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CONTRIBUTION OF RURAL NON-FARM INCOME TO TOTAL HOUSEHOLD INCOME: THE CASE OF TIGRAY, NORTHERN ETHIOPIA

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ABSTRACT

By allowing for income diversification, the rural non-farm economy plays a crucial role in supplementing rural farm income and consequently helping for improved livelihoods and poverty reduction. This study is conducted to determine the contribution of rural non-farm income to overall income of rural households in Tigray, northern Ethiopia. Data for the study were gathered from a sample of 2463 rural households using a structured questionnaire undertaken in 2011. We principally used a descriptive method of analysis along with statistical tests of significance as well as the Lorenz Curve and the Gini Coefficient to measure levels of inequality. We found in the study that the contribution of non-farm income amounts to 24% of total income, which is smaller than the African average of 30-50% indicating that more needs to be done towards boosting the rural non-farm economy. Comparing female headed and male-headed households, we found significant difference in favour of male-headed households in terms of land holding size, farm income, non-farm income, and livestock possessions.

KEYWORDS

Tigray, non-farm income, gini coefficient, female-headed households.

1. INTRODUCTION

Rural non-farm activities include all those non-agricultural engagements that generate income to rural households. Non-farm activities help rural households (including the landless) to diversify their sources of income and improve their livelihoods. Also known as rural non-farm economy (RNFE), these activities may include petty trading, construction works, manufacturing works, handicrafts, service provision works, as well as wage employment. The terms off-farm and non-farm may appear to be confusing and sometimes difficult to differentiate. While the former relate to those activities undertaken away from the household's own farm, the latter refer to any non-agricultural activity that can be undertaken on or away from the household's own land (Davis, 2003; Hossain, 2004).

Farm households participate in non-farm activities to supplement their farm income. In many rural areas in Africa, agriculture alone cannot provide sufficient livelihood opportunities. On the other hand, abandoning rural areas in favour of migration to urban areas may not provide the required answer or it may not be a preferred option by policy makers in a bid to limit the worst effects of unplanned urban expansion. The rural non-farm economy can provide part of the answer to dealing with rural poverty and limiting unwanted rural-urban migration. Although agriculture is still the mainstay of the Ethiopia economy, rural non-farm livelihood diversification is believed to improve coping mechanisms of rural households by providing alternative and additional sources of income. Landless rural households, in particular, will largely rely on the non-farm economy as their major source of income.

Various studies indicate that rural non-farm activities contribute between 30-50% of household income of rural households in African (see Davis, 2003; Holden *et al.*, 2004). The rural non-farm economy is very important not only in terms of generating additional income to particular households but also in terms of lifting local economic growth through production linkages (Zaware, 2012) and employment effects. In view of this brief backdrop, the main objective of the study is to analyze the contribution of the rural non-farm economy to the total income of rural households in the northern Ethiopian region of Tigray. Moreover, we intend to evaluate the differences between male headed and female headed households in terms of ownership and household income.

2. DATA AND METHODOLOGY

Data for this study were obtained from a household survey containing a sample of 2463 rural households as summarized in the table below. The data were gathered from all six zones of the region and all 34 rural *weredas* (districts) using a structured interview conducted in 2011. Average household size of rural areas in the region was found to be 5.35 and it was bigger than the average family size of urban households which was computed as 4.25 (Fredu, *et al.*, 2011). The method of analysis utilized for this study is largely descriptive. In addition to the descriptive tables, we used statistical tests of significance as well as the Lorenz Curve and the Gini Coefficient to understand and test levels of inequality among male headed and female headed households.

TABLE 1: SAMPLE HOUSEHOLDS BY GENDER OF HOUSEHOLD HEAD

Zone	Male Headed		Female Headed		Total
	N	%	N	%	
Central	467	77.4	136	22.6	603
Eastern	317	66.9	157	33.1	474
North Western	373	83.1	76	16.9	449
Southern	305	77.8	87	22.2	392
South Eastern	251	73.2	92	26.8	343
Western	166	82.2	36	17.8	202
Total	1879	76.3	584	23.7	2463

3. RESULTS AND DISCUSSION

3.1 AVERAGE LAND HOLDING SIZE AND NUMBER OF PLOTS OWNED

Rural and urban land as well as all natural resources is under public ownership in Ethiopia. The Ethiopian Constitution (Article 40) provides land use rights but not ownership rights. Selling and mortgaging of land are prohibited. Land happens to be one of the three most important resources at the possession of rural households in Tigray; the others being labour and livestock. Out of the total sample of 2463, some 185 households do not own land. This means that 7.5% of the rural households in the region are landless.

Farming plots owned by rural households are generally small and found in different locations. While this pattern may negatively affect land productivity in view of difficulties for investment, it, on the other hand, ensures some sort of equity by staggering land ownership among different areas of soil fertility within the particular village. Taking only those households possessing land, the average number of plots per household is found to be 2.05. Thus, on average, every household possesses around two plots of land.

TABLE 2: AVERAGE NUMBER OF PLOTS AND LAND HOLDING SIZE PER HOUSEHOLD BY ZONE

Zone	Number of plots owned			Land holding size (by <i>tsimad</i> *)		
	N	Mean	Sd	N	Mean	Sd
Central	561	2.28	1.20	603	2.80	2.17
Eastern	425	1.97	1.18	474	2.83	9.51
North Western	423	2.01	1.08	449	4.88	5.75
Southern	373	2.08	0.87	392	3.58	3.84
South Eastern	329	2.17	1.00	343	3.37	2.24
Western	167	1.32	0.60	202	5.28	5.02
Total	2278	2.05	1.08	2463	3.59	5.52

* A *tsimad* is a local unit of land size amounting to about a quarter of a hectare

Perhaps more important than the number of plots is the actual land holding size. Keeping other factors constant, one can safely imagine that the larger the size of land a household owns the more the total produce it generates. However, land holding size in Tigray has remained small because the size of arable land in the region is quite small relative to population size, and more so in some zones than in others. One needs to note, in the meantime, that higher levels of land productivity can be attained by introducing appropriate technologies and, accordingly, reap higher levels of harvest even if land remains of relatively small size.

Alike to previous studies, this survey shows that average land holding size remains below one hectare per household. In precise terms, and including landless households, the average land holding size is reckoned as 3.59 *tsimad* (or 0.9¹ hectares) per household. There exists wide variation in terms of zonal land holding sizes as shown in the table above. Land holding size in the North West and Western zones is much higher than the regional average, while, on the other hand, households in the Central and Eastern zones possess much smaller sizes. The remaining two zones are much closer to the regional average.

Dividing the rural population into five groups in terms of landholding size, we obtain that the lowest 20% have an average ownership of 0.71 *tsimad* (0.18 hectare) per household. On the other hand, the highest quintile has an average ownership of 9.19 *tsimad* (2.3 hectares) of land per household. The remaining quintiles range between the two figures. We therefore observe that there exists wide disparity among rural households in term of landholding size.

TABLE 3: LANDHOLDING SIZE IN *TSIMAD* BY QUINTILES

Quintiles	N	Mean	Sd
lowest 20%	570	0.71	0.56
second 20%	480	1.99	0.04
third 20%	439	2.86	0.25
fourth 20%	549	4.24	0.51
highest 20%	425	9.19	11.38
Total	2463	3.59	5.52

Comparing land holding size of female headed and male headed households, we found that there exists significant difference in favor of male headed households as shown in the table below with a difference of one and a quarter *tsimad*. This is one of the factors that believed to have contributed to the fact that female headed households are poorer than their male headed counterparts.

TABLE 4: DIFFERENCE IN LAND HOLDING SIZE BY GENDER OF HOUSEHOLD HEAD

Households	N	Mean	Std. Err.	T
Male Headed	1879	3.88	0.1417	4.62***
Female Headed	584	2.67	0.1007	
Combined	2463	3.59	0.1112	
Difference		1.20	0.2603	

*** Significant at 1% level

3.2 LAND CERTIFICATION

As indicated above, land in Ethiopia is under public ownership. In a direction towards helping ensure land security, government policy allows for renting of land, transferring land use rights to legal heirs, and compensation for land improvements in case of expropriation by government or other bodies. The land certification practice in the country, which began in Tigray region in 1998/99 and later expanded to other regions of the country, is also designed as an additional move towards enhancing land security and, consequently, productivity (Holden *et al*, 2007).

TABLE 5: LAND CERTIFICATION BY ZONE

Zone	Plots without Certificate	%	Plots with Certificate	%	Total
Central	117	9.16	1160	90.84	1277
Eastern	68	8.23	758	91.77	826
North Western	81	9.55	767	90.45	848
Southern	107	13.79	669	86.21	776
South Eastern	143	19.97	573	80.03	716
Western	90	41.10	129	58.90	219
Total	606	13.00	4056	87.00	4662

As shown in the table above, about 87% of the plots held by households have certificates of holding. This translates to the fact that 4056 plots are issued land certificates out of the total sample plots of 4662. The number of plots without certificates is thus 606. Virtually all households possess land certificates for their land use rights. In comparative terms, Central, Eastern, and South Eastern regions have the highest proportion of certification while the Western zone has the least proportion of certification with 41% of the plots yet to receive certification.

3.3 CROP YIELD

The results here indicate the average crop output earned by households in quintals irrespective of whether they rent out or rent in land. In other words, it shows crop income by households in physical amount. Moreover, we have included all households whether they are land owners or landless. Consequently, we found that the average crop earning by households stands at 10.4 quintals in the current production year. This means that on average rural households obtained nearly ten and a half quintals of crop income in the current production year. As one can expect, the biggest share, i.e., 9.7 quintals or 93%, of the crop income is attributable to the *kiremt* (main rains) season while irrigation and *belg* (secondary rains) related income constitute only 7%; i.e., 0.7 quintals, of the total crop income. In other words, of the total crop harvest of 10.4 quintals per household, 9.7 quintals come from the main *kiremt* rains. Only 7% of the total crop harvest comes from irrigation and *belg* rains related agricultural activities.

In terms of zonal comparisons, total crop produce ranges from the lowest per household average of 7.24 quintals in the Eastern zone to the highest average of 15.57 quintals in the Western zone. In general, crop harvests in the Central, Eastern, and South Eastern zones are below the regional average while that of the North Western, Southern, and Western zones are above the regional average. Taking household level crop harvests mainly from irrigation but including *belg* related agricultural activities (i.e., non-*kiremt* harvest), we find that the Eastern zone, whose overall average output is smaller, has the highest produce of 1.53 quintals per household; with the lowest average coming from the South Eastern zone.

TABLE 6: CROP PRODUCE IN QUINTALS BY ZONE

Zone	Kiremt	Irrigation and Belg	Total
Central	7.45	0.53	7.98
Eastern	5.70	1.53	7.24
North Western	10.46	0.52	10.98
Southern	14.71	0.79	15.50
South Eastern	9.20	0.21	9.41
Western	15.22	0.35	15.57
Total	9.70	0.70	10.40

Although the main unit of analysis in this study is the household and our principal focus has been to obtain average crop income earned by households, this result can also be used to provide an indirect albeit rough estimate of productivity per unit of land. Accordingly, given the fact that average land holding stands at 0.9 ha per household, a simple manipulation shows that average land productivity stands at 11.56 quintals per hectare. However, this figure needs some adjustment as it assumes not only that land rented in and rented out are equal, but it also considers absence of fallowed land during the production season. Moreover, all households, including the landless, are included in the computation. Thus while keeping the assumption that land rented in and rented out are the same, if we exclude 3% of the crop land which is estimated to have been left fallow in Tigray during the same season (see CSA, Statistical Bulletin, May 2011) and leaving the landless out of our computations, we obtain a more realistic estimate of 13 quintals per hectare as average productivity of land. Similar productivity figures have been reported for Tigray by CSA (Statistical Bulletin, May 2010). According to this Bulletin, productivity per hectare of the major crops is given as: Teff (10.86), Barley (13.49), Wheat (15.6), Maize (12.72), Sorghum (18.07), and Finger Millet (11.48).

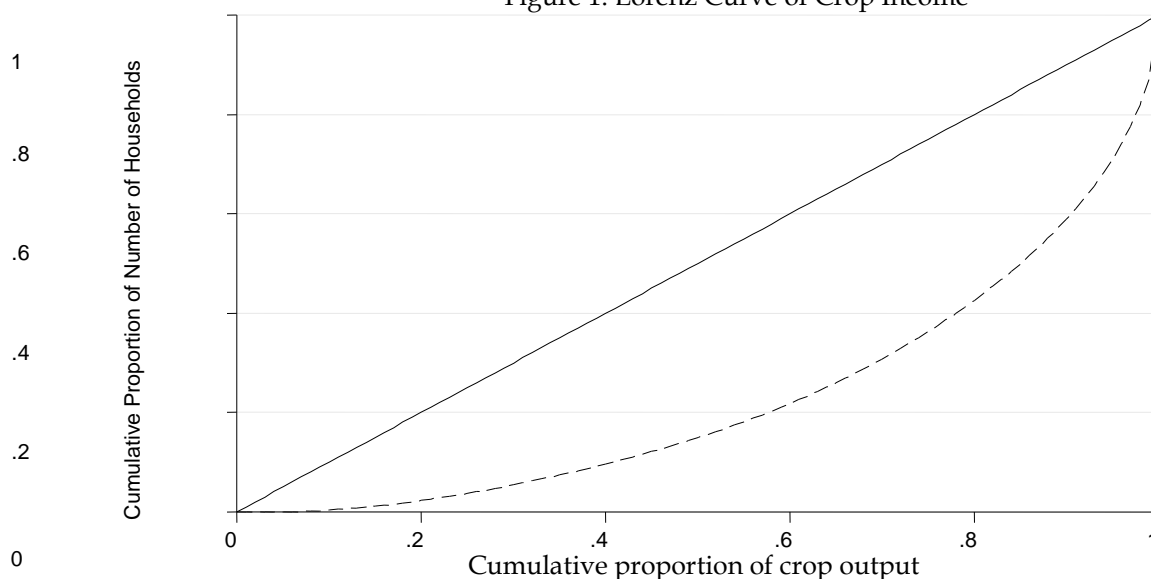
Putting crop output in deciles could give us a better picture into the level of inequality existing within the rural households. As summarized in the table below, out of the total crop harvest of 25622.24 quintals, the lowest 10%, which contains 248 households (i.e., 10% of the households) only get 81.08 quintals or 0.33 quintals per household. On the higher side, 9.9% of the households (i.e., 243) had an average crop harvest of 43 quintals per household. This means that while the lowest 10% obtained only 3% of the total output, the highest 10% earned 41% of the total produce. The remaining 56% of the output is shared among the other 80% of the rural population. Dividing the sample into the lower half and the higher half in terms of crop harvests, we find that the former had a share of 15% of the total while the latter had 85% of the total output. One can therefore conveniently see the existence of wider disparities among households in terms of their crop income. However, we need to note that crop income in physical units does not tell the whole story as it constitutes part of the total household income.

TABLE 7: CROP PRODUCE (QUINTALS) IN DECILES

Deciles	N	Sum	Mean
Lowest 10%	248	81.08	0.33
Second 10%	245	497.33	2.03
Third 10%	358	1258.94	3.52
Fourth 10%	215	1034.14	4.81
Fifth 10%	184	1060.31	5.76
Sixth 10%	247	1807.53	7.32
Seventh 10%	284	2776.33	9.78
Eighth 10%	198	2516.13	12.71
Ninth 10%	241	4141.77	17.19
Highest 10%	243	10448.69	43.00
Total	2463	25622.24	10.40

We can put the distribution indicated above in terms of the Lorenz curve for a graphical presentation. Accordingly, we find the following curve which gives us a good visual image of the level of inequality. The associated Gini Coefficient is also reckoned as 0.54 showing high level of income inequality in terms of crop output in physical units.

Figure 1: Lorenz Curve of Crop Income



Considering gender of household heads, we found significant difference ($t=5.885$) of average crop earnings with 11.52 quintals for male headed households and only 6.81 quintals for female headed households. One can understand that part of this difference can be explained by the fact that female household heads have significantly lower land holding sizes compared to their male headed counterparts.

TABLE 8: CROP OUTPUT BY GENDER OF HOUSEHOLD HEAD (t-TEST)

Households	N	mean	Std. Err.	T
Male Headed	1879	11.52	0.381	5.885***
Female Headed	584	6.81	0.751	
Combined	2463	10.40	0.343	
Difference		4.72	0.801	

*** Significant at 1% level

4. LIVESTOCK HOLDINGS

Agriculture in Tigray is typically of a mixed nature. Livestock holdings play crucial role in the livelihood of farmers. In fact, in most cases possession of livestock in general and oxen in particular is used as an important yardstick to define poverty levels of households with those having larger possessions considered as richer compared to those with a few or no possessions. Livestock holdings can be measured in terms of Tropical Livestock Units (TLU) where every animal is converted into its ox equivalent or in terms of their pecuniary value. The table below shows livestock holdings measured both in TLU and in monetary terms.

Considering TLU conversions², the results of the computations show that on average a rural household in Tigray possesses 3.17³ TLU or oxen equivalent. Zonal comparisons show that South Eastern, Eastern, and Central zones have livestock possessions smaller than the regional average, with the South Eastern zone displaying the smallest average TLU possessions. Livestock holdings in the Southern zone are quite similar to the regional average. On the other hand, we have the North Western and Western zones whose possessions are much larger than the regional average.

TABLE 9: LIVESTOCK HOLDINGS IN TLU AND IN VALUE BY ZONE

Zone	N	TLU		Value (Ethiopian birr)	
		Mean	Sd	Mean	Sd
Central	603	2.89	2.03	8022.92	6646.19
Eastern	474	2.55	2.21	8013.76	8826.93
North Western	449	4.38	3.49	15758.82	14793.39
Southern	392	3.07	2.77	9907.69	11501.71
South Eastern	343	2.42	2.46	7105.31	9830.53
Western	202	4.25	4.99	20018.36	28576.74
Total	2463	3.17	2.97	10587.37	13546.94

Alternatively, and as stated above, livestock holdings can be measured in terms of their financial equivalent. This is reckoned based on the Ethiopian birr (ETB) value of each of the animals as provided by respondents in their nearest market areas. Accordingly, the average value of livestock holdings per household stands at Br. 10587.37. This means that on average a household in Tigray owns livestock assets whose monetary value amount to ten thousand five hundred Ethiopian birr. As expected, the North Western and Western zones have possessions much higher than the regional average and in the case of Western zone amounting to double of the regional average. South Eastern, Eastern and Central zones reported below regional average holdings.

5. NON-FARM INCOME

Another important source of income for rural households relate to earnings from non-farm activities. Three sources of income related to non-farm activities; namely, employment, small informal businesses, and transfers (such as remittances) are identified in the study as the principal income sources associated with non-farm activities. The survey results show that 41% of the households are involved in non-farm employment. This means that 41% of the sample households have one or more of their members participating in one or another type of wage earning jobs. Employment can take place within the same *tabia* (sub-district), *wereda* (district), zone, or through migration to other regions or even countries.

As shown in the table below, the proportion of households involved in some kind of non-farm employment varies from zone to zone. Zonal comparisons indicate that participation in non-farm employment ranges from a high of 62% in the Eastern zone to a low of 12% in the Western zone. We have above regional average levels of participation and income in the Eastern, Central, and South Eastern zones; and these happen to be the zones where crop output is below the regional average. Thus there appears to be an inverse relationship between crop output and participation in non-farm employment.

TABLE 10: HOUSEHOLDS INVOLVED IN NON-FARM ACTIVITIES

Zone	N	Non-farm employment			Number of HHs involved in informal businesses
		Number of HHs involved	% involved	Average number of days worked	
Central	603	305	50.58	74.53	102
Eastern	474	293	61.81	95.28	60
North Western	449	84	18.71	36.26	101
Southern	392	142	36.22	60.12	52
South Eastern	343	154	44.90	64.94	42
Western	202	25	12.38	24.52	42
Total	2463	1003	40.72	63.82	399

In terms of number of man days worked, the regional average stands at 64 indicating that on average every rural household spends 64 man days working on non-farm employment. In a similar fashion to the participation rate, Eastern, Central and South Eastern zones have average man days spent on non-farm employment larger than the regional average. Cash earning from non-farm employment also show similar results with Eastern, Central, and Southern zones securing average income levels above the regional average. In all three yardsticks (i.e., number of households involved, man days worked, and income), we have these three zones, whose average crop output in physical terms is smaller than the regional average, trying to compensate for the shortfalls through non-farm employment.

The other principal source of non-farm income is engagement in self owned and operated small businesses such as petty trade (grain, livestock, wood and charcoal, food and drinks, etc.) and handicrafts (including spinning, hairdressing, and embroidery). The average household income generated from informal businesses turns out to be ETB 2010.62 per year as shown in the table below. Zonal comparisons show that the average income generated from such informal businesses is higher in the North Western and Western zones.

In addition to income from non-farm employment and informal businesses, households obtained additional income in the form of transfer payments averaging ETB 140.29 per household per annum. Cash and non-cash transfers (including remittances, pensions, and inheritance) are used to compute total transfers; the latter converted into their cash equivalents.

TABLE 11: AVERAGE NON-FARM INCOME (ETB) PER HOUSEHOLD PER ANNUM

Zone	Non-farm Employment	Informal Businesses	Transfers	Total non-farm income
Central	1166.31	1416.48	162.02	2744.8
Eastern	1368.87	1410.38	230.43	3009.68
North Western	652.81	2973.96	48.88	3675.65
Southern	875.22	2138.05	178.33	3191.6
South Eastern	1087.52	1810.57	118.83	3016.91
Western	611.87	3143.82	29.7	3785.39
Total	1008.91	2010.62	140.29	3159.82

As with crop produce measured in physical units (i.e., quintals), total earnings from non-farm sources is higher than the regional average in the Western, North Western, and Southern zones. In the case of non-farm employment, though, the zones performing below average in physical crop produce are the ones with higher levels of participation and income as shown in the previous page.

A summary of all non-farm related earnings is provided by zones in the table above. The overall average earning from all non-farm sources is reckoned as ETB 3159.82 per household per annum. Using the average household size of 5.35, per capita income from non-farm sources stands at ETB 590.62.

It needs to be noted however that the distribution of non-farm income among households does not appear to be fair. The fact that the Gini Coefficient of non-farm income came out to be 0.66 shows the existence of high level of inequality in terms of non-farm earnings among households in the study area. In terms of gender, the t-test undertaken to test the extent of variation indicates the existence of significant difference in favor of male headed households ($t=5.15$).

TABLE 12: T-TEST OF NON-FARM INCOME BY GENDER OF HOUSEHOLD HEAD

Household Head	n	mean	Std. Err.	T
Male Headed	1879	3459.34	131.30	
Female Headed	584	2196.11	122.81	5.15***
Combined	2463	3159.82	104.86	
Difference		1263.24	245.28	

*** Significant at 1% level

Compared to the average monthly household income of ETB 1100.43 (or ETB 13205.16 per annum) obtained from the same survey (see. Fredu *et al.*, 2011), the average household non-farm income is found to be 24% of total household income indicating that rural households in the study area derive nearly a quarter of their income from non-farm activities. This finding indicates that the non-farm income obtained by households in the study area is smaller than the African average of 30-50% (see Davis, 2003). One can conclude, as a result, that there is greater room to improve the rural non-farm economy so as to help households enhance their livelihood and minimize the extent of rural poverty.

6. CONCLUSION

The rural non-farm economy helps rural households improve their welfare by providing opportunities for additional sources of income. Various studies indicate that rural non-farm income generating activities in Africa contribute 30-50% of household income. Using a sample of 2463 households in rural Tigray, the northern administrative region of Ethiopia, the current study found that the contribution of rural non-farm activities to household income stood at 24%, which is smaller than the African average. Moreover, we also found that male headed households are significantly better in terms of crop income, non-farm income, land holding size, and livestock holdings providing additional evidence to the fact that female headed households are poorer than their male headed counterparts.

ACKNOWLEDGEMENT

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NOTES

1. The Agricultural Sample Survey Report on Land Utilization, of private peasant holdings, produced by the Central Statistical Agency (CSA, Statistical Bulletin, May 2011) shows strikingly similar figures for Tigray. According to this Bulletin and including all types of land use (crop and non-crop), the average land holding size for the whole country stands at 1.18 ha per household and the corresponding figure for Tigray is reported as 0.93 ha per household. Considering crop areas alone, the land holding size per household reported by the Bulletin shows average figures of 0.93 and 0.9 for Ethiopia and Tigray, respectively.
2. The TLU conversion factors used here are: ox (1.0), bull (0.75), cow (0.7), heifer (0.6), calf (0.33), sheep and goat (0.1), horse (0.8), mule (0.7), donkey (0.5), camel (1.4), poultry (0.01), beehive (0.33). For further reference see Dercon (2004) and Ramakrishna and Assefa (2002).
3. CSA provides number of animal holdings based on sex and age; it does not provide holdings in TLU. Our conversion to TLU based on animal holdings reported in the CSA Bulletin (February 2010) shows an average holding of 3.7 TLU. This is higher than our survey result, which stands at an average holding of 3.17 TLU.

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COMPETITIVENESS CONDITION, MARKET POWER AND DRIVERS OF COMPETITION OF BANKS IN ETHIOPIA**MISRAKU MOLLA AYALEW****Ph. D. STUDENT****ACCOUNTING SCHOOL****DONGBEI UNIVERSITY OF FINANCE & ECONOMICS****CHINA****Dr. ZHANG XIANZHI****PROFESSOR, ACCOUNTING SCHOOL, DONGBEI UNIVERSITY OF FINANCE & ECONOMICS; &****DIRECTOR SINO-GERMAN MANAGEMENT CONTROL RESEARCH CENTER****CHINA****ABSTRACT**

This study used structural and non-structural approaches to analyses the competitiveness condition and market power of banks in Ethiopia based the data 2000-2015. The results of concentration ratios and Herfindahl-Hirschman Index indicates during the study period the industry is highly concentrated. The Panzar–Rosse model results reveal that Ethiopia banking competition is monopolist and therefore lower competition is found. The long-run equilibrium test conduct successfully. In the long-run Ethiopia's banks Return on Asset (ROA) is inelastic of price of labor and price of capital. The result of market power indicators; Lerner index and Boone indicator shows that during the study period banks operated under higher degree of market power. Different approaches this study uses commonly evidence that the decreasing level of concentration and market power from 2000-2010 starts increasing 2011 onward. This study has also found negative and significant relationship between concentration and competition. Moreover, the development of non-bank financial sectors and general economic development improve competition of banks in Ethiopia. Low level of competition help the banks to earn high operating performance (ROA and ROE). Well capitalized banks tends to exercise greater market power and operate well in more concentrated environments The result of this study is robust under different specifications. Finally, policy implication and future possible research ideas are derived.

KEYWORDS

concentration, competition, drivers of competition, Ethiopia, Market Power.

INTRODUCTION

Using both Structural-Conduct-Performance (SCP) and Non-Structural approaches, this study analyses the level of competition, market power and drivers of competition in Ethiopian banks from 2000 to 2015. Research in banking competition is a well-defined but remain debating and hot issues among policy makers and regulator. In developing economics banking system undergone massive regulatory and structural changes aiming to improve competitiveness and efficiency of the sector. The impact of thus measures should be evaluated against their aims. So that, it's possible to appreciate if the policy measures achieve their desired aim or to find better policy solution if not. In this regard, tests are few on the competitiveness of banking systems for developing countries and transition economies. In particular, this analysis in Ethiopian's banks is missed.

The innovation of the present research is the following: first we focus on Ethiopian banking; second we intensively implement SCP approaches (Concentration ratios and Herfindahl-Hirschman Index) and Non-structural approaches (Panzar–Rosse, 1987) model, dynamic Lerner index and Boone indicator) to measure competition and market power of banks; third we investigate the drivers of banking completion using a model which incorporate bank-specific, structural and macro-economic variables. For all models, we adopted several equation specifications aiming to compare the robustness of the procedure adopted.

The motivation behind the research is as follows. First, test of competitiveness level and market power has not been made yet many regulatory measures are taking since 1994. The effect of these deregulation and structural measures in competitiveness level is not clearly known. Moreover, there has been widespread focus on banks in Africa (Barros and Mendes 2016, Angola; Abdelkader and Mansouri 2013, Tunisia; Simpasa 2013, Zambia; Biekpe 2011, Ghana; Malambo and Ncube 2011, South Africa; Hauner and Peiris 2008, Uganda), there has been no analysis by the research community of the situation in Ethiopia, a country that recorded two-digit economic growth for a decade (the fastest growing country in Africa). Second, the hall-mark of this study is exhaustive utilization of measure of competition and market power of which majority of prior studies lacks. Our present study boldly relies on the principle that different measurement of competition and market power has different unique insight. As a result, we intensively used SCP approaches (K-banks Concentration ratio and Herfindahl-Hirschman Index) and Non-structural approaches (Panzar–Rosse model, Lerner index and Boone indicator) to test competition and measure market power of Ethiopia's banks. Third, beyond test of competition we investigate drivers of competition in the industry. To our understanding, this study is the first in its nature and approach in the Ethiopian case.

This study has two major importance. First, it provide first hand empirical results which will be at most important to policy makers and regulator. Second, it contribute to the growing body of literature in the area of banking competition particularly by empirically examine a banking sector which is closed for foreign participation for four decades. Finally, this article is organized as follows. After this introduction, brief review of Banks in Ethiopia is presented, followed by the literature review. The methodology is then presented, followed by the hypothesis, data and results, and finally the conclusion and policy recommendation are made.

BANKING IN ETHIOPIA

Banking activity in Ethiopia started in 1905, named Bank of Abyssinia (later changed to Bank of Ethiopia in 1931) during Emperor Minilik II. Until the military government come to power in 1974, banking sector was open to foreign banks to operate and invest in Ethiopia. As the result, foreign owned banks like Barclays bank (British owned), and Banco Di Roma and Banco Di Napoli (Italian banks) have obtained the license and operated in the sector. During the 1974-1991, following nationalization of financial sectors the industry become fragile, inefficient and fully state owned sector. Especially up to mid-1990s, mismanagement, ineffective supervision and deep political interference puts the sector under developed. Aiming to tackle these problems, to improve competition and efficiency, many de-regulation and structural measures were taken starting from 1994. For example, opening the industry for domestic private investment, restructured the two development banks as commercial banks, and introduced a new Banking and Monetary Proclamation which gave more autonomy to National Bank of Ethiopia (NBE) were made. In April 2011, to finance development projects and promote long-term investment, NBE issued a directive requiring all commercial banks to hold 27% of new loan disbursements in NBE bills¹. Thus, measures witnessed a proliferation of domestic private banks (from zero 16 new private banks created); remarkable decrease in non-performing loan of stated owned banks and population to branch ratio decrease from 247061:1 in 1998 to 28932:1 in 2015.

1. Currently, Ethiopia is in massive construction of infrastructures like dams and train ways, among thus Ethiopian Grand Renaissance Dam is the biggest project and will be the largest dam in Africa at completion.

Up June 30, 2015, in the banking industry of Ethiopia there were 18 commercial banks (2 state owned and 16 private owned banks), one development bank and a central bank (National Bank of Ethiopia)². As presented on table 1, the number of commercial banks increase from 8 to 18. Total assets of commercial banks increase from Br. 23,959 to Br. 406,154; deposit Br.18, 423 to Br. 367,395 and loan and advance Br. 14,473 to Br. 217,580 (the amount is given in Millions of Ethiopian birr). Following capitalization of banking industry commercial banks together can accumulate 43 billion at the end of 2015.

TABLE 1: CHARACTERISTICS OF COMMERCIAL BANKS IN ETHIOPIA DURING THE PERIOD

Year	No banks	Amount in millions of ETB			
		Asset	Deposit	loan & advances	Capital
2000	8	23959	18423	14478	1782
2001	8	26493	21050	15662	1907
2002	8	28338	23212	15943	1551
2003	8	32110	25817	16463	2080
2004	8	38125	30401	18475	2497
2005	9	47254	36214	23515	2901
2006	10	54089	42243	27439	3608
2007	11	67571.5	51245.5	33498.5	7266
2008	11	82004.17	61366.09	48179	8557.533
2009	12	100970.8	75299.86	61074.3	10130.888
2010	14	127700.7	95541.38	73769.1	12119.681
2011	17	182757.2	137562.29	98079.1	15,900
2012	17	243613.7	179766.58	137512	23346
2013	18	302127.1	233108.75	162119	26437
2014	18	370273.5	287076.15	200114	30808.30
2015	18	406 154	367395	217580	43060.80

Source: calculated from NBE and banks annual report.

During the period 2000-2015 on average the industry recorded growth of 17% in asset, 16.6% loan and advances, 18% in deposit, 18.18% in capital and 13.5% in branching per year. The country's fastest economic growth help the industry to mobilize huge domestic deposit. The directive issued by the NBE to achieve minimum paid up capital of 500 million ETB, takes the average growth rate of capital relatively higher than others. Although the sector is still undeveloped, the growth figures showed like the general economy the banking sector is also growing fast. Uniquely, capital growth rate of commercial banks observed highly volatile; lowest in 2002 (-0.23) and highest in 2007 (0.50), while other growth metrics move relatively stable.

LITERATURE REVIEW

In the banking literature, there are two major empirical approaches for measuring competition: the Structural-Conduct-Performance (SCP) and the Non-Structural approach. The following sections discuss briefly about them.

STRUCTURAL CONDUCT PERFORMANCE APPROACH

The structural approach to measure banking sector competition grasps the Structure-Conduct-Performance (SCP) paradigm (Mason, 1949). The basic ground to this approach is that the market power of banking companies' increases with industrial concentration and thus creates a direct link from industry structure to competitive conducts. This approach assesses the competition environment that characterize market structure by using ratios of concentration of largest firms (CR) and Herfindahl-Hirschman index (HHI). Accordingly, a rise in concentration is regarded as increasing collusive opportunities between banks, and thus will cause higher prices and profitability (Abduh, 2017). The implication of higher CR and HHI is the industry is main dominated by few large firms which hamper the competitiveness condition.

Although it has been excessively used in the empirical banking competition literature, the approach is criticized on different grounds. The proxies to measure the K-bank concentration ratio (CR_k) and HHI are ambiguous because they ignore the relationship between market contestability and revenue at the bank-level (Berger et al., 2004b). Moreover, Vesala (1995) criticized the approach as direction of causality running from structure to conduct is not clear. Evidence from industrial organization literature reveal that measures of market structure, such as the number of institutions and concentration ratios, are not necessarily related to the level of competitiveness in an industry (Baumol et al., 1982). Scholars such as Beck et al., (2006a), Claessens and Laeven (2004), Demirgüç-Kunt et al., (2004) evidenced strength of the link between concentration and competitive conduct is weak. Schaeck and Čihák, (2009) argue that it is inappropriate to rely on concentration to assess the degree of competition in banking. These arguments puts the validity of empirical results widely conducted in structural conduct performance assumption.

To fill the above limitations related with the approach, researchers have recognized the problems and tried other methods that has small measurement problem. For example, Berger et al., (2004b) tested SCP and Efficient structure (ES) hypotheses in models of bank profitability. Recently, researchers have looked to other direct measure of competition like the literature on oligopoly and contestability (e.g., Shaffer 2001), and include some indicators for regulation, entry restrictions, and other legal impediments to bank competition (Berger et al., 2004).

NON-STRUCTURAL MEASUREMENT OF COMPETITION AND MARKET POWER

Non-structural measurement of competition and market power is based on The New Empirical Industrial Organization (NEIO) paradigm. The approach doesn't consider explicit information related the structure of the market. Instead, nonstructural measures focus on obtaining estimates of market power from the observed behavior of banks (Abduh, 2017). This approach explains that high efficiency banks will help in increasing their market share and realizing profits. Under this paradigm, there are three methods to test level of competition and market power; the Panzar and Ross model (PR-model), Lerner Index and Boone Indicator. The Panzar-Rosse model (1987) is repeatedly used to empirically assess the degree of competition in banking. It indicate the transmission of input prices and marginal costs on firms' revenues. The approach showed that under certain assumptions, the transmission of input price to marginal cost and then to revenue performance differs according to the degree of competition in the market. Weak transmissions are interpreted to indicate the exercise of market power in pricing and higher values indicate more competition. The elasticity of bank revenues relative to input prices, also called the H-statistic, equals one means the market is under perfect competition. In this condition, an increase in input prices raises both marginal costs and total revenues by the same amount. In a market where firms collude, an increase in input prices results in a rise in marginal costs, a fall in output, and a decline in revenues, leading to an H-statistic less than or equal to zero. The H-statistic lies between 0 and 1 interpreted as the system is operating under monopolistic competition (Panzar and Rosse, 1987). However, the interpretation of the values of the H-statistic requires conforming of many assumptions regarding the market equilibrium, demand elasticity, cost structure or exogeneity of input prices. Results obtained from the models of perfect and monopolistic competition depend on the assumption that firms are observed in their long-run equilibrium (Panzar and Rosse, 1987). This hypothesis can be tested by calculating the H-statistic from estimate result in that return on assets used as the dependent variable in place of the total revenue. In this regard, input prices should not be significantly correlated with the dependent variable. A finding of H<0 would indicate disequilibrium, whereas H = 0 would tend to confirm equilibrium suggesting that input prices are not correlated with industry returns (Shaffer,

2. Recently, the bank named 'Construction and Business bank of Ethiopia' which was owned by the state emerged with another state owned bank; Commercial Bank of Ethiopia. This merger is the first in the industry after liberalization. The figure exclude this bank in consideration.

1982). Under conditions of freedom of entry and exit, the market reaches stability and equilibrium, regardless of its structure (monopoly, oligopoly or duopoly) as long as the market outcome is sustainable (Barros and Mendes, 2016).

Limitation of PR-model is, unlike the HHI and the CR_k , the Panzar–Rosse method utilizes firm-level data and derives a test statistic-H to capture bank market power (Shaffer, 2004, Nguyen et al., 2016). The empirical implementation of H-statistic requires banking markets to be in long-run equilibrium, which may not always be the case in practice (Berger et al., 2009b). Using PR-model banks competition in Africa has been analyzed by Barros and Mendes (2016) in Angola, Abdelkader and Mansouri (2013) in Tunisia, Simpasa (2013) in Zambia, Biekpe (2011) in Ghana, Malambo and Ncube (2011) in South Africa, Huaner and Peiries (2008) in Uganda. Except Biekpe (2011) evidenced Oligopolistic tendencies all the above empirical works evidenced monopolistic competition.

The Lerner index is often used in empirical works to indicate market power. It measures the degree of market power by focusing on the pricing power apparent in the difference between price and marginal cost (Jimenez et al., 2007). It also captures the extent to which banks can maintain a price level above their own marginal costs. The higher values of the Lerner index are linked with higher levels of market power. The Lerner index's computation is based on individual bank observations for each bank and so can help overcome the small sample bias problem (Nguyen et al. 2016). In addition, it captures the influence of both market concentration and demand elasticity and thus is preferable to the concentration indicators (Maudos and Fernández-de-Guevara, 2007). While The PR-model provide an aggregate measure of competition Lerner index provide an individual measure of market power.

The approach criticize by Boone et al. (2013), that the Lerner index at the country level consistently has problems picking up increasing competition due to more aggressive conduct of incumbent firms. The Lerner index is sensitive to the reallocation of activity from inefficient to efficient firms when competition intensifies. This issue is particularly relevant in concentrated markets that encompass the banking industry in many developing countries (Leon, 2015). Recently, Abduh (2017), Amidu and Wilson (2014), Simpasa (2013), Chen (2009) apply this approach to measure banks market power.

Boone (2008) developed a new indicator called Boone indicator. It is based on the idea that efficient firms are more rewarded in more competitive markets. The Boone indicator is beginning to be used in banking literature (Leon, 2015). The basic intuition underlying this indicator is that more efficient firms achieve superior performance in the sense of higher profit or higher market shares, and that this effect is stronger the heavier the competition is. Boone et al. (2007) shows that the Boone indicator can be calculated as the elasticity of profits to marginal costs. The coefficient of marginal cost (the elasticity) obtained from the estimate result of the log of return on assets (dependent variable) regressed against to a log measure of marginal costs. The sum of coefficients the three input prices from estimated translog cost function gives marginal cost. The more negative coefficient of marginal cost in the regression is the higher the level of competition is in the market (Boone, 2008). However, in some cases a positive coefficient of marginal cost from regression estimation will be possible, implying that the higher a bank's marginal cost, the higher its market shares. This may arise if the market is characterised by collusion or because banks are competing on quality (Amidu and Wilson, 2014). According to Leon (2015), Boone indicator has two major advantages. On the one hand, it is based on strong theoretical foundations and catches competition due both to a fall in entry barriers and to more aggressive behavior on the part of incumbents. On the other hand, it captures the dynamics and non-price strategy in the market, while the Panzar-Rosse model and Lerner index are based on static price competition. These advantages come with shortcomings. The Boone indicator approach focuses on one important relationship, affected by competition, thereby disregarding other aspects (Leon, 2015). Abdul (2017), Leon (2015) and Amidu and Wilson (2014) recently apply this indicator for their empirical study in banking competition.

Finally, the theory and empirical works clearly depict reliance on single measurement of competition and market power will lead wrong inference or create doubt to accept the result of an empirical work. One measurement has advantage over another and different indicator catch different aspects of competition or market power. For instance, Lerner index measures the static pricing market power, the PR H-statistic measure the transmission of input price changes to revenues, and the Boone indicator indicate the dynamics of markets (Leon, 2015). Finally, the present no consensus on how best to assess completion in the literature, enforce researchers to apply all measurements intensively in a given study. In this regard, majority of previous studies fail to do this. We used all the above discussed measure of competition and market power on our present study.

DRIVERS OF BANKING COMPETITION

Regarding bank specific determinants Simpasa (2013) in Zambian banks found negative and significant relationship between bank competition and risk and inefficiency of banks, while capital ratio positively correlated. Abduh (2017) in his study on Islamic banks of Indonesian, found negative relationship between competition and ROE, capitalization and banking concentration. Further, he found positive and significant relationship between competition and ROA. Cost inefficiency in banking is often associated with high mark-ups because banks tend to mask their operating inefficiency through high spreads, the cost of which is borne by customers (Simpasa, 2013).

Regulatory restrictions; restricting foreign bank participation increase bank fragility and tighter entry and exit restrictions are negatively linked with bank efficiency, leading to higher interest rate margins and overhead expenditures (Barth et al., 2001 and 2004; Demircug-Kunt et al., 2004). Demircug-Kunt et al., 2004, from evidence of 77 countries they found bank concentration has a negative and significant effect on the efficiency of the banking system except in countries with well-developed financial systems. They also found implicit and explicit restrictions on bank activities, are associated with lower levels of bank margin.

RESEARCH METHODOLOGY

The methodology of this study is based on various measures of the competition and market power. First, SCP measures; CR_k and HHI index are used. Second Non-structural measure of competition (PR-Model) and the Lerner index and Boone indicators are used with the aim of measuring power in term of price setting.

STRUCTURAL-CONDUCT-PERFORMANCE (SCP) APPROACHES

Under this approach K-banks Concentration Ratio (CR_k) and Herfindahl-Hirschman Index (HHI) are used to measure banking concentration. The concentration of banks in terms of asset, deposit mobilization and loan disbursement was measured. Based on balance sheet data of banks the largest three and largest five largest banks concentration ratio calculated for asset, deposit and loan items of balance sheet. Its higher value interpreted as monopoly position of a few banks in the sector. These K-banks concentration ratios calculated as follow.

$$CR_k = \sum_{i=1}^k S_i \text{ ----- (Eq 1)}$$

Where K is the three or five largest banks, S_i is each of the three or five bank's share in the total assets or deposit mobilized or loan and advance amount of the banking industry. The number of banks included in the concentration index is rather an arbitrary decision since there is no rule for the determination of the value of k (Abduh, 2017). The concentration ratio may be considered as one point on the concentration curve, and it is a one-dimensional measure ranging from zero to unity. The index close to zero for an infinite number of equally sized banks and it equals to unity if the banks included in the calculation of the concentration ratio make up the entire industry.

HHI was introduced by Hirschman (1945) and Herfindahl (1950). It is widely applied to estimate the degree of competition of a market. It computed as follow;

$$HHI_k = \sum_{i=1}^n S_i^2 \text{ ----- (Eq 2)}$$

Where S_i^2 denotes the market shares of the company i and n stands for the number of banks in the industry. The more the value of the indication rises, the more the market is concentrated, and weaker is the competition between the market players. According to the current screening guidelines, the banking industry is regarded to be a competitive market if the HHI is less than 0.1, a somewhat concentrated market if the HHI lies between 0.1 and 0.18, and a very concentrated market if HHI is more than 0.18.

PANZAR-ROSSE (PR-MODEL)

The Rosse and Panzar (1977), which further expanded by Panzar and Rosse (1987) is an approach to measuring competition based on a reduced-form revenue equation (Barros and Mendes, 2016). The model allows for bank specific differences and measure competition by calculating the H-statistic which is obtained by summing the elasticities of revenue with respect to input prices. The model assumes that banks have revenue and cost functions that define the profit maximization path, whereby marginal revenue must be equal to marginal cost. The empirical PR model for this study is given by the following Equation:

$$\ln TR_{it} = \beta_{it} + \beta_1 \ln(P_{Lit}) + \beta_2 \ln(P_{Rit}) + \beta_3 \ln(P_{Kit}) + \gamma_1 \ln(TA_{it}) + \gamma_2 \ln(CAPR_{it}) + \gamma_3 \ln(RISK_{it}) + \varepsilon_{it} \text{ ----- (Eq3)}$$

where TR denotes total revenue (interest revenue plus other non-interest revenues) from i bank in period t , P_L is the unit price of labor proxied by the ratio Employees salary and benefit divided by total assets; P_F is unit price of fund proxied by the ratio of interest expense to total deposit and P_K is the unit price of fixed capital proxied by the ratio of other operating and administrative expense divided by fixed and other assets. All input price are expected to positively associate with revenues. ε represent the usual error terms which assumed normal distributed.

To control various effects, based on previous empirical studies we included firm-specific control variables in the model. Accordingly, Log of total assets (TA) to capture scale effect and aggregate demand which are expected to be positively associated with revenues. Ratio of equity capital to total asset (CAPR) to capture capitalization reflects the solvency risk born by the depositors and ultimately shareholders of the bank. A higher CAPR value reflects a lower risk in the sense that the bank's asset portfolio is not expanded beyond what the bank can afford in terms of capital adequacy. A higher CAPR value reflects a lower risk in the sense that the bank's asset portfolio is not expanded beyond what the bank can afford in terms of capital adequacy. Hence, the coefficient for this variable is expected to be negative. However, it should be noted that the relationship between capital adequacy and the income-generation potential of the banking firm is not very straightforward and strong (Gunalp and Celic, 2006). The capital adequacy ratio represents the solvency risk born by the shareholders on the right-hand-side of the bank's balance sheet and therefore does not have a direct bearing on the efficiency with which the bank generates interest and non-interest income in the asset portfolio. The RISK variable measures the amount of risk taken by the bank in its asset portfolio through extending of risky loans. Therefore, the coefficient of RISK is expected to be positive as more loans reflect more risk and potentially higher interest income. The definition and expected relationship of control variables are similar to Gunalp and Celic (2006), Barros and Mendes (2016), Abduh (2017).

The sum of the revenue elasticities with respect to input factor prices is called H-Statistics. It equation 4 present the computation of H-Statistics from reduced PR-model.

$$H\text{-Statistics}_{it} = \sum_{i=1}^n (\beta_L + \beta_F + \beta_K) \text{-----} \text{ (Eq 4)}$$

If $H \leq 0$, Short-term oligopoly; $0 < H < 1$, monopolistic and $H = 0$, perfect competition. Finally, for the purpose of robustness, the dependent variable in the PR-model, TR is replaced by Log of TR scaled by total asset ($\ln TR/TA$) and Log of interest revenue ($\ln IR$). However, no change made on the independent and control variables. Unlike the monopoly model, the results for the models of perfect and monopolistic competition depend crucially on the assumption that firms are observed in their long-run equilibrium (Panzar and Rosse, 1987). Therefore, the PR-model in Eq 3 can only valuable if the long-run equilibrium is satisfied. This can be performed by calculating the H-statistic using the return on assets as the dependent variable in place of the total revenue in the equation to be estimated. The long-run equilibrium equation is present as follow:

$$\ln ROA_{it} = \beta_{it} + \beta_1 \ln(P_{Lit}) + \beta_F \ln(P_{Fit}) + \beta_K \ln(P_{Kit}) + \gamma_1 \ln(TA_{it}) + \gamma_2 \ln(CAPR_{it}) + \gamma_3 \ln(RISK_{it}) + \varepsilon_{it} \text{----} \text{ (Eq 5)}$$

Repeat Eq 4 to find the value of H-statistics after estimation of Eq 5. A finding of $H < 0$ would indicate disequilibrium, whereas $H = 0$ would tend to confirm equilibrium suggesting that input prices are not correlated with industry returns (Shaffer, 1982). Shaffer, 1982, was the first to apply PR-model for banking sector. The assumption of long-run equilibrium may be difficult to sustain in transition and developing countries where banking sectors are still undergoing structural transformation (Simpasa, 2013). ROA proxied by the ratio of net income after tax to total asset. Because it can potentially take negative values, ROA it is adjusted by a factor of one before taking logarithmic transformation.

LERNER INDEX

The Lerner index is one of the most popular indexes of market power. The Lerner index is a relative mark-up of price over marginal cost (Lerner, 1934) and measures the banks' exercise of market power. According to Coccoresse (2009), the Lerner index is a true reflection of the banks' degree of market power because it represents the behavioural departure from monopoly and perfect competition. The Lerner index (L) is computed as follow;

$$L = \frac{P - MC}{P} \text{-----} \text{ (Eq 6)}$$

Where P represents the price of banking outputs and MC denotes the marginal cost. Following the approach in Fernandez de Guevara et al., (2005), Turk-Ariss (2009) and Abduh (2017). Bank output is proxied by total bank revenues over total assets, and MC is computed by taking the derivative from a trans-log cost function shown in the following equation.

$$\ln TC_{it} = \beta_0 + \beta_1 \ln(TA_{it}) + \frac{\beta_2}{2} \ln(TA_{it})^2 + \sum_{i=1}^3 (\gamma_{ki} \ln P_{k, it}) + \sum_{i=1}^3 (\phi_k \ln TA_{it}) \ln P_{k, it} + \sum_{i=1}^3 (\delta \ln(P_{k, it}) \ln(P_{l, it}) + \sum_{i=1}^3 (\delta/2) \ln(P_{l, it})^2 + \beta_K \ln(P_{K, it})^2 + \mu_{it} + \varepsilon_{it} \text{-----} \text{ (Eq 7)}$$

TC is proxied by the ratio of sum of interest and non-interest expense by total asset. Once the cost function is estimated, its first derivative with respect to the output evaluated for each bank in the sample, is the marginal cost; which can be computed as follow:

$$MC_{it} = \frac{TC_{it}}{TA_{it}} [\beta_1 + \beta_2 \ln TA_{it} + \sum_{i=1}^3 (\phi_k \ln TA_{it}) \ln P_{k, it}] \text{-----} \text{ (Eq 8)}$$

Where $\frac{TC_{it}}{TA_{it}}$ is computed for each bank each year. The estimated coefficients of the cost function are then used for computing the Lerner index (Eq 6) the result generally lies between 0 and 1. Lerner index equals to 0 means a perfectly competitive behavior and the firm has no market power. Lerner index close to 1 shows the weakness of the competition at the price level and that the firm exercises a market power to a higher mark-up. An increase of price or decrease of marginal cost contribute to an increase in Lerner index. In condition of very strong competition banks oblige to propose price under marginal cost which bring down Lerner Index to negative.

BOONE INDICATOR

The most recent market power indicator which is used by few empirical studies is the Boone Indicator. The Boone indicator is based on the efficient structure hypothesis that links performance with differences in efficiency. It suggests that increased competition leads to an increase in the market shares of more efficient banks in relation to less efficient counterparts (Amidu and Wilson, 2014). The Boone indicator can be calculated as the elasticity of profits to marginal costs. To calculate this elasticity, the log of return on assets is regressed against a log measure of marginal costs.

$$\ln(ROA_{it}) = \alpha + \beta_1 \ln(MCI) + \beta_2 CON + \varepsilon_{it} \text{-----} \text{ (Eq 9)}$$

Where ROA is stands for return on asset and MCI a measure of marginal cost. Marginal costs are obtained from an estimated translog cost function with three inputs (Eq 7). The more negative the β_1 -coefficient is, the higher the level of competition is in the market. As the Boone indicator is time dependent, β_1 is estimated separately for each year reflecting changes in competition over time. To allow for heterogeneity in the empirical model, a bank-specific effect is included to estimate the Boone indicator. CON stands for control variables. We use similar control variables included in Eq 3 and Eq 4.

DRIVERS OF COMPLETION

Finally, another objective of this study is to investigate the factors that drive competition in the Ethiopian banking industry. Based on an approach applied by Barth et al (2004), Turk-Ariss (2008), Masood and Sergi (2011), Sahut et al., (2012), and Abduh (2017) we develop the following model to estimate.

$$COMP_{it} = \beta_{it} + \sum_{i=1}^n (\beta_1 \text{Bankspecific}_{it}) + \sum_{i=1}^k (\gamma_1 \text{Structural}_{it}) + \sum_{i=1}^L (\phi_1 \text{Macro}_{it}) + \varepsilon_{it} \text{-----} \text{ (Eq 10)}$$

Where variable $COMP$ refers to the measure of competitiveness proxied by bank level Lerner. This study considers profitability measured by ROA (ratio of net income to total asset) and ROE (ratio of net income to total equity), the efficiency (EFF) measured by the ratio of total deposit to total assets and finally capitalization ($CAPR$) measured by the ratio of total equity to total assets included in the model as bank specific variables (*Bankspecific*). Based on previous works, we estimate all bank-specific variables included positively affect competition in the industry. The concentration as structure variable is captured by the Concentration Ratios (CR) of the largest 3 banks ratio of total loan and advance to total loan and advance of the industry. Our estimation to this structural variable is negative. For this particular study, to robust the regression result concentration ratio further proxied by total asset and total deposit and regressed again.

As a proxy competition from nonbank financial institutions, we use total insurance premium divided by GDP^3 . Based on Claessen and Laeven, 2004, and Demirgüç et al., 2004, we expect to find positive coefficients for this variable since the more developed other parts of the financial sector are, the more competitive

3. In the financial sector of Ethiopia only banks, insurance companies and microfinance institutions are operate. Banks are the dominant in the sector followed by insurance companies. There are 17 insurance companies and 31 microfinance institutions. The share of insurance companies and microfinance institutions in the

pressure there will be on the banking sector. We include general economic development and macroeconomic stability as these can be expected to affect banking system performance. A proxy for the general level of development of the country, we use the log of per capita GDP. Based on Claessen and Laeven (2004), the banking system is less likely be more competitive when it is subject to high inflation as prices of financial service such as interest rates, will be less informative. As an indicator for macroeconomic stability, we use the GDP deflated inflation rate. The data regarding insurance premium to GDP, per capita GDP and inflation rate are obtained from the World Development Indicator.

DATA

Up to June 2015; the final sample period of our study, there were 19 banks (excluding National Bank) in the Ethiopian banking industry. The panel data from 2000 onwards can only be constructed for the 8 banks as the others are very recent. Because of the unavailability of data for Development Bank of Ethiopia (the only policy bank in the country), we excluded from the sample. Moreover, the inclusion of this bank to our study has no significant as far the bank only finance development projects of the state. Therefore, our analysis is based on annual data collected 2000-2015 from 8 banks (127 observations). Following merger of Construction and Business Bank to Commercial Bank of Ethiopia, we couldn't find data for Construction and Business Bank for the year 2015. As a result total observations reduced from 128 to 127. The financial statements of banks are sourced from National Bank of Ethiopia. We obtained macroeconomic data from World Bank Development Indicators. Finally, on average 2000-2015 the 8 banks included in the study takes 97%, 98%, 97% and 95.6% share of the industry asset, loan and advance, deposit and revenue respectively.

In the descriptive statistics, higher standard deviation observed particular TR, IR, TA, TC and PK. The result is because of huge variation between state-owned bank (Commercial Bank of Ethiopia, the largest bank in the country) and smaller effective private banks. In the regression estimation, these variables are include as a ratio, therefore would not have outlier effect in the regression estimations.

TABLE 2: DESCRIPTIVE STATISTICS: 2000-2015

Definition	variable	Obs	Mean	Std. Dev.	Min	Max
Total revenue at constant price 2000=100 (1,000,000 ETB*)	TR	127	1123.7	2623.8	5	18470.4
Interest revenue at constant price 2000=100 (1,000,000 ETB)	IR	127	744.1	2085.5	3	16769.4
Total cost at constant price 2000=100 (1,000,000 ETB)	TC	127	544.2	1201.9	4	9768.3
Total asset at constant price 2000=100 (1,000,000 ETB)	TA	127	16083.8	41996.3	143	305074.8
Return on Asset at constant price 2000=100 (1,000,000 ETB)	ROA	127	0.0234	0.0106	-0.0212	0.0484
Return on Equity at constant price 2000=100 (1,000,000 ETB)	ROE	127	0.2161	0.1446	-0.5681	0.7035
Price of labor	PL	127	0.0111	0.0041	0.0047	0.0236
Price of fund	PF	127	0.0261	0.0102	0.0106	0.0834
Price of capital	PK	127	1.90	0.999	0.2017	6
Loan to total asset ratio	Risk	127	0.4996	0.1232	0.1926	0.7761
Capital to total asset ratio	CAPR	127	0.1193	0.0475	0.0374	0.2943
Efficiency, Deposit to total asset	EFF	127	0.7451	0.0801	0.4936	0.8715
GDP per capita	GDPCA	127	296.2	166.75	111.53	619.16
Rate of inflation GDP deflated	IFF	127	0.1173	0.1088	-0.057	0.3354
Insurance premium to GDP	INSGDP	127	0.5799	0.1089	0.4164	0.8252

*Ethiopian Birr (currency)

FINDINGS AND DISCUSSIONS

RESULT OF CONCENTRATION INDICATORS

Table 3 shows that the concentration ratios of largest 3 and 5 banks in terms of asset, loan and advances and deposit. During 2000-2014, on average 80.67% of total asset, 67.38% of loan and advance, and 81.68% of deposit of the industry is shared by the largest three banks namely commercial bank of Ethiopia (public owned), Dashen Bank and Awash International bank (both private owned). This ratio increase to 88.4 %, 81.7% and 89.53% share of asset, loan and advance and deposit respectively when largest 5 banks assumed. The industry was at most and at least level of concentration ratio during the year 2000 and 2010 respectively. Table 3 reveal two interesting results; first, CRs continuously decrease from 2000-2010 and start increasing from 2011 onward. The implication this result can be interpreted as among others, recent regulatory measures or directives taken on the industry turned the downward moving concentration to upward. In other word, decrease competitiveness condition as higher concentration interpreted as lower competition. Second, compared to measure of concentration based asset and deposit, concentration measured based on loan and advance shows relatively lower level although still higher compared to the standard line. This indicate that the market power of large banks tends to decrease in loan market participation or small banks are better competitive and efficient in the loan market than financing (deposit mobilization). Although many regulatory measures aiming to improve competition are continuing taken and more new banks are entering to the market, the industry remain highly concentrated and dominated by few banks.

Measurement of market power based on concentration of largest banks alone is not enough. We, therefore further analyzed by using another concentration measure called Herfindahl-Hirschman Index (HHI). Unlike, concentration ratio of largest banks (CR_k), HHI assume all banks operate in the industry during the period. Table 3 also shows that the HHI of banks measured using three proxies; asset, loan and advances and deposit. HHI decrease moving from early 2000 to 2010, and start increasing 2011 onward. During the study period, the average HHI of banking industry in Ethiopia were 0.491, 0.268 and 0.499 in terms of asset, loan and deposit respectively. The value of HHI is interpreted as competitive market if the HHI is less than 0.1, a somewhat concentrated market if the HHI lies between 0.1 and 0.18, and a very concentrated market if HHI is more than 0.18. The average value of HHI in the Ethiopian banking sector conclude that the sector is high concentrated or were at lower level of competition during 2000-2014. Similar to CRs of largest 3 and 5 banks (discussed in the previous section), the HHI result also evidenced that market power of large banks is lower in terms loan and advances than measured by asset and deposit. Finally, the result of the two dominants structural measure of competition and market power (CR_k banks and HHI) reveal the same conclusion; during 2000-2014, banking sector in Ethiopia was highly concentrated and large few banks exercise market power.

sector is less than 20% of the sectors asset. Because of data unavailability regarding Microfinance institution, we consider the share of premiums (life and non-life) of insurance companies to GDP only to measure competition of non-bank sector to the bank.

TABLE 3: MARKET CONCENTRATION AND HHI OF BANKS IN ETHIOPIA FOR 2000-2014

Year	Concentration ratios						Herfindahl-Hirschman Index		
	Asset		Loan and advances		Deposit		Asset	Loan and advance	Deposit
	CR3	CR5	CR3	CR5	CR3	CR5			
2000	0.8954	0.9468	0.8268	0.9119	0.9179	0.9643	0.69	0.526	0.732
2001	0.8869	0.9427	0.8086	0.9031	0.9077	0.96	0.664	0.48	0.694
2002	0.8732	0.9363	0.7746	0.8867	0.8897	0.951	0.619	0.4	0.644
2003	0.8593	0.9285	0.7256	0.8605	0.8733	0.9423	0.578	0.308	0.596
2004	0.8504	0.9219	0.6913	0.8388	0.8619	0.9326	0.55	0.254	0.561
2005	0.8214	0.8991	0.6465	0.8027	0.8323	0.9128	0.507	0.221	0.505
2006	0.8014	0.8956	0.6121	0.7977	0.8178	0.9114	0.457	0.184	0.467
2007	0.7892	0.891	0.586	0.7913	0.7971	0.9033	0.433	0.165	0.433
2008	0.769	0.8714	0.6224	0.7967	0.7766	0.8816	0.4	0.194	0.4
2009	0.7484	0.8533	0.6068	0.7803	0.7487	0.8579	0.37	0.183	0.36
2010	0.7399	0.834	0.6007	0.7637	0.7421	0.8369	0.361	0.174	0.352
2011	0.7608	0.8447	0.6195	0.7759	0.7588	0.8463	0.408	0.193	0.399
2012	0.7728	0.8409	0.6674	0.788	0.778	0.8477	0.439	0.246	0.435
2013	0.7669	0.8349	0.6548	0.7814	0.7755	0.8444	0.438	0.235	0.44
2014	0.7662	0.827	0.6637	0.7762	0.7754	0.8363	0.446	0.252	0.463
Average	0.8067	0.8845	0.6738	0.817	0.8168	0.8953	0.491	0.268	0.499

Source: own computation based on the data source.

PANZAR AND ROSSE MODEL RESULT

Panzar and Rosse (1987) is a direct measure of competition. We estimate the PR-model on three specifications; total revenue (LnTR) used as dependent variable (specification 1), total revenue scaled by total asset (Ln (TR/TA)) used as dependent variable (specification 2) and interest revenue (LnIR) as dependent variable (specification 3). It can be seen that TR in specification (1) increases, and is statistically significant at 1% level with all input prices (LnP_L, LnP_F and LnP_K). The H-statistic (sum of coefficients LnP_L, LnP_F and LnP_K) is 0.4387, which means that Ethiopian banking is a monopolistic competition. As expected, and consistent with the empirical result of most studies the coefficient of all input prices (under all specifications) are positive and statistically significant at 1% significant level. The first two specifications showed that the contribution of input prices to H-statistics is nearly equal. However, price of fund is the largest contributor (0.3349) to the H-statistic followed by price of labor (0.1682) when interest revenue used as dependent variable (specification 3). The value of H-statistics in specification 3 (0.55507) is higher than the first two specifications. This result indicates that banking market in Ethiopia is the more competitive in terms of interest rate, which affects interest income. This result is expected as interest-generating activities have been the tradition in developing banking sectors.

In relation to the control variables, all control variables (LnTA, LnCAPR and LnRISK) positively correlated with the dependent variables (LnTR, LnTR/TA, and LnIR) and statically significant at 1% significant level. The result suggest that more capitalized banks tends to earn higher income than less capitalized banks. Large banks size in terms of asset associated with higher profit (Barros and Mendes, 2016; Fusu, 2013; Al-Muharrami et al. 2006; and Mamatzakis et al. 2005). Finally, as it has been strongly supported by theory and empirical results, the result of this paper also concede the higher risk is matched with higher reward. Hence, based on all specifications, Ethiopian banks operated under monopolistic competition during the study period. The inference of similar conclusion obtained from regression when revenue equation regress with and without scaled of total revenue by total asset reduce the frustration of that the H-statistics could be biased when scaled rather than unscaled revenue equation is estimated (Bikker et al. 2009). The finding of 0<H<1 appears to be robust to different specifications of the dependent variable. The result of Wald-test for the hypotheses that during the same period, the banks enjoyed some monopoly power (H=0) and that they operated in a perfectly competitive or a perfectly contestable environment (H = 1) are clearly rejected at 1% level of significant. Finally, the use of fixed effect for this particular model is supported by Huasman test.

TABLE 4: ETHIOPIAN BANKING USING THE PANZAR-ROSSE MODEL (FIXED-EFFECT REGRESSION)

Descriptions	Specification 1 LnTR		Specification 2 Ln(TR/TA)		Specification 3 LnIR	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Constant	-1.1499 (0.3178)	-3.62*	-1.1499 (0.3178)	-3.62*	-0.7165 (0.3056)	-2.34*
Price of Labor (LnP _L)	0.1566 (0.0578)	2.71*	0.1565 (0.0578)	2.71*	0.16821 (0.0555)	3.03*
Price of Fund (LnP _F)	0.1449 (0.0442)	3.28*	0.1449 (0.0442)	3.28*	0.3349 (0.0424)	7.89*
Price of Capital (LnP _K)	0.1372 (0.0257)	5.34*	0.1372 (0.0257)	5.34*	0.0475 (0.0247)	1.93**
Log of total asset (LnTA)	1.071 (0.0134)	79.7*	0.0710 (0.0134)	5.29*	1.0738 (0.0129)	83.1*
Capital ratio (LnCAPR)	0.27 (0.0459)	5.88*	0.2699 (0.0459)	5.88*	0.1770 (0.0441)	4.01*
Net loan to total asset (LnRISK)	0.2724 (0.0578)	4.72*	0.2723 (0.0578)	4.72*	0.7525 (0.0555)	13.55*
Time (dummy)	-0.0066 (0.0199)	-0.33	-0.0065 (0.0199)	-0.33	-0.0250 (0.0191)	-1.3
H-statistic	0.4387		0.4387		0.5507	
overall R2	0.9927		0.627		0.9933	
F-stat	1992.1		20.27		2070.2	
Probability of F-stat	0.0000		0.00		0.00	
F-statistic for testing the hypothesis H = 0	14.90*		14.28*		35.36*	
F-statistic for testing the hypothesis H = 1	0.000*		0.000*		0.000*	
Observations	127		127		127	
Number of groups	8		8		8	

Note: SEs are given in parentheses. *and ** Significant at 1% and 5% level.

EQUILIBRIUM TEST RESULT

The validity of PR-model is based on the satisfaction of long-run equilibrium test. The equilibrium test showed that in the long-run banks earning is independent of price of labor and capital but dependent to price of fund. The value of H-statistics is near to but not equal to zero in all specifications. In all regressions the null hypothesis that H=0 cannot be rejected even at the 5% level. Therefore, the data appear to be in long-run equilibrium. This supports the conclusion drawn above regarding monopolistic competition. According to Shaffer (2004) the rejection of the test of equilibrium does not distort the inferences based on the results of the estimation of this indicator. He further argues that the hypothesis of the long-term equilibrium is not strictly necessary in the presence of the positive values of the statistics. Shaffer (2004) also underlines that the “no equilibrium” situation suggests a dynamic development of the industry. Moreover, the assumption of long-run equilibrium may be difficult to sustain in transition and developing countries where banking sectors are still undergoing structural transformation (Sim-pasa, 2013). Finally, in the long-run earning performance of banks negatively correlated and statically significant at 1% with asset, capital ratio and risk. According to the empirical result of this study, the recent capitalization measure taken on the banking industry of Ethiopia will reduce banks revenue generating power in the long-run. Currently, the industry is the most profitable and less competitive.

TABLE 5: EQUILIBRIUM TEST ESTIMATION RESULT

Depended variable (LnROA factorized by 1)	Pooled OLS	Fixed effect without time dummy	Fixed effect with time dummy
Constant	-0.0026 (0.011)	0.0621 (0.0209)*	0.0638 (0.0211)*
Price of Labor (lnP _L)	-0.0054 (0.0027)	0.0054 (0.0038)	0.0053 (0.0038)
Price of Fund (lnP _F)	0.01174 (0.0029)*	0.0115 (0.0029)*	0.0117 (0.0029)*
Price of Capital (lnP _K)	0.00072 (0.0014)	0.0004 (0.0017)	0.0004 (0.0017)
Log of total asset (lnTA)	-0.0052 (0.0007)*	-0.007 (0.0009)*	-0.007 (0.0009)*
Capital ratio (lnCAPR)	-0.0136 (0.0024)*	-0.016 (0.003)*	-0.016 (0.003)*
Net loan to total asset (lnRISK)	-0.0152 (0.0037)*	-0.012 (0.0038)*	-0.012 (0.0038)*
overall R ²	0.473	0.352	0.3498
H-statistics	0.00703	0.0172	0.0174
p-value of F-statistic for testing the hypothesis H=0	0.0012	0.000	0.000
No-Observation	127	127	127

Notes: SEs are given in parentheses. * denote statistically significant coefficient at 1% level

THE LERNER INDEX

The Lerner index indicates the degree of market power and measures the capacity of a bank to increase its price with regard to its marginal cost. The computation of marginal cost is heavily based on estimate result of translog cost function. The estimate result of translog cost function is presented on table 6.

The industry marginal cost is computed from the estimated translog cost function based on Equation 8. Multiply industry marginal cost with bank level ratio of total cost to total asset result bank level marginal cost. Based on equation 6, we calculate bank level Lerner for each year. Finally, the result of average price, average marginal cost and Lerner Index of each year for the industry is given on table 7.

TABLE 6: ESTIMATION RESULT OF THE TRANSLOG COST FUNCTION (FIXED EFFECT REGRESSION)

Log of total cost (logTC)	Coefficient and SE	t-stat
Constant	-0.9919 (2.2999)	-0.43
Output (lna)	1.0648 (0.1510)	7.05***
Price of Labor (lnpl)	0.9371 (0.8863)	1.06
Price of Fund (lnpf)	-1.2880 (0.6711)	-1.92*
Price of Capital (lnpk)	-1.3850 (0.3867)	-3.58***
Price of labor times total asset (lnplta)	-0.0773 (0.0356)	-2.17**
Price of fund times total asset (lnpfta)	0.1061 (0.0356)	2.98***
Price of capital times total asset (lnpkta)	0.0559 (0.0172)	3.25***
Price of labor times Price of fund (lnplpf)	-0.2917 (0.1288)	-2.26**
Price of labor times Price of capital (lnplpk)	-0.2861 (0.0871)	-3.28***
Price of fund times Price of capital (lnpfpk)	0.0402 (0.0866)	0.46
Time (dummy)	-0.0233 (0.0185)	-1.26

Note: SEs are given in parentheses. ***, ** and * Significant at 1%, 5% and 10% level.

The Lerner index move between 0.1038 and 0.7986 and the average during the sample period is 0.5388. Higher value of Lerner is observed, indicates banks have more market power to affect the price of the products and services they offered. To some extent, the result is consistent with the results of other market power indicators (CR_k and HHI, see table 3). Lerner value increase consistently from 0.2295 (2000) to 0.5967 (2009). Reached at maximum during 2010 (0.7986) and then start moving downward but with higher value compared to early 2000s. Summing up the result we found from concentration ratios with the average annual value of Lerner we can generalize that banks market power reduced from 2000-2010 and then started increase 2011 onwards. Increase market power negatively affect competition.

TABLE 7: CALCULATED ANNUAL VALUES OF AVERAGE PRICE, MARGINAL COST AND THE LERNER INDEX OF BANKING INDUSTRY OF ETHIOPIA 2000-2015

year	Average Price	Average marginal cost	Lerner Index
2000	0.0754	0.0613	0.2295
2001	0.0898	0.0699	0.2838
2002	0.0739	0.0669	0.1039
2003	0.067	0.0566	0.182
2004	0.0719	0.0529	0.3574
2005	0.0708	0.0451	0.572
2006	0.0787	0.0445	0.7712
2007	0.0844	0.0505	0.6712
2008	0.0854	0.0537	0.5907
2009	0.0792	0.0464	0.7054
2010	0.0828	0.046	0.7986
2011	0.0858	0.0479	0.791
2012	0.0889	0.0502	0.7697
2013	0.0853	0.0536	0.5913
2014	0.0923	0.058	0.5927
2015	0.0895	0.0556	0.6119
Average 2000-2015	0.0813	0.0537	0.5388

Source: Authors' calculation based on the result of translog cost function and other derivations.

BOONE INDICATOR

Our measurement to market power of banks in Ethiopia extended to the use of the most recent market power indicator; Boone Indicator. We estimate equation 9 three times; pooled OLS, fixed effect with and without time dummy. Table 8, presents the estimate result of econometric used to investigate the level of Boone value, which is the coefficient of marginal cost (lnMC). The coefficient of lnMC in the estimate result is -0.7523 (OLS), -1.181(fixed effect with time dummy) and -1.183 (fixed effect without time dummy) and significant at 1% level. The negative coefficient is as expected, because efficient structure hypothesis (the base for Boone indicator) suggests that increased competition leads to an increase in the market shares of more efficient banks. The higher negative coefficient of marginal cost (the Boone indicator) is the more competitive system. The control variables keep the expected sign and significant at 1% level of significant. Large banks (in terms of asset) and capitalized banks generate better operating performance (ROA) than smaller and non-capitalized banks. The positive significant coefficient of net loan to total asset (lnRISK) evidence banks charge higher return on high-risk loans and advances.

TABLE 8: ESTIMATE RESULT COEFFICIENT OF LERNER INDEX 2000-2015

Return on Assets (lnROA)	Pooled OLS	Fixed effect without time dummy	Fixed effect with time dummy
Constant	-5.9595 (0.5344)*	-8.28828 (0.8145)*	-8.341 (0.8263)*
Marginal cost (lnMC)	-0.7523 (0.2063)*	-1.1811 (0.2263)*	-1.183 (0.2271)*
Log of total asset (lnTA)	0.26109 (0.0476)*	0.28111 (0.047)*	0.2827 (0.0473)
Capital ratio (lnCAPR)	0.87506 (0.1362)*	0.54239 (0.194)*	0.5364 (0.1951)*
Net loan to total asset (lnRISK)	0.59055 (0.2495)**	0.37614 (0.2513)	0.3751 (0.2522)
overall R ²	0.3622	0.2904	0.2886
F-statistics	18.89*	22.02*	22.02*

Notes: Numbers in parentheses SE * denote statistically significant coefficient at 1% and 5% level respectively.

In order to explore the competitiveness condition over time using Boone, it requires to know each year Boone value. As a result, we regress equation 9 for each year. However, the value of Boone Index we find from each year estimation result seems biased due to small observations (each year for 8 cross sections = 8)⁴. Therefore, we fail to report this result in this section.

DRIVERS OF COMPETITION IN THE ETHIOPIAN BANKING INDUSTRY

The estimation results on the drivers of the degree of competition in Ethiopian banking sector is reported in Table 9. Bank level Lerner is used as a dependent variable to investigate factors that drive competitiveness in the Ethiopian banking industry. The two measurement of operating performance ROA and ROE are positively related with Lerner index (dynamic measure of market power) and statistically significant at 1% level. This implies that banks earn higher return under lower level of competition. The result is expected as strong competition leads banks to charge lower interest rate to loan and advance they offer, higher interest rate to attract time deposit and assumed to incur additional costs to delight customers. The coefficient of capitalization is significantly positive, which indicates that well capitalized banks tends to exercise greater market power and operate well in more concentrated environments. The result is as expected and consistent with many empirical studies (Abduh, 2017, Simpasa, 2013, Turk Ariss, 2008).

Concentration is included as a structural variable and result as expected is negative and significant. The implication of this result is straight forward; competitiveness increase with a decrease in concentration. Further, we, re-estimate this model by replacing concentration which is measured on asset with concentration of large 3 banks based on loan and advances and deposit (financing). All the three specifications result are robust and consistent with finding of Demircuc-Kunt et al., 2004.

TABLE 9: DRIVERS OF COMPETITION AMONG ETHIOPIAN BANKS 2000-2015 (GLS-RANDOM EFFECT ESTIMATION)

Dependent variable bank level Lerner	Coefficient	Std. Err.	z-stat
Constant	1.41461	0.346	4.09*
Return on Asset (ROA)	7.91631	1.1188	7.08*
Return on Equity (ROE)	0.66857	0.0736	9.08*
Deposit to total asset (Efficiency)	0.06217	0.1088	0.57
Ration of equity to total asset (CAPR)	0.81575	0.2089	3.91*
Asset Concentration of large 3 banks	-0.9442	0.2798	-3.38*
Inflation GDP deflated	0.01474	0.0577	0.26
Log of GDP per capita	-0.2837	0.0553	-5.13*
Insurance companies total premium to GDP	-0.2132	0.107	-1.99**
overall R ²	0.8916		
Wald-x ²	1091.06		
Probability of x ²	0.000		
Number of observation	127		
Number of groups	8		

Note: *and ** statistically significant at 1% and 5% respectively

Regarding macro-economic variables, general economic development (measured by GDP per capita) tends to decrease market power and improve competitiveness. However, we found no significant evidence between banks market power and inflation. Finally, the variable include to capture the influence of other financial sectors on banking sector competition found negative and significant correlated with banks market power. In other word, the development of non-bank financial sector increase the competition within banks. This result quite convincing because in developed financial system non-bank financial sectors involve in banking sector functions and vice-versa.

CONCLUSION

This paper investigates market power and competitive conditions of Ethiopian's banks during the period of 2000–2015. Based on the principle that different indicator catch different aspects of competition; we intensively apply measures of concentration (K-banks concentration ratio and Herfindahl-Hirschman Index), competition (Panzar–Rosse model) and market power (Lerner Index and Boone indicator). This is an essential contribution, as the literature lacks evidence on the level of competition in the Ethiopia's banking market.

The results of concentration measures reveal that the industry is highly concentrated. In addition, concentration in the industry decrease moving from 2000-2010 and start increasing 2011 onward. The result of Panzar-Rosse model reveal that competition in Ethiopia's banks is monopolist. The result is robust in different specifications and is similar with empirical studies conducted in African countries such as; Barros and Mendes, 2016; on Angola's banks, Simpasa, 2013; on Zambia's banks, Hauner and Peiris, 2008, on Uganda's banks). The test for long-run equilibrium successfully conducted. In the long-run Ethiopia's banks Return on Asset (ROA) is inelastic of price of labor and price of capital. Both the Lerner index and Boone indicator shows that during the study period banks in Ethiopia exercise market power. The average Lerner index during 2000-2015 is 0.54, which is higher compared to most African countries. This index was lower from 2000-2004 and higher from 2005 to 2015. Although rapid development of the sector time to time the competitiveness condition remain at average level. This affects the intermediary efficiency of banks and their contribution to economic growth.

Our analysis towards the drivers of competition evidence that ROA and ROE are positively related with Lerner index and statistically significant at 1% level. This implies that banks earn higher return under lower level of competition. In addition, the result shows that high concentration of banks negatively affects the competition of banks. This result is consistent while concentration is measured by different metrics. Highly capitalized banks exercise market power and harm competition between banks. Moreover, we found an evidence that the development of non-bank financial sector increase competition in the banking sector of Ethiopia. An increase in banking competition positively and significantly associate with GDP per capita in Ethiopian case. Finally, we found no significant relationship between competition of banks and banks efficiency and inflation.

POLICY IMPLICATION AND SCOPE FOR FUTURE RESEARCH

The policy implication of the present study is that the industry should be open for foreign banks to operate. Based on our understanding on the facts of the industry half a century undergoing operation within closed and highly regulated system should be over. Indeed, few positive roles of the closed policy to date not undermined. The empirical results of this study shows the need to further study in the following issues. First, continues decrease from 2000-2010 and increasing trend

4. To increase observations it is better to use quarterly or monthly data to estimate Boone index for a single banking system. We cannot find quarterly or monthly data for each bank from any source.

from 2011 onward of concentration measures and higher but volatile value of Lerner index from 2005 onward notices to go back and evaluate events happen in the industry and their effect on banks competition and market power. For example, regulatory measures taken, structural changes made, mandatory directives imposed, new entrant to the sector and the conditions of non-bank financial sectors should be evaluate against baking competition and market power in Ethiopia. Second, this study analyses the level of competition and market power for 16 consequent years. We recommend future researchers to evaluate the impact of banks competition on firms and households access to financial services. We believe, it's at most desirable to a nation access to credit is the frontline obstacle for development.

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COMPREHENSIVE PROBLEMS OF HDFC AND SBI HOME LOAN TAKERS - A STUDY IN TELANGANA STATE

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ABSTRACT

The study finds out that the Housing Finance in India faced a number of set-backs in decades, such as an unorganized market, development disparities and compartmentalized development approach. There was not even a concerted attempt to understand the housing problem let alone promote it. Reforms introduced in the sector during the 1990s, however, have overturned the situation to a great extent. The deigning of a shelter policy, the organization of the housing finance market, the introduction of fiscal incentives, increased public investment, legal reforms and others initiatives have brought about a number of changes in the housing finance. Home Loan providers should continue to address the huge potential in the industry and would maintain their focus on the individual loan segment. A trend that has emerged over the years in the housing finance is that the decreasing role of interest rates as a competitive tool. Service and product innovations are the key tools for success at present.

KEYWORDS

HDFC home loan, SBI home loan, Telangana state.

INTRODUCTION

Housing finance is a relatively new concept in India comparing to other financial services that are widely available in the country since a long year back. However, the speedy development in housing and various housing activities have understandably led to the growth of Indian housing finance market. As a result, a number of players have barged into the market. It was in the year 1970 when Housing and Urban Development Corporation (HUDCO) was established to finance various housing and urban infrastructure activities. However, the Housing Development Finance Corporation (HDFC) was the India's first private sector housing finance company came into existence in 1977. Since then, the housing finance in India has been flying high. It's expected to grow at a growth rate of 36% in the coming years. HOUSING SECTOR Housing Sector refers to the entire construction activity, it has maximum propensity to generate income and demand for materials, equipments and services. In fact, housing provides necessary impetus to the economy as a whole. Small initiatives in housing will propel multiplier effects in the economy through a chain of linkage effects. For every one crore rupees of investment in housing, nearly 290 industries in the building material sector get activated besides the core manufacturing sector constituting cement, steel and bricks etc. It has been estimated that out of every Rs. 100 spent on housing Rs. 11.40 is returned back to the national exchequer by way of stamp duty, registration and taxes. Housing Sector has seen exceptional changes in the last 15 years, both globally and nationally. In the last few years, the housing sector in India has witnessed a spurt in demand not just for residential property but also for commercial property. This rise in demand may be attributed to the large and growing middle class population of 300 million people. The Technology and business Process Outsourcing have correspondent to growing demand for shopping malls, multiplexes, food outlets, office spaces and business centers etc. HOUSING FINANCE blessed are those who live in their own house and fortunate are those who have the money to buy one. But all are not privileged to buy a house of their own. For many such people, buying a house has become possible in modern times through Housing Finance. The term "Housing Loan" or "Housing Finance" means fiancé for constructing/purchasing or modifying a property. The various Housing Loans offered by Housing Finance institutions (HFIs) are for house Purchase, house extension, house improvement and land purchase. Hence, "Housing Finance" means the financial resources for an individual or group of persons used especially for the purpose of housing. HOUSING FINANCE IN INDIA Rao/A Study on Comprehensive Problems of HDFC & SBI Home Loan Takers in Telangana State Home-buyers in India were traditionally debt averse and opted for external funding only as a last resort. Consequently, formal external funding of house construction/purchase has accounted for a relatively small proportion of housing finance in the three decades after independence and this business activity had formally began in India in the 1970s. Construction/purchasing of a house needs a large investment, it requires long-term finance. In India, the main source of credit that flows into house construction is both formal and the informal sectors. The formal sector includes budgetary allocation of Central and State Government, assistance from the Financial Institutions, agencies and corporations like Life Insurance Corporation (LIC) and General Insurance Corporation (GIC) etc., the latter, it refers to finance from money lenders, household savings, disposal of existing property and borrowings from friends and relatives. Since independence, the institutional framework for housing finance was in the form of insurance companies like LIC and GIC. Then in 1970, the Government set up the HUDCO as a 100 per cent, Government owned enterprise with the objective of housing and urban development as well as infrastructure development.

The housing policy of HUDCO was designed to allocate 55 per cent of its housing finance to the low income and weaker sections of society. Housing Development Finance Corporation (HDFC): HDFC was incorporated in 1977 with the primary objective of meeting a social need that of promoting home ownership by providing long-term finance to households for their housing HDFC was guided by its core objective housing for all, though the development of the Housing Finance Sector in India. It is viewed as an innovative institution and a market leader in the housing finance sector in India. The World Bank considers HDFC, as a model Private Sector Finance Company in developing countries and a provider of technical assistance for new and existing institutions in India and Abroad. State Bank of India (SBI): The State Bank of India, the country's oldest bank and a premier in terms of balance sheet size, number of branches, market capitalization and profits. It is the two hundred year old Public Sector Bank. It is the bank having very wide product mix, such as Project fiancé, Home loans, Auto loans, Car loans, Education loans, Loans to Small Medium Enterprises, Government business, Rural and Agri business, Corporate Business etc. SBI is moving ahead with cutting-edge technology and innovative new banking models, to expand its rural banking base, looking at the vast untapped potential in the hinterland and proposes to cover 100,000 villages in the next two years. It is the only India bank to feature in the Fortune 500 list. Need for the Study: Today due to inflation in the economy, there is rise in the price of all commodities. Due to this, an ordinary individual is not able to save sufficiently to meet the high cost requirement of house construction or purchase. He has to essentially depend upon the Financial Institutions (FIs) for borrowing money for the purpose of house constructions or purchase. The proposed study will bring out the various sources of finance for house construction/purchase and a detailed study about the types of home loans, loan procedure and documents required for home loan sanction from the FIs. There is a need to examine the housing policies, Government and RBI initiatives in order to appreciate the liquidity in the housing finance sector.

REVIEW OF LITERATURE

- Sangwan and Bhan (2012) this study can find out the satisfaction level of customers and problems faced by them in obtaining home loans. For this purpose, we have taken four commercial Banks in Chandigarh city namely H.D.F.C. Bank, Punjab National Bank(P.N.B.), Union Bank of India and Industrial Credit and Infrastructure Corporation of India(I.C.I.C.I). Bank. It includes two public sector banks and two private sector banks. In the research methodology a sample size of 200 respondents has been taken through random sampling. They have taken both primary data as well as secondary data, in the primary data questionnaire has been used to check the satisfaction level of customers about home loans. In the secondary data, the annual reports of RBI, commercial banks and brochures of these banks have been studied. Finally, the whole research was carried out in a systematic way to reach at exact results. The whole research and findings were based on the objectives. Some of the limitations faced in collecting the data were Lack of time, lack of data, non-response, reluctant attitude and illiteracy of respondents, which posed problems in carrying out the research

- Gupta and Agarwal (2013) this is a comparative study in Meerut city, India, to evaluate service quality and resultant customer satisfaction in private banks as compare to public sector ones.
- Rao (2013) this study discussed about the perception and problems of home loan takers in Andhra Pradesh. The author has focused on research by taking into account H.D.F.C. and S.B.I. bank. The paper discussed about the Housing Policy frame work, trends and progress in Housing Finance, the operational performance of H.D.F.C. and S.B.I. with regard to providing housing finance to individuals, perception and problems of home loan takers in the State of Andhra Pradesh. The author concluded by stating that the Housing Finance in India faced a number of set-back in decades but the designing of a shelter policy, the organization of the housing finance market, the introduction of fiscal incentives have brought about a number of changes in the housing finance. The services and product innovations are the key tools for success.
- Thakur G. (2014) this study concluded that people prefer H.D.F.C. bank more than S.B.I bank for home loan. As private banks are coming daily in our country still, mostly people prefer government banks for loan especially older persons are more dependent on government banks. It is true that younger population preference is changing and they prefer more private banks because of services and facilities provided by private banks. The interest rate is lower in public (S.B.I.) bank in comparison with private (H.D.F.C.) bank but services are not up to the mark.
- Kumara swamy (2014) this study discussed about the importance of housing finance and the institutions providing housing finance. A detailed discussion of the marketing strategies adopted by financing institutions have been discussed by taking into account the loan criteria eligibility, loan amount, interest rate, security, loan tenure, margin and processing fee. Finally, the paper highlights the performance of the housing sector, major findings and suggestions to improve the effective marketing of housing finance for both public and private sector banks.
- Sharma and Garg (2014) this study concluded that the public sector banks are very popular among the customer these days because the interest rate is lower in State Bank of India as compare to H.D.F.C. bank and the trust level that customer have with these banks is very high in comparison to H.D.F.C. bank. The public sector bank also provide better facilities and services to the customer and give all the information to the customer time to time through Short Message Service(SMS) and internet banking. The information provided by the private banks is sometimes fake and they tried to cheat customer for their own benefits.
- Gupta and Sinha (2015) this examining on the respondent regarding the purchase of home loan and low rate of interest, easy accessibility, status/ reputation of the institution and scheme offered by the company are the major factor for selection of the housing finance institution comparative study on Factor Affecting consumer's Buying Behavior towards Home Loan (with special reference to S.B.I. and L.I.C.H.F.L.)" and found that fixed rate of interest is most preferred option by the customers.
- Chithra and Muthurani (2015) this study conducted on customer perception towards home loan in H.D.F.C are done Chennai with the 85 sample size and simple random sampling. The study shows that H.D.F.C. bank home loans has product portfolio for satisfying different consumer needs. The bank has got goodwill and this can be used for promoting its services. If new promotional activity and services introduced, it will help very much to organization to increase the business.
- Murugan and Jansirani (2017) a study carried out in Chennai to Customer perception towards home loan by selecting the 500 customer on randomly basis. This study made an attempt to evaluate in depth the performance and operational problems faced by the banking sector in extending finance to the housing sector and based on findings; identify the areas of concerns and strategic interventions required

TYPES OF HOME LOAN

There are different types of home loans available in the market to cater borrower's different needs.

- Home Purchase Loan
- Home Improvement Loan
- Home Extension Loan
- Home Conversion Loan
- Home Construction Loan
- Land Purchase Loan
- Bridge Loan

a) **Home Purchase Loan:** These are the basic home loans for the purchase of a new home. These loans are given for purchase of a new or already built flat/bungalow/row-house.

b) **Home Improvement Loan:** These loans are given for implementing repair works and renovations in a home that has already been purchased by the customer. It may be requested for external works like structural repairs, waterproofing or internal works like tiling and flooring, plumbing, electrical work, painting, etc.

c) **Home Construction Loan:** These loans are available for the construction of a new home. The documents required by the banks or bank for granting customer a home construction loans are slightly different from the home purchase loans. Depending upon the fact that when customer bought the land, the lending party would or would not include the land cost as a component, to value the total cost of the property.

d) **Home Extension Loan:** Home Extension Loans are given for expanding or extending an existing home. For example addition of an extra room, etc. For this kind of loan, customer needs to have requisite approvals from the relevant municipal corporation. Vol-3 Issue-4 2017 IJARIE-ISSN (O)-2395-4396 6205 www.ijarie.com 1789

e) **Home Conversion Loan:** It is that loan wherein the borrower has already taken a home loan to finance his current home, but now wants to move to another home. The Conversion Home Loan helps the borrower to transfer the existing loan to the new home which requires extra funds, so the new loan pays the previous loan and fulfills the money required for new home.

f) **Land Purchase Loan:** Land Purchase Loans are available for purchase of land for both home construction or investment purposes. Therefore, customer can be granted this loan even if customer is not planning to construct any building on it in the near future. However, customer has to complete construction within tenure of three years on the same land.

g) **Bridge Loan:** Bridge Loans are designed for people who wish to sell the existing home and purchase another. The bridge loan helps finance the new home, until a buyer is found for the old home.

h) **Top up loans:** Encashing the investment in a house without having to dispose it off to fund various needs related to Higher Education, Purchase of Furniture and Business Requirements. The maximum term of the loan is 10 years. Top up loans can give after 1 to 2 years of the final disbursement of the existing loan or upon possession/completion of the existing financed property.

OBJECTIVES OF THE STUDY

1. To examine the Housing Policy frame work in India.
2. To analyze the trends and progress in Housing Finance in India.
3. To study the operational performance of HDFC and SBI with regard to providing housing finance to individuals.
4. To assess the perceptions and problems of home loan takers in the State of Telangana

HYPOTHESES OF THE STUDY

H₀1: Whether the concerted efforts made by the government, in the form of policy frame work are helpful to the home loan borrowers.

H₀2: Whether the selection of the housing financial institution is influenced by the operational factors.

H₀3: Whether the home loans are taken by the borrowers of all income groups to avail the tax benefits

METHODOLOGY OF THE STUDY

The major lenders of housing finance to individuals are considered for the study, namely HDFC and SBI, representing Housing Finance Company and Public Sector Bank respectively. Further, to study perceptions and problems of home loan borrowers, respondents have been selected randomly. That is respondents have been selected from the list of the borrowers/customers provided by the various branches of HDFC and SBI of Hyderabad, Rangareddy in the state of Telangana for the present study. The sample includes 300 respondents consisting 150 respondents from HDFC and 150 respondents from SBI, representing various occupational groups such as Businessmen, Employees, Professional and Self employed people. The care has been taken to include the respondents who are availing tax benefits through their home loans.

SCOPE OF THE STUDY

In view of the objectives set for the research, the study examines the efforts made by the government in the form of policies are helpful to home loan borrowers. The study mainly concerned with the evaluation of operational performance of HDFC and SBI with regard to providing housing finance to individual borrowers and to examine the operational factors, which influenced them in the selection of the Housing Financial Institution.

SOURCES OF THE DATA

For the purpose of the study, two sources of data have been collected.

PRIMARY DATA

A broad questionnaire was administered to the individual home loan borrowers of HDFC and SBI to know their perceptions i.e. factors influencing the selection of the HFI, opinion regarding the rate of interest on home loan, time taken in processing the loan, procedural formalities, security for getting the loan and difficulties faced by borrowers, in addition to this, personal interviews with the officers and branch managers of HDFC & SBI were held to fill the gaps in the data.

SECONDARY DATA

To explain the housing policy changes and to analyze the trends and progress in the housing finance in India, the secondary data were used. The was collected from the annual reports of the NHB, Drafts of National Housing and Habitat Policies, published by Ministry of Urban Development and Poverty Alleviation, Government of India, RBI Bulletins, Union Budgets of India, Ministry of Finance, Government of India and Survey Reports on Indian Housing Finance, published by Federation of Indian Chambers of Commerce and Industry etc.

LIMITATIONS OF THE STUDY

Housing Finance Sector growth is influenced by various factors such the prices of land, steel, cement, labor cost, savings, inflation rate, etc., the impact of these factors was not taken for the present study. The other limitations are:

- i. Only individual loan schemes offered by the FIs had been studied. Thus, the study neither covers the corporate loan schemes offered by the FIs nor the corporate customers.
- ii. Only operational performance of the HFIs under review was studied and the evaluation of the institutions had been done on the basis of their figures from the annual reports at all India level.
- iii. Since the data was obtained from more than one source, there may be discrepancies between one resource and another about the same variable. patency in lending practices.

PROBLEMS OF THE HOME LOAN BORROWERS

1. The home loan application/sanction procedure is too lengthy.
2. HFIs are collecting high amount of processing, administration, conversion fee and other charges like prepayment penalty.
3. The change in the terms and conditions especially with regard to interest rate changes are not being communicated.
4. The reasons for rejecting the loan application are not being informed.
5. Delay in loan processing/sanctioning time especially with reference to SBI.
6. There is no transparency in lending practices.

SUGGESTIONS

1. The loan application formalities should be simplified.
2. Most of the customers opined that institutions should not charge any processing, administration, conversion fee and other charges like prepayment penalty.
3. The customers also suggested that institutions should provide online approval of applications.
4. The change in the terms and conditions especially with regard to interest rate, the concerned customers should be informed.
5. HFIs should inform the reason for rejecting the loan application. This will help the applicants in rectifying their mistakes.
6. To win confidence of the customer sand bring transparency in all the transactions, it is necessary that their loan accounts should be made available on the Internet. HDFC is the way ahead in these criteria.
7. The customers of SBI suggested that the loan processing/sanctioning time should be reduced further.
8. All employees, especially the front officers of SBI should be familiar with the details of Housing Loan schemes of their banks.
9. All information regarding Housing Loans should be available on the websites of the HFIs in an interactive mode.
10. There should be uniformity in loan sanction procedure, interest rate structure among the various lenders.

CONCLUSION

Thus, the Housing Finance in India faced a number of set-backs in decades, such as an unorganized market, development disparities and compartmentalized development approach. There was not even a concerted attempt to understand the housing problem let alone promote it. Reforms introduced in the sector during the 1990s, however, have overturned the situation to a great extent. The deigning of a shelter policy, the organization of the housing finance market, the introduction of fiscal incentives, increased public investment, legal reforms and others initiatives have brought about a number of changes in the housing finance. Home Loan providers should continue to address the huge potential in the industry and would maintain their focus on the individual loan segment. A trend that has emerged over the years in the housing finance is that the decreasing role of interest rates as a competitive tool. Service and product innovations are the key tools for success at present.

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THE IMPACT OF VARIOUS ASPECTS OF STRESS INFLUENCING FACTORS OF PRIVATE BUS DRIVERS WITH SPECIAL REFERENCE TO TRICHY DISTRICT

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ABSTRACT

The study finds out that everybody in the universe has stress but the level may vary among individual to individual. As far as the present study is concerned, though different issues faced by drivers of private bus transport companies, personal problems are the most significant one, which lead to have more stress not only at their work place but also in their family. Among the different coping strategies, most of the drivers adopt constructive coping strategies like taking coffee or tea, watching television and listening to music, doing physical exercise and writing stress diary, etc. At the same time, the companies not forget to take care of employees who opt for destructive coping strategies like drinking alcohol and smoking cigarettes. It is worth mentioning that experience, education and numbers of dependents are the major factors that determine stress among the employees. Work family conflict and family work conflict are the two major outcome of stress. Employees who have work family conflict can be managed well, but those who have family work conflict must be treated with care as they adopt destructive coping strategies. When companies implement the suggestions mentioned in this article, and thereby satisfy their employees, then the forthcoming years will be a golden period not only for the private bus transport companies, but also for their employees as well as for the Public.

KEYWORDS

Trichy district, stress-influencing factors, private bus driver.

1. INTRODUCTION

Every human being is stressed at one time or other. Occupation could be a major area of stress creating circumstances. People are constantly pressurized to accomplish more and more works within less facility and less time. Stress occurs when people are faced with events, which they perceive as endangering their physical and psychological well-being. These events are usually referred to as stressors and people reaction to them as stress responses (Mathews, 2005). The way, one reacts will depend upon his/her vulnerability. Employees develop various symptoms of stress that can harm their job performance, as a result of external or internal pressures. External pressures result from deadlines, staffing issues and heavy workloads. Internal pressures may result from unconstructive thinking, unrealistic expectations, inability to delegate and so on (Manimaran and Harisundar, 2006). In the organisations, employee stress is an increasing problem. Work related stress has gained importance because of its implications on employee dissatisfaction, lowered productivity, lowered physical and mental health of employees.

2. SCOPE OF THE STUDY

The scope of this article would be to identify the stress of the employees at different levels, who face in the organisation and to focus how much mentally they are fit to face this kind of stress. To learn the ways the organisation deals to handle the kind of stress the employees face. To know how the organisation gets affected due to the stress faced by the employees.

3. IMPORTANCE OF THE STUDY

This study is significant for the drivers of the private bus transport to locating the factors influencing stress among them and after locating the root cause, according to the method of stress they will be guided to identify the suitable stress coping mechanism. If they are deployed suitable stress coping mechanism, then the interrelationships or mutual understanding between them will be improved and they will be working together and the team spirit will be geared-up.

4. STATEMENT OF THE PROBLEM

The private bus transport is providing decent employment opportunity to the general public at the same time, the employees those who are employed and engaged in the private bus transport sectors, they are put under tremendous stress due to various reasons. That is, the employees influenced by various influencers of stress like company issues, occupational issue, road and traffic rules related issue, personal issue and co-workers issue. So it is clearly understood that, the private bus transport employees especially drivers are having more avenues for loading stress. In fact, they are rendering very important service to the society and that is why they must be treated as an important human asset of the society and they must be safeguarded from all possible threats (stress) to ensure their health, wealth and survival. So, how the employees of private bus transport is put under stress, the various influencers of stress and stress coping mechanisms are needed to address properly.

5. OBJECTIVES OF THE STUDY

To identify the impact of various aspects of driving on stress influencing factors.

6. RESEARCH METHODOLOGY

6.1. RESEARCH DESIGN

The study is descriptive nature because certain available secondary data is to be collected and its characteristics are to be described without diluting its originality.

6.2. ANALYTICAL TOOL

This article is analytical in nature because application of tool becomes necessary. The following tools have been used in this article.

1. t-test
2. Freidman Test
3. Analysis of Variance (ANOVA)
4. Regression Analysis

6.3. VARIABLES USED IN THIS STUDY

A brief description about the variables used in this research is given in the following paragraphs.

- i. Company issues
- ii. Occupational related issues
- iii. Road and traffic rules related issues
- iv. Personal issues

7. REVIEW OF LITERATURE

Srivastava and Singh (1981) Occupational stress arising from various job dimensions impairs employees' favourable attitude towards job and management and makes the employees to violate the formal procedures and policies and result in negative job and management attitude. Under participation also results in dissatisfaction with job and management. These results are similar to the findings of a study among blue-collar workers. Excessive and consistent job stress results in job dissatisfaction, anxiety and depression and in some cases, even serious physical and mental disabilities ranging all the way to coronary heart diseases.

Kathryn Tyler (2006), Stress is a subject of interest to researchers across fields because occupational stress is a major problem for both individuals and organisations. Stress has both positive and negative effects. On the positive side, stress motivates individuals to get more work done as in working toward a deadline. On the negative side, Stress causes the feeling of overwhelming and procrastination. Too much stress depresses the immune system and makes the individual sick.

Asim Masood (2013), examined that, the relationship between Job Stress and Employee Retention and consequences of high stress on bank employees of banking sector of Pakistan. The author identified problematic customer relation is caused by creating major stress on employees. They are more focused to avoid stress at their work place, which is directly affects, their performance. If avoided, then turn -over is unusually high in this viable business world of today. Moreover, the ratio of employee and turnover of the organisation must be minimum. The study has suggested finally maintaining an amicable customer relationship to off-load the stress of employees as well as to increase the overall performance of an organisation.

8. ANALYSIS AND INTERPRETATION

ANOVA - IMPACT OF HOURS OF WORK IN A DAY ON COMPANY RELATED ISSUES, OCCUPATIONAL RELATED ISSUES, ROAD AND TRAFFIC RULES RELATED ISSUES, AND PERSONAL ISSUES

TABLE 1

Hours of work in a day		Company related Issues	Occupational related issues	Road and Traffic Rules related Issues	Personal Issues
Less than 10 hours	Mean	2.258	2.661	3.076	3.061
	SD	0.370	0.488	0.634	0.511
10 to 12 hours	Mean	2.494	2.542	2.644	3.368
	SD	0.539	0.330	0.821	0.537
12 to 14 hours	Mean	2.819	2.832	2.948	3.333
	SD	0.435	0.387	0.782	0.389
More than 14 hours	Mean	3.173	3.271	3.750	3.022
	SD	0.377	0.356	0.710	0.395
	F	42.157	41.312	24.615	8.562
	Sig.	<0.001	<0.001	<0.001	<0.001

The result shows that the hours of work in a day influences all the stress influencing factors namely company related issues ($F = 42.157$; $p < 0.001$), occupational related issues ($F = 41.312$; $p < 0.001$), road and traffic rules related issues ($F = 24.615$; $p < 0.001$), and personal issues ($F = 8.562$; $p < 0.001$).

As far as company related issues are concerned, the respondents who work for more than 14 hours (mean = 3.173; SD = 0.377) are having comparatively more company related issues than the respondents who work for less than 10 hours in a day (mean = 2.258; SD = 0.370).

With regard to occupational related issues the respondents who work for more than 14 hours in a day (mean = 3.271; SD = 0.356) are having high occupational related issues compared to the respondents who work for 10 to 12 hours in a day (mean = 2.542; SD = 0.330).

Similarly, for road and traffic rules related issues, the respondents who work for more than 14 hours in a day (mean = 3.750; SD = 0.710) are having more issues compared to the respondents who work for 10 to 12 hours in a day (mean = 2.644; SD = 0.821).

Regarding personal issues, respondents who work for 10 to 12 hours (mean = 3.368; SD = 0.537) and 12 to 14 hours (mean = 3.333; SD = 0.389) in a day are having comparatively more issues than the respondents who work for less than 10 hours (mean = 3.061; SD = 0.511) and more than 14 hours in a day (mean = 3.022; SD = 0.395).

Hence, it is concluded from the above results that the respondents who work for more hours are prone to have all the stress creating issues namely company related issues, occupation related issues, road and traffic rules related issues, and personal issues.

t-TEST - IMPACT OF RESPONDENTS' OPINION ON WAGE FIXATION ON COMPANY RELATED ISSUES, OCCUPATIONAL RELATED ISSUES, ROAD AND TRAFFIC RULES RELATED ISSUES, AND PERSONAL ISSUES

TABLE 2

Wage fixation based on collection of the bus		Company related Issues	Occupational related issues	Road and Traffic Rules related Issues	Personal Issues
Yes	Mean	2.750	2.764	3.106	3.242
	SD	0.711	0.426	0.894	0.535
No	Mean	2.935	3.066	3.400	3.120
	SD	0.461	0.470	0.838	0.427
	t	2.061	3.831	2.022	1.590
	Sig.	0.041	0.000	0.044	0.113

The respondents' opinion about wage fixation is given in the above table in terms of mean values with respect to various stress influencing variables called stress influencers. t-test has been performed to find out the mean difference among the respondents who agree that their company fix the wage based on the collection of the bus and the respondents who do not agree for the above statement. On performing the test it is noted that except personal issues ($t = 1.590$; $p = 0.113$), all the other stress influencing factors namely company related issues ($t = 2.061$; $p = 0.041$), occupational related issues ($t = 3.831$; $p < 0.001$), and road and traffic rules related issues ($t = 2.022$; $p = 0.044$) are having significant outcome.

As far as company related issues are concerned, the respondents who do not agree that wage fixation is based on collection of the bus (mean = 2.935; SD = 0.461) significantly different from the respondents who agree for the statement (mean = 2.750; SD = 0.711). However, the mean score is not high but it is moderate.

With regard to occupational related issues the respondents who do not agree that wage fixation is based on collection of the bus (mean = 3.066; SD = 0.470) significantly different from the respondents who agree for the statement (mean = 2.764; SD = 0.426). However, here too, the mean score is not high but it is moderate.

Similarly, for road and traffic rules related issues also, the respondents who do not agree that wage fixation based on collection of the bus (mean = 3.400; SD = 0.838) significantly different from the respondents who agree for the statement (mean = 3.106; SD = 0.894).

Hence, it is concluded from the above results that the respondents who accept that their company fix the wage based on the collection of the bus are having low company related issues, occupation related issues, and road and traffic rules related issues.

9. FINDINGS

- Hours of work in a day, influences all the stress-influencing factors namely company related issues, occupational related issues, road and traffic rules related issues, and personal issues. That is, the respondents who work for more hours are prone to have all the stress creating issues namely company related issues, occupation related issues, road and traffic rules related issues, as well as personal issues.
- It is found that 78 per cent of the respondents do not accept that they get wage fixation based on collection of the bus, which shows that the collection is not a main criteria for fixing the wage for private bus drivers.

10. CONCLUSION

Everybody in the universe has stress but the level may vary among individual to individual. As far as the present study is concerned, though different issues faced by drivers of private bus transport companies, personal problems are the most significant one, which lead to have more stress not only at their work place but also in their family. Among the different coping strategies, most of the drivers adopt constructive coping strategies like taking coffee or tea, watching television and listening to music, doing physical exercise and writing stress diary, etc. At the same time, the companies not forget to take care of employees who opt for destructive coping strategies like drinking alcohol and smoking cigarettes. It is worth mentioning that experience, education and numbers of dependents are the major factors that determine stress among the employees. Work family conflict and family work conflict are the two major outcome of stress. Employees who have work family conflict can be managed well, but those who have family work conflict must be treated with care as they adopt destructive coping strategies. When companies implement the suggestions mentioned in this article, and thereby satisfy their employees, then the forthcoming years will be a golden period not only for the private bus transport companies, but also for their employees as well as for the Public.

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IMPACT OF FOREIGN DIRECT INVESTMENT (FDI) ON INDIAN ECONOMY

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ABSTRACT

Foreign inflows are considered to be an important fuel for any country's economic engine. India has taken several initiatives in terms of government policies, liberal reforms & investor- friendly business environment, to attract foreign direct investment (FDI) into the country. In its recent policy initiatives, the government has allowed FDI in multi-brand retail, power exchanges and boosted FDI cap in single brand retail and broadcasting. FDI in India has grown immensely in the last 5 years due to strong support from government. This growth has in turn helped with the progress of the national economy. Further, the explosive growth of FDI gives opportunities to Indian industry for technological upgradation, gaining access to global managerial skills and practices, optimizing utilization of human and natural resources and competing internationally with higher efficiency. Most importantly, FDI is central for India's integration into global production chains which involves production by MNCs spread across locations all over the world. This research investigates the impact of FDI on Indian economy. It seeks to explain and brief out the concept of FDI with the help of models showing the factors influencing the foreign direct investment in India and depicts the contribution of foreign direct investment to economic growth, problems faced by the MNC at the time of investing in other country, findings and conclusions of research.

KEYWORDS

Indian economy, FDI, MNC.

INTRODUCTION

Foreign direct investment (FDI) – occurs when an entity or investor from one country obtain or acquires the controlling interest in an entity in another country and then operates and manages the entity and its assets as part of the multinational business of the investing entity. FDI plays a multidimensional role in the overall development of the host economies. It may generate benefits through bringing in non-debt-creating foreign capital resources, technological upgrading, skill enhancement, new employment, spill-overs and allocative efficiency effects. While FDI is expected to create positive outcomes, it may also generate negative effects on the host economy. The costs to the host economy can arise from the market power of large firms and their associated ability to generate high profits. Much of the existing empirical evidence suggests that the positive effects offset negatives, thus providing net economic benefits for the host economies. The majority of the population, both urban and rural, is expected to gain, indirectly and differentially, from FDI. While FDI may benefit the economy at both macroeconomic and microeconomic levels, it is equally important to probe whether people in the rural and suburban areas get affected through such benefits. FDI in relatively labour-intensive sectors including food processing, textiles and readymade garments, leather and leather products, and light machine tools, with plants set up in small cities close to rural and suburban areas, would tend to have relatively high employment-generating potential. Nations' progress and prosperity is reflected by the pace of its sustained economic growth and development. Investment provides the base and pre-requisite for economic growth and development. Apart from a nation's foreign exchange reserves, exports, government's revenue, financial position, available supply of domestic savings, magnitude and quality of foreign investment is necessary for the well being of a country. Developing nations, in particular, consider FDI as the safest type of international capital flows out of all the available sources of external finance available to them.

CHART 1

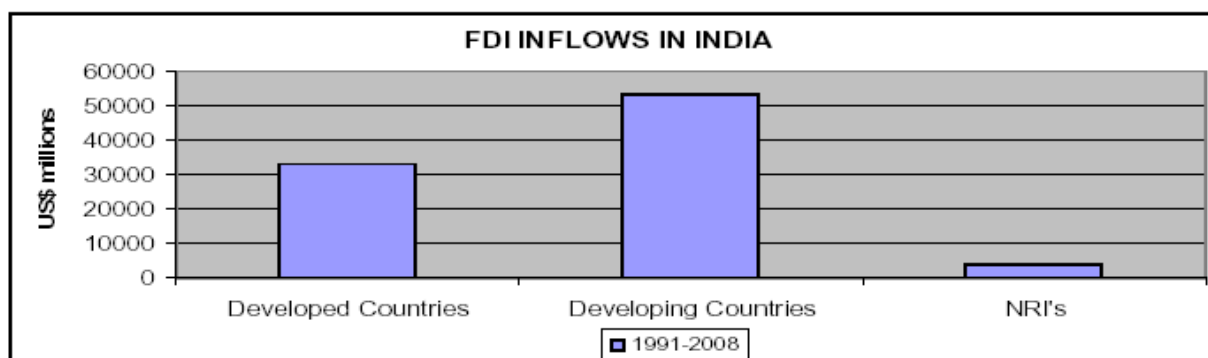
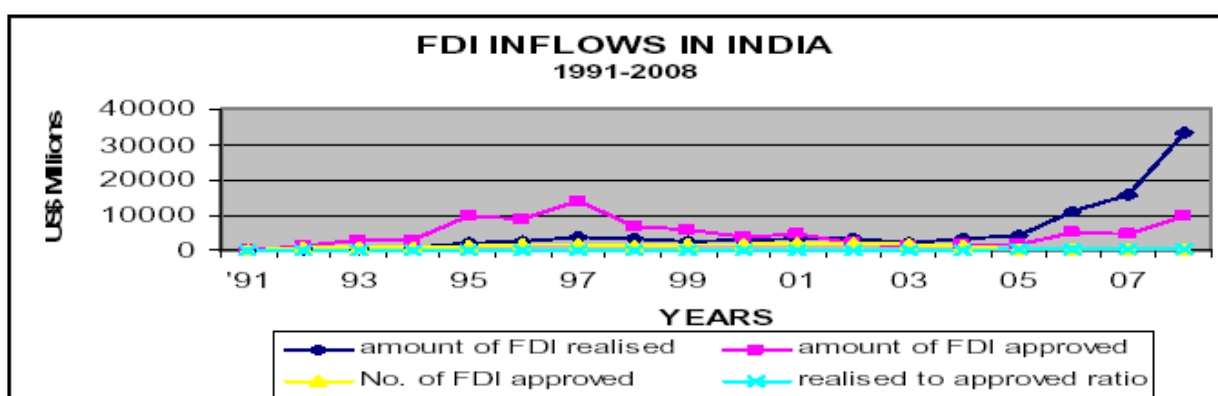


CHART 2



Sources: compiled and computed from the various issues SIA Bulletin, Ministry of Commerce, GOI

TABLE 1.3: PROVIDES A LIST OF COUNTRIES THAT ARE THE LEADING FOREIGN DIRECT INVESTORS FOR INDIA

Country	Approx. percentage of FDI inflows	Approx. inflows in million US dollars
Mauritius	42	50164
Singapore	9	11275
USA	7	8914
UK	5	6158
Netherlands	4	4968

As the table shows, within 2000 and 2010 India has attracted FDI worth 178 billion dollars. Majority of the foreign direct investment comes through Mauritius as it enjoys several tax advantages, which works well for the international investors.

OBJECTIVES

The study covers the following objectives:

1. To study the trends and patterns of flow of FDI.
2. To assess the determinants of FDI inflows.
3. To evaluate the impact of FDI on the Economy.

HYPOTHESES

The study has been taken up for the period 1991-2008 with the following hypotheses:

1. Flow of FDI shows a positive trend over the period 1991-2008.
2. FDI has a positive impact on economic growth of the country.

Developed economies consider FDI as an engine of market access in developing and less developed countries vis-à-vis for their own technological progress and in maintaining their own economic growth and development. Developing nations look at FDI as a source of filling the savings, foreign exchange reserves, revenue, trade deficit, management and technological gaps. FDI is considered as an instrument of international economic integration as it brings a package of assets including capital, technology, managerial skills and capacity and access to foreign markets. The impact of FDI depends on the country's domestic policy and foreign policy. As a result, FDI has a wide range of impact on the country's economic policy. In order to study the impact of foreign direct investment on economic growth, two models were framed and fitted. The foreign direct investment model shows the factors influencing the foreign direct investment in India. The economic growth model depicts the contribution of foreign direct investment to economic growth.

MODEL BUILDING

Further, to study the impact of foreign direct investment on economic growth, two models were framed and fitted. The foreign direct investment model shows the factors influencing the foreign direct investment in India. The economic growth model depicts the contribution of foreign direct investment to economic growth. The two model equations are expressed below:

- 1) $FDI = f [TRADEGDP, RESGDP, R\&DGP, FIN. Position, EXR.]$
- 2) $GDPG = f [FDIG]$

Where,

FDI	=	Foreign Direct Investment;
GDP	=	Gross Domestic Product
FIN. Position	=	Financial Position
TRADEGDP	=	Total Trade as percentage of GDP.
RESGDP	=	Foreign Exchange Reserves as percentage of GDP;
R&DGP	=	Research & development expenditure as percentage of GDP;
FIN. Position	=	Ratio of external debts to exports;
EXR	=	Exchange rate;
GDPG	=	level of Economic Growth;
FDIG	=	Foreign Direct Investment Growth.

IMPORTANCE OF THE STUDY

It is apparent from the above discussion that FDI is a predominant and vital factor in influencing the contemporary process of global economic development. The study attempts to analyze the important dimensions of FDI in India. The study works out the trends and patterns, main determinants and investment flows to India. The study also examines the role of FDI on economic growth in India for the period 1991-2008. The period under study is important for a variety of reasons. First of all, it was during July 1991 India opened its doors to private sector and liberalized its economy. Secondly, the experiences of South-East Asian countries by liberalizing their economies in 1980s became stars of economic growth and development in early 1990s. Thirdly, India's experience with its first generation economic reforms and the country's economic growth performance were considered safe havens for FDI which led to second generation of economic reforms in India in first decade of this century. Fourthly, there is a considerable change in the attitude of both the developing and developed countries towards FDI. They both consider FDI as the most suitable form of external finance. Fifthly, increase in competition for FDI inflows particularly among the developing nations. The shift of the power center from the western countries to the Asia sub-continent is yet another reason to take up this study. FDI incentives, removal of restrictions, bilateral and regional investment agreements among the Asian countries and emergence of Asia as an economic powerhouse (with China and India emerging as the two most promising economies of the world) develops new economics in the world of industrialized nations. The study is important from the view point of the macro-economic variables included in the study as no other study has included the explanatory variables which are included in this study.

LIMITATIONS OF THE STUDY

All the economic / scientific studies are faced with various limitations and this study is no exception to the phenomena. The various limitations of the study are:

1. At various stages, the basic objective of the study is suffered due to inadequacy of time series data from related agencies. There has also been a problem of sufficient homogenous data from different sources. For example, the time series used for different variables, the averages are used at certain occasions. Therefore, the trends, growth rates and estimated regression coefficients may deviate from the true ones.
2. The assumption that FDI was the only cause for development of Indian economy in the post liberalized period is debatable. No proper methods were available to segregate the effect of FDI to support the validity of this assumption.
3. Time and money.

TABLE 1.1: SHOWING FDI INFLOWS, GDP, TRADE, FOREIGN RES.& RES. DEV. EXP. (Amounts in Rs. Crores)

Years	FDI inflows in India	GDP	Total Trade	Foreign Exchange Reserves	Research & Development Expenditure
1991-1992	409	1099072	91892	23850	8363.31
1992-1993	1094	1158025	117063	30744	8526.18
1993-1994	2018	1223816	142852	60420	9408.79
1994-1995	4312	1302076	172645	79781	9340.94
1995-1996	6916	1396974	229031	74384	9656.11
1996-1997	9654	1508378	257737	94932	10662.41
1997-1998	13548	1573263	284276	115905	11921.83
1998-1999	12343	1678410	318084	138005	12967.51
1999-2000	10311	1786525	374797	165913	14397.6
2000-2001	10368	1864301	434444	197204	15683.37
2001-2002	18486	1972606	454218	264036	16007.14
2002-2003	13711	2048286	552343	361470	16353.72
2003-2004	11789	2222758	652475	490129	17575.41
2004-2005	14653	2388768	876405	619116	19991.64
2005-2006	24613	2616101	1116827	676387	22963.91
2006-2007	70630	2871120	1412285	868222	24821.63
2007-2008	98664	3129717	1668176	1237985	27213
2008-2009	142829	3339375	2072438	1283865	28914.51

Source: various issues of SIA Bulletin & RBI Bulletin

TABLE 1.2: SHOWING FINANCIAL POSITION AND EXCHANGE RATES (amount in Rs. Crores)

Years	Exports	Debt	Exchange Rates
1991-1992	44041	252910	24.5
1992-1993	53688	280746	30.6
1993-1994	69751	290418	31.4
1994-1995	82674	311685	31.4
1995-1996	106353	320728	33.4
1996-1997	118817	335827	35.5
1997-1998	130100	369682	37.2
1998-1999	139752	411297	42.1
1999-2000	159561	428550	43.3
2000-2001	203571	472625	45.7
2001-2002	209018	482328	47.7
2002-2003	255137	498804	48.4
2003-2004	293367	491078	45.9
2004-2005	375340	581802	44.9
2005-2006	456418	616144	44.3
2006-2007	571779	746918	42.3
2007-2008	655864	897955	40.2
2008-2009	766935	1169575	45.9

Source: various issues of SIA Bulletin.

1. FOREIGN DIRECT INVESTMENT (FDI): It refers to foreign direct investment. Economic growth has a profound effect on the domestic market, as countries with expanding domestic markets should attract higher levels of FDI inflows.

2. GROSS DOMESTIC PRODUCT (GDP): Gross Domestic Product is used as one of the independent variable. GDP can be estimated with the help of either (a) Current prices or (b) constant prices. If domestic product is estimated on the basis of market prices, it is known as GDP at current prices. On the other hand, if it is calculated on the basis of base year prices prevailing at some point of time, it is known as GDP at constant prices. In fact, in a dynamic economy, prices are quite sensitive due to the fluctuations in the domestic as well as international market. In order to isolate the fluctuations, the estimates of domestic product at current prices need to be converted into the domestic product at constant prices. Any increase in domestic product that takes place on account of increase in prices cannot be called as the real increase in GDP. Real GDP is estimated by converting the GDP at current prices into GDP at constant prices, with a fixed base year. In this context, a GDP deflator is used to convert the GDP at current prices to GDP at constant prices. The present study uses GDP at factor cost (GDPFC) with constant prices as one of the explanatory variable to the FDI inflows into India for the aggregate analysis.

Gross Domestic Product at Factor cost (GDPFC) as the macroeconomic variable of the Indian economy is one of the pull factors of FDI inflows into India at national level. It is conventionally accepted as realistic indicator of the market size and the level of output. There is direct relationship between the market size and FDI inflows. If market size of an economy is large than it will attract higher FDI inflows and vice versa i.e. an economy with higher GDPFC will attract more FDI inflows. The relevant data on GDPFC have been collected from the various issues of Reserve bank of India (RBI) bulletin and Economic Survey of India.

3. TOTAL TRADE (TRADEGDP): It refers to the total trade as percentage of GDP. Total trade implies sum of total exports and total imports. Trade, another explanatory variable in the study also affects the economic growth of the country. The values of exports and imports are taken at constant prices. The relationship between trade, FDI and growth is well known. FDI and trade are engines of growth as technological diffusion through international trade and inward FDI stimulates economic growth. Knowledge and technological spillovers (between firms, within industries and between industries etc.) contributes to growth via increasing productivity level. Economic growth, whether in the form of export promoting or import substituting strategy, can significantly affect trade flows. Export led growth leads to expansion of exports, which in turn promote economic growth by expanding the market size for developing countries.

4. FOREIGN EXCHANGE RESERVES (RESGDP): RESGDP represents Foreign Exchange Reserves as percentage of GDP. India's foreign exchange reserves comprise foreign currency assets (FCA), gold, special drawing rights (SDR) and Reserve Tranche Position (RTP) in the International Monetary Fund. The emerging economic giants, the BRIC (Brazil, Russian Federation, India, and China) countries, hold the largest foreign exchange reserves globally and India is among the top 10 nations in the world in terms of foreign exchange reserves. India is also the world's 10th largest gold holding country (Economic Survey 2009-10)17. Stock of foreign exchange reserves shows a country's financial strength.

5. RESEARCH & DEVELOPMENT EXPENDITURE (R&DGDGP): It refers to the research and development expenditure as percentage of GDP. India has large pool of human resources and human capital is known as the prime mover of economic activity.

6. FINANCIAL POSITION (FIN. Position): FIN. Position stands for Financial Position. Financial Position is the ratio of external debts to exports. It is a strong indicator of the soundness of any economy. It shows that external debts are covered from the exports earning of a country.

7. EXCHANGE RATES (EXR): It refers to the exchange rate variable. Exchange rate is a key determinant of international finance as the world economies are globalised ones.

8. GROSS DOMESTIC PRODUCT GROWTH (GDPG): It refers to the growth rate of gross domestic product. Economic growth rate have an effect on the domestic market, such that countries with expanding domestic markets should attract higher levels of FDI. India is the 2nd fastest growing economy among the emerging nations of the world. It has the third largest GDP in the continent of Asia. Since 1991, India has emerged as one of the wealthiest economies in the developing world. During this period, the economy has grown constantly and this has been accompanied by increase in life expectancy, literacy rates, and food security. It is also the world most populous democracy. The Indian middle class is large and growing; wages are low; many workers are well educated and speak English. All these factors lure foreign investors to India.

India is also a major exporter of highly – skilled workers in software and financial services and provide an important ‘back office destination’ for global outsourcing of customer services and technical support. The Indian market is widely diverse. The country has 17 official languages, 6 major religion and ethnic diversity. Thus, tastes and preferences differ greatly among sections of consumers.

9. FOREIGN DIRECT INVESTMENT GROWTH (FDIG): In the last two decade world has witnessed unprecedented growth of FDI. This growth of FDI provides new avenues of economic expansion especially, to the developing countries. India due to its huge market size, diversity, cheap labour and large human capital received substantial amount of FDI inflows during 1991-2008. India received cumulative FDI inflows of Rs. 577108 crore during 1991 to march 2010. It received FDI inflows of Rs. 492303 crore during 2000 to march 2010 as compared to Rs. 84806 crore during 1991 to march 99.

During 1994-95, FDI registered a 110% growth over the previous year and a 184% age growth in 2007-08 over 2006-07. FDI as a percentage of gross total investment increased to 7.4% in 2008 as against 2.6% in 2005. This increased level of FDI contributes towards increased foreign reserves. The steady increase in foreign reserves provides a shield against external debt. The growth in FDI also provides adequate security against any possible currency crisis or monetary instability. It also helps in boosting the exports of the country. It enhances economic growth by increasing the financial position of the country. The growth in FDI contributes toward the sound performance of each sector (especially, services, industry, manufacturing etc.) which ultimately leads to the overall robust performance of the Indian economy.

MODEL-1: FOREIGN DIRECT INVESTMENT MODEL

$FDI = f [TRADEGDP, R\&DGP, EXR, RESGDP, FIN. Position]$

TABLE 1.3

Variable	Coefficient	Standard Error	t-Statistic
Constant	26.25	.126	207*
TradeGDP	11.79	7.9	1.5*
ReservesGDP	1.44	3.8	.41
Exchange rate	7.06	9.9	.72**
Financial health	15.2	35	.45
R&DGP	-582.14	704	.83**

$R^2 = 0.623$ Adjusted $R^2 = 0.466$

D-W Statistic = .98, F-ratio = 7.74

Note: * = Significant at 0.25, 0.10 levels; ** = Significant at 0.05 level.

In Foreign Direct Investment Model, it is found that all variables are statistically significant. Further the results of Foreign Direct Investment Model shows that TradeGDP, R&DGP, Financial Position (FIN.Position), exchange rate (EXR), and ReservesGDP (RESGDP) are the important macroeconomic determinants of FDI inflows in India. The regression results of shows that TradeGDP, ReservesGDP, Financial Position, exchange rate are the pull factors for FDI inflows in the country whereas R&DGP acts as the deterrent force in attracting FDI flows in the country. As the regression results reveal that R&DGP exchange rate does not portray their respective predicted signs. However, R&DGP shows the unexpected negative sign instead of positive sign and exchange rate shows positive sign instead of expected negative sign. In other words, all variables included in the foreign direct investment model shows their predicted signs except the two variables (i.e. Exchange rate & R&DGP) which deviate from their respective predicted signs. The reason for this deviation is due to the appreciation of Indian Rupee in the international market and low expenditure on R&D activities in the activities in the country.

MODEL-2: ECONOMIC GROWTH MODEL

$GDPG = f [FDIG]$

TABLE 1.4

Variable	Coefficient	Standard Error	t-Statistic
Constant	.060322925	0.00007393156391	815.92
FDIG	0.039174416	.020661633	1.8959

$R^2 = 0.959$ Adjusted $R^2 = 0.956$

D-W Statistic = 1.0128, F-ratio = 28.076

Note: * = Significant at 1%

In the Economic Growth Model (Table – 4.10), estimated coefficient on foreign direct investment has a positive relationship with Gross Domestic Product growth (GDPG). It is revealed from the analysis that FDI is a significant factor influencing the level of economic growth in India. The coefficient of determination, i.e. the value of R^2 explains 95.6% level of economic growth by foreign direct investment in India. The F-statistics value also explains the significant relationship between the level of economic growth and FDI inflows in India. D-W statistic value is found 1.0128 which confirms that there is no autocorrelation problem in the analysis. Thus, the findings of the economic growth model show that FDI is a vital and significant factor influencing the level of growth in India.

FINDINGS

It is observed from the results of above analysis that TradeGDP, ReservesGDP, Exchange rate, FIN. Position, R&DGP and FDIG are the main determinants of FDI inflows to the country. In other words, these macroeconomic variables have a profound impact on the inflows of FDI in India. The results of foreign Direct Investment Model reveal that TradeGDP, ReservesGDP, and FIN. Position variables exhibit a positive relationship with FDI while R&DGP and Exchange rate variables exhibit a negative relationship with FDI inflows. Hence, TradeGDP, ReservesGDP, and FIN. Position variables are the pull factors for FDI inflows to the country and R&DGP and Exchange rate are deterrent forces for FDI inflows into the country. Thus, it is concluded that the above analysis is successful in identifying those variables, which are important in attracting FDI inflows to the country. The study also reveals that FDI is a significant factor influencing the level of economic growth in India. The results of Economic Growth Model and Foreign Direct Investment Model show that FDI plays a crucial role in enhancing the level of economic growth in the country. It helps in increasing the trade in the international market. However, it has failed in raising the R&D and in stabilizing the exchange rates of the economy.

The positive sign of exchange rate variables depicts the appreciation of Indian Rupee in the international market. This appreciation in the value of Indian Rupee provides an opportunity to the policy makers to attract FDI inflows in Greenfield projects rather than attracting FDI inflows in Brownfield projects.

Further, the above analysis helps in identifying the major determinants of FDI in country. FDI plays a significant role in enhancing the level of economic growth of the country. This analysis also helps the future aspirants of research scholars to identify the main determinants of FDI at sectoral level because FDI is also a sector – specific activity of foreign firms’ vis-à-vis an aggregate activity at national level. Finally, the study observes that FDI is a significant factor influencing the level of economic growth in India. It provides a sound base for economic growth and development by enhancing the financial position of the country. It also contributes to the GDP and foreign exchange reserves of the country.

Thus, we can say Impact of FDI on Indian economy are:-

1. Creates employment opportunity for domestic country.
2. Good relation between two countries.
3. Modern technology.
4. Inflow of foreign funds in Indian economy.
5. To provides the goods and services at best suitable price.
6. It creates the competition among the domestic company and MNC in this way domestic co can increase their efficiency.
7. Indian company get chance to work professional body.
8. Indian company get chance to work with world market Leader Company.
9. Backward area can be developed.
10. Creating good capital market in India.
11. Government earns in the form of licenses fees, registration fees, taxes which is spend for public expenditure.

Problem facing by the MNC's at the time of investing (FDI) in other country

1. Communication problem
2. They will have to find new supplier and distributors.
3. Political problem: for e.g. if any Pakistan company want to invest in Indian market of course they will face problem or difficulty compare to other country
4. Taxation policy of country
5. Exchange rate of home country

CONCLUSIONS

The above review confirms/highlights the following facts:-

- Institutional infrastructure and development are the main determinants of FDI inflows in the European transition economies. Institutional environment (comprising both institutional strategies and policies of organizations relating to these institutions) plays critical role in reducing the transaction costs of both domestic and cross border business activity.
- FDI plays a crucial role in employment generation/ preservation in Central Europe.
- It is found that bigger diversity of types of FDI lead to more diverse types of spillovers and skill transfers which proves more favorable for the host economy.
- It is also found that apart from market size, exports, infrastructure facilities, institutions, source and destination countries, the concept of neighborhood and extended neighborhood is also gaining importance especially in Europe, China and India.
- In industrial countries high labour costs encourage outflows and discourage inflows of FDI. The principle determinants of FDI in these countries are IT – related investments, trade and cross – border mergers and acquisitions. Studies which underlie the effects of FDI on the host countries economic growth shows that FDI enhance economic growth in developing economies but not in developed economies.
- It is found that in developing economies FDI and economic growth are mutually supporting. In other words economic growth increases the size of the host country market and strengthens the incentives for market seeking FDI.
- It is also observed that bidirectional causality exist between FDI and economic growth i.e. growth in GDP attracts
- FDI and FDI also contribute to an increase in output.
- Studies on role of FDI in emerging economies shows that general institutional framework, effectiveness of public sector administration and the availability of infrastructural facilities enhance FDI inflows to these nations. FDI also enhance the chances of developing internationally competitive business clusters
- It is observed that countries pursuing export – led growth strategies reaps enormous benefits from FDI.
- The main determinants of FDI in developing countries are inflation, infrastructural facilities, debts, burden, exchange rate, FDI spillovers, stable political environment etc.
- It is found that firms in cluster gain significantly from FDI in their region, within industry and across other industries in the region.
- It is also observed that FDI have both short – run and long – run effect on the economy. So, regulatory FDI guidelines must be formulated in order to protect developing economies from the consequences of FDI flows.

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AN ANALYTICAL STUDY ON LONG TERM PERFORMANCE OF INITIAL PUBLIC OFFERINGS IN INDIA

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ABSTRACT

Initial public offering is also known as stock market launch, because shares of any company are to be sold in the market for the first time. The Indian IPO market had undergone several changes during last two decades. The price performance of the IPOs is a buzzword in the area of capital market. In this study the analysis of 258 IPO companies that acquire capital for the first time from the market, are carried out from 2007 to 2014. The performance of IPOs is divided in two categories i.e. Initial performance of IPO and long term after market performance of IPOs for different intervals of time i.e. 1 year, 2 year and 3 year after listing day. The finding indicates that the Indian IPOs, which are underpriced on the listing days, are declining in subsequent long-term period after listing day and underperformed.

KEYWORDS

IPO, MAER, price performance.

INTRODUCTION

In the rush of the IPOs in the primary market and the price differences of the IPOs in the short run period leads to analyse the initial performance of the IPOs. In this study, evaluation of the performance of the IPOs is carried for the listing day. The initial performance of IPOs is measured in two terms, i.e. underpricing and overpricing of IPOs. When the closing price on the listing day is more than offer price, such positive return can consider as an underpricing of the IPOs, whereas the listing price is less than the offer price of the IPOs such negative returns are considered as the overpricing. Initial high return (underpricing) of the IPOs on the first trading day leads us to evaluate the long run performance of IPOs, i.e. underperformance and over performance. There were number of research studies, which shows short run high initial returns (underpricing) and subsequently in long run it convert in the lower return i.e. underperformance. In this study evaluation of performance of IPOs for first trading day as well as for long term are carried out.

REVIEW OF LITERATURE

Dimitrios Gounopoulos et al. (2012) had measured long performance of 254 IPOs, which are listed in Greece during the period from 1994 to 2002. Their result shows a different trend than the international findings. They also stated the reasons behind such over performance is that the hot period, and during this period, mass IPOs were floated.

Jay Ritters and Ivo Welch (2002) analyse 6249 IPOs issued by the companies from United States during the period from 1980 to 2001. They examined long run after market performance for a period of 3 years after listing for that purpose they used multiyear buy and hold returns. The average returns were identified by them for 3 year period is -23.4%.

Ritter Jay R. (1991) analyse 1526 IPOs and found 29.13% cumulative average adjusted return at the end of the 36 month which proves the underperformance of IPO in long run. Mohammad Khalid Sohail and Mohamed Nasir (2007) investigated 50 Pakistani company and state that the Pakistani IPOs are underperformed with -65.73 % BHAR. Yue – Fang Wen and Minh Huong Cao (2013), Amet Seitbraimov (2012), Jay Ritters and Ivo Welch (2002), Nobuy Takezawa and Noriku Maruoka (2004) and Liang Peng (2008) have documented underperformance in the long run after market analysis.

OBJECTIVES OF THE STUDY

1. To measure the initial performance of Indian IPOs i.e. from offer date to listing date.
2. To examine the long run performance of IPOs in India. i.e. listing date to the period up to 3 years.
3. To analyse the factors influencing price performance of IPOs.

RESEARCH DESIGN

There are 275 BSE listed IPOs issued in Indian primary market during the year 2007 to 2011. Out of total IPOs listed on BSE, researcher selected 258 IPOs using random sampling method. The performance of IPOs was evaluated for the period from 2007 to 2014. The performance of IPOs are evaluated under two categories i.e. Initial Performance and long-term performance. The initial performance is evaluated by offer price to listing price performance on first trading day and long-term performance is measured for 1 year, 2 year and 3 year after market performance. Further the performance of IPOs are evaluated under different factors like mechanism, issue size, offer price, group of company, year etc.

SAMPLE SELECTION OF THE STUDY

The present study is based on secondary data. The secondary data consists of the samples of 258 IPOs, which were listed on Bombay Stock Exchange. The study includes pricing performance of those IPOs, which are satisfying the following conditions.

1. The samples include the IPOs, which were listed in Bombay Stock Exchange during 2007 to 2011. During the study, period total 275 IPOs falls under this category.
2. Out of 275 IPOs listed BSE 13 IPOs excluded due to falls to the listing at BSE and 4 IPOs were excluded due to unavailability of data for 3 years after market performance now 258 IPOs are the final sample size.
3. The IPO is listed on the BSE and has been traded for minimum 3 years after listing period for short and long run analysis of performance of IPOs.

SOURCES OF DATA COLLECTION

The present study is based on secondary data. The data relating to this study are extracted from Published Annual Reports of SEBI, BSE, Books & journals, Government Guidelines for companies and capital market and Websites of the companies. Further information has been collected from various magazine, articles, books, research publication and websites.

MEASUREMENT OF INITIAL PERFORMANCE OF IPOs

The initial performance is a performance of IPOs from the offer opening date to the issue listing date. To analyse the initial performance of the IPOs the following formula has been used.

$$R_i = \frac{P_1 - P_0}{P_0} \times 100$$

Where,

R_i = Initial return on IPOs.

P_1 = Closing price on the listing date

P_o = Offer price of the issue

When the initial return is positive it can be considered as an underpricing. While the initial return is negative, it can understand as an overpricing. The initial returns computed for IPOs may be affected by market movement. So that it is required to adjust the initial returns with market returns as under.

$$MAER = \left(\frac{P_1 - P_o}{P_o} \right) - \left(\frac{M_1 - M_o}{M_o} \right) \times 100$$

Where,

MAER = Market Adjusted Excess Return

P_1 = Closing price on the listing date

P_o = Offer price of the issue

M_1 = SENSEX value on the listing date

M_o = SENSEX on the offer date

MEASUREMENT OF LONG TERM PERFORMANCE OF IPOs

To evaluate long term performance of Indian IPOs, the returns have been calculated with following formula for the period of 1 year, 2 year and 3 year after the listing day.

$$R_{it} = \frac{P_{it} - P_{io}}{P_{io}} \times 100$$

Where,

R_{it} = returns of i^{th} company for time t

P_{it} = price of share of company i at time t

P_{io} = offer price of share of i^{th} company

Again the long term returns are adjusted with market return as under.

$$MAER_{it} = \left(\frac{P_{it} - P_{io}}{P_{io}} \right) - \left(\frac{M_{it} - M_{io}}{M_{io}} \right) \times 100$$

Where,

MAER_{it} = Market Adjusted Excess Return

P_{it} = price of the share of company i at time t

P_{io} = Offer price of share of i^{th} company

M_{it} = SENSEX at time t

M_{io} = SENSEX on the offer date

ANNUALISED RETURNS

The time period has been taken for listing, the IPOs are not similar for different companies. Therefore, to maintain normality in return, the returns were adjusted for 365 days. The formula for annualizing factor is as under.

$$\text{Annualising Factor} = \frac{\text{Initial Return}}{\text{Days taken for listing}} \times 365$$

OVERALL LONG TERM RETURNS OF IPOs

TABLE 1: OVERALL LONG TERM RETURNS OF IPOs

Period	Raw Return (%)	MAER (%)	Annualised Raw Returns (%)	Annualised MAERs (%)
Listing Day	18.63	18.90	361.16	366.53
1 Yr After Listing	-10.39	-5.82	-9.71	-5.36
2 Yr After Listing	-36.17	-34.67	-17.56	-16.83
3 Yr After Listing	-28.21	-46.68	-9.22	-15.26

The above table indicates that the listing day high initial return of 18.62% came down at -10.39% at the end of one year of listing day. Then after again it is decrease and provided a negative return of -36.17% at the end of the 2nd year after listing day. The return on the 3rd year after listing increases and goes up to -28.21% still it remains negative. In nutshell, we can conclude that the IPOs which are performed better and Underpriced on listing day, subsequently on the long run turn into the underperformance and release lower return.

The Market Adjusted Excess Returns of IPOs have shown a consistently downward trend over an entire study period. The MAER which is 18.90% on the listing day would continuously decrease to -5.82%, -34.67 and -46.68% on the first year, second year and third year respectively. Annualised raw return as well as annualised MAER follows similar trend as that followed by raw return.

MECHANISM WISE LONG TERM RETURNS OF IPOs

TABLE 2: MECHANISM WISE LONG TERM RETURNS OF IPOs

Period	Raw Return (%)		MAER (%)		Annualised Raw Return (%)		Annualised MAER (%)	
	BB	FP	BB	FP	BB	FP	BB	FP
Listing Day	17.83	28.05	18.19	27.43	356.19	420.28	362.26	417.39
1 Yr After Listing	-9.77	-17.87	-5.67	-7.68	-11.91	16.36	-5.26	-6.64
2 Yr After Listing	-35.57	-43.33	-33.96	-43.18	-16.70	-27.93	-16.52	-20.64
3 Yr After Listing	-29.51	-12.77	-47.76	-33.85	-9.35	-7.70	-15.63	-10.88

This section evaluates the relationship between the issue mechanism and the long-term performance of IPOs. In the long run both book building method and fix price method yield negative initial raw return, but book issue through book building method overall perform much better than the fix price method. Table 2 depicts that initial listing day return of book building method and fix price method were 17.83% and 28.04%. At the end of the 1st year the raw return were negative and it shows downward trend, however at the end of the 3rd year the raw return goes down very sharply from -9.76% to -35.57% in both book building method as well as fix price method. In case of the 3rd year, the scenario totally changed. The fix price issue performs better than the book building and also returns were corrected for both the methods. The similar pattern seen in the MAER annualised MAER and annualised raw return as followed by raw return.

OFFER PRICE WISE LONG TERM RETURNS OF IPOs

TABLE 3: OFFER PRICE WISE LONG TERM RETURNS OF IPOs

Offer Price (Rs.)	Period	Raw Return (%)	MAER (%)	Annualised Raw Return (%)	Annualised MAER (%)
<=30	Listing Day	38.34*	38.54	593.22	595.87
	1 Yr After Listing	-40.30	-31.52	-27.17*	-29.79
	2 Yr After Listing	-49.71*	-50.63*	-28.24	-24.57*
	3 Yr After Listing	-56.41*	-76.60*	-16.84	-25.06*
30-60	Listing Day	5.40*	5.53	120.06	127.23
	1 Yr After Listing	-16.07	-14.51	-3.09*	-12.74
	2 Yr After Listing	-37.12*	-43.10*	-18.98	-20.62*
	3 Yr After Listing	-21.12*	-44.21*	-5.91	-14.26*
60-90	Listing Day	8.34*	8.68	210.82	214.79
	1 Yr After Listing	-11.36	-12.59	6.86*	-12.09
	2 Yr After Listing	-54.94*	-52.96*	-17.54	-25.84*
	3 Yr After Listing	-47.38*	-68.41*	-4.09	-22.42*
90-120	Listing Day	7.01*	7.61	131.68	149.70
	1 Yr After Listing	7.52	3.53	22.74*	3.57
	2 Yr After Listing	-29.23*	-26.26*	-18.54	-12.78*
	3 Yr After Listing	-3.22*	-25.78*	-12.14	-8.45*
120-150	Listing Day	33.64*	35.03	687.67	703.69
	1 Yr After Listing	24.69	36.88	-44.12*	35.09
	2 Yr After Listing	20.27*	20.25*	-23.42	9.86*
	3 Yr After Listing	17.27*	3.22*	-15.34	1.04*
>150	Listing Day	24.29*	24.26	471.36	470.42
	1 Yr After Listing	-15.81	-7.18	-19.91*	-6.83
	2 Yr After Listing	-39.70*	-35.68*	-13.38	-17.37*
	3 Yr After Listing	-35.67*	-50.64*	-8.49	-16.59*

*Significantly different from zero at 5 % level

Table 3 depicts that the IPOs which had released higher initial returns on the listing day, were converted into the lower return in long run and such reduction in return seen at all categories of offer price. The initial return of IPO issued at the below 30 Rs. offer price are consistently decreasing. The initial return which was 38.3% on the listing day decreased to -40.3% after one year, decreased to -49.7% after second year and come down to -56.4% at the end of the third year. Noticeable point is that among all the offer price group less than 30 offer price group underperform more in long run with constant reduction pattern. The offer price group 120 to 150 follows same pattern as that of offer price group below 30 Rs. Though it is underperformed, it provides positive returns for entire study period. Therefore, it is better than other offer price groups. The MAER was consistently decreased at all the groups of offer price but the annualised raw return as well as annualised MAER were fluctuating under all the offer price group during entire study period.

After the analysis of offer wise performance of IPO, it can be concluded that lower offer price more underperformed than medium range offer price. Again extreme high offer price also underperform with negative returns but some extent it is better than the lower offer price.

OFFER SIZE WISE LONG TERM RETURNS OF IPOs

TABLE 4: OFFER SIZE WISE LONG TERM RETURNS OF IPOs

Offer Size	Period	Raw Return (%)	MAER (%)	Annualised Raw Return (%)	Annualised MAER (%)
0-25	Listing Day	21.90	22.34	389.04	398.68
	1 Yr After Listing	-11.59*	8.08	-6.91	-6.47
	2 Yr After Listing	-29.44	-18.10	-32.99	-15.95
	3 Yr After Listing	-40.09	-3.44	-59.15	-19.31
26-50	Listing Day	22.80	21.92	438.34	424.45
	1 Yr After Listing	10.07*	0.56	11.34	11.33
	2 Yr After Listing	-40.76	-23.51	-43.69	-21.19
	3 Yr After Listing	-16.38	-12.53	-40.04	-13.07
51-75	Listing Day	18.62	19.73	363.41	383.33
	1 Yr After Listing	-42.79*	-28.83	-33.35	-31.78
	2 Yr After Listing	-36.21	-26.30	-36.28	-17.72
	3 Yr After Listing	-35.62	-19.48	-54.42	-17.86
76-100	Listing Day	24.48	23.85	508.52	492.29
	1 Yr After Listing	18.21*	15.45	10.99	10.41
	2 Yr After Listing	-48.87	-12.62	-39.02	-18.99
	3 Yr After Listing	-35.04	-4.07	-58.49	-19.15
101-125	Listing Day	26.87	26.98	602.26	599.27
	1 Yr After Listing	15.97*	-5.54	14.43	14.73
	2 Yr After Listing	-40.73	-20.48	-38.59	-18.41
	3 Yr After Listing	-24.35	-14.73	-47.30	-15.27
>125	Listing Day	11.09	11.81	198.41	213.60
	1 Yr After Listing	-21.05*	-21.96	-12.05	-11.53
	2 Yr After Listing	-31.84	-10.77	-27.68	-13.51
	3 Yr After Listing	-25.10	-5.10	-37.83	-12.41

*Significantly different from zero at 5 % level

Table 4 shows that raw return and MAER which is positive on the listing day would become negative in long run performance by all the offer size groups. It means those IPOs underpriced with high return are under performed in long run with negative returns. The IPOs in the offer size of less than 25 crores shows -40.09% highest negative raw returns on 3rd year after listing. The performance of the large offer size IPO is better than the lower and medium range offer size IPOs on the 3rd year of listing day. Medium offer size IPOs from offer size 51 crores to 100 crores are more under performed in the 1st and 2nd year after listing. Annualised raw return and annualised MAER also follow the raw return.

From the above analysis, it can be concluded that offer size affects the performance of IPOs. Smaller size IPOs were more underperformed than the larger issue size. All the categories of offer size of IPOs were negatively performed in long run however; the extent of negative return is different across all size.

GROUP WISE LONG TERM RETURNS OF IPOs

TABLE 5: GROUP WISE LONG TERM RETURNS OF IPOs

Group	Period	Raw Return (%)	MAER (%)	Annualised Raw Return (%)	Annualised MAER (%)
A	Listing Day	26.08	26.46	474.49	484.19
	1 Yr After Listing	16.80	1.01	17.78	16.80
	2 Yr After Listing	3.69*	-9.50*	12.93	6.29*
	3 Yr After Listing	29.84*	-0.19*	15.55	5.08*
B	Listing Day	16.79	16.89	341.02	341.51
	1 Yr After Listing	-11.05	-15.88	-5.18	-4.70
	2 Yr After Listing	-41.69*	-19.28*	-41.87	-20.34*
	3 Yr After Listing	-36.60*	-12.10*	-55.33	-18.10*
T	Listing Day	11.59	12.07	171.62	181.67
	1 Yr After Listing	-21.03	-4.66	-28.98	-27.69
	2 Yr After Listing	-60.32*	-14.29*	-64.43	-31.36*
	3 Yr After Listing	-66.78*	-2.42*	-93.65	-30.65*
X	Listing Day	20.01	20.14	309.44	318.68
	1 Yr After Listing	-58.30	-1.87	-48.38	-45.26
	2 Yr After Listing	-65.61*	-21.70*	-65.82	-31.76*
	3 Yr After Listing	-69.24*	-5.70*	-87.96	-28.65*
Z	Listing Day	22.93	25.31	496.86	545.65
	1 Yr After Listing	-37.00	22.40	-28.96	-27.39
	2 Yr After Listing	-47.46*	-22.83*	-43.02	-20.95*
	3 Yr After Listing	-37.63*	-14.65*	-58.27	-19.09*

*Significantly different from zero at 5 % level

The above mentioned table 5 shows that companies from group – A provides positive initial return and Underpriced on the listing day. However, in long run of 3 year after listing it shoes over performance. Companies from group-A only provides positive raw return among all the groups. The reason behind this over performance in initial as well as long run is that BSE registers the blue chip companies in group – A. Majority groups were underperformed among all the groups but group X and T are more underperformed than the other groups.

The group X and group T produce highest negative return of -69.24 and -66.78 respectively on the 3 year after listing. They consistently decrease from listing day to 3 year after listing.

In nutshell, it can be concluded that group can affect the performance of IPOs. In long companies from group A were over performed where as other groups were underperformed.

YEAR WISE LONG TERM RETURNS OF IPOs

TABLE 6: YEAR WISE LONG TERM RETURNS OF IPOs

Year	Period	Initial Return	MAER (%)	Annualised Raw Return (%)	Annualised MAER (%)
2007	Listing Day	32.25*	31.90*	527.50	523.17
	1 Yr After Listing	1.65*	8.61	0.47	8.19
	2 Yr After Listing	-41.48	-28.03	-18.51	-13.58
	3 Yr After Listing	-14.17	-31.68*	-4.50	-10.33*
2008	Listing Day	5.55*	5.98*	171.45	177.83
	1 Yr After Listing	-53.36*	-37.08	-33.56	-34.79
	2 Yr After Listing	-33.71	-49.61	-16.33	-24.00
	3 Yr After Listing	-53.76	-73.28*	-17.10	-23.92*
2009	Listing Day	9.73*	9.74*	156.48	150.60
	1 Yr After Listing	25.33*	4.19	15.57	3.90
	2 Yr After Listing	-24.93	-31.76	-4.23	-15.44
	3 Yr After Listing	-34.25	-50.86*	-0.14	-16.64*
2010	Listing Day	14.70*	16.07*	356.44	384.35
	1 Yr After Listing	-20.56*	-16.16	-24.56	-15.43
	2 Yr After Listing	-27.95	-25.93	-17.97	-12.69
	3 Yr After Listing	-29.31	-37.35*	-13.34	-12.28*
2011	Listing Day	5.10*	5.26*	208.21	206.99
	1 Yr After Listing	-3.24*	-2.26	-2.67	-1.22
	2 Yr After Listing	-44.82	-55.72	-23.38	-27.02
	3 Yr After Listing	-36.49	-76.54*	-12.68	-24.99*

*Significantly different from zero at 5 % level

The table 6 proves that the Indian IPOs issued during 2007 to 2011 were underperformed for long period of time. On the listing day, all the IPOs generate positive initial returns but raw returns decline over a time and become a negative in the long period of time. The highest negative initial returns were shown by the year 2008. The raw return of 2009 and 2010 reveals continuous decreasing trend, whereas fluctuating trend found in the year 2007, 2008 and 2011. MAER shows something different views than raw return from 2007 to 2011. The MAER of IPOs shows continuously reduction over a long period of 3 years after listing. Which shows continuous underperformance prevails over a time. The annualised raw return and annualised MAER shows fluctuating trend during all the five years.

CONCLUSION

From the foregoing analysis, it can be concluded that the underpricing and underperformance of the IPOs is observed in BSE. The Indian IPOs are underpriced on the first trading day as an average return of the international evidences of IPO underpricing. The Indian IPOs which are underpriced on the listing days are declining in subsequent long term period after listing day and underperformed. At general, it can be concluded that there are various factors affected to the performance of the IPOs in the long term. They include the issue mechanism; offer size, offer price, and groups of the Market are impacted to the performance of the IPOs in different time intervals.

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WOMEN ENTREPRENEURS IN INDIA: ISSUES AND POLICIES

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ABSTRACT

"Women who innovate initiate or adopt business actively are called women entrepreneurs." J. Schumpeter. According to a new National Federation of Independent Business (NFIB) study published in a recent Forbes article, over half of all new small business jobs created in the next five years will come from businesses started by women. Self-employment is regarded as a cure to generate income. The Planning commission as well as the Indian government recognizes the need for women to be part of the mainstream of economic development. Women entrepreneurship is seen as an effective strategy to solve the problems of rural and urban poverty. Entrepreneurship development for women is an important factor in economic development of India. It is estimated that women entrepreneurs presently comprise about 10% of the total number of entrepreneurs in India, with the percentage growing every year. This conceptual paper give emphasis on the problems, issues, challenges faced by women entrepreneurs especially in India and the remedies to overcome them in the light of Indian government policies for women entrepreneurs. The primary objective of this paper is to find out the status of women entrepreneurs in India.

KEYWORDS

entrepreneurs, self-employment, policies, challenges, planning commission, strategy.

INTRODUCTION

Entrepreneurship refers to the act of setting up a new business or reviving an existing business so as to take advantages from new opportunities. An entrepreneur searches for change and responds to it. The sociologists feel that certain communities and cultures promote entrepreneurship like for example in India we say that Gujarati's and Sindhi's are very enterprising. Still others feel that entrepreneurs are innovators who come up with new ideas for products, markets or techniques. Thus, entrepreneurs shape the economy by creating new wealth and new jobs and by inventing new products and services. It is a general belief in many cultures that the role of women is to build and maintain the homely affairs like task of fetching water, cooking and rearing children. Since the turn of the century, the status of women in India has been changing due to growing industrialization, globalization, and social legislation. Women entrepreneurship must be molded properly with entrepreneurial traits and skills to meet the changes in trends, challenges global markets and also be competent enough to sustain and strive for excellence in the entrepreneurial arena. Entrepreneurship has been a male-dominated phenomenon from the very early age, but time has changed the situation and brought women as today's most memorable and inspirational entrepreneurs. It is estimated that women entrepreneurs presently comprise about 10% of the total number of entrepreneurs in India, with the percentage growing every year. Women entrepreneurs create new jobs for themselves and others and by being different also provide society with different solutions to management, organization and business problems as well as the exploitation of entrepreneurial opportunities.

OBJECTIVES OF THE STUDY

1. To study the socio-economic background of the women entrepreneurs.
2. To analyze the motivational factors and other factors that influence women to become entrepreneurs.
3. To analyze the major challenges faced by women entrepreneurs to promote the entrepreneurship.
4. To analyze the role of Government to develop Women Entrepreneurs in India.
5. To give recommendations to improve the satisfaction of women entrepreneurs.

RESEARCH METHODOLOGY

This conceptual paper give emphasis on the problems, issues, challenges faced by women entrepreneurs especially in India and the remedies to overcome them in the light of Indian government policies for women entrepreneurs. The paper is based on secondary data. The material is collected from various distinguished journals magazines, books, etc.

WOMEN ENTREPRENEURS

Women entrepreneur may be defined as a woman or group of women who initiate, organize, and run a business enterprise. In terms of Schumpeterian concept of innovative entrepreneurs, women who innovate, imitate or adopt a business activity are called "women entrepreneurs".

Accordingly, the Government of India has defined women entrepreneur as "an enterprise owned and controlled by a women having a minimum financial interest of 51 per cent of the capital and giving at least 51 per cent of the employment generated in the enterprise to women." In nutshell, women entrepreneurs are those women who think of a business enterprise, initiate it, organize and combine the factors of production, operate the enterprise and undertake risks and handle economic uncertainty involved in running a business enterprise.

FEATURES OF WOMAN ENTREPRENEUR IN INDIA

A woman entrepreneur likes to take realistic risks because she wants to be a successful entrepreneur. The most critical skill required for industrial development is the ability of building a sound organization. A woman entrepreneur assembles, co-ordinates, organizes and manages the other factors namely land, labor and capital. The most critical skill required for industrial development is the ability of building a sound organization. Human capital variables are likely to influence the development of a business and the organization of resources. Human capital variables include knowledge, education, skills and previous experience (Deakins and Whittam, 2000). Storey (1994) suggests the entrepreneurial factors such as previous management, experience, family history, functional skills and relevant business sector knowledge as the important entrepreneurial factors. The effect of education has been widely studied. Education is presumably related to knowledge, skills, motivation, and self-confidence, problem solving ability, commitment and discipline. Higher education is expected to enhance the ability of the entrepreneur

to cope with problems and seize opportunities that are important to the growth of the firm. Helms, 1997 explains that women often start their own business for 'three reasons of personal gains: personal freedom, security and/or satisfaction'. Studies highlight independence, need to achieve, need for job satisfaction, economic necessity, and personal environment as the factors that motivate women entrepreneurs in starting the enterprise.

A distinguishing feature of a woman entrepreneur is the willingness to work hard. Achievement orientation is derived to overcome challenges, to advance and to grow. A woman entrepreneur must be optimistic. She should approach her venture with a hope of success and attitude for success rather than with a fear of failure. The success of an enterprise largely depends upon the ability of woman entrepreneur to cope with latest technology. Technical competency refers to the ability to devise and use the better ways of producing and marketing goods and services. One more very important quality that women entrepreneur should have is the leadership quality. It is the process of influencing and supporting others to work enthusiastically towards achieving objectives.

CHALLENGES AND ISSUES FACED BY WOMEN ENTREPRENEURS IN INDIA

Gender Disparity: While women are making major strides in educational attainment at primary and secondary levels, they often lack the combination of education, vocational and technical skills, and work experience needed to support the development of highly productive businesses.

They are treated as subordinate to husbands and men, physically weak and lesser confident to be able to shoulder the responsibility of entrepreneur. There is discrimination against women in India despite constitutional equality. Women do not get equal treatment in male-dominated Indian society and male ego puts barriers in their progress.

Lack of education: Due to lack of proper education, women entrepreneurs remain in dark about the development of new technology, new methods of production, marketing and other governmental support which will encourage them to flourish.

Lack of finance: Access to finance is one of the most common challenges that entrepreneurs face and this is especially true for women who are further impeded by lack of personal identification, lack of property in their own name and the need for their husband's countersignature on many documents. The complicated procedure of bank loans also creates lot of problems in getting the required finance. Women entrepreneurs even face problems in getting requisite working capital financing day-to-day business activities. Obtaining the support of bankers, managing the working capital, lack of credit resources are the problems, which still remain in the males domain. Women are yet to make significant mark in quantitative terms.

Low risk-bearing capacity: Women in India are by nature weak, shy and mild. They cannot bear the amount of risk, which is essential for running an enterprise. Lack of education, training and financial support from outside also reduce their ability to bear the risk involved in an enterprise.

Lack of entrepreneurial aptitude: They have no entrepreneurial bent of mind. Even after attending various training programs on entrepreneurship, they fail to tide over the risks and troubles that may come up in an organizational working.

Obsolescence of technology & resulting increase in cost of production: Several factors including inefficient management contribute to the high cost of production, which stands as a stumbling block before women entrepreneurs. Women entrepreneurs face technology obsolescence due to non-adoption or slow adoption to changing technology, which is a major factor of high cost of production.

Low risk taking ability: Women in India lead a protected life. They are less educated and economically not self-dependent. All these reduce their ability to bear risk involved in running an enterprise. Risk bearing is an essential requisite of a successful entrepreneur. In addition to above problems, inadequate infrastructural facilities, shortage of power, high cost of production, social attitude, low need for achievement and socio-economic constraints also hold the women back from entering into business.

Stiff Competition: Women entrepreneurs do not have organization set-up to pump in a lot of money for canvassing and advertisement. Thus, they have to face a stiff competition for marketing their products with both organized sector and their male counterparts. Such a competition ultimately results in the liquidation of women enterprises.

Family Conflicts: In India, the major duty of woman is to look after the children and other members of the family. Man plays a secondary role only. In case of married woman, she has to strike a fine balance between her business and family. Her total involvement in family leaves little or no energy and time to devote for business. Support and approval of husbands seem necessary condition or women's entry into business.

Marketing Problems: The middlemen exploit the women entrepreneurs. Women entrepreneurs also find it difficult to capture the market and make their products popular. Women entrepreneurs also lack energy and extra efforts needed to be investing and to win the confidence of customers and popularize the products. Women entrepreneurs continuously face the problems in marketing their products. During the process of marketing of products women entrepreneurs faced certain problems viz. poor location of shop, lack of transport facility and tough competition from larger and established units.

Production Problems: Non-availability of raw material is one of the reasons to the slow growth of women entrepreneurs. Women entrepreneurs find it difficult to procure the required raw materials and other necessary inputs for production in sufficient quantity and quality. Other production problems are non-availability of machine or equipment, lack of training facility and non-availability of labor, high cost of required machine or equipment. High cost of production undermines the efficiency and stands in the way of development and expansion of women's enterprises, government assistance in the form of grant and subsidies to some extent enables them to tide over the difficult situations. However, in the long run, it would be necessary to increase efficiency and expand productive capacity and thereby reduce cost to make their ultimate survival possible.

Legal Formalities: Women entrepreneurs find it extremely difficult in complying with various legal formalities in obtaining licenses etc.

Team Building: Many female entrepreneurs try to handle every aspect of the business alone, and that's a recipe for failure. It's important that female entrepreneurs surround themselves with team members that have different strengths and expertise that can help run a successful business. Women think they can do it all themselves, and aren't thinking about team building and tapping resources the way that men are. Men in the business world tend to realize that, whereas women are used to multitasking.

ROLE OF GOVERNMENT TO DEVELOP WOMEN ENTREPRENEURS IN INDIA

A congenial environment is needed to be created to enable women to participate actively in the entrepreneurial activities. The Government of India has also formulated various training and development cum employment generations programs for the women to start their ventures. These programmes are as follows: In the seventh five-year plan, a special chapter on the "Integration of women in development" was introduced by the Government, with following suggestion:

- **Specific target group:** It was suggested to treat women as a specific target groups in all major development programs of the country.
- **Arranging training facilities:** It is also suggested in the chapter to devise and diversify vocational training facilities for women to suit their changing needs and skills.
- **Developing new equipment:** Efforts should be made to increase their efficiency and productivity through appropriate technologies, equipment and practices.
- **Marketing assistance:** It was suggested to provide the required assistance for marketing the products produced by women entrepreneurs.
- **Decision-making process:** It was also suggested to involve the women in decision-making process.

The Government of India devised special programs to increase employment and income-generating activities for women in rural areas. The following plans are launched during the Eight-Five Year Plan:

- Prime Minister Rojgar Yojana and EDPs were introduced to develop entrepreneurial qualities among rural women.
- 'Women in agriculture' scheme was introduced to train women farmers having small and marginal holdings in agriculture and allied activities.
- To generate more employment opportunities for women KVIC took special measures in remote areas.
- Women co-operatives schemes were formed to help women in agro-based industries like dairy farming, poultry, animal husbandry, horticulture etc. with full financial support from the Government.
- Several other schemes like Integrated Rural Development Programs (IRDP), Training of Rural youth for Self-employment (TRYSEM) etc. were started to alleviate poverty. 30-40% reservation is provided to women under these schemes.

ASSOCIATIONS PROMOTING WOMEN ENTREPRENEUR

In India, the Micro, Small & Medium Enterprises development organizations, various State Small Industries Development Corporations, the nationalized banks and even NGOs are conducting various programmes including Entrepreneurship Development Programs (EDPs) to cater to the needs of potential women entrepreneurs, who may not have adequate educational background and skills. The Office of DC (MSME) has also opened a Women Cell to provide coordination and assistance to women entrepreneurs facing specific problems. Various government schemes for MSMEs also provide certain special incentives and concessions for women entrepreneurs.

1. SIDBI

State Industrial and Development Bank of India (SIDBI) is an institution established at the national level to provide facilities to small scale industries. As a part of development SIDBI has introduced following schemes to assist the women entrepreneurs. These schemes are:

- i. Mahila Udyam Nidhi
- ii. Mahila Vikas Nidhi
- iii. Women Entrepreneurial Development Programmes
- iv. Marketing Development Fund for Women

2. SIDO

Small industries Development Organization (SIDO) are conducting various Entrepreneurship Development Programmes (DEP's) for women to provide various skills to women like T.V repairing, printed circuit boards, screen printing etc.

3. Consortium of Women Entrepreneurs in India (CWEI)

The CWEI is a voluntary organization consisting of NGOs, SHGs and individual business units. This came into being in 2001. The objective is to provide technology up gradation facilities, and other facilities like marketing, finance HRD and production to women entrepreneurs.

4. NABARD

National Bank of Agriculture and Rural Development (NABARD) is an autonomous financial institution provides liberal credit to rural women entrepreneurs.

5. CENTRAL AND STATE GOVERNMENT SCHEMES

State Government has come out with several schemes to develop women entrepreneurs. Development of Women and Children in Rural Areas (DWCRA) a scheme designed for state governments were implemented in 1982-83. Uncountable women throughout the country have availed the facilities to develop themselves as entrepreneurs.

6. SELF-EMPLOYED WOMEN'S ASSOCIATION (SEWA)

SEWA is a trade union of women, which was registered in 1972 under Trade Union Act. The members of SEWA has extended its operations to the global level and has the opportunity of receiving grants from various international organizations such as UNICEF, ILO, and Government of India etc.

The First Five-Year Plan (1951-56) envisaged a number of welfare measures for women. Establishment of the Central Social Welfare Board, organization of Mahila Mandals and the Community Development Programmes were a few steps in this direction.

In the second Five-Year Plan (1956-61), the empowerment of women was closely linked with the overall approach of intensive agricultural development programmes.

The Third and Fourth Five-Year Plans (1961-66 and 1969-74) supported female education as a major welfare measure.

The Fifth Five-Year Plan (1974-79) emphasized training of women, who were in need of income and protection. This plan coincided with International Women's Decade and the submission of Report of the Committee on the Status of Women in India. In 1976, Women's welfare and Development Bureau was set up under the Ministry of Social Welfare.

The Sixth Five-Year Plan (1980-85) saw a definite shift from welfare to development. It recognized women's lack of access to resources as a critical factor impeding their growth.

The Seventh Five-Year Plan (1985-90) emphasized the need for gender equality and empowerment. For the first time, emphasis was placed upon qualitative aspects such as inculcation of confidence, generation of awareness with regards, to rights and training in skills for better employment.

The Eight Five-Year Plan (1992-97) focused on empowering women, especially at the grass roots level, through Panchayat Raj Institutions.

The Ninth Five-Year Plan (1997-2002) adopted a strategy of women's component plan, under which not less than 30 percent of funds/benefits were earmarked for women-specific programmes.

The Tenth Five-Year Plan (2002-07) aims at empowering women through translating the recently adopted National Policy for Empowerment of Women (2001) into action and ensuring Survival, Protection and Development of women and children through rights based approach.

The Eleventh Five-Year Plan lays down six monitorable targets (1) raise the sex ratio for age group 0-6 from 927 in 2001 to 935 by 2011-12 and to 950 by 2016-17; (2) Ensure that at least 33% of the direct and indirect beneficiaries of all government schemes are women and girl children; (3) Reduce IMR from 57 to 28 and MMR from 3.01 to one per 1000 live births; (4) Reduce malnutrition among children of age group 0-3 to half its present level; (5) Reduce anemia among women and girls by 50% by the end of the Eleventh Plan; and (6) Reduce dropout rate for primary and secondary schooling by 10% for both girls as well as boys."

FACTORS INFLUENCING WOMEN ENTREPRENEURSHIP

1. PUSH FACTORS- Push factors are elements of necessity such as insufficient family income, dissatisfaction with salaries job, difficulty in finding work and a need for flexible work schedule because of family responsibilities. These factors may have more importance for women than for men.

2. PULL FACTORS- Factors that work as entrepreneurial drive factors relate to independence, self-fulfillment, entrepreneurial drive and desire for wealth, power and social status, co-operation and support of family members and a strong network of contacts. The most prominent factor is self-achievement expressed in terms of challenge, which helps women to start, run their own business and turn it into a profitable venture. When a strong need for achievement could not be fulfilled through a salaried position or when there was a desire to transform a perceived opportunity into a marketable idea, then these factors work for a person to state their own venture.

POLICIES AND SCHEMES FOR WOMEN ENTREPRENEURS IN INDIA

In India, the Micro, Small & Medium Enterprises development organizations, various State Small Industries Development Corporations, the nationalized banks and even NGOs are conducting various programmes including Entrepreneurship Development Programs (EDPs) to cater to the needs of potential women entrepreneurs, who may not have adequate educational background and skills. The Office of DC (MSME) has also opened a Women Cell to provide coordination and assistance to women entrepreneurs facing specific problems. Various government schemes for MSMEs also provide certain special incentives and concessions for women entrepreneurs. For instance, under Prime Minister's Rozgar Yojana (PMRY), preference is given to women beneficiaries. The government has also made several relaxations for women to facilitate the participation of women beneficiaries in this scheme.

1. Integrated Rural Development Programme (IRDP)
2. Training of Rural Youth for Self-employment (TRYSEM)
3. Prime Minister's Rozgar Yojana (PMRY)
4. Women's Development Corporation Scheme (WDCS)
5. Working Women's Forum
6. Indira Mahila Yojana
7. Indira Mahila Kendra
8. Mahila Samiti Yojana
9. Rashtriya Mahila Kosh
10. Khadi and Village Industries Commission

The Government programmes for women development began as early as 1954 in India but the actual participation began only in 1974. At present, the Government of India has over 34 schemes for women operated by different department and ministries. Some of these are as follows;

1. Rastriya Mahila Kosh (RMK) 1992-1993
2. Mahila Samridhi Yojana (MSY) October, 1993.
3. Indira Mahila Yojana (IMY) 1995.
4. Women Entrepreneur Development programme given top priority in 1997-98.
5. Mahila Samakhya being implemented in about 9000 villages.
6. Swayasjdha.
7. Swa Shakti Group.
8. Support to Training and Employment Programme for Women (STEP).
9. Swalamban.
10. Crèches/ Day care Centre for the children of working and ailing mother.
11. Hostels for working women.
12. Swadhar.
13. National Mission for Empowerment of Women.
14. Integrated Child Development Services (ICDS) (1975),
15. Rajiv Gandhi Scheme for Empowerment of Adolescence Girls (RGSEAG) (2010).
16. The Rajiv Gandhi National Crèche Scheme for Children of Working Mothers.
17. Integrated Child Protection scheme (ICPS) (2009-2010).
18. Dhanalakshmi (2008).
19. Short Stay Homes.
20. Ujjawala (2007).
21. Scheme for Gender Budgeting (XI Plan).
22. Integrated Rural Development Programme (IRDP).
23. Training of Rural Youth for Self Employment (TRYSEM).
24. Prime Minister's Rojgar Yojana (PMRY).
25. Women's Development Corporation Scheme (WDCS).
26. Working Women's Forum.
27. Indira Mahila Kendra.
28. Mahila Samiti Yojana.
29. Khadi and Village Industries Commission.
30. Indira Priyadarshini Yojana.
31. SBI's Sree Shakti Scheme.
32. SIDBI's Mahila Udyam Nidhi Mahila Vikas Nidhi.
33. NGO's Credit Schemes.
34. National Banks for Agriculture and Rural Development's Schemes

RECOMMENDATIONS FOR 'THE GROWTH OF WOMEN ENTREPRENEURS'

1. Most of the women entrepreneurs are of the opinion that because of lack of training, they are not able to survive in the market. Hence, the government should conduct frequent training programmes with regard to new production techniques, sales techniques, etc. This training should be made compulsory for women entrepreneurs.
2. Finance is the first major problem for women entrepreneurs. Hence, the government can provide interest free loans to encourage women entrepreneurs. To attract more women entrepreneurs, the subsidy for loans should be increased.
3. Since the number of entrepreneurs from scheduled caste and most backward communities is very low, awareness is to be created those women, by providing special attention.
4. Women entrepreneurs should be encouraged to start their entrepreneurs as joint stock companies rather than as a sole trade and partnership concerns to avail the advantages of large scale operation.
5. Parents of unmarried potential women entrepreneurs should be encouraged in spending money on setting up business rather than giving preference to their marriage.
6. Marketing product is one of the main problems for women entrepreneurs. Here, women co-operative societies can be started to procure the products from women entrepreneurs. They will help them in selling their products at a reasonable price.
7. Improper location and inadequate infrastructure facilities are the hurdles in the way of development of women entrepreneurship. Hence, separate industrial estates may be set up exclusively for women entrepreneurs to reduce the initial investment and to create a special environment.
8. The family members of women entrepreneurs should extend all possible support in managing units set up by women entrepreneurs.
9. To establish all India forums to discuss the problems, grievances, issues, and filing complaints against constraints or shortcomings towards the economic progress path of women entrepreneurs and giving suitable decisions.
10. Infrastructure set up plays a vital role for any enterprise. Government can set some priorities for women entrepreneurs for allocation of industrial plots, sheds and other amenities.

CONCLUSION

Women being the vital gender of the overall population have great capacity and potential to be the contributor in the overall economic development of any nation. Therefore, programs and policies need to be customized to not just encourage entrepreneurship as well as implement strategies, which can help support entrepreneurial culture among youth.

Women entrepreneurs must be molded properly with entrepreneurial traits and skills to meet changing trends and challenging global markets, and also be competent enough to sustain and strive in the local economic arena.

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A STUDY ON WORKING STRATEGY OF SELF HELP GROUPS

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ABSTRACT

People have to economically, socially and politically empower for the development of the society. Active participation of majority people of the society is an ingredient of development. The twelfth five year plan (2012-2017) focuses on aspects of inclusion of deprived sections of the society by providing banking services. Financial inclusion can be analyzed in two important ways- credit penetration and deposit penetration. The former concentrates on the the number of loan accounts while later is the key driver of financial inclusion and it is the number of savings bank accounts opened at a certain period of time and place. As a part of inclusiveness, the government of India launched the Pradhan Mantri Jan Dhan Yojana (PMJDY) to facilitate bank services and increase the financial literacy in the first phase while second phase provided insurance and pension services to bring the excluded under the fold of formal financial services. In India, the financial inclusion is not a recent phenomenon, which can be traced back to 1904. The pioneering efforts of Prof. Yunus in the seventies took worldwide impetus after providing microcredit. In India, SHG-Bank linkage programme has registered tremendous growth under the NABARD initiatives and launching of SGSY led to microfinance movement. The members of self help groups are effectively the owners and managers of a small bank. They can themselves decide who gets loans, when and at what interest cost. They are indirectly remunerated for their management time and effort. Self-help group are informal voluntary groups supposed to generate their cohesive characteristics from the homogenous composition of members. In the study, the data and information collected by way of administering the questionnaire are summarized and made further analysis to draw interpretations. The data was collected from a statistically selected sample 1035 SHG members from rural Telangana. The respondents were administered a pre-structured questionnaire personally by the researcher to collect the data. After being collected, the data was analyzed using SPSS version 23, 24 and Microsoft Excel.

KEYWORDS

PMJDY, self help groups.

INTRODUCTION

The formal banking sector and SHGs represent the two ends of the spectrum of credit interventions. While banks bring in scale and resources to the partnership, savings and credit groups ring in their ability to reach the poorest of the poor and their skills in delivering credit efficiently. Each has developed its own parameters of operations and mandates.

The groups function as a small bank by depositing savings in their accounts, maintaining records. The members informed that as soon as the SHGs complete 6-9 months duration since their formation and save considerable amount in their account, are eligible for getting loan through bank linkage programme. The micro-credit plan will be prepared at a place that is agreeable to all the members. Points discussed at the time of preparation of MCP are to be noted down in the minutes book. MOU made on the lines that are decided by the members and the institutions. Selection of income generating activities based on the technical skills of the members, installments, rate of interest and income that can be earned should be decided by the members.

The credit claimed at the first phase of loan sanction will be four times of their savings amount. The rate of interest will be around 14% and repayment will be done in 10-24 installments. They lend internally depending on the requirement of the members and lend at the rate of discretion of members.

The SHGs are highly successful in getting the loans from the banks with their prompt repayment rate on the one hand and effective implantation of bank linkage programme by IKP and banks on the other hand (P.Srinivas, 2014). The purpose wise average amount of loan per SHG reveals that the average amount of loan used for establishing a small business followed by rearing farm and non-farm activities. A considerable amount of SHGs had used their loan for asset creation. Markfed is the activity given to one of the leader of a SHG in the village who buy the agricultural yield on behalf of the government and claim commission. The commission was to be distributed among all the members of the group. But lack of awareness among the group members, the commission is accounted into the leader's account. The most of the sample respondents invest on the agricultural activity.

Leaders elicit cooperation and teamwork from a group of people and keeping them motivated, using every manner of affiliation (Dubrin, 2002). He specifies the far reaching goal as well as the strategy for goal attainment. The 20 SHGs form a village organization. The VOs were registered according to primary self help group, Telangana act 1995 (serp, 2015).

OBJECTIVES OF THE STUDY

1. To study the demographic factors
2. To study its impact on sustainability of SHGs.

METHODOLOGY OF THE STUDY

In the study, the data and information collected by way of administering the questionnaire are summarized and made further analysis to draw interpretations. The data was collected from a statistically selected sample 1035 SHG members from rural Telangana. The respondents were administered a pre-structured questionnaire personally by the researcher to collect the data. The correlations were used for analysis of the data.

Demographic factors are the most popular bases to measure the members (SHGs) needs, wants and usage. Even to define the member's benefits or behavior, their demographic characteristics must be known to assess the sustainability of SHGs.

ANALYSIS

In this section demographic profile of the respondents is presented.

1.1 Age of the Respondents: Members needs change with age. To include financially, the member needs to be met. For example, 60 years a woman who is living alone in Venkatayapalem, require the orders to stitch the clothes. The member whose age is 55 years living in Turkayamjal needs financial assistance and helpers in continuing her business. The member who is 35 years married needs financial assistance for income generating purpose to meet the family expenses. Thus, age is often a poor predictor of a person's life cycle, health, work or family status, needs and buying power. The members are to be provided with different financial products for different age and life cycle groups to sustain.

In general, only married women are eligible to become members and they should attain an age of 21 years to be a member in the group. So for the purpose of the study, age of the respondents are classified into four categories i.e, 25-35, 36-45, 46-55 and above 56.

TABLE 1.1: THE AGE OF THE RESPONDENTS

	Frequency	Percent
25-35	441	42.6
36-45	350	33.6
46-55	165	15.9
56 and above	79	7.6
Total	1035	100

The above table shows that the age wise distribution of the sample respondents. The sample consists of 43% respondents between age 25 and 35, 34% respondents belong to age group between 36 and 45, 16% respondents belong to age group 46-55 and 8% belong to age group of above 55 years. It means majority of the members were in the middle age group. The above middle age group people are discouraged to be a part SHGs.

1.2 Education Profile of the Respondents: There was a program to educate the members in the rural villages but it was unsuccessful. One member has responded the program was good but her husband was a drunker and when he drinks come to her beat. She could not able to concentrate on the education in fear of when her husband comes to beat. In other case, the members who volunteered for educating the rural members were not given said payment. So they stopped teaching. The members could only able to learn the signature from the night classes.

TABLE 1.2: THE EDUCATION PROFILE OF THE RESPONDENT

		Frequency	Percent
Valid	below 10 th	709	68.7
	10-12	260	25.0
	graduate	62	6.0
	post graduate	4	.4
	Total	1035	100

The above table shows that the sample consists of 68% illiterates or high school education, 25% respondents who completed their Intermediate education, 6% respondents who completed graduates and 0.4% who finished their post graduation. Majority of the members are active participants in the SHGs formation and its functioning irrespective of the education. This is a very good and positive development in the society. That even illiterates or with basic education are serving in the economic development of the society. Since these people cannot get jobs elsewhere, therefore they are known to find alternative income generating activity.

1.3 Social class of the Respondents: It was observed to form groups, the members are considering no differences in social class. But the providing credit to the members on rotation basis, priority was given to scheduled caste and tribes. The members request the priority of giving credit should not be on the basis of social class but on the basis of necessity.

TABLE 1.3: SOCIAL CLASS OF THE RESPONDENTS

	Frequency	Percent
OC	241	23.3
BC	403	38.9
SC	157	15.1
ST	226	21.8
Minority	8	0.8
Total	1035	100.0

Table shows that the sample consists of 39% of respondents who belong to Upper Class (OC), 23% of Other Backward Class (OBC), 22% of Scheduled Social Class and 15% respondents belong to Scheduled Tribes. The other 1% may belong to Muslim category. The main aim of the SHG is to bring people from below poverty level to main stream activity where they not only improve their economic life but they can as well develop the society. Since majority of the people are in the fence of SC/STs, BC and others. Since majority of the people are backward not only in the society but also locally.

1.4 Religion of the respondents: India is a land of diversities. This diversity is also visible in the spheres of religion. India known as the land of spirituality and philosophy was the birthplace of some religions, which even exist today in the world. The most dominant religion in India today is Hinduism. About 80% of Indians are Hindus (census, 2011).

TABLE 1.4: RESPONDENTS' RELIGION

		Frequency	Percent
Valid	Hindu	1011	97.2
	Muslim	24	2.3
	Total	1035	99.5

About 98% of sample belongs to Hindu religion and the remaining 24 members constitute 2% were Muslims. Although the SHGs are for every religion, but predominantly people are Hindu religion households. Only 2% of Muslims are active in the establishment of SHGs and take benefit out of this. This is a good sign for the society.

1.5 Marital status of the respondents: The women who are married can be part of SHGs. For the purpose of the study the marital status of the women were classified into three categories: Married, divorcee and widow.

TABLE 1.5: MARITAL STATUS

		Frequency	Percent
Valid	married	992	95.4
	divorcee	12	1.2
	widow	31	3.0
	Total	1035	100

The above shows that the sample consists of 95.4% of respondents married, 3% who are widowed and 1.2% respondents who are divorced. Majority of the women are married who have responsibilities towards their family need access to financial resources. This is a very good and positive development in the rural area. The members are coming out of the houses and conducting meetings, empowering socially.

1.6 Family type of the respondents: for study purpose based on the size or structure, family types of the members are classified into joint family and nuclear family. In case of nuclear families, the breadwinner will be husband. But if anything happens to head of the family, the wife/mother could not be able to take care of the family members. Through self help groups the members should be motivated for income generating activities. All the members are given advice and inspired to move for income generating activities who can support the family head in expenses and also could take the charge if anything happens also.

TABLE 1.6: FAMILY TYPE OF THE RESPONDENTS

		Frequency	Percent
Valid	joint	89	8.6
	nuclear	946	91.4
	Total	1035	100

The above table shows that the sample consists of 91% of respondents belong to nuclear type and the rest belong to Joint family. Majority of the respondents belong to nuclear family. It's a good development that the members can save and get credit and support the family in case of nuclear type.

1.7 Occupation of the Respondents: For the purpose of the study, occupations of the respondents were classified into House wives, Business, Jobs, self-employed professionals, labor and agriculture and allied activities. Self-employed professionals include tailoring, beauty parlour etc. Jobs include ward members, bank mithra, gram sabha leaders, mid day meals preparation etc. agriculture allied activities include agriculture, livestock, rearing animals etc.

TABLE 1.7: OCCUPATION OF THE RESPONDENTS

		Frequency	Percent
Valid	housewife	40	3.8
	business	246	23.7
	job	86	8.3
	Self-employed professional	133	12.8
	labor	234	22.5
	agriculture	296	28.5
	Total	1035	99.5

The above table shows that the sample consists of 29% of respondents from agriculture, 24% who were business, 22% respondents who were labor, 13% respondents were self-employed professional, 8% respondents were jobs and 4% respondents are house wives. The active participants are elected for village panchayat as ward member to represent women which is a very good and positive development in the society. Few members are also selected as Bank mithra to write the vouchers, deposit and withdrawal forms of the members. Group was selected on two years contract basis to purchase the agricultural yield from the farmers by the IKP under MARKFED program and provided commission to the members. As an income generating activities, the members purchased rearing animals like buffaloes, goats, chicks which increase the income of the member.

1.8 Legal status of the Respondents: For the purpose of the study, based on the ownership the legal status has been classified into Family owned business/service and sole proprietor. Family owned business like agriculture, electric winding shops, handicrafts etc. sole proprietor like tailoring, kirana stores, vegetable sales etc.

TABLE 1.8: LEGAL STATUS OF THE RESPONDENTS

	Frequency	Percent
Family owned	431	41.4
sole proprietorship	244	23.5
Labour/housewives/jobs	360	34.7

The above table shows that the sample consists of 41% of respondents invest in family owned, 24% who were sole proprietors and 35% respondents belong to labor/Housewives. The members started small kirana or vegetable shops with the credit taken from the SHGs or Bank linkage programme. Housewives utilised the credit for the expenses of the house or children's education or purchasing gold who can repay the amount in installments. Majority of the members invested credit in agriculture who cannot get loans from cooperative banks or any other Banks. It's a major development in the members and economic growth can be witnessed.

1.9 Income generating activities started before joining the SHG or after joining the SHG: The members who earned income before joining the SHGs had extended their capital investment on the activity. The members after joining SHGs with the help financial assistance or training programme started generating income. For study purpose, the income generating activities started by the members divided into before joining and after joining.

TABLE 1.9: THE RESPONDENTS STARTED INCOME GENERATING ACTIVITIES BEFORE JOINING THE SHG OR AFTER JOINING THE SHG

		Frequency	Percent
Valid	before	396	38.1
	after	365	35.1
Labour/housewives		274	26.5
Total		1035	100.0

The above table shows that the sample consists of 38% of respondents started their occupation before joining the SHG, 35% respondents started their occupation after joining the SHG and 27% respondents belong to labour/Housewives. Majority of the people had chosen income generating activity to support the family which is a positive development in the society.

1.10 Type of activity of the Respondents: Type of income generating activities classified into manufacturing, trading and services for the study. Handicrafts, plates etc are included in the manufacturing; agriculture and agriculture allied activities, bank mithra, ward members included in services while vegetable sales, kirana stores, livestock sale, dealership etc included in trading activity.

TABLE 1.10: THE TYPE OF ACTIVITY OF THE RESPONDENTS

	Frequency	Percent
Manufacturing	217	20.9
Trading	92	8.8
Services	452	43.5
Labour/House wives	274	26.5
Total	1035	100.0

The above table shows that the sample consists of 43% respondent's service oriented activity, 21% respondents involved in Manufacturing/assembling activity, 9% respondents involved in trade related activity and 27% respondents belong to labour/Housewives. It means majority of the members are in service followed by manufacturing.

1.11 Length of the period of the Respondents in SHGs: The length of the period of the respondents in SHGs classified into 4 categories. 3-5 years, 5-10 years, 10-15 years and above 15 years. For sustainability of the SHGs, the members who joined before three years from the date of collection of data had been considered for the study.

TABLE 1.11: LENGTH OF THE PERIOD IN SHGs

		Frequency	Percent
Valid	3-5 years	104	10.0
	5-10 years	306	29.56
	10-15 years	302	29.17
	15 and above years	323	31.2
	Total	1035	100.0

The above table shows that the sample joined the SHG 31% respondent's fall into category of 15 and above years, 29% respondents fall into 10-15 years, 30% respondents fall into 5-10 years, 10% respondents fall into 3-5 years. It means majority of members fall above 15 years, 5-10 years and 10-15 years. It indicates positive sign of the sustainability of the SHGs.

Testing the Hypothesis 1

Null Hypothesis (H₀): There is no significant correlation between demographic variables and year of joining the SHG.

Alternative Hypothesis (H₁): There is a significant correlation between Age and Year of joining the SHG.

TABLE 1.12: CORRELATIONS

		Year of join- ing	age	educa- tion	class	reli- gion	mari- tal	fam- ily	occupa- tion	sta- tus	join- ing	activ- ity
Year of join- ing	Pearson Correla- tion	1	.091**	-.144**	.105**	0.049	.063*	0.039	-0.061	0.068	.085*	-0.047
	Sig. (2-tailed)		0.003	0.000	0.001	0.114	0.044	0.215	0.051	0.077	0.019	0.197
	N	1035	1035	1035	1028	1035	1035	1035	1035	675	761	761

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The table 1.12 shows that at the 0.01 level of significance, there is a sufficient evidence to conclude that there is a significant correlation between Age and Sustainability of members in SHG. (P-value is greater than 0.003). The null hypothesis was rejected.

The table 1.12 shows that at the 0.01 level of significance, there is a sufficient evidence to conclude that there is a significant correlation between Education and Sustainability of members in SHG. (P-value is less than 0.00001). The null hypothesis was rejected.

The table 1.12 shows that at the 0.01 level of significance, there is a sufficient evidence to conclude that there is a significant correlation between Social Class and Sustainability of members in SHG. (P-value is greater than 0.001). The null hypothesis was rejected.

The table 1.12 shows that at the 0.01 level of significance, there is a sufficient evidence to conclude that there is no significant correlation between Religion and Sustainability of members in SHG. (P-value is less than 0.114). The null hypothesis was accepted.

The table 1.12 shows that at the 0.05 level of significance, there is a sufficient evidence to conclude that there is a significant correlation between Marital Status and Sustainability of members in SHG. (P-value is greater than 0.044). The null hypothesis was rejected.

The table 1.12 shows that at the 0.01 level of significance, there is a sufficient evidence to conclude that there is no significant correlation between type of Family and Sustainability of members in SHG. (P-value is less than 0.215). The null hypothesis was accepted.

The table 1.12 shows that at the 0.01 level of significance, there is a sufficient evidence to conclude that there is no significant correlation between Occupation and Sustainability of members in SHG. (P-value is less than 0.051). The null hypothesis was accepted.

The table 1.12 shows that at the 0.01 level of significance, there is a sufficient evidence to conclude that there is no significant correlation between legal status of the respondents and Sustainability of members in SHG. (P-value is less than 0.077). The null hypothesis was accepted.

The table 1.12 shows that at the 0.05 level of significance, there is a sufficient evidence to conclude that there is a significant correlation between starting of activities before and after joining the SHG and Sustainability of members in SHG. (P-value is greater than 0.019). The null hypothesis was rejected.

The table 1.12 shows that at the 0.01 level of significance, there is a sufficient evidence to conclude that there is no significant correlation between type of activity and Sustainability of members in SHG. (P-value is less than 0.197). The null hypothesis was accepted.

CONCLUSION

It is concluded that the people have to economically, socially and politically empower for the development of the society. Active participation of majority people of the society is an ingredient of development. The twelfth five year plan (2012-2017) focuses on aspects of inclusion of deprived sections of the society by providing banking services. Financial inclusion can be analyzed in two important ways- credit penetration and deposit penetration. The former concentrates on the number of loan accounts while later is the key driver of financial inclusion and it is the number of savings bank accounts opened at a certain period of time and place. As a part of inclusiveness, the government of India launched the pradhan mantri jan dhan yojana (PMJDY) to facilitate bank services and increase the financial literacy in the first phase while second phase provided insurance and pension services to bring the excluded under the fold of formal financial services. In India, the financial inclusion is not a recent phenomenon, which can be traced back to 1904. The pioneering efforts of Prof. Yunus in the seventies took worldwide impetus after providing microcredit. In India, SHG-Bank linkage programme has registered tremendous growth under the NABARD initiatives and launching of SGSY led to microfinance movement. The members of self help groups are effectively the owners and managers of a small bank. They can themselves decide who gets loans, when and at what interest cost. They are indirectly remunerated for their management time and effort. Self-help group are informal voluntary groups supposed to generate their cohesive characteristics from the homogenous composition of members. In the study, the data and information collected by way of administering the questionnaire are summarized and made further analysis to draw interpretations. The data was collected from a statistically selected sample 1035 SHG members from rural Telangana. The respondents were administered a pre-structured questionnaire personally by the researcher to collect the data. After being collected, the data was analyzed using SPSS version 23, 24 and Microsoft Excel.

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ANALYSIS OF NON-INTEREST INCOME AN OPPORTUNITY & SUCCESS OF BANKS IN INDIA

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ABSTRACT

Non-interest income is the income of a bank arising from non-traditional of Indian banking industry is slowly and shifting its revenue base from traditional to nontraditional activities that generate income, fee service charges and other types of non interest income. The shift toward non-interest income has been perceived to reduce the volatility of bank's revenues and reduce the risks, as noninterest income is less dependent on overall business conditions than traditional income. Over the years in general and post financial crisis 2008 in particular, non interest income has come under a lot of scrutiny all over the world. The present study is aimed to understand the contribution of non-interest income over the years and the risks associated with its additional, we study the result of stress test on the banks when this non-interest income dries up using the sample of banks in India during 2008-09 years to 2015-16.

KEYWORDS

Indian bank's interest risk, non-interest income.

1.1 INTRODUCTION OF NON-INTEREST INCOME

Non-interest income is define as income of a bank to arising from non-traditional banking as banks are increasingly squeeze in their detection of profitability; one strategy to increase income is to diversify away from traditional sources of revenue like loan making and toward activities that generate fee income, charges, service trading revenue, and other types of noninterest income.

Commission, exchange and brokerage are includes on all remuneration on services such as commission on collections commission/exchange on remittances and transfers, the commission on controlled through four holding companies, letter of letting out lockers and guarantee, commission on government business, commission on other that permitted agency business including consultancy and other services, brokerage on securities etc. but, in does not include foreign exchange income. Profit Net on sale of Investments the net position of gain and losses from sale of securities held on maturity shown under the particular head. Profit net revaluation of investments on the net position of revaluation on investment is shown under this particular head and if any loss occurs after the revaluation of investment it will shown as a deduction. Profit net on sale of land, building and other assets, net position of gain and losses from sale of furniture, land and building, motor vehicle silver, gold, etc. shown under this head.

Net profit on exchange transactions: includes profit or loss dealing in foreign exchange, all income earned by way of foreign exchange commission and charges on foreign exchange transactions, interest the income recorded here will be shown after setting off losses on exchange transactions. Miscellaneous income: all residual income arising out of miscellaneous sources such as: income from bank owned property; recoveries from constituents for go down rents, charges, security insurance etc. The major difference between interest income and non-interest income apart from latter non-traditional arising from activities is that there is higher operating this as the bank is exposed to a higher fixed income and the ups and downs of the business cycle.

Banks are very important to the organizations, which aid in the execution of the economic activities by individuals, business organizations and even the sovereign states. They serve primarily as a medium, which bridges the gap between surplus and deficit spending units in an economy this fundamental function of banks generate interest income which has over the years being their major source of revenue, since loans form a greater portion of the total assets of banks. These assets generate huge interest income for banks, which to a large extent determines their financial performance (mabvure et al., 2012). however, in the recent times to advancements in information and communication technology, increased competition in the middle of banking companies as well as the diversity and the complexity of businesses and their Demands for the financial services have constrained banks to consider other banking activities which offer diverse services to clients and beef up revenue generation through fee income.

The Non-interest incomes are basically incomes earned from sources other than the returns on advances to bank clients. They are usually fee-generating activities which range from underwriting activities to cash management and custodial services as well as derivative arrangements.

1. 2. REVIEW OF LITERATURE

The banking system in India is complex in that it comprises public and private firms with the latter including foreign firms. as in many other emerging economies, India until recently was heavily regulated with the banking sector aligned to meet social and economic development. The institutional structure of the financial system is by sociologists since communication

1. The banks either owned by the government, or private sector (RBI foreign) or regulated by the RBI
2. The financial development institutions and refinancing institutions, set up either by a separate statute or under companies act, either owned by government, RBI, private or other development financial institutions and regulated by the RBI; non-bank financial companies
3. The (NBFCs), owned privately and regulated by the RBI. The legislative framework governing public sector banks (PSBs) was amended in 1994 to enable them to raise capital funds from the market by way of public issue of shares.

Incomes from the nontraditional activities have played a more important role in improving total bank operating income (lepetit et al., 2013) are Barnes becoming increasingly reliant on fiduciary income, fees, service charges, revenue, trading and other types of non-interest Income. they reported that the industry as a whole, earned 42% of its net operating revenue from noninterest sources in 2014, a marked increase from 32% in 1990 and 20% in the recent renegotiation" in the banking business dynamics have made it necessary for banking companies to be proactive and innovative in their operations in the view of n-chane and ghosh (2014), an important dimension of this financial innovations is a process which has been an upsurge in off-balance sheet (OBS) activities of banks. Such activities, though not entirely new from a historical edited by Francisco orrego vicuña have expanded considerably in range and scope in recent years.

Whereas the basic functions of banks and other financial service companies have remained relatively constant over time, the specific products and services through which these functions are provided have changed. The Component of total bank earning, non-interest Generating activities may increase the overall risk of banks via volatility. huizinga (2009) found that Income and banks with relatively high non-interest earning assets are less profitable and

Banks that rely largely on deposits for their funding are also less profitable. as late as 2000, many bankers (continued to believe that fee income would be a stable income stream; indeed, and analysts fond of the earnings growth potential, diversity and market insulation that fees provide (engen, 2010). this view is not very conclusive as recent evidence using accounting data (e.g. stiroh, 2016) suggests that an increased reliance on non-interest income raises the volatility of profits without raising profits. average

Deyoung s. and roland (2011) suggested and explained the three reasons why non-interest income may increase the volatility of bank earnings. first, loans that are held in a bank's portfolio especially loans to businesses - are relationship based. second (a bank that shifts its product mix from traditional to nontraditional asset-based interest-generating activities fee-based activities tends to increase its "degree of operating this". productivity obviously for most fee-based activities require banks to hold the little or no fixed assets, so unlike interest-based activities like portfolio lending, fee-based activities like trust services, mutual fund sales

and cash management require little or no regulatory capital. them, according to this allows banks to finance a greater amount of their income-generating activities with presented which increases the fixed interest expenses.

1.3 CONTRIBUTION OF THE RESEARCH PAPER

Most of the existing literature on the banking sector relates to the private and public sector banks. There is not much literature available on banking sector, and more specifically in comparison with the private sector banks. The present study adds to the existing literature on banking and finance, private sector banks operating in rural areas with special focus on non-interest income share on risk in the Indian banking sector services offered by both types of banks.

1.4 OBJECTIVES

1. To conduct a detailed study of retail liabilities, products and services of Public Bank and Private Bank.
2. Comparative Analysis of products and services of both banks to find differential features and benefits of products and services of both banks and their advantages and disadvantages.
3. To recommend some strategies to both type of banks to enhance the marketability of their non-interest income, liability of products.

1.5 METHODOLOGY

In this research paper, we examine the impact of banks' non-interest income share on risk in the Indian banking sector for the period between 2008-09 and 2015-16 for sample of the banks. Comprises the sample of six banks two each from public sector, the private sector and foreign banks. The banks that are considered in the paper are state bank of India and bank of Baroda from Public sector, ICICI Bank and HDFC bank from the private sector, HSBC bank and SCB (Standards Chartered Bank) bank from foreign banks. In this paper, we observe the trends in non-interest income in these banks and document the long-term trends in the amount and composition of non-interest income in Indian banks. Further, we also look into instability of Non-interest income.

We obtain our initial sample from the RBI database and augment this data with the center for monitoring the Indian economy's (CMIE) prowess database we include only public sector banks in our sample, eliminating cooperatives and other state commercial enterprise banks. Our final sample comprises of 28 banks spanning the period 2004 2014 and which includes only public sector banks. Classifies the prowess database in two ways. Income the first definition of income divides into income interest income and interest on income. non-interest (loans) advances and investment activities is classified as interest income comprises income, while non-interest income from sources the interest earned on advances, deposits with the RBI, and deposits with other banks. Therefore, non-interest income Comprises profit on trading, gains from foreign exchange activity, income from fiduciary activities, fees and commissions for services related to issuing letters of syndication, underwriting, controlled through four holding companies, derivatives transactions, etc.

1.6 DATA ANALYSIS

Indian banks are growing at a very fast pace since the 6-11 of the early 1990s, and both interest income and non-interest income have risen over our sample period. The following table summarizes the figures of interest and non interest incomes of all scheduled commercial banks during the period of financial years 2008-09 to 2015-16. The figures in the table clearly indicate consistent growth in both interest and non-interest income over this time period, but the growth of non-interest income outpaces that of the growth of interest income.

TABLE 1: SHOWING THE FINANCIAL PERFORMANCE OF PUBLIC SECTOR BANKS IN INDIA (2008-09 TO 2015-16) (Amount : Rs. in Crore)

Items	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
A. Income (i+ii)	147486.32	189289.69	204764.56	188889.39	245872	315608	354979	414288
	-100	-100	-100	-100	-100	-100	-8.10	-7.84
i) Interest Income	111647.38	157831.69	182273.7	164198.96	213075	273428	305899	366401
	-78.69	-83.87	-84.43	-87.39	-86.7	-86.6	-6.90	-6.93
of which: Interest on Advances	48944.25	76985.89	101402.86	110554.5	154101	204709		
Income on Investments	54107.99	62922.36	63293.87	47239.79	53119	63080	-	-
ii) Other Income	28149.85	30569.11	32599.85	23785.48	32797	42180	48898	478674
	-20.39	-17.26	-15.88	-11.98	-13.3	-13.4	-1.2	-0.8
of which: Commission & Brokerage	7923.23	12639.75	15778.2	12545.58	14799	18475		
B. Expenditure (i+ii+iii)	1321401.96	158233.76	182859.58	167801.23	219280	281215	3156728	369183
	-100	-100	-100	-100	-100	-100	-7.16	-6.97
i) Interest	64879.56	85039.72	101859.83	101898.8	148902	193447	211951	230856
Expended	-55.35	-53.78	-55.65	-61.89	-67.9	-68.8	-4.78	-4.38
of which: Interest on Deposits	63274.64	74668.29	86189.45	88868.29	132718	174313		
ii) Operating Expenses	-	-	-	-	-	-	66076	82966
	-	-	-	-	-	-	-1.59	-
iii) Provisions and Contingencies	23744.79	27471.16	28276.49	22612.76	23715	32578	37615	55165
	-18.88	-17.38	-15.58	-13.49	-10.8	-11.6	-0.86	-1.05
of which: Provision for NPAs	15199.15	57.25	39.66	61.99	80	93		
iii) Operating Expenses	33533.69	45715.94	53105.48	43256.59	46663	55190	-	-
	-27.89	-28.89	-28.99	-25.81	-21.3	-19.6	-	-
of which : Wage Bill	23582.26	28124.5	31457.83	27812.89	28660	34250	-	-
C. Profit								
i) Perating Profit	38389.3	46455.92	49798.65	42655.96	50307	66972	76872 -1.75	100066 -1.90
ii) Net Profit	1756840	18975.81	21493.98	20151.28	26592	34394	39258 -0.89	44911 -0.86

It appears that the more efficient banks pursue such diversification strategies. We also find that efficient banks as measured by profit per employee claim a bigger non-interest income. Similarly, at of banks with poor loan quality as assessed by net non performing advances to total advances, non-interest seeks sources of income. Larger banks are marginally associated with increased non-interest income. we find that business per employee to be negatively related to non-interest income; as employees pursue new business sources, these sources appear to be the more traditional, interest based source that you use this is consistent with the view that non-interest income improves income diversification and makes a bank less dependent on overall economic conditions that affect their loan portfolio (stiroh, 2014).

Composition of non interest income for the individual banks are given in figure 1 to 6 in number.

➤ About here figure 1. – the components of non interest income in state bank of India

In case of state bank of India, the income due to fees, commission and brokerage has been constant over the time. Income due to insurance premium increasing. Is the component due to exchange rate has been constant contributor the transactions

➤ About here figure 2.- The components of non interest income in the Bank of Baroda

In case of Baroda, bank of the income due to fees, commission and brokerage has increased over the time. The component due to exchange rate has increased the transactions

- About Here Figure 3.- The components of non interest income in ICICI Bank In case of ICICI Bank, the income due to fees, commission and brokerage has been volatile. The component due to exchange rate transactions has shown an increasing pattern.
- About Here Figure 4. – components of non interest income in HDFC bank in case of HDFC bank, the income due to fees, commission and brokerage volatile has been the component due to exchange rate transactions has shown an increasing pattern.
- About Here Figure 5. – components of non interest income in HSBC bank
In case of HSBC bank, the income due to fees, commission and brokerage has come down. The component due to exchange rate transactions has shown an increasing pattern.
- About here figure 6. – Components of non interest income in HSBC bank
- About here figure 7. – Component of non interest income in deutsche bank.
In case of deutsche bank, the income due to fees, commission and brokerage has come down. The component due to exchange rate transactions has shown an increasing pattern.

1.7 RISKS ASSOCIATED WITH NON INTEREST INCOME

The risks associated with non interest income can be summarized by the increasing contribution toward revenue.

In case of state bank of India, non interest income contributed to around 17% of revenue. In case of bank of Baroda, it contributed around 13% of revenue. In case of ICICI Bank, it contributed around 20% of revenue. In case of HDFC bank, it contributed around 18% of revenue. In case of HSBC bank, it contributed around 29% of revenue, earlier it contributed around soaring in case of deutsche bank, non interest income contributed to 36% of revenue. As one can observe, foreign banks are more read susceptible to volatility in non-interest income than private banks and public sector banks are highly immune to volatility of non interest income. The instability of operating revenue due to non interest income and net interest income is given by the following formula:

$$\sigma^2 \text{dlnOPREV} = \sigma^2 \text{dlnNON} + (1-\alpha)^2 \sigma^2 \text{dlnNET} + 2\alpha(1-\alpha) \text{Covar}(\text{dlnNON}, \text{dlnNET})$$

Where α is defined as (volatility in non-interest income) / (instability of non interest income instability of net interest)

The following table presents the instability in operating revenue for all the banks considering the stable part of non interest income which is calculated by removing instability factor from non interest income

- About here Table 2. – instability in operating revenue for all the banks
- About here Table 3. – instability in non-interest income for all the banks
- About here Table 4. – standard deviation of the non interest income for all the banks

1.7.1 COLLISION ANALYSIS

By using the standard deviation as instability or volatility in the non interest income the stable par of non interest income is calculated as $(1-\text{stdev}) \times \text{non income Interest}$

The following set of tables give the impact of instability of non interest income on different profitability ratios

- About here Table 5. – return on equity
- About here Table 6. – return on assets

The profitability ratios suggest that, instability of non interest income has not affected public sector banks but the profitability ratios of private banks and foreign banks are affected by a greater extent.

- About here Table 7. – burden ratio
- About here Table 8. – (expenses – non- interest income)/net interest income even after factoring in instability, deutsche bank was able to compensate its operating expenses with its non interest income and the performance of other banks was relatively good with respect to burden ratio.

1.7.2 STRESS TEST, WITH RESPECT TO CAPITAL ADEQUACY

In this paper, we have considered the non funded sources in off balance sheet which contribute to non interest income. The non funded sources contribute to credit risk to the bank. So in the paper, a scenario is created in which the bank has to pay off all the non funded sources at once all.

- About here Table 9. – the effect on capital adequacy ratio conclusion

Non-interest income has high operating this and low switching cost compared to interest income. Non-interest income is significant part of revenue for foreign banks whereas it forms less proportion of revenue to public sector banks commission, brokerage and exchange is significant part of private banks in India compared to public sector banks. This shows that private banks have more risk appetite than the public sector banks. Foreign banks have significant part of their income as profit from an exchange. reduction in non -interest income reduces ROE and ROA for the bank Burden ratio for foreign banks is good indicating that these banks have maintained their operating expenses and non-interest income to the comparable level. Stress test of capital Adequacy on banks has shown that foreign banks are read susceptible to non exposure of fund

Our preliminary results indicate that non-interest income is strongly and positively influenced by the return on a loan quality, profit per employee, and personalized customer service offered to bank customers. We find that foreign banks capture larger amounts of non-interest income. Furthermore, we find that as banks continue to develop traditional interest income sources, they international to diversify into non-traditional less sources of income, and we find that banks where employees generate more traditional business report significantly lower non-interest revenue.

1.8 CONCLUSION

Non-interest income is the income of a bank arising from non-traditional of Indian banking industry is slowly and shifting its revenue base from traditional to nontraditional activities that generate income, fee service charges and other types of non interest income. The shift toward non-interest income has been perceived to reduce the volatility of bank's revenues and reduce the risks, as noninterest income is less dependent on overall business conditions than traditional income. Over the years in general and post financial crisis 2008 in particular, non interest income has come under a lot of scrutiny all over the world. The present study is aimed to understand the contribution of non-interest income over the years and the risks associated with its additional, we study the result of stress test on the banks when this non-interest income dries up using the sample of banks in India during 2008-09 years to 2015-16.

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WINNING THE PLASTIC BOTTLE BATTLE (A CASE STUDY OF THE PLASTIC WASTE DISPOSAL MANAGEMENT AT THE MYSORE CHAMARJENDRA ZOOLOGICAL GARDENS, MYSORE)

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ABSTRACT

Purpose – The purpose of this study is to show the use of an innovative way of handling plastic waste.

The case is about a very positive waste management approach controlling the waste in the form of plastics and their disposal managed by one of the oldest and most popular Zoos in India and Asia, namely The Mysore Chamarjendra Zoological Gardens.

Design/Methodology/Approach – Interviews and Observation methods has been the basis for collecting information and data.

The case has been put together studying the ticketing software reports and how it has been extended to generate reports to manage the plastic disposal management.

Findings – The case studies the information about waste management in the city and examines its significance and contribution of the Mysore Zoo in keeping its commitment to disposal of the plastic waste.

Practical implications – The case study has practical implications to the ecology, environmental management, IT management, consumer management and ultimately a good services marketing approach

Originality/Value – The case study provides insights into the relationship between waste generation and its successful management and also the roles played by authorities and the visitors to the zoo, making it a good experience overall. It is an attempt of the Mysore Zoo to be a role model to all other tourist destinations and sights. Indeed, it has had a huge impact with its contribution towards cleaner and greener India.

KEYWORDS

waste management, waste disposal, consumer attitude and perception, technology to aid.

CASE STUDY

Hari and his family stood in the "Que" at the Mysore Zoo entrance to buy tickets for a family of four, Hari a seasoned traveler was well equipped with most things with special emphasis to equipping each of the family member with a bottle of water.

At the counter, the friendly ticketing zoo agent smiled and stated, "that would be 40 Rupees Sir for the water bottles." Hari was a little taken aback, he retorted, "These are our water bottles procured from an outside store. So why would I need to pay 40 rupees?"

The Zoo ticketing Agent very patiently replied. It appears Sir, you have not noticed the sign board that says we collect 10 rupees for every plastic bottle carried inside the zoo, by fixing a sticker on the bottle, we scan the sticker to identify its entry in our system, and the same bottle on return would be reimbursed with the money collected from you."

Hari was now placated and was keen to understand as to why such a move was taken up by the Zoo authorities...

PLASTIC BOTTLE MENACE

The Mysore Chamarajendra Zoological Gardens is Asia's top Zoo and had been long fighting the battle of plastic waste disposal accumulated due to the huge number of visitors visiting every day and dumping plastic garbage all around the 125 yr old garden.

The zoo was incurring huge expenses in disposing the waste and for no avail; clearing waste left behind indiscriminately was also a pain for the authorities.

There were also cases of plastic bottles, which were being used to chuck them at animals by unkind human beings. Food carried in packages were also given to animals which was a sure form of harm to the fauna and led to serious health consequences to many a species and their dwindling number.

MANY FRUITS WITH ONE STONE

A solution had to be worked out to keep the zoo plastic free zone and achieve more benefits from such a move. Therefore, an initiative was mooted by the then Executive Director of Mysore Zoo, B.P. Ravi. Way back in 2011-2012, The objective was clearly to make the Zoo totally "Plastic Free" and nothing less.

It started in a small way and small number stickers stuck to bottles after collecting a fee. This later paved way for a more hi tech initiative in terms of Bar coding the stickers on the bottle first and later went on to include every item packaged in plastic, be it chocolate or chips wrappers. All in all, it was a movement to discourage any type of food and water being brought into zoo in plastic containers. Thereby making the zoo free from plastic waste and ensuring that the animals are free from abuse from the visitors.

PHOTO 1



PHOTO 2



PHOTO 3



THE TECHNOLOGY BEHIND BAR CODE SCANNING

The software behind the bar code technology, helps the zoo to tag and trace at the exit point, ensuring that a visitor is cleared of paying for the bottle. This also takes care of any duplication or reentry of any sort at the exit point by proper sequencing in the system making it fool proof.

The Mysore Zoo has been very competently supported by Mysore based International Firm known as Nexshore, who have been working as consultative partners over the years and integrating all the zoo's software needs specially in the areas of e-ticketing and report generation and most recently in bringing in Bar code sticker scanning for plastic bottles and any other form of plastic containers wrappers termed as waste.

BENEFITS ACHIEVED FROM THIS INITIATIVE

The bottle sticker initiative has been successful in eliminating plastic bottle accumulation in the zoo. The stickers on the bottles ensure people to behave in a responsible manner, by carrying the bottle out of the zoo after being returned of the deposit at the entrance gate. In fact, the luggage room has come as a boon to the visitors to not carry plastic bags and containers inside, instead can stow it there comfortably till they return.

The zoo was able to plough back what was earned in the of penalty after all those visitors leaving behind bottles and not claiming for it.

It has also been a source of motivation for the zoo staff to pick up any isolated bottle thrown away in the bins or grounds to return it at the counter and be rewarded for the move. This has been a break from the past when plastic bottle waste was viewed as not their job to collect for disposal.

Now that the plastic is all collected and centralized at the entrance, the Plastic bottle is then disposed for recycling by calling for tender to vendors who are involved in plastic recycling. The huge quantity of plastic waste makes it a very attractive raw material for many a manufacturer in the plastic industry.

The Zoo being a very popular tourist attraction in Mysore has a constant stream of visitors all through the year, however only two months in a year it is considered lean, the highest visitation is seen to be during school holidays in Summer and Christmas and during the famous Mysore Dasara festival of 9 days

GARBAGE AND WASTE MANAGEMENT IN MYSORE CITY – THE BIG PICTURE

Mysore is the second largest city in Karnataka, In India, after Bangalore. Mysore is spread over an area of about 128 sq. km with the growing population (0.65 millions in 1991 to 0.76 millions in 2001) at faster rate due to influx of many service industry activities, the generation of municipal waste both garbage and sewage has been on the rise. Anthropogenic activities in society generate large quantities of wastes posing a problem for their disposal. Improper disposal leads to spreading of diseases and unhygienic condition besides spoiling the aesthetics. In India, every year 30.3 million tons of Municipal solid waste is generated. This equate to about 350 gm of waste per person on average (Mazumdar, 1994)

(https://www.researchgate.net/publication/228852479_Studies_on_Municipal_Solid_Waste_Management_in_Mysore_City-A_case_study [accessed Jun 20, 2017]).

As of now, the city is generating 402 tonnes of garbage a day of which only fifty percent is processed daily while the rest is dumped.

The missing link was segregation of waste at source, which the MCC is now addressing even as it start works to build the new plants. The MCC has procured dustbins under the integrated municipal solid waste management plan at a cost of Rs. 2.95 crore.

The local body, which has set up five zero waste management plants across the city's five among the nine zones, will ship the biodegradable waste to these mini units and process them producing manure. The local body has now advised the households that they need to separate the solid waste, mainly plastic, in a separate bin, which will be collected once in a week. This waste is planned to be used at a plant it is planning to build to convert it into diesel.

(<http://timesofindia.indiatimes.com/city/mysuru/Mysore-City-Corporation-launches-drive-for-efficient-solid-waste-management/articleshow/>)

METRICS OF THE ZOO PLASTIC WASTE ACCUMULATED

The Mysore Zoo on an average accumulates and collects, in a month 20,000. Units of plastic bottle waste. This is a significant proportion in terms of the overall plastic waste recorded in the Mysore City. This also lays emphasis on how waste can be managed in most of the sites termed as Tourist attractions in Mysore city. Given below data* related to Zoo recorded real time regarding the walk in of Visitors (Adult and Children) and the Plastic bottle scanning operations since April 2017.

TABLE 1: ZOO MONTH WISE WALK INS DETAILS FOR 2016-17

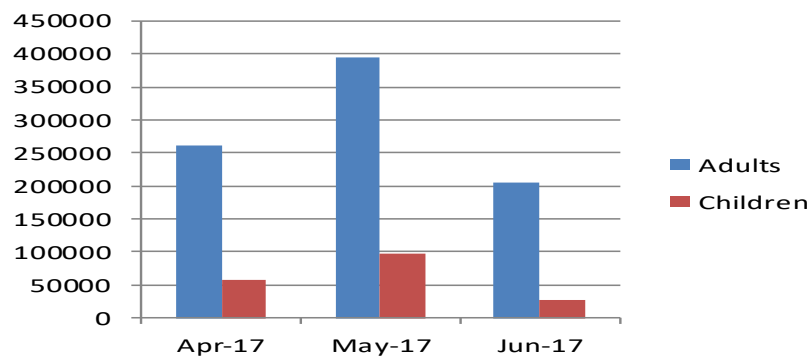
Month/Year	Adults	Children
4/2016	11101	2427
5/2016	367497	88364
6/2016	135262	16436
7/2016	185957	21707
8/2016	164547	16292
9/2016	109195	11039
10/2016	274480	48045
11/2016	145936	18284
12/2016	228569	34101
1/2017	34038	4881
2/2017	125190	10947
3/2017	119323	10243
Total	1901095	282766

Zoo Monthwise walkins and bottles tracking details [Month :April - June]					
Month/Year	Walkins Details		Bottle Tracking Details		
	Adults	Children	Bottles Collected	Bottles Carried Out	Barcode Utilized
Apr-17	260598	57402	23278	7590	30868
May-17	394107	96869	26256	8819	35075
Jun-17	204443	26557	13593	3084	16677
Total	859148	180828	63127	19493	82620
Walkins Details					
Total Adults	859148				
Total Children	180828				

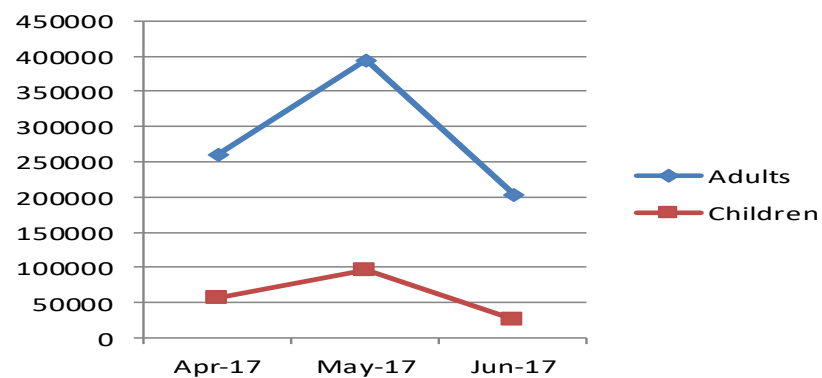
WALKINS DETAILS	
Adults	1901095
Children	282766

GRAPH 1 TO 4

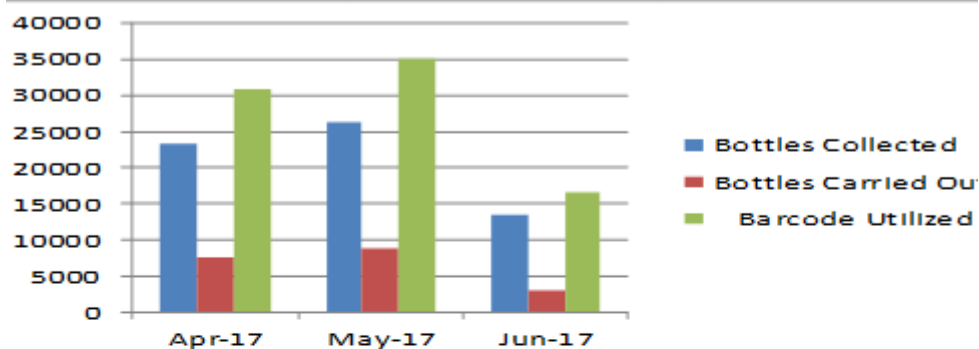
Walkins Bar Graph



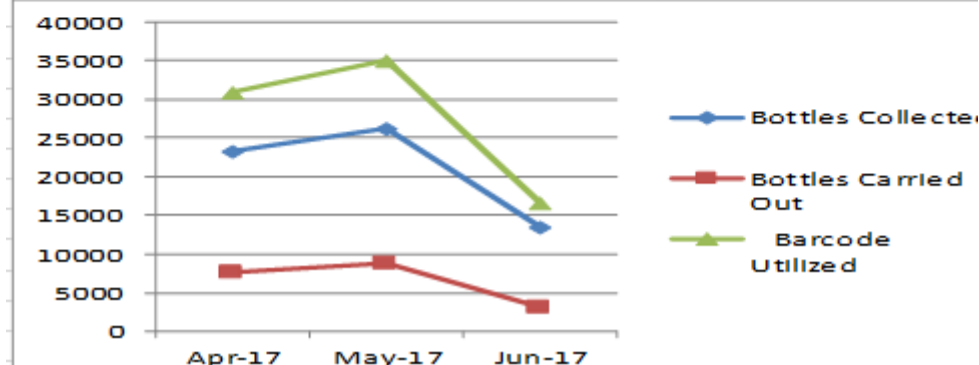
Walkins Line Graph



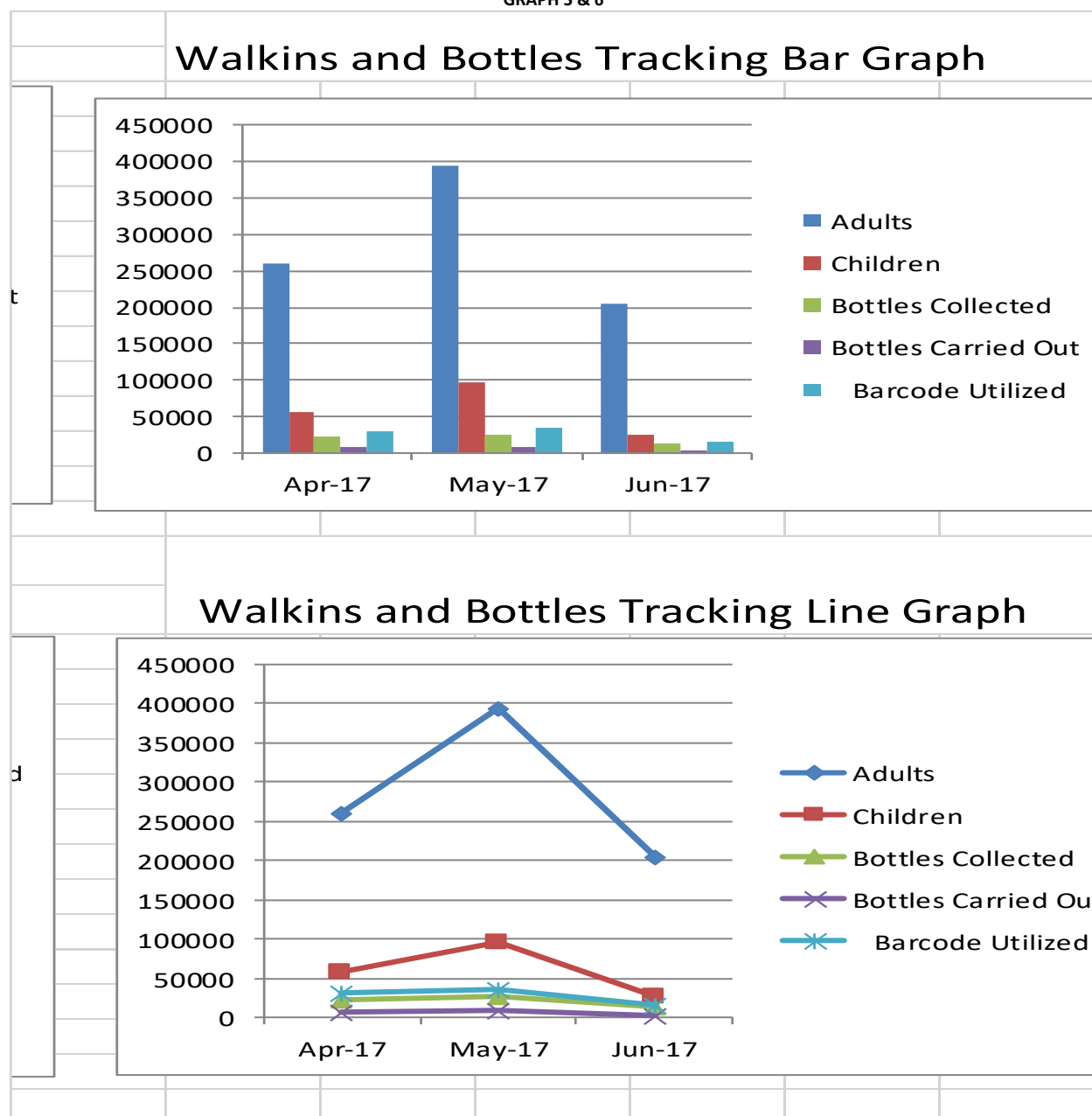
Bottle Tracking Bar Graph



Bottle Tracking Line Graph



GRAPH 5 & 6



The number of visitors to the zoo visiting the zoo carrying bottles and affixing the barcodes for scanning is an key indicator of the bottle waste generated in the zoo.

The number of adults to children visitors is another aspect which can help in determining the source of bottles carried into and out of the zoo.

Utilized barcode – barcode scanned and collected at the exit point = barcode carried out.

This equation gives rise to many possibilities

There are 4 possibilities of events happening in the management of bottle waste.

This is based on the events with the visitor's actions.

X1- visitors complete the tour and scan the plastic bottle at the exit and collect the refund.

X2 – visitors forget to scan and leave with the bottle possibly with water in it.

X3 – Visitors leave the bottle behind on the tour in bins and is collected later by staff and returned at exit point.

X4- Visitors scan the bottle and carry the bottle outside possibly because water.

In the Month – Apr-17

Bottles Carried Out = 7590;

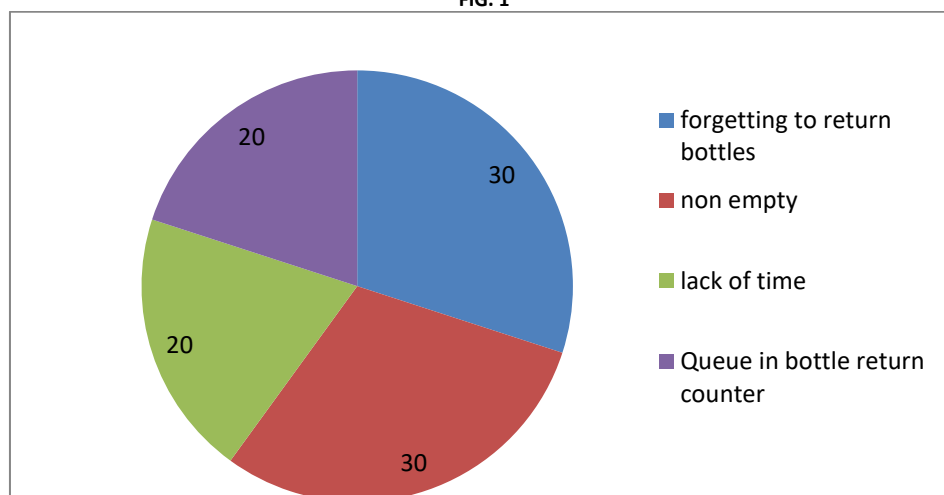
Total No of Customers who carried it out by forgetting to return bottles = $(7590 / 100) * 30 = 2277$;

Total No of Customers who carried it out as it was not empty = $(7590 / 100) * 30 = 2277$

Total No of Customers who carried it due to paucity of time = $(7590 / 100) * 20 = 1518$

Total No of Customers who returned it on their way out by EXIT return counter = $(7590 / 100) * 20 = 1518$.

FIG. 1



THE HURDLES AND STUMBLING BLOCKS TO THIS INITIATIVE

The toughest hurdle faced, was the very idea of introducing the need of "Plastic free" concept in the zoo, There was a big block in the form of educating the people about why the money was collected.

The zoo has visitors pan country pan nations, which meant issues related to Literacy, Language, Social Class and Awareness levels related ecology and environment. It has taken great patience and understanding for the zoo staff specially the security men and women at the entrance manning counters and entry points to explain and convince the people of the worthiness of such an initiative for all.

Operational difficulties were also faced while introducing the bar code stickers, the stickers had to be the right size and stick able on the water bottle and the ink on the codes needed to be visible and readable

People walk around the park with plastic bottles in their hands covering the stickers with their fingers, this would lead to erasing of the bar lines on the stickers because of sweat and moisture, they would then become unreadable which in turn, create serious confusion at the exit point leading to a need for stringent but peaceful crowd management.

Some thought was given to solve the problem of condensation of water leading to ink being erased and making it unreadable. PVC stickers which not only stick well but which come with barcodes which are indelible was introduced, even though the cost of stickers were higher than paper stickers, the Mysore Zoo felt committed to the cause and considered it worthwhile specially during summers. It is now decided they will use a combination of paper and PVC stickers depending on the season very diligently.

CONTRIBUTION TO THE "SWATCH BHARATH"

The Mysore Zoo has been in the forefront of the new wave taken over India called the "Swatch Bharath" meaning "Clean India". The Mysore Zoo's contribution was another factor for putting Mysore on top of the list of cities in India as the "Cleanest city".

The concept of "Go Green" by Mysore Zoo, has been the first of its kind amongst the Zoo's in India. It is a small move towards a larger initiative of making a small part of the world have lessor Carbon footprint and commit a better environment for the future generations to come.

VISITOR PERCEPTION AND ACCEPTANCE

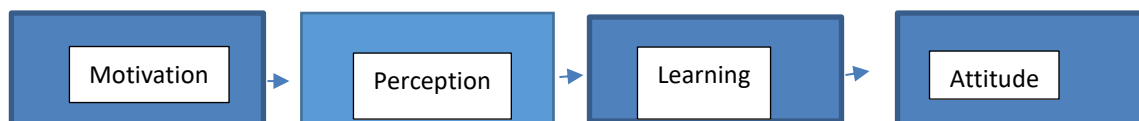
The visitors visiting the Zoo, have now understood the motive behind this initiative to make Mysore Zoo plastic free and have accepted it whole heartedly.

Perception and Learning has played a very important role in changing behavior of the zoo visitors.

There is no universally accepted Learning theory, However one with direct application to a strategy is stimulus response theory. Learning occurs to a person (1) responds to some stimulus by behaving in a particular way and (2) is rewarded for a correct response or penalized for an incorrect one. When the same correct response is repeated in reaction to same stimulus, a behavior pattern, or learning is established.

From the Zoo's perspective, learning can become desirable or undesirable; once a behavior pattern has been established it becomes a habit and replaces conscious, willful behavior. This leads to attitude formation. Attitudes are formed and learned when visitors to zoo interact with social groups and this is important for zoo to convince people of the cause and make them to result favorably. If the zoo had failed to convince people to control their solid waste disposal initiative, society suffers.

STAGES IN VISITOR BEHAVIOR AND ACCEPTANCE OF THE CONCEPT



The marketing of zoo to the Visitors comes under the classification of cultural services marketing and Zoos are generally known for being a not for profit organizations which effectively means its growth and continued existence depend on generating revenue more than its costs. However, Profit as a motive is only secondary to N-F-P's primary objective.

Cause related Marketing by The Mysore Zoo, reflects adoption of the societal marketing concept. From one point of view, these changes are true. The Zoo may totally satisfy its visitors and do very well economically, while adversely affecting the society in the process by its plastic waste pollution, but by taking up the cause of freeing zoo from plastic waste and marketing this idea efficiently shows its breadth and commitment dimension aspect of marketing the Zoo.

CONCLUSION

Since the early 1990ies, a big effort has been made to recycle plastics and integrate the concept of sustainable development in various fields of the economy. The current state of plastics recycling still suffers from major drawbacks from the economic and the ecological point of view. Firstly, it is still very expensive. For this reason, up to now large amounts of post-consumer plastics are deposited in landfills. As a further problem, mechanical recycling in the past has in some cases led to low-value products which are difficult to market and the ecological benefits of which are sometimes dubious.

In the words of Ravishanker, A very progressive minded and dynamic current Executive Director, of the Mysore Zoo "It's not about technology available or its use alone in disposal of waste, It has to do with attitude about the process of disposal and its management. Plastics are a boon and a bane; all waste is generated by us in the name of development, it is important to develop sustainable solutions for this plastic menace. Mysore zoo being the oldest in the country and popular too is proud have worked around this problem, by adopting Zero Waste Management policy, we recycle biodegradable solid waste into manure, harvest and recycle rainwater, collect plastic bottles and recycle it. Our Zoo is indeed a successful picture of aesthetic and economic role model. If we can do it successfully, why not others?"

He went on to add, "We are ready to share our ideas and collaborate on more innovative ideas for the future, after all, It most certainly calls for a larger role by the citizens and various authorities to sustain the initiatives, which will make the world become greener, cleaner and a healthier environment".

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