality improvement programmes and schemes.

The initiation of technology in various functions of the education department like payroll management through 'Service and Payroll Administrative Repository for Kerala' (SPARK) programme, common admission, via, 'Centralised Allotment Process for Higher Secondary Courses' (HSCAP), are contributing factors to the up gradation of quality in the educational department in Kerala. The National Education Policies and schemes, sponsored by the Union Government, such as Minimum Levels of Learning (MLL), Universalisation of Elementary Education (UEE), District Primary Education Programme (DPEP), Sarva Shiksha Abhiyan (SSA) and Rashtriya Madhyamik Shiksha Abhiyan (RMSA), are all quality up gradation efforts of the government, which are expected to have remarkable impact on school education in the state. Improvements have also been introduced in the curriculum, through the introduction of continuous and comprehensive internal evaluation of students together, with the learner centered and activity oriented teaching methodology that intends to ensure better academic performance of students. The activity based, process oriented and learner centered pedagogy has been introduced in the schools from the 1st standard onwards and it was continued in the higher secondary classes from the year 2005. The teachers have been equipped to handle the new methodology of teaching and learning. Clusters are formed as quality circles to pave way for serious academic deliberations and interactions among teachers. All these quality improvement initiatives could be brought under the broad spectrum of Total Quality Management (TQM). Nomenclature may be different, but the intention is nevertheless the same, which is, to satisfy the customers of education by constantly and continuously improving educational service, through the whole hearted efforts of everybody

involved in the process. This is absolutely the true essence of total quality management.

II. Statement of the Problem

Of lately, the quality of education in Kerala is on the downhill of progress. However, quantity-wise the progress is astounding, as evidenced through the study reports of NCERT and such other agencies and individual research endeavors. This is further confirmed through the surveys conducted by voluntary agencies like Kerala Sasthra Sahitya Parishat. Parents and people in general are not satisfied with achievements made by government run schools and private aided schools. This is one of the reasons for the flight of students in search of quality to other schools and for the increasing number of uneconomic schools. The above scenario called for a drastic change in each of the components of the system of higher secondary education, starting from the administration, right down to the individual schools. It is in this back ground, that the applications of the concepts of TQM in education are being experimented on a large scale in Kerala. The government has been taking initiatives for imparting training and education to teachers for imbibing the philosophy of TQM into them; significant changes were made in the curriculum and in the administration of the education system. Massive efforts are also being taken with respect to building infrastructure facilities. In 2004, following the "Total Quality", envisaged by the educational authorities, a vision-mission statement was developed in a Training Need Analysis (TNA) workshop and ever since it has been used in all official documents. The vision envisages a central agency of the state government to promote all round excellence in higher secondary education, by establishing appropriate philosophies, adequate institutional network, effective administrative systems, and well qualified, competent and motivated staff necessary to carry out academic and administrative responsibilities. The mission

provides to serve as a professional institution in formulating and maintaining the standards of higher secondary education and in providing need-based, time-bound, effective and sustainable services to the students and teachers. Curriculum envisages the teachers to do lesson planning for achieving the curriculum objectives, and this is considered vital for delivering quality education within the available time span. However, it is alleged that only a few teachers engage themselves in the process of planning for classroom transactions and in its implementation. Another area of quality initiative introduced was in the method of evaluating students. The continuous and comprehensive evaluation of the learning process is introduced by applying activity oriented; student centered learning and evaluation strategies. There have been apprehensions among the teaching community with regard to the effectiveness of such quality initiatives and the negative impact it might have on their workload. The total quality encompassing involvement of everybody concerned, is met by building teams, which function like 'quality circles', popularly called as *'clusters',* where periodical academic deliberations and training are provided. It is desired that the teachers would actively participate in such endeavors. Observations throw light on the facts which are contrary to what is desired. It is doubtful that the agenda of quality improvement efforts in the higher secondary education in Kerala has struck with some amount of disapproval and reluctance to change from the part of the teachers and related authorities. Therefore, it is highly inevitable to evaluate the quality improvement initiatives of the government, leading to the successful implementation of TQM process in the higher secondary school education in Kerala.

III. Objectives of the Study

The study has been designed with the following objectives in view;

1. Assess the continuous improvement in teaching, teachers, evaluation and infrastructure, as part of application of TQM in higher secondary school education in Kerala.

2. Examine the team work among teachers, as part of application of TQM in higher secondary school education in Kerala.

3. Examine the customer satisfaction attained, as part of application of TQM in higher secondary school education in Kerala.

4. Identify the problems in the implementation of TQM in the higher secondary school education in Kerala.

IV. Hypotheses

Based on the above objectives, the following hypotheses were formulated for the study.

1. The overall continuous improvement achieved, as part of application of TQM in higher secondary school education in Kerala, is moderate.

2. The continuous improvement in teaching, teachers, evaluation and infrastructure, as part of application of TQM in higher secondary school education in Kerala, is the same, irrespective of, the type of ownership of the schools, location of the schools and subject taught.

3. The overall team work achieved among teachers, as part of application of TQM in higher secondary school education in Kerala, is moderate.

4. The opinion of the teachers with regard to overall teamwork, as part of application of TQM in higher secondary school education in Kerala, is the same, irrespective of, the type of ownership of schools, location of schools and subject taught.

5. The overall satisfaction level of teachers and students achieved, as part of application of TQM in the higher secondary school education in Kerala, is moderate.

6. The overall satisfaction of teachers in higher secondary school education in Kerala is the same, irrespective of, the type of ownership and location of schools.

V. Methodology

The study is descriptive in nature examining the application of TQM in higher secondary school education in Kerala. It is concentrated on the three important tenets of total quality management namely; continuous improvement, teamwork and customer satisfaction, and the opinion on these three tenets were elicited from the respondents, selected as sample.

V. (A) Sample Design

The population of the study comprises of, the teachers, students and parents belonging to the government, aided and unaided higher secondary schools coming under the Directorate of Higher Secondary Education in Kerala. There were 760 government higher secondary schools, 686 aided and 461 unaided higher secondary schools in the state in the year 2010-11 totaling to 1907 higher secondary schools in all. From the total number of schools in the state, about 1.5 per cent (30) schools were selected for the sample through a multi-stage sampling process. Schools were included in the sample proportionately from, government, aided and unaided sector. Thus, 13 schools were included from government, 11 from aided and 6 from unaided higher secondary schools. For getting a complete representation of the state (14 districts in all), it is divided into three zones, northern, southern and central. From each of these zones a district was selected and from each district government, aided and unaided

higher secondary schools were selected proportionally. Thus altogether 10 schools were selected from each district. From each of the school selected, 10 teachers, 10 students, 10 parents were selected. Thus data were collected from 300 teachers, 300 students and 300 parents. The teachers who are having minimum five years experience and the students of the plus two classes and one parent of each student selected are included in the purview of the study.

V. (B) Tools of Analysis

The opinion of the teachers, students and parents were collected using a pre-tested structured survey schedule and marked on a five point Likert-type scale. Percentage analysis and descriptive statistics were computed for identifying the nature of the data. The hypotheses are tested using Z test, one sample t test, one way analysis of variance (ANOVA) along with least significant difference test for comparison between more than two groups and independent t test for comparing between two groups and also correlation. The level of significance was fixed at 5 per cent. In order to identify the dimensions of the problems faced by the teachers in the implementation of new curriculum, factor analysis on a set of thirty six statements with the Principal Component Analysis as an extraction method and Varimax as Rotation method with Kaiser Normalization was performed. Bartlett's Test of Sphericity and KMO measure of Sampling Adequacy were performed to confirm the suitability of the data for factor analysis.

VI. Organization of the Report

The thesis is organized under eight chapters. The first chapter provides an introduction to the study. It includes a review of the literature, in the order of relevance to the present study and the research design. The second chapter describes the concept of quality with special emphasis on the quality of service especially education and the concept of

total quality management and its application in the field of education. The third chapter unveils the history of school education in Kerala and evolution of higher secondary school education and also discusses the educational programmes of quality up gradation. The fourth chapter deals with the assessment of continuous improvement in teacher, teaching, evaluation and infrastructure. The fifth chapter examines the teamwork among teachers at school resource group level and at cluster level and also the overall teamwork among teachers in higher secondary school education in Kerala. The sixth chapter examines the level of customer satisfaction, in the higher secondary school education, taking into account the satisfaction of teachers, students and parents. The seventh chapter deals with the identification of the problems of implementation of total quality management. The eighth chapter presents the major findings, suggestions and conclusion.

VII. Major Findings of the Study

The major findings of the study from each area are summarized below in four heads.

VII. (A) Continuous Improvement

Continuous improvement is assessed in four pertinent aspects of higher secondary school education such as Continuous Improvement in Teaching, Continuous Improvement in Teachers, Continuous Improvement in Evaluation and Continuous Improvement in Infrastructure.

1. Continuous Improvement in Teaching

Continuous improvement in teaching is the systematic process of planning for class room transactions, implementing, evaluating and re-implementing these plans, continuously, for the purpose of attaining higher level of efficiency and customer satisfaction. The percentage score of continuous improvement in teaching as part of total quality management is 78.69. Continuous improvement in teaching is found to be the same

in government, aided and unaided higher secondary schools (p value 0.611). Similarly, continuous improvement in teaching is the same among the teachers handling different subjects (p value 0.389).

2. Continuous Improvement in Teachers

Continuous improvement in teachers is the improvement attained by the teachers, by attending the faculty development programmes, conducted by the Directorate of Higher Secondary Education and SCERT. The opinion of the teachers about the training sessions is the basis for assessing continuous improvement achieved by them through these faculty development programmes.The percentage score of 'continuous improvement in teachers' is at 72.82. The study found that 'continuous improvement in teachers' is the same among government, aided and unaided higher secondary school teachers (p value 0.388), among male and female teachers (p value 0.062), teachers of different age groups (p value 0.135) and those teaching different subjects (p value 0.524).

3. Continuous improvement in Evaluation

'Continuous improvement in evaluation' is an assessment of the extent to which students in the higher secondary school education are subjected to continuous and comprehensive internal evaluation as part of the teaching-learning process and continuous improvement in the conduct of practical and terminal evaluation. The percentage score of overall continuous improvement in evaluation is 69.02.There is lesser continuous improvement in 'continuous and comprehensive internal evaluation', than the other two types of evaluation. It means this new method of evaluation, introduced as part of quality improvement, is yet to be carried out as envisaged. It can be understood that teacher centeredness still prevail to a certain extent in the classrooms, and that, it has to work on, for being more activity oriented. Out of the three sets of evaluation assessed, 'continuous and

comprehensive internal evaluation', has got much importance in determining, the extent of 'continuous improvement in evaluation', from the perspective of total quality management. This is because; it is this mechanism which ensures that the output, i.e., the students, is of the desired quality.

There are striking differences in the conduct of 'continuous and comprehensive internal evaluation', by the teachers of different types of schools on the basis of ownership; it is done on a higher scale by the government school teachers when compared to the unaided school teachers (p value 0.044). The findings of factor analysis on the 'problem of continuous internal evaluation', also affirmatively shows that, this problem is more for the unaided school teachers than aided and government school teachers (p value 0.015). The difference in the conduct of 'continuous and comprehensive internal evaluation' (C.E) is highly significant among teachers, teaching Science (mean 31.84) and other subjects. The conduct of C.E is more among Language (mean 38.71), Humanities (mean 35.29) and Commerce (mean 34.83) teachers, than among Science teachers (p value less than 0.001). The 'problem of vast syllabus', studied through factor analysis is also more in the case of Science subjects when compared to Languages (p value less than 0.001), which acts as a major constraint in the implementation of continuous and comprehensive internal evaluation process in the case of Science subjects.

4.Continuous Improvement in Infrastructure

'Continuous improvement in infrastructure' is an assessment of the incremental changes brought about in the infrastructure of the school, comprising of buildings (classrooms, staffrooms, and toilets), common space, laboratories, playground, library and water including drinking water, electricity supply, computer and other technology. The study found that the improvement in 'infrastructure' (percentage score 68.53) is way behind. The 'continuous improvement in infrastructure' in government schools is inferior to aided and unaided schools. It is specifically noted that the difference between government, aided and unaided higher secondary schools lies only in the differences in continuous improvement in 'infrastructure' and not in 'teaching', 'teachers' or 'evaluation'.

5. Overall Continuous Improvement

The 'overall continuous improvement' achieved as part of application of TQM in higher secondary school education in Kerala is above moderate. 'Overall continuous improvement' is the same in government, aided and unaided schools and in urban and rural higher secondary schools in Kerala.

VII. (B) Team work

Team work among teachers, as part of application of TQM in higher secondary school education in Kerala, has been examined under two levels, at the school resource group level and at the 'cluster' level. The 'overall teamwork', comprising of teamwork at school resource group level and team work at cluster level, achieved among teachers as part of application of TQM in higher secondary school education in Kerala, is moderate. The opinion about 'overall teamwork' in the higher secondary school education in Kerala is the same among government, aided and unaided school teachers. The teachers of different subjects may be having difference of opinion on teamwork, because 'clusters' or teams are formed based on subjects. It is interesting to note that although teachers cluster together based on the subject, every cluster group, irrespective of the subject they represent, have the same opinion with regard to 'overall teamwork'.

VII. (C) Customer Satisfaction

1. Satisfaction of Teachers

The 'overall satisfaction' of teachers is assessed and found to be above moderate. It is found that the teachers of aided schools are more satisfied than government school teachers and unaided school teachers. The unaided school teachers are lesser satisfied about the service aspects of their job like compensation and attitude of management than with the infrastructural facilities. The government school teachers show lesser satisfaction than aided school teachers on infrastructural facilities and the reason for the government school teachers to have lesser 'overall satisfaction' than the aided school teachers lies in the inadequacies of infrastructure rather than service related matters.

2. Satisfaction of the Students

The study found that the overall satisfaction of the students is above moderate. The study found that, the satisfaction level of aided and unaided school students is significantly higher than that of students of government schools and the reason for the differences in satisfaction is not due to the differences in the satisfaction level about 'teachers and their attitude' or 'conduct of examinations' but only on the inadequacy of infrastructure. The overall satisfaction on infrastructure is significantly lesser for students in co-educational schools than the students in boys only schools and students in girls only schools. It is also important to note that the students of boys only schools are lesser satisfied than girls only and co-educational schools in the matter of 'teachers and their attitude'.

3. Satisfaction of Parents

The satisfaction of parents of the students of higher secondary schools are assessed using different variables like 'infrastructure', 'teachers and their attitude', 'attitude of the principal' and 'other supporting system', which comprises of aspects like conduct of parent-teacher meetings, teacher-student ratio, number of working days in a year, permanency of faculty, selection of teachers, counseling for students and parents, career guidance, academic achievement of the school, and importance given to co-curricular and co-academic activities. The study found that the overall satisfaction of parents of students of the higher secondary schools in Kerala is above moderate. It is interesting to note that the difference in the satisfaction level of parents of government school students is not due to inadequacies of satisfaction in 'teachers and their attitude', 'attitude of principal' and 'other supporting system' but on a more rectifiable factor, 'the infrastructure'.

VII. (D) Problems in the Implementation of TQM

In order to analyze the collected data and to identify the dimensions of the problems faced by the teachers in the implementation of TQM, factor analysis on the thirty six statements is performed, which has statistically helped to reduce the problems to a significant set of ten factors. The study found that 63.44 per cent of the total variance in the problem is explained by these ten factors. The factors identified are, 'Socio-Economic problem', 'Implementation problem', 'Vast syllabus', 'Problem of Terminal Evaluation', 'Problem of continuous internal evaluation', 'Problems related to lesson planning', 'Problem of working hours', 'Problem of remedial teaching', 'Problem of clusters' and 'Influence of Association'. The least problematic, out of the ten factors, is 'influence of association' in the teachers' work related matters (percentage score 58.3) and 'problems related to lesson planning' (percentage score 58.9). But, the most problematic among them are of 'vast syllabus' (77.1), 'remedial teaching' (77) and 'continuous internal evaluation' (79.1). The 'socio-economic problem' is more severe in the government schools

than in the aided schools but it is the least in the unaided schools. The problem of continuous internal evaluation (percentage score 79.1), is the same for aided and government school teachers but, higher for unaided school teachers. It is found that the problem of vast syllabus is very high for Science, Humanities and Commerce teachers than for the Language teachers. The problem of 'continuous internal evaluation' is more for Commerce teachers than for Language teachers. Science and Commerce teachers have more problem than the Language teachers with respect to 'problem of working hours'.

VIII. Suggestions

The core concept of total quality management stresses on the importance of constantly striving to attain higher levels of improvement and satisfaction. Thus, the extent of continuous improvement achieved in teaching, teachers, evaluation and infrastructure and the levels of satisfaction of the teachers, students and parents attained, should not be considered as the ultimatum, but the education system on the whole, should strive for new heights insatiably. The study has assessed continuous improvement, team work and customer satisfaction in the higher secondary school education in Kerala and has also focused on the problems faced in the implementation of TQM and therefore, has been able to highlight the key areas were concerted efforts could be taken to improve the TQM process. Based on the study the following suggestions are proposed as suitable remedies for attaining higher levels of improvement in the teaching learning process, teamwork and customer satisfaction.

1. Even though continuous improvement in teaching, teachers and evaluation are the same in government, aided and unaided schools, the continuous improvement in infrastructure in the government schools is way behind. Therefore, infrastructural facilities covering, adequately sized classrooms, library, toilets, auditorium, computer labs, technological aids and staffroom, in the government higher secondary schools have to be addressed to, immediately.

2. Most of the problems in the implementation of TQM are associated with the 'problem of vast syllabus' especially in the case of Science, Humanities and Commerce subjects. The syllabus being vast, the teachers, especially, Science teachers, find it difficult in conducting the continuous and comprehensive internal evaluation. Failing to conduct internal evaluation effectively would undermine the quality of education. Therefore, efforts should be taken by the authorities to redesign and reduce the syllabus, suitably.

3. Higher the extent of teamwork, higher is the effectiveness of the 'school resource groups' and 'clusters' of teachers. It is found that the teamwork achieved in the higher secondary school education is moderate. The assessment of the problem of clusters also shows a percentage score of 72.8, which indicate that teamwork through clusters, are not devoid of inefficiencies. The teachers feel that the clusters are not productive; and that school working days are adversely affected due to cluster meetings and they do not participate actively in clusters. Therefore, efforts should be taken to improve the teamwork in the clusters and school resource groups. For this purpose the opinion of the teachers should be obtained, through a feedback mechanism, so that, improvements could be made in the future sessions of clusters. The clusters can also be made more productive by engaging expert resource persons from outside, instead of engaging trained teachers of higher secondary schools, since,

psychologically, resource persons from outside are more acceptable than fellow-teachers. Training provided in the 'clusters' should also be placed in the hands of experts in the field of teaching methodology and management. This would enable the teachers to efficiently implement the changes in the teaching methodology, application of total quality efforts in classrooms and to have better understanding of the philosophy of TQM in education. Teachers should also be provided training and education to refresh their knowledge in their respective subject, in the use of hi-tech teaching aids, and also to deal effectively with adolescent children. The presence of officials from the department is desirable in all clusters, at least in the initial period, or until the teams become self-reliant.

4. The satisfaction of the higher secondary school teachers is above moderate. However, with regard to certain key areas, there is comparatively lesser satisfaction. One such area is the satisfaction on workload which is assessed to reflect a percentage score of 61.2, which is lower when compared to the percentage scores on other aspects like attitude of parents, attitude of students, compensation, attitude of management and principal and relationship with co-workers. Therefore, efforts should be taken to improve the satisfaction of the teachers on workload by reducing the number of working days per week, as the higher secondary school teachers' work for six days a week. This will also help to safeguard and keep up the physical and mental health of teachers as well as students. Adequate supporting staff should be appointed in higher secondary schools and the teachers should be left to concentrate on classroom activities instead of administrative jobs which increase their workload.

5. The problem of 'continuous internal evaluation' is at a percentage score of 79.1 and is the most pertinent problem of the teachers. High teacher-student ratio is one of the factors contributing to this problem. An effective learner centered, activity oriented, teaching methodology is incompatible with high teacher-student ratio. Therefore, the teacher-student ratio should be reduced.

6. The continuous and comprehensive internal evaluation, if not done scientifically, will place no significant difference between students who excel and students who do not and would destroy the whole purpose of the education system. The philosophy of TQM emphasizes on, the need to be self-critical and to involve whole heartedly, so that, there is no need for coercion and control from outside. Therefore, the teachers should take sincere efforts to conduct 'continuous internal evaluation process' as envisaged and inspection of the irregularities in internal evaluation conducted periodically should be dropped from the system in the long run.

7. The socio-economic problem which denotes health problems of parents, alcoholism, use of narcotic drugs by students etc could be solved by providing counseling to both parents and students. The existing system of providing counseling should be made more effective by starting counseling centers in every school. For ensuring privacy to the students seeking help, separate room should also be provided for the purpose of giving counseling.

8. The 'implementation problem' identified through factor analysis is at 69.3 per cent. Implementation problem comprises of the problems like, lack of interest of the students, inability of the students in doing their assignments on their own etc. Most of the

students do not participate actively in such learner centered classrooms, mainly because; they do not know how to involve. Orientation programmes should be given to students by the teachers, for reaping the benefits of student-centered learning. This will enlighten the students about the role they have to play in activity oriented learning and thus enable them to involve more effectively in an activity oriented classroom. In order to improve, on the basic entry quality, classes for updating the basics, in the form of bridge courses should also be given for the students in the beginning of the academic year. The government can also set apart fund for remedial teaching, for the purpose of providing additional remuneration to the teachers, who engage extra hours for remedial teaching.

9.   Quality takes birth is the classrooms; therefore, importance should be given to ensure that TQM is properly applied in the classrooms. The educational authorities, like SCERT, have brought out 'Teacher's Source book' containing models of lessons, prepared by experts. The teachers should be encouraged to make intensive use of the teacher's source book. The source book should be revised and updated.

10. The problem of terminal evaluation is at a percentage score of 68.5. It comprises of, issues about, proper valuation of answer papers and also on the setting of proper question papers. Over importance is given to application level questions in the terminal evaluation and in the case of Language subjects, questions based on the text books are not included, which has in a way adversely affected the basic communication skills of students. Thus, for languages, the traditional system of learning text books should only be supported and not replaced with activity oriented learning.

11. The concepts and application techniques of TQM must be included in the syllabus of B.Ed. programme, a mandatory programme, to become teachers, - 'to catch them young'. This would help in instilling into the teachers the philosophy of total quality management in education.

12. In order to ensure the quality standards, a new hierarchical network of quality managers or facilitators having management qualifications should be appointed at school, district and state level, as vehemently suggested by the Kerala State School Education Commission 2003-04.

IX. Conclusion

The examination of the TQM initiative in higher secondary school education in Kerala could reveal a number of pertinent information about the process of implementation, current scenario of the initiative and the flaws in its implementation process. The results of the study reporting 'above moderate level' of continuous improvement in teaching, teachers, evaluation and infrastructure by ensuring above moderate satisfaction level of teachers, students and parents, about the process, are strong indicators of the efficient implementation of TQM, in higher secondary school education in Kerala. Continuously improving quality of education, based on, vision and revisited mission, to attain and cope-up with changing standards of education world around, are inevitable. Benefits of total quality management could be reaped by efficient implementation of the periodically updated, quality initiatives through the process of effective team work. This would enable the higher secondary school education in Kerala; reap exponential benefits in the long run. By the constant and continuous implementation of the TQM measures, the higher secondary school education in Kerala through government, aided and unaided schools, could reach the heights of national and international standards.

(Footnotes)

[1] The thesis was submitted to Mahatma Gandhi University, Kottayam, Kerala, India, in April 2013 for the award of Ph.D Degree and awarded in January 2014. The work was done under the supervision of Dr. Joy Joseph Puthussery, Principal, Bharat Mata College, Thrikkakara, Ernakulam, Kerala, India.

[2] Human Development Index (HDI) is a composite index, measuring average achievement in three basic dimensions of human development – like a long and healthy life, knowledge and a decent standard of living

[3] Education Index, refers to the mean years of schooling, which is the average number of years of education, received by people aged 25 and older, converted from education attainment levels, using official durations of each level.

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