TRANSFORMING CURRENT LIABILITY TO FIXED ASSET – A CASE OF DEMOGRAPHIC DIVIDENDS IN INDIA

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ABSTRACT:

The latest employment data for 2011-12 show that India's much-hyped demographic dividend has not yet arrived. The proportion of workers in the population rose slightly from 40% in 1980 to 43% in 2004-05, but is now down again to 40%. This is actually good news. It means that the record GDP growth of the 2000s was due to higher productivity, not rising worker participation. Second, the demographic dividend has not vanished, it is merely postponed. A qualitative survey was done to answer the question of wether the demographic dividend for India is asset or liability and succeeding, if it is an asset then are we ready for it. The responses were recorded and summarised as key findings in this research paper. The main finding is that there is a large and significant growth in the working age population but if it is not handled properly in terms of skills, opportunities then it may prove as bane with increasing civil war issues instead of boon.

Keywords: Demographic Dividend, Age-Structure, Demographic Transition, Working age population

JEL Classification: J11; J21; I12; O40

(Words: 193)

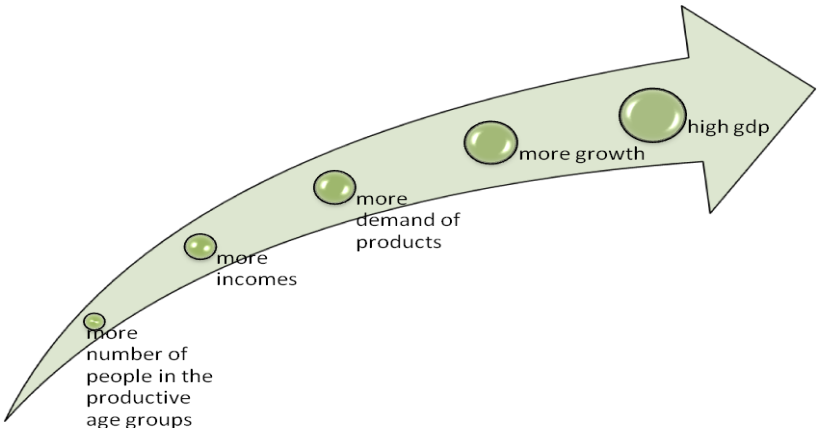
INTRODUCTION:

a) Demographic dividend concept & History

The world was aging, but India was growing younger. Declining fertility rates have changed the age structure of India's population, resulting in a "bulge" in the working age-group. This "demographic dividend" has improved the dependency ratio leading to the hypothesis that the bulge in working population and lesser proportion of dependent population will lead to acceleration in growth. However, recent employment figures (India’s employment rate is 38.4 as per 2007 Eleventh Five Year Plan (2007-12)) indicate that the absorption of the Indian youth into the labour force is not as high as one would expect. This is perhaps due to the poor employability of the workforce, which is severely affected by a deficit in educational attainment and health. This needs to be remedied in order to take advantage of the opportunity for growth that the demographic dividend is supposed to give India. India, as expected, is not getting any younger. India’s median age has raised from around 22 years in

2001 to over 24 years in 2011 as per The Hindu's[1], calculations. Overall, India has 472 million people under the age of 18, and 49.91% of its population is under the age of 24. The proportion of the population under the age of 24 has dropped by four percentage points, but demographers caution that this should not be interpreted as a sign that the youth bulge is shrinking. *"With falling fertility, the number of infants and children is what reduces first and this is what we are seeing with the number of under-25s falling,"* said by Faujdar Ram, Director of the Mumbai-based International Institute for Population Sciences.

Fig 1: Demographic Dividend



In 1967 in a book titled Famine 1975: America's Decision: Who Will Survive? by economists William and Paul Paddock highlighted that the population of India should be allowed to starve as the country was a hopeless case. The authors also argued that America should allocate its aid dollars to other countries with greater chances of being able to feed their hungry.

Ann April 2012 International Monetary Fund (IMF) paper titled, "Asia and the Pacific: Managing Spillovers and Advancing Economic Rebalancing," noted that "in many Asian countries, aging populations are now causing, or are about to cause, a decline in the working-age ratio. The Japanese workforce has been shrinking since 1995, and the Korean workforce will start to decline beginning 2015. China's working-age ratio will peak in 2013 and then decline by a substantial amount in the next few decade. The second most populous country in the region (and the world) affords grounds for cautious optimism. India's demographic transition is presently well underway, and the age structure of the population there is likely to evolve favourably over the next two to three decades." The democratic dividend could add 2 percentage points to per capita GDP growth per annum, according to the IMF.

b) Demographic Liability

India is currently at a stage of '*demographic transition* 'where population growth is slowing down but the population of young people entering the labour force continues to expand. This means that a working person will have fewer dependents, children or parents. The

[1] *Published in 'The Hindu' daily, dated September 7, 2013 22:35 IST*

dependency ratio (ratio of dependent to working age population) declined from 0.8 in 1991 to 0.73 in 2001and is expected to decline further to 0.59 by 2011. If the workforce is gainfully employed, a lower dependency ratio means a higher rate of savings which, in turn, can raise the growth rate. This young demographic profile places India favourably in terms of manpower availability and could be a major advantage in an environment where investment is expanding in India and the industrial world is ageing. During a panel discussion titled, "Building an Inclusive India", in 20th Anniversary Symposium of the University of Pennsylvania's Center for the Advanced Study of India. S. Ramadorai, vice-chairman of Tata Consultancy Services and an advisor to the Prime Minister for the National Council of Skill Development, commented as a panelist that "Only 5% of India's labour force is estimated to have had any formal training", which emphasize numerically India's demographic as liability.

c) Fixed Asset defined

India, which is on track to become the world's most populous country by 2025, hopes to transform its demographic boom into an engine for growth, but the country faces many challenges. The first is in finding jobs for all these people. Second, and more importantly, India's young people will need to develop the right skills for the modern job market. If these challenges are answered then in real terms we can say that the population of India is an asset in coming years which correlates with the definition of fixed asset i.e. *"tangible assets" or property, plant, and equipment, is a term used in accounting for assets and property that cannot easily be converted into cash.*

PROBLEM STATEMENT:

The growing working age population in India will depend in great measure on whether the public and private sector have the political spirit and forethought not only to create jobs but also to train the new young workforce, encourage global trade, improve a failing education system, provide better housing, attract capital to support invention and innovation, and implement policies that engender confidence in the economy. We are fortunate that we are aware of and reminded repeatedly about our problems but the problem is to ensure that we are doing enough in attempting those problems and challenges. The problem here is to identify the reasons of not recognizing and tapping the human work force which can prove to be an asset in growing service industry and the ways to reap this demographic dividend.

RESEARCH QUESTIONS:

The paper in particular deals with following Research questions:

1. How and why the respondents and researchers perceive the challenges of demographic dividend in India.
2. Are there sufficient evidences to believe that the policy makers in India are aware and are attempting the various challenges in reaping the demographic dividend.

3. Prima facie the literature on demographic dividend and the views of the respondents is sounding pessimistic and suggesting that there are more difficulties than ease for realising the demographic dividend in India.
4. What are the chances that the demographic dividend will be claimed by the neighbouring countries and it will be unpaid or unclaimed by the Indians?
5. Which part of dividend is more relevant for India? First Demographic Dividend (1975-2050) or Second Demographic Dividend (2050 onwards)?
6. To what extent the failure to claim 100% dividend is attributed to the fact that Indian economy has not followed the routine model [Agriculture – Industry – Services] of growth?

RESEARCH METHODOLOGY:

It is a qualitative research aimed at deliberating the series of issues faced by Indian economy in general and policy makers in particular. The primary data is collected through various blogs where either we have used the existing question asking comments on the issue of "Can one consider Demographic dividend in India as Asset or it is a Liability" or in some blogs we ourselves have raised the similar question for responses. The data so gathered was segregated & tabulated for drawing meaningful conclusions.

INSIGHTS FROM EXISTING LITERATURE: THE DIVIDEND MAY WELL BE -

Nayab, Dr. Durre [1] discusses in their working paper that population growth and size are no more demographic dividend and but it is changing age structure of the population in developing countries. As a result of declining population growth and consequent changes in age structure, the proportion of working-age population is increasing in most developing countries, with an associated decline in the dependent age population, offering a window of opportunity to these countries that is referred to as the "demographic dividend". Pakistan is also going through the demographic transition, and is experiencing a once-in-a-lifetime demographic dividend as the working-age population bulges and the dependency ratio declines. This paper looks into the demographic dividend available to Pakistan and its implications for the country, mainly through three mechanisms: labour supply, savings, and human capital. For economic benefits to materialise there is a need for policies dealing with education, public health, and those that promote labour market flexibility and provide incentives for investment and savings. On the contrary, if appropriate policies are not formulated, the demographic dividend might in fact be a cost, leading to unemployment and an unbearable strain on education, health, and old age security.

Bloom, David E. and Canning, David and Sevilla, Jaypee [2] in their working paper highlights that nations with a high proportion of children are likely to devote a high proportion of resources to their care, which tends to depress the pace of economic growth. By contrast, if most of a nation's population falls within the working ages, the added productivity of this group can produce a 'demographic dividend' of economic growth, assuming that policies to take advantage of this are in place. In fact, the combined effect of this large

working-age population and health, family, labor, financial and human capital policies can create virtuous cycles of wealth creation. And if a large proportion of a nation's population consists of the elderly, the effects can be similar to those of a very young population. A large share of resources is needed by a relatively less productive segment of the population, which likewise can inhibit economic growth. After tracing the history of theories of the effects of population growth, this report reviews evidence on the relevance of changes in age structure for economic growth. It also examines the relationship between population change and economic development in particular regions of the world: East Asia; Japan; OECD, North America and Western Europe; South-central and Southeast Asia; Latin America; Middle East and North Africa; Sub-Saharan Africa; and Eastern Europe and the former Soviet Union. Finally, it discusses the key policy variables that combined with reduced fertility and increases in the working-age population, have contributed to economic growth in some areas of the developing world.

Bloom, David E. et al. [3] estimated the effect of fertility on female labor force participation in a cross-country panel data set using abortion legislation as an instrument for fertility. They found a large negative effect of the fertility rate on female labor force participation. The direct effect is concentrated among those aged 20–39, but authors found that cohort participation is persistent over time giving an effect among older women. They have presented a simulation model of the effect of fertility reduction on income per capita, taking into account these changes in female labor force participation as well as population numbers and age structure.

Kumar U. [4] discusses in his working paper that age structure and its dynamics are critical in understanding the impact of population growth on a country's growth prospects. Using state-level data from India, it was seen that the pace of demographic transition varies across states, and that these differences are likely to be exacerbated over the period 2011-2026. It is usually seen that the so-called BIMARU states (Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh) are likely to see a continuing increase in the share of the working-age population in total population. The BIMARU states are expected to contribute 58% of the increase in India's working-age population. The BIMARU states have traditionally been the slow-growing states and have performed poorly on different accounts of social and physical infrastructure. Whether India can turn demographic dividend into a boon or whether the dividend will become a bane will critically depend on the ability of the BIMARU states to exploit the bulge in the working-age population.

Aiyar S. et al. [5] highlights main finding in their working paper that there is a large and significant growth impact of both the level and growth rate of the working age ratio. This result is robust to a variety of empirical strategies, including a correction for inter-state migration. The results imply that a substantial fraction of the growth acceleration that India has experienced since the 1980s - sometimes ascribed exclusively to economic reforms - is attributable to changes in the country's age structure. Moreover, the demographic dividend could add about 2 percentage points per annum to India's per capita GDP growth over the next two decades. With the future expansion of the working age

ratio concentrated in some of India's poorest states, income convergence may well speed up, a theme likely to recur on the global stage.

FINDINGS AND INFERENCES

The responses on blog on collation indicate following findings and Inferences in response to the questions rose by researchers as follows:

1. How and why the respondents and researchers perceive the challenges of demographic dividend in India?

-The blog responses indicate a common nature of responses towards the perceived challenges of demographic dividend in India. This is more pessimistic as out of 20 blogs 17 blogs say that the demographic dividends perceive innumerable challenges which needs a serious attention at all fronts. The policy makers, funding agencies, government, allied departments, e-governance, educational infrastructure, skill development and many other such issues identifies the threats and indicates high risk, if it is not treated properly. The existing literature highlights the impact of population growth on a country's growth prospects.

2. Are there sufficient evidences to believe that the policy makers in India are aware and are attempting the various challenges in reaping the demographic dividend?

-Policy makers in India are aware and are working seriously which is being evident from Economic survey report 2013 wherein the report's chapter 2 completely dedicates for policies and approaches on reaping benefits of demographic dividend.

3. Prima facie the literature on demographic dividend and the views of the respondents is sounding pessimistic and suggesting that there are more difficulties than ease for realising the demographic dividend in India.

-The responses and discussions on various blogs circumvent against the problem of skills of working almost on all 20 blogs i.e. 100%. This problem of skilled manpower can be resolved by:

(i) **At Primary and High School Level:**

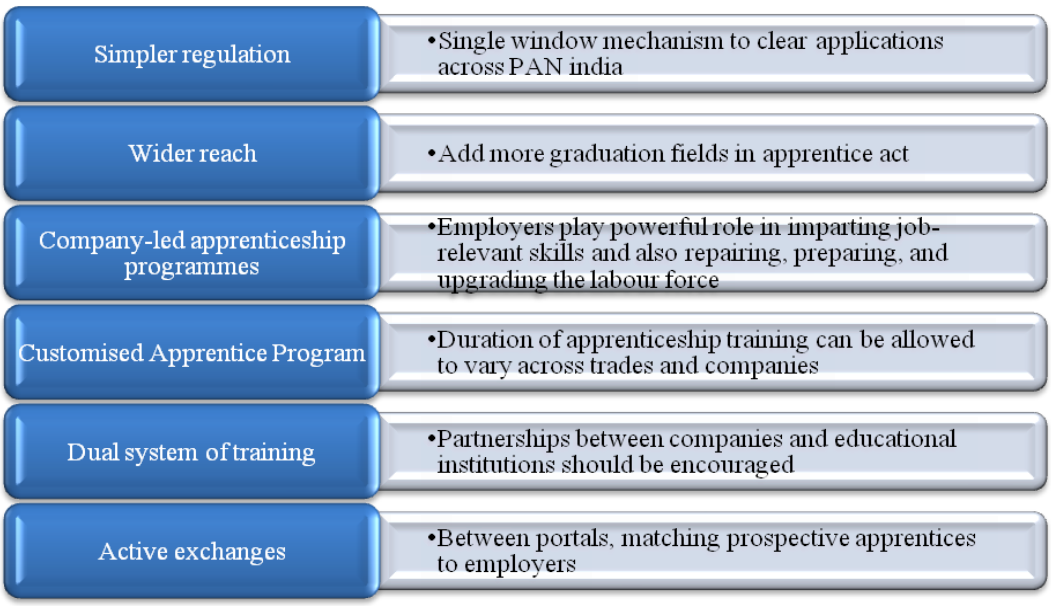
In Annual Status of Education Report (ASER) 2013 is an annual household survey to assess children's schooling status and basic learning levels in reading and arithmetic states some shocking findings which needs attention-

PROBLEM				
	Can read simple Std. I sentences and/ or Std. II level text	**Can read words but cannot read sentences yet**	**Can read letters but cannot read words yet**	**Cannot recognize letters yet**
Std. I	8	12.6	32.3	47.3
Std. II	22.8	20.8	33.4	23.1

	Can read Std. II level text/ Can read simple Std. I sentences but cannot read Std. II level text	**Can read words but cannot read sentences yet**	**Can read letters but cannot read words yet**	**Cannot recognize letters yet**
Std. III	21.6/18.5	22.2	25	12.7
Std. IV	47/21.2	14.2	12.6	5
Std. V	**More than 50% students cannot read a class 2 level textbook.**	**Almost 50% students cannot solve two-digit subtraction**	**Almost 75% students cannot do division**	
Std. VIII	**Read English sentences - 47 %**	**Convey sentence meaning in own words -60%**		
SOLUTION				
Std. I-II	Building foundations for learning especially reading, listening, speaking, writing and basic arithmetic			
Std. III-V	Ensuring that basic skills are in place & enabling children to move towards grade level content and skills.			
Std. VI-VIII	Ensuring that appropriate basic skills are in place & enabling children to move towards grade level content and skills.			

(ii) At Technical and Vocational Education Institutes level:

Apprenticeship training is an important tool for skill development, as it facilitates earning while learning. But it is outdated and rigid from both employers and worker's point of view so a need arises to rejuvenate them and implement them again. So, the outdated Apprentice regime introduced by Indian Railways decades ago needs a complete makeover.



(iii) Graduation and Post Graduation level:

Encourage entrepreneurship in areas in which the capital expenditure is low, for example Handicrafts, toy making and such other innovating industry.

Encourage graduates to take up teaching as a profession. This will also help to fill in the demand for primary teachers in the country.

(iv) School Dropouts:

Focus not only on graduates but also on skilled class 10 and 12 drop-outs, who can be instrumental in driving the workplace.

(v) Focussing on all regional languages:

Focussing not only on English-speaking employees as India being a diverse country people with regional language skills should not be marginalised from the workforce.

4. What are the chances that the demographic dividend will be claimed by the neighbouring countries and it will be unpaid or unclaimed by the Indians?

-According to the United National population research, during the last four decades the countries of Asia and Latin America have been the main beneficiaries of the demographic dividend. Advanced countries of Europe, Japan and USA have an ageing population because of low birth rates and low mortality rates. Neither the least developed countries nor the countries of Africa have as yet experienced favourable demographic conditions according to the research by UN population division. China's one child policy has reversed the demographic dividend it enjoyed since the mid 1960s according to a World Bank global development report. Looking at the population maps of SAARC countries, one can conclude that only India has the big advantage as it has the largest equity i.e. population but at the same time looking at the developments in the world economy, the FIIs i.e. the developing countries of the world specially Latin America may claim the majority of this dividend which otherwise was to be credited to India.

5. Which part of dividend is more relevant for India? First Demographic Dividend (1975-2050) or Second Demographic Dividend (2050- 2070)?

-The researchers agree to the views put forward by the author duo Laishram Ladusingh and M. R. Narayana in their paper titled Economic Lifecycle And Demographic Dividends: Evidence And Implications For India, that the first demographic dividend period is transitory in nature for the simple reason that with further decline in fertility and improvement in life expectancy enter the phase of rapid population aging and age structure exhibits increasing population in advance and shrinking of working age population. At this stage the economic support ratio begin to decline and the phase of second demographic dividend starts with some overlapping period with the phase of first demographic dividend. The second demographic dividend is characterised by accumulation of asset to support extended period of retirement with population aging. The first dividend is in part the consequence of explaining work age population and can be realised only if employment opportunities expand keeping pace with the increase of working age population. The second dividend arises largely because prime age adults have to save to support longer retirement as fewer children are available with fertility decline. For harvesting economic gains of emergence of demographic dividend, however, an environment conducive to accumulate assets is a prerequisite. Some of these prerequisites have started receiving policy attention in India, as they are reflected in policies and programmes (e.g. sill development) in India's 11the Five Year Plan.

Thus one can say that both the demographic dividends are welcome but looking at vision 2050 and Vision 2070 but important part is quantification of demographic dividend and re-investment of first dividend back to economy to reap the enhanced second phase dividends.

6. To what extent the failure to claim 100% dividend is attributed to the fact that Indian economy has not followed the routine model [Agriculture – Industry – Services] of growth?

- Developed economy in any country has three stages Agriculture – Industry – Services which is a routine model but in India we directly moved from Agriculture to Services and missed Industry. This leap has poised high challenges in Industry and now the Service industry growth is also not attributing high results. *India is creating jobs in industry but mainly in low productivity construction and not enough formal jobs in manufacturing, which typically are higher productivity. The high productivity service sector is also not creating enough jobs* (as per The Economic Survey 2012-13, presented by the Finance Minister P. Chidambaram in the Lok Sabha on Wednesday).

CONCLUDING REMARKS:

India has every potential to grab most part of the window of opportunity and is on the track to leverage the same. No country is better poised to take advantage of the demographic dividend than India. In 2020, the average age in India will be only 29 years, compared with 37 in China and the United States, 45 in Western Europe, and 48 in Japan. Moreover, 70 percent of Indians will be of working age in 2025, up from 61 percent now. Also by 2025, the proportion of children younger than 15 will fall to 23 percent of India's total population, from 34 percent today, while the share of people older than 65 will remain around just 5 percent. China's demographics are not as rosy as India's, because the government's policies to limit population growth will have created an abnormally large cohort of people over age 60 by

2040. Other emerging nations, such as Pakistan, Indonesia, and certain countries in Latin America and Africa, will produce much larger workforces in the coming years. But their demographic dividends may be inhibited by political and social instability that impedes efforts to put this young population to productive use; a country with massive numbers of unemployed young people and no constructive economic outlet for their dynamism is headed for trouble. The equity portion in the Indian balance sheet has reached its high. Now the only issue is to take care that we don't land up in the region of "Overcapitalisation", where the quality of assets is responsible for taking away the value of equity. Thus all depends on the skill of country to manage its skill set.

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WOMEN'S LABOUR FORCE AND THE DEMOGRAPHIC DIVIDEND: LESSONS FOR INDIA FROM THREE NATIONS

Dr. Aaliyah Siddiqui*

ABSTRACT

It can be stated that longer chain of events that may follow lower fertility rates and increased Mortality which will make people accumulate greater personal wealth during their working years, and as people realize that they will live longer, they will be motivated to accumulate wealth that they can use to support themselves in old age and finally having a lasting phase of Demographic Dividend

Key words- Mortality rate, Demographic dividend,

INTRODUCTION

The 'demographic dividend' is the window of opportunity that opens up as fertility rates decline. Faster rates of economic growth and human development are possible when combined with effective policies and markets.
Harvard economist and demographer David Bloom, one of the lead architects of the concept**,** explains that when the number of working age adults in a population is larger than the number of dependent seniors and children, there is a "window of opportunity" wherein the adults' productivity and consumption levels can rise and the economy can benefit. The term "demographic dividend" has come to refer to the working age population, rather than the economic boom.

According to the definitions provided by Population Reference Bureau "The opportunity for the demographic dividend happens when fertility rates decline significantly, which results in a lower proportion of children relative to working-age adults. This figure, known as the 'dependency ratio', describes the ratio of the economically dependent part of the population to the productive part".

The opportunity for the demographic dividend arises after a 'demographic transition' where birth and death rates shift from high to low levels in a population. The decline of mortality usually precedes the decline in fertility, resulting in rapid population growth. As access to family planning and reproductive health services increases, and when women become more educated and have more opportunities to participate in the formal workforce, fertility rates also decline. Population growth then slows to a sustainable pace.

The demographic transition leaves a large generation of children and young people in its wake – a 'boom' generation – and this creates a special bulge in the population structure that

persists throughout the lifetime of that generation. When the individuals who make up this boom generation are young, they place pressure on the economy and their working-age parents, and the dependency ratio is high. However, as fertility rates steadily decline, countries are able to shift the dependency ratio so that there are more working-age adults to support a relatively smaller population of children (Gribble and Bremner, 2012). This research paper highlights the impact of Total Fertility Rates (TFR) on the three crucial aspects of demographic dividend including Gross Domestic Product (GDP) per Capita, Female Labor Participation Rate (FLP), and Maternal Mortality Ratio (MMR). The study aims to create a model by establishing the relationship of these variables. The study shall include the data obtained from three countries namely Indonesia, Singapore and Thailand as these three nations have been able to gain the Demographic Dividend and an analysis of these nations will lead to creating of the 'way forward' for India.

REVIEW OF LITERATURE

To achieve development goals, and for an economy to function at its maximum potential, women must be given the opportunity to move successfully through education and into productive employment (Commission on Growth and Development, World Bank, 2008) Opportunities for women currently lag behind their capabilities (World Bank, 2006). High fertility and women's childrearing roles are major barriers (Canning D, 2010). Governments can capitalize on the demographic dividend by empowering women through access to reproductive health services, and by providing decent work and educational opportunities.
Women who have an unmet need for voluntary family planning account for 79 per cent – nearly 63 million – of unintended pregnancies each year. (Guttmacher Institute and UNFPA, 2012).

Meeting unmet need for voluntary family planning would allow more women to be better able to plan their lives, to invest in each child and to generate an income. The effect of changes in the age structure of a nation upon its economy has been studied for decades (Coale and Hoover, 1958; Easterline, 1967; Simon, 1981; Ehlrich and Ehlrich, 1990, Bloom, Canning and Malaney, 2000; Mason, 2005). The underlying theory says that demographic dividend puts a positive impact upon a nation's economic development, and that in high fertility societies, fertility reduction is a potentially powerful tool to reduce poverty (Eastwood and Lipton, 1999; Mason and Lee, 2004; Li and Zhou, 2007). However, at the same time fertility reduction in a developing country poses a couple of serious challenges to the policy makers.

India is the second highest populated country in the world, contributing to 17 percent of the world population. The country presently is experiencing the third stage of demographic transition. Following a fall in mortality rates, fertility rate has been declining for last few decades. According to the National Population Policy (NPP, 2000), India had targeted to achieve the below replacement level fertility by 2010; but they failed to attain that level. Total Dependency Ratio in India was highest in 1970 while there were almost 120 people aged 0-14 years and more than 65 years per 100 people aged between 15-64 years of age.

However the ratio declined consistently to touch 83 points mark. United Nations predict that this dependency ratio will continue falling till 2040s.

a) The Two phases of Demographic Dividend

The first demographic dividend arises and dissipates as changes in age structure interact with the lifecycle of production and consumption. Children and the elderly produce much less than they consume, whereas working-age age adults, on average, produce much more than they consume. Populations with heavy concentrations at the working ages are advantaged at producing high levels of per capita income. Child and old-age dependency ratios are often used to capture the key features of the economic lifecycle, but more detailed and precise estimates are becoming available now.

The second dividend arises to the extent that consumers and policymakers are forward-looking and respond effectively to the demographic changes that are coming. With a rise of the elderly dependent population on the horizon, consumption in the future can be maintained only through the accumulation of wealth in some form. One possibility is that individuals and/or firms and governments acting on the behalf of consumers accumulate capital. If invested in the domestic economy, the result will be capital deepening and more rapid growth in output per worker. If invested abroad, the result will be an increase in the current account and national income. In either case, per capita income will grow more rapidly. The first and second dividend are formalized in Mason and Lee (2004) drawing on earlier work by Cutler et al. (1990).

b) The Demographic Transition*:*

The demographic transition can be divided into three phases (Lee 2003). In the first phase mortality is falling, particularly among infants and children. So the *dependency ratio* (defined as the numbers of under 15 years and over 65 years in the population as a proportion of those aged 15-64) rises, driven by a rise in the proportion of young dependents in the population. As time passes, this population bulge travels through the age profile, a process that has been likened to the passage of a kill through a python (Basu 2007). Thus, in the second phase of transition, the bulge is of working age, automatically lowering the dependency ratio: prosperity-driven falls in fertility lower this still further. Finally, in the third phase, the bulge arrives at retirement age, swelling the number of old dependents, and causing the dependency ratio to rise again.

c) Women & the Demographic Dividend

Women and girls are 50 percent of the world's population, so empowering them is essential for achieving the demographic dividend. When women and girls have equal access to education, economic opportunities, and rights, countries benefit from increased development and economic growth. (World Development Report, 2011)

Increased access to family planning and reproductive health services support women's social and economic well-being. Teenage girls who have access to family planning are more likely

to stay in school, giving them better opportunities to obtain a secure income and fully contribute to a country's economic growth. In turn, well-educated women with access to family planning often choose to have fewer children than their less-educated counterparts. On an aggregate level, this lowers overall fertility in a country and opens the demographic window.

d) Criticism of Demographic Dividend

The demographic dividend concept inscribes an inherent value to working age populations even as concept proponents caution that dividend benefits are not automatic. By valuing working-age populations because of their numbers rather than other characteristics, the concept tends to universalize population trends, rather than examine them in their context. Just as the concept relies on the debated "demographic transition" theory to explain global population change through a universal, European based norm, the concept promotes a template for understanding and exploiting working-age populations, based on the supposed demographic dividend successes in East Asia.

However, the conditions and factors that explain the East Asian economic "miracle" cannot be replicated elsewhere. The particular context that contributed to the "miracle," including the national regime, political context, and relationship to the global market and the U.S., among other factors, does not exist everywhere.

That particular economic surge in East Asia cannot be repeated, even in East Asia. While the national, political and social context of the working age population matters, so does the composition of the population. Working age populations' characteristics differ from location to location. The demographic dividend concept views them as heterogeneous blocks. It assumes that all economic classes, ethnic groups and races within a population go through demographic transition at the same time, whereas often demographic transition occurs at different rhythms and paces for different sectors of the population. This tendency to generalize about working-age populations weakens an already simplistic concept.

OBJECTIVES OF THE STUDY:

1. The main objective of this study is to assess whether Female fertility has actually caused the demographic dividend in the countries where the fertility rates have declined and the demographic transition has happened. For this the data of Fertility rate and GDP per capita shall be drawn on for the given set of countries.
2. The study further aims to study if the reduced fertility has actually resulted in the increased participation of the female in Employment by studying the Female Labor Participation Rate (FLP).
3. The study will also investigate the aspect of Maternal Mortality Ratio (MMR) of the countries under consideration to establish the realization of economic gains due to fertility decline in all the countries.

4. The study will finally analyze the present Indian Scenario from the all the above perspectives to evaluate the Indian Demographic Dividend.

CONCEPTUAL FRAMEWORK & FORMULATION OF HYPOTHESES:

Lowering of the total Fertility rate (TFR) will lead to a fall in the dependency ratio, especially the young dependency ratio, which may raise both savings and female labour force participation (FLP). Higher savings may lead to faster productivity growth, rising female participation means that workforce growth is faster than growth in the working age population, which will raise growth of GDP per capita. This premise leads us to the formulation of the first hypothesis of the study and can be stated as under:

$H_0$1: There is no significant relationship between GDP per capita and Total fertility Rate.
$H_1$1: There is a significant relationship between GDP per capita and Total fertility Rate.

The concept of the "demographic dividend" (Bloom, Canning et al. 2001; Bloom, Canning et al. 2003) elucidates the economic benefits that a country can gain if it experiences a decline in fertility. The decline in fertility reduces population growth, and increases the female labour force participation. At the same time, the shift in fertility increases the ratio of working-age to total population; compounding this is the positive response, which further increases labor supply per capita. This suggests that the effects of fertility reduction on female labour force participation can be very large – more than doubling the steady-state level of output per capita. Taking these findings further we hypothesise as under:

$H_0$2: There is no significant relationship between Total Fertility Rate and Female Labour Force Participation.
$H_1$2: There is a significant relationship between Total Fertility Rate and Female Labour Force Participation.

The World Health Organization (WHO) estimates that in 2005 over 500,000 women died from pregnancy- and birth-related causes. (WHO, 2011)A woman in a developing country is 97 times more likely to die as a result of pregnancy than a woman in a developed country. Human capital is the stock of competencies, knowledge, social and personality attributes, including creativity, embodied in the ability to perform labor so as to produce economic value (Simkovic, 2012). In another study it was found that the relationships between maternal health outcomes and GDP run in both directions, with the majority running from maternal to GDP (Amiri & Gerdtham, 2013) in the same study the results indicate that (maternal & Child) health investments in poorer countries may increase GDP. It is evident that there is potential synergy between these two factors, i.e. the maternal mortality rate and GDP per capita since if Maternal Mortality is translated into Female workforce participation; it is more likely that there will be faster accumulation of domestic capital. This leads us to formulation of third hypothesis for this study and can be stated as:

$H_0$3: There is no significant relationship between Maternal Mortality Rate and GDP per capita.
$H_1$3: There is a significant relationship between Maternal Mortality Rate and GDP per capita.

RESEARCH METHODOLOGY:

The Empirical approach of the study:

This study shall focus on the first demographic dividend which arises out of change in age structure, and will perform an analysis using samples of three countries namely South Korea, Singapore and Thailand. The purpose of this analysis is to examine demographic dividend that occurred in these three countries and whether this has any relationship with the variables being considered in this study.

These countries have been selected mainly because they have experienced the demographic transition. Secondly, these countries have been selected because of the availability of data of these countries which can then be evaluated using the same set of variables with the central premise of this study i.e. is the Total fertility Rates (TFR). Thirdly these countries also have offer varied characteristics which will provide an opportunity to establish the relationship of TFR under diverse conditions.

Units of Study

The study shall create a framework of women related aspects of demographic dividend and include the following units in the study

1. Total fertility Rate (TFR): Total fertility rate represents the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with current age-specific fertility rates.
2. Gross Domestic Product per Capita (GPC): GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data used is expressed in U.S. dollars
3. Female Labor Participation Rate (FLP): female labor participation rate, (% of female population ages 15+) Labor force participation rate is the proportion of the population ages 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period. This unit is used by the International Labour Organization as the Key Indicators of the Labour Market database.
4. Maternal Mortality Ratio (MMR): Maternal mortality ratio (modeled estimate, per 100,000 live births) Maternal mortality ratio is the number of women who die during pregnancy and childbirth, per 100,000 live births. The data are estimated with a regression model using information on fertility, birth attendants, and HIV prevalence.

Trends in Maternal Mortality: 1990-2010. Estimates Developed by WHO, UNICEF, UNFPA and the World Bank.

The Proposed Model of the Study

$$GPC_{ct} = f(TFR_{ct}) + f(FLP_{ct}) + f(MMR_{ct}) + \alpha + \varepsilon$$

Where

GPC_{ct} = Gross Domestic Product Per Capita of the country *C* at time *t* (Outcome)

TFR_{ct} = Total Fertility rate of the country *C* at time *t* (Predictor)

FLP_{ct} = Female labour Force participation rate of the country *C* at time *t* (Predictor)

MMR_{ct} = Maternal Mortality Ratio of the country *C* at time *t* (Predictor)

α = Constant

ε = Error of the Estimates

DATA SOURCES & TESTING OF HYPOTHESIS

The data for the proposed study has been drawn from various sources. The projection is based on the data on Gross Domestic Product per capita, Female Labour Force Participation, Maternal Mortality rate and Total fertility rate has been acquired for the world bank data base (*data.worldbank.org*) . The data regarding demographics and country wise statistics has been drawn from the CIA World Factbook) The information about the education wise age specific fertility rate was taken from the Sample Registration System of India, for the period of 2000 to 2010 (MoSPI, GoI). Some estimates have been utilized from the projections carried out by Wittgenstein Centre for Demography and Global Human Capital (Source: forthcoming book Lutz, Blutz and K.C., 2013) following the assumptions adopted by them. Substantial data collected for the Maternal Mortality rate has been used from the WHO, UNICEF, UNFPA and the World Bank.

Bivariate correlation and regression evaluate the degree of relationship between two quantitative variables. Pearson Correlation (*r*), the most commonly used bivariate correlation technique, measures the association between two quantitative variables without distinction between the independent and dependent variables. In contrast, bivariate regression utilizes the relationship between the independent and dependent variables to predict the score of the dependent variable from the independent variable (Lutz, 2010). This study uses the bivariate co relation and regression to estimate the relationship between the various variables included in the study. The Pearson Correlation(r) will be measured to find out if there is any significant relationship between the various variables; p values will indicate the level of significance as also the r-squared vales to indicate the %age of variance explained by the dependent variable (Eastwood, Lipton, 1999)

DATA ANALYSIS & INTERPRETATION:

Table 1: Comparative analysis of Total Fertility Rate and GDP per Capita

Country	*Correlation*	*Significance*	*R-Square*	*R-Square (in %)*
INDIA	*-0.729***	*0.000*	*0.532*	*53.2%*
KOREA	*-0.766***	*0.000*	*0.587*	*58.7%*
SINGAPORE	*-0.638***	*0.000*	*0.408*	*40.8%*
THAILAND	*-0.817***	*0.000*	*0.668*	*66.8%*

Dependent Variable: GDP per capita

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

Interpretation-

From table 1, it is evident that there exists a very strong and negative correlation between GDP per capita (GPC) and Total Fertility Rate (TFR) for all the four countries which means that it is statistically significant that whenever there was a decrease in the TFR, a corresponding rise in the GPC all the countries. Moreover, the above table also represents the R Square value for all the countries. The R Square value for India is 53.2 percent which means that 53.2 percent variance in GPC can be explained by Fertility rate and the rest of 46.8 percent can be explained by some extraneous factor as has been modeled in the study. The R Square value for Korea, Singapore and Thailand are 58.7 percent, 40.8 percent and 66.8 percent respectively, which indicates a very large degree of variance is explained in case of all the countries. This analysis leads us to rejecting the null hypothesis and accepting alternate hypothesis having found a significant relationship between the GPC and TFR.

Table 2: Comparative analysis of Total Fertility Rate and Female Labour force Participation

Country	*Correlation*	*Significance*	*R-Square*	*R-Square (in %)*
INDIA	*0.327*	*0.138*	*0.107*	*10.7%*
KOREA	*-0.582***	*0.004*	*0.339*	*33.9%*
SINGAPORE	*-0.655***	*0.001*	*0.428*	*42.8%*
THAILAND	*0.311*	*0.158*	*0.097*	*09.7%*

Dependent Variable: Female Labour Force Participation

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

Interpretation-

Table 2 demonstrates that India and Thailand are the countries which display a positive correlations between FLP and TFR which indicates that a fall in TFR has resulted in a rise in FLP but for Korea and Singapore the relationship is negative correlation, which means that a fall in TFR has not resulted in corresponding rise in the FLP. The R Square value for India and Thailand is low and is 10.7 percent and 09.7 percent respectively whereas for Korea and Singapore, the R Square value is high and is 33.9 percent and 42.8 percent respectively. This

means the variance in the TFR and FLP value are explained to a large extent in context of these nations and to a small extent in context of India and Thailand. Looking at the overall scenario presented by this analysis we accept the null hypothesis, as the relationship has not been able to substantiate any significant relationship between TRF and FLP.

Table 3: Comparative analysis of Maternal Mortality Rate and GDP per Capita

Country	***Correlation***	***Significance***	***R-Square***	***R-Square (in %)***
INDIA	*-0.849**	*0.069*	*0.721*	*72.1 %*
KOREA	*-0.879**	*0.049*	*0.773*	*77.3 %*
SINGAPORE	*-0.302*	*0.622*	*0.091*	*09.1 %*
THAILAND	*-0.394*	*0.511*	*0.156*	*15.6 %*

Dependent Variable: Female Labour Force Participation

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

Interpretation-

Table 3 indicates that GPC & MMR are strongly & negatively correlated to each other. For India & Korea, the relationship is stronger having value of -0.849 & -0.879 respectively as compared to that of Singapore & Thailand having value of -0.302 & -0.394.The stronger correlation is witnessed in case of Korea followed by that of India. Also, the R Square value of Korea is highest followed by India, Thailand & Singapore i.e. 77.3 percent, 72.1 percent, 15.6 percent & 09.1 percent respectively. The variances explained in case of Indian and Korea further substantiates the strong correlations and that of Thailand and Singapore indicates a weaker correlation. This leads us to summarize that the MMR has a significant relationship with the GPC. This leads us to reject the null hypothesis.

DISCUSSION & CONCLUSION:

This study has started with the aim to gather evidence from the three nations namely South Korea, Singapore and Thailand, which have seized the demographic dividend and have added an astounding 2% to their annual growth of per capita income. Their economic miracle was in large part a demographic miracle. India hopes for a similar award by virtue of changing age-structure of its population. India has been undergoing substantial demographic change since the 1970s and is touted to reach a beneficial point stage in the next twenty years. An IMF study (Aiyar and Mody 2011) shows that between 1981 and 2001, the proportion of the population in the age group 15-59 rose in Tamil Nadu from 58.6% to 64.4% and in Karnataka from 53.9% to 60.4%. This facilitated faster growth in these states. By contrast, the proportion stayed almost unchanged in Bihar and UP (from 51.5% to 52.1% and from 51.5% to 52.3% respectively), one reason why these states were laggards. Overall, the study estimated that the demographic dividend added 1-1 .5% to annual GDP growth in the 1980s and 1990s, and could add 1.5-2 % from 2001 onward.

The most crucial constituent of this demographic Dividend will be the women of the nation. We theorized that if the Women have reduced fertility and higher mortality this will make more women available for adding into the labour force and finally nothing up the GDP per capita. This will have substantial bearing on the Consumption and saving rate in the country.
This study has been successful in establishing the contribution of the women in the economic development through participation in labour force. However the recent estimates by the Census (2010) has revealed that proportion of females interested in working has crashed from 30% in 2004-05 to just 23% today. This is dismayingly low: in rich countries, it can be up to 60%. Over 35 million Indian women have opted out of working. This remains an area of concern for India and women need to be encouraged and facilitated to join the labour force of the nation. The following steps are suggested to facilitate greater participation of Women in the labour force:

a)Increased access to family planning and reproductive health services
Family Planning Schemes and access to reproductive health services will enable women's socio-economic well-being. Teenage girls who have access to family planning are more likely complete education and in return provide them opportunities to obtain a secure income and fully contribute to a country's economic growth.

b) Increased Employment opportunities in the Rural Areas:
The Policy framers must look at providing more job opportunities to women especially in the rural hinterlands of the country to increase the participation of women in the labour force and generate economic returns for the nation.

c) Increased Investments in Human Capital
A greater investment in the health and education of women will ensure set up of literate and technically qualified women workforce which will lead to provision of suitable labour for industry as has been noticed in some of the leading Asian economies, where up to 60% of women labour force is engaged in secondary and tertiary industries.

To conclude, we can state the longer chain of events that may follow lower fertility rates and increased Mortality which will make people accumulate greater personal wealth during their working years, and as people realize that they will live longer, they will be motivated to accumulate wealth that they can use to support themselves in old age and finally having a lasting third phase of Demographic Dividend..

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MANAGEMENT APPROACH: SAYING "NO" TO CUSTOMERS TO GAIN COMPETITIVE ADVANTAGE.

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ABSTRACT

To gain competitive advantage in the international & domestic market, the "saying No" strategy for better quality services or products offers to customers, will have positive impact in the minds of Customers, indirectly organisation will develop its Brand image. However one should not frequently change the policy with the demand and needs of the customers. Finally the rivalry / Association / federation of the organisation will definitely follow your strategy & unquestionably they will follow you in future and appreciate your strategy. Eventually Saying no in a better way, will have a positive impact on the customers & they will pay money for better service to the organisation.

Keywords- Growth, Excellent, Quality, Bargaining power of Customers, Profit

INTRODUCTION-

To sustain & retain in the domestic / international market or in the era of globalization, Liberalization & privatisation, the Business environment is becoming increasingly multifaceted, unstable and unpredictable. Also to maintain the quality of services or Products, the bargaining power of customers has increased due to accessibility of various competitors in the market. Now days the organisation is facing a tough completion due to the easy user-friendliness of various rivalry (Existing & the New Entrants) in the domestic & international market. Consequently many times the companies are working with negligible profit or at Break Even point due the pressure from the Customers for the Minimal Cost working. For longer sustainability the Organization has to decide their own strategy not to work with Low Profit margin or one should adopt the new strategy, "Say No to Customers" for excellent quality services or Products by the company.

To gain the competitive advantage in the business environment, one should focus on quality services to remain as a brand image in the minds of customers. However Clients often do bargain with the Business organisation for excellent quality services with low cost. Hence saying no with Pride to Customers without hurting them will give the best opportunity for the organisation to search new clients or more focused with the existing one.

LITERATURE REVIEW

According to (Patrick, 2013,) Josh Pattrick[1], "The Value of Saying No" is an important strategy & one of the customers took his advice and started to say no. And an interesting thing happened. The profit at her firm increased, and it became easier for potential customers

to recognize her specialty. When the firm decided to specialize, it made a commitment to an industry about which it had specialized knowledge. The author lay emphasis on 'Niche' & explained a niche is a specialty where you have a great deal of knowledge, and potential customers can easily figure out your specialty.

The author Elisa (Levy)[2] on the article Exceptional Customer Service based on "USA Technique" focus on U is for Understanding; S is for Situation & then comes 'A' for Action. The USA flips the sequence. First you explain the situation and then you say 'no'. That's the way; the customers have no choice but to hear the explanation. So if you forget the acronym, just remember that from now onwards you should first explain and then say no. If customers argue, be patient with them and go through the USA sequence as many times as you need (with a few extra doses of U), until they accept the answer. Good service isn't enough; businesses need to be exceptional. It doesn't take a lot of extra time or money; it just requires knowing how to be memorable.

Another Research article by (Koritz, 2011)[3] on "Wrong Customers and the Art of Saying No" explains that **"Preview" the customer**. Does the client still seem wrong for your business? Then the smartest thing to do is to "say no". You need to be able to do a good job, get paid and feel that your company is going in the direction you want it to. If money today will hurt your company tomorrow, the project isn´t worth it!

UK based consultant Eric Fraterman (Fraterman)[4] reports on saying "How to Dump Your Customers – When Saying 'No' Can Help Your Business". The author illustrate that too many sales people find it impossible to say 'no', and end up taking on work that is non-profitable, proves difficult or impossible to deliver, is time consuming, and causes hassle to everyone in the business, as well as the customer, so, what can be done? *Step One* : Identify Your 'Best' Customers, *Step Two*: Establish Why They Buy From You, *Step Three*: 'Profile' Your Customer Base, Step *Four*: Maximise Resources, .*Step Five*: 'Dump' Your Worst Customers. As the MD of an engineering business once told him six months after consciously cultivating his customer base, 'Having dumped my non-profitable customers, I've got more time to devote to my best customers, less hassle, increased profits and the satisfaction of knowing my competitors have picked up all the problems that go with my old bad customer.

The author of Book Lewis P. Carbone, (Carbone, 31-Mar-2010)[5] title of 'Clued In: How to Keep Customers Coming Back Again and Again', introduces an excerpt on how to eliminate negative cues. Carbone draws on the latest neuro scientific research to show how customers transform physical and emotional sensations into powerful perceptions of your business... perceptions that crystallize into attitudes that dictate everything from satisfaction to loyalty. And he explains how to assess and audit existing customer experiences, design and implement new ones... and "steward" them over time, to ensure that they remain outstanding, no matter how your customers change

The Effortless Experience: Conquering the New Battleground for Customer Loyalty, by Matthew Dixon, Nick Toman, and Rick DeLisi. (Matthew Dixon, 26/09/2013)The authors say, "The mind is a powerful thing. But almost all our mental processing takes place unconsciously; neuroscience suggests that as few as 5 percent of a person's decisions are based on conscious, rational thought. Whether companies realize it or not, they're constantly delivering clues that influence their customers' unconscious thinking—shaping their impressions and ultimately, their actions. Conventional wisdom holds that to increase loyalty, companies must "delight" customers by exceeding service expectations. Some focus on dazzling them at the cost of neglecting to solve basic service problems-a big strategic mistake. Through extensive research and surveys, the authors have concluded that loyalty has much more to do with how well a company delivers on its basic promises than on how dazzling its service experience might be. From the above review one can conclude that Saying No is an important strategy for any organisation.

a) How should we win the battle by saying 'No'?

However the reasons for Saying No may hurt the customers, but in future they will understand the value of your service for their betterment. The customer will definitely say "***Pay money for better service***." and this will be the new line of attack in era of globalisation. Sales may be growing in a particular industry, but if profit margins are thin or missing, you could not have your work for prolonged existence also when it comes to structuring the business, you may not have money and taking home a pay cheque for your existence or survival. After all, the profit margin represents how much you take home for every **dollar** or **rupees** in sales, so higher margins are definitely a good thing. And profitability is among the secret figure that shed light on your creditworthiness.

One has to decide while deciding the company's strategy either in the domestic or international Market for better quality services or products the important approaches "Saying No" to Customer for better reasons. There are various challenges in front of the organisation in terms of losing the customers, but may be for the reason of 'no' strategy, the Customers may not stick or may come back to your organisation.

Before applying this approach to customers, the following precautions and assignments has to be taken in consideration in terms of every customer.

1. Bifurcate the Customers List in terms of Volume which they are giving the Business to your organisation
2. The Time and efforts spend by our organisation to each & every customers
3. The amount of profit from each & every customers is getting to our organisation along with loyalty of the customers.

After this exercise the High-value Customer in terms of Volume, Profit & Loyalty a separate List should be prepared in Descending orders. Next, apply logic reason behind each & every customer why they stick to our organisation and how much Time & efforts the organisational

Team/staffs are giving them. The following three categories can further explain the bifurcation of customers in a better way:

1) High Profit Margin Customers
2) Average Profit margin
3) Customer Low profit Margin Customers

By doing this, the organisation has to target any two categories from the above options. However two things are important in consideration, the Time and efforts spent by the staff and the profit margin in the company by those clients.

For example:

Suppose 'XYZ' company is targeting/ focusing to 60% of High profit margin Customers and 40% Average profit margin customers, with the efforts and Time spent by the organisational Team/ staff on them, it may gain competitive advantage in the international market or domestic market due to its **focus** strategy. However in such situation they will have to say 'no' for the Low profit margin customers, if they will not do in advance by applying this strategy it may not be obtain the desired results. More proportion if we focus on High Profit Margin customers more desired result we will get.

Saying 'No' is an important strategy but it may be a challenging task for the organisation. How to say 'no' to your customers:

1. **Explain** clearly and delightfully about the organisation Policy. Be Transparent about the cost/ tariff for the each & every service you offered to the customers. But if the customer's do the bargaining for the cost, graciously say 'no' to them & give them an idea about your Brand image. Do not waste more time & efforts by convincing them as you can't work with Low profit margin strategy.
2. **Listen** carefully the customers need & acknowledge them. Convinced the idea & confidence about the organisation quality service you offered.
3. Still the customer does bargaining for the cost & other matters say 'no' **positively and politely** and give them the reasons. Simply Saying No to customers to make them turn back to your organisation.
4. Finally make them value of '**yes'** that your company is ready to do the business with them with the tariffs the organisation possess. Also review & innovate your quality policy to sustain for competitiveness before the needs of the customers arise.

Ultimately the Team/staff of any organisation must have a *self-confidence and value* about the company's 'No' strategy Policy, with such condition they may be able to generate the business in an enjoyable way. First the internal customer should appreciate this Policy to workout in better way in the international or domestic market.

CONCLUSION:

To gain competitive advantage in the international & domestic market, the "saying No" strategy for better quality services or products offers to customers, will have positive impact

in the minds of Customers, indirectly organisation will develop its Brand image. However one should not frequently change the policy with the demand and needs of the customers. Finally the rivalry / Association / federation of the organisation will definitely follow your strategy & unquestionably they will follow you in future and appreciate your strategy. Eventually Saying no in a better way, will have a positive impact on the customers & they will pay money for better service to the organisation.

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ANTECEDENTS OF CUSTOMER SATISFACTION AT SHRI KANNAN DEPARTMENTAL STORE (P) LTD, COIMBATORE DISTRICT OF TAMILNADU STATE

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ABSTRACT

The present empirical research is an attempt to find out the factors that determine customer satisfaction at Shri Kannan Departmental Store (P) Ltd (SKDS) in Coimbatore District of Tamil Nadu State. The study has been made by collecting the responses of customers through self-designed questionnaire. A total 100 responses were collected from customers who are purchasing products at SKDS in X- Cut Road, Kuniamuthur, Singanallur, Sulur and Ramnagar Areas. This study found eight different factors like customer value, easy to shop, employees' response, service features, reputation of store, service support, availability of products and affordable price with good product quality that determine customer satisfaction at SKDS. Finally, this study conclude that the factors like affordable price with good product quality, employees' response, reputation of store and availability of products have highly responsible to determine the customer satisfaction at SKDS. The findings of the present study may act as input for the customer perception about SKDS in organized retailing and also to the management knows their customers based on various socio demographic and economic variables.

Keywords: Organized Retailing, Departmental store, Customer satisfaction, Buying behavior

INTRODUCTION

India is the 5th largest retail market in the world with the businesses about US$ 500 Billion and it is expected to US$950 billion in 2018 (Retailers Association of India) but US$ 1.3 trillion by 2020. The Indian retail sector accounts for over 20% of the country's Gross Domestic Product (GDP) and contributes 8% to total employment.

In the present scenario, organized retail trade accounts for merely 10% of the total retail trade and the remaining 90% is left unorganized. The organized retail to grow with 25%-30% every year but it contributes only 4% of total retail in 2008 (Shradha et al.). The organized Retailing include the corporate-backed hypermarkets and retail chains, Franchisee Stores, Specialty Stores, Departmental Store, discount stores, Factory outlets etc. Among various different stores in organized retail, this study only focuses on departmental store with reference to Shri Kannan Departmental Store (P) Ltd. This Concern was started in 1985 as a Departmental Store in Erode named as Sangeetha Shopping Centre under the Chairmanship of Shri. T. Thanushgaran. Then, a Mega Departmental Store was started in the year 1999 under the Name as "Shri Kannan Departmental Store (P) Ltd.," (SKDS) with support of the public. SKDS has branches in various parts like Coimbatore, Erode, Dindigul, Karur, Namakkal, Madurai and Tiruppur Distrcits of Tamilnadu State and presently operating total

of 22 Departmental Stores of various sizes in these places. Presently, SKDS groups providing employment opportunities to the 2500 people and its turnover of Rs. 370 Crores for the FY 2013-2014 which is grew with 27.58% over the FY 2008-2009 (Rs. 290 Crore). SKDS is a one-stop-shop for customers because it sells groceries, cosmetics, electronics, stationery items, furniture, clothing to medicines etc. In 2010, SKDS have been selected as the best Departmental Store for the Region by The Ministry of Food Processing Industries (MOFPI) jointly with the Food Forum of India, and this organization make an effort to keep up the same momentum in the coming years.

STATEMENT OF THE PROBLEM

Assessment of customer satisfaction frequently needed to the organized retail sector because of consumers' purchase decision shifting in nature on time-to-time due to changing their expectations, higher disposable income, preference for luxury goods, and change in the demographic mix, etc. In order to organized retail sector wants to know their customer satisfaction regularly. So, the researcher has undertaken this research work titled "Antecedents of Customer Satisfaction at Shri Kannan Departmental Store (P) Ltd, Coimbatore District of Tamilnadu State**"** with the following objectives.

OBJECTIVES OF THE STUDY

To find out the factors that determine the customer satisfaction at SKDS and also to analyze the relationship of various responsible factors with overall satisfaction of customer at SKDS.

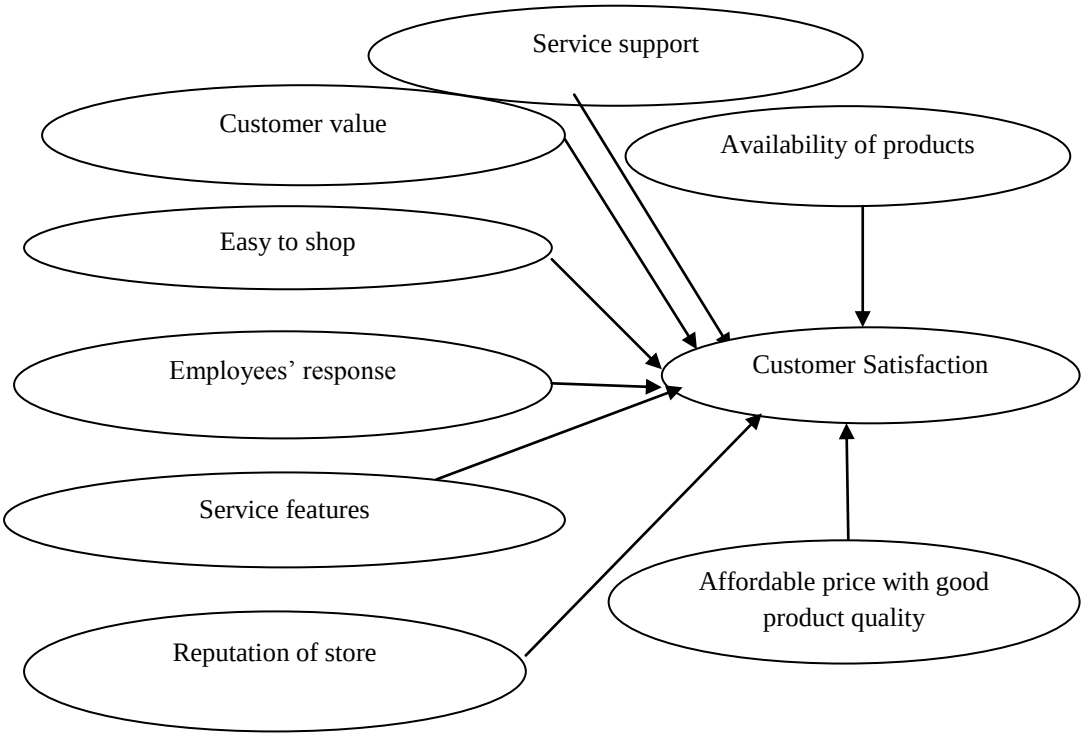
HYPOTHESES OF THE STUDY

Ho_1: f_1, f_2.f_3.....f_n has determine the satisfaction among customers at SKDS.
Ho_2: Related factors (f_1,f_2,f_3……fn) have lesser responsible towards overall satisfaction of the customers at SKDS.

RESEARCH METHODOLOGY

With an aim to factors that determine the customer satisfaction at SKDS, a total of 100 customers were selected from various SKDS functioning in Coimbatore District (X- Cut Road, Kuniamuthur, Singanallur, Sulur and Ramnagar) of Tamil Nadu State. The self-designed questionnaire has been used to collect primary data from customers during the period of April to May' 2014. The questionnaire have three different parts like personal factors (Gender, Age group (in years), education, occupation, Marital status, type of family, family income (Rs. per month), Frequency of visit and Shopping style), Preference of products type and evaluate the customer satisfaction through various parameters. Purposive sampling method is most suitable for this research work. The statistical tools like % analysis, Kaiser-Meyer-Olkin (KMO) and Bartlett's test of Sphercity, Garret's Ranking Technique, Factor analysis, regression and analysis of variance used to draw the inference of the study. The final research model of current research is shown in the figure – 1.

Figure – 1: Research Model towards Responsible Factors on Customer Satisfaction



REVIEW OF LITERATURES

Arpita (2014) concluded that Indian consumers prefer small retail stores due to assortment, service, store facility and relationship but older and younger populations differ in their reasons for preferring small retail stores.

Angamuthu and Sudalaimuthu (2013) in their study is to assess the consumers' acceptance level (Low, Medium and High) and expectations of service quality in the Organized Retail Market (ORM). The authors reported that majority of the consumers has moderately accepted the service quality provided by the ORM. Lowest price and high quality products are most expected service quality in the ORM.

Angamuthu and Sudalaimuthu (2013) in their descriptive research design focus on behavior of consumers' acceptance of service quality in the organized and unorganized retail market. This research has concluded that value added customer service, self-service satisfaction, variety of the products and quality of the products are influenced factors on consumers' acceptance of service quality in the organized retail market. Moreover, affordable prices, availability of credit facilities and fresh products, possible to personal interaction to the owner of the stores are the influenced factors on consumers' acceptance of service quality in the unorganized retail market.

Ramakrishna & Sudharani (2012) analyzed the fashion and food bazaar consumers' perception towards private label brands in ORM in Coimbatore. Majority of the youngsters

have good perception towards the private brands in fashion wear and munchies. Quality, trustworthiness of the product and brand image was found to be leading factors that differentiate private label brand from other branded product.

Hotniar, et.al. (2009) in their findings were there was no difference of consumer shopping behaviour among hypermarket, supermarket and minimarket. In addition, attitude towards retail outlet and shopping habit influenced to shopping intention.

Paromita and Mridula (2009) in their study tries to found that whether Indian consumers are likely to move from traditional kirana stores to large organized retailers while shopping for groceries. This study confirmed that the customer patronage to grocery stores was found to be positively related to location, helpful, trustworthy salespeople, home shopping, cleanliness, offers, quality and negatively related to travel convenience. Kiranas do well on location but poorly on cleanliness, offers, quality, and helpful trustworthy salespeople. Gupta et al. (2008) in their research involves studying the consumer's perception towards buying behavior at organized retailing. This study reported that the consumers are highly appreciating the availability of the variety of products/services at the organized retail stores and also good customer service and convenience of parking and other facilities most important aspect of their buying decision.

Leela Rani and Sanal Kumar (2008) in their empirical research aims to examine how consumers' attitude towards retail stores gets affected by situational, consumer, store and product characteristic variables when they face out-of-stock situations in India's unorganized retail sector. This study found that shopping attitude of respondent, store loyalty, perceived store prices, store distance, shopping frequency, and brand loyalty significantly influenced consumers' attitude towards retail store in out-of-stock.

Banerjee and Divakar (2001) in their study focus on threshold prices, which trigger different kinds of purchase behavior like decision to forego purchase till future periods, decision to increase consumption, decision to stockpile for the future. In addition need for retailers to be sensitive to the issue of consumer's multi-period purchase planning process, which may significantly impact the effectiveness of promotion schemes. This study reported that there exists a price threshold that triggers stockpiling behavior of the retail customer.

ANALYSIS AND INTERPRETATIONS

1. *Personal profile of the customers*

Distribution of the sample customers based on their gender, age group, education, occupation, marital status, type family, family income, frequency of visit and shopping style is given in the Table – 1.

Table - 1: Personal Profile of the Customers

Variable	Character	No. of Customers	%
Gender	Male	28	28
	Female	72	72

Age group (in Years)	Upto 25	16	16
	26-40	39	39
	41-55	28	28
	Above 55	17	17
Education	Upto school level (IX-XII)	27	27
	Under Graduate	42	42
	Post graduate	31	31
Occupation	Govt. employee	23	23
	Private employee	36	36
	Own business	7	7
	Professional	16	16
	Home maker	14	14
	Students	4	4
Marital status	Married	91	91
	Unmarried	9	9
Type of Family	Nuclear family	70	70
	Joint family	30	30
Family Income (Rs. Per Month)	Upto 15,000	16	16
	15,001 - 25,000	48	48
	Above 25,000	36	36
Frequency of visit to the SKDS (Per Month)	One time	16	16
	Two times	39	39
	Three times	28	28
	Four times	9	9
	Five times and above	8	8
Shopping style	Single	20	20
	With spouse	44	44
	With family	28	28
	With friends	8	8
Source: Primary data			

Interpretation

Table 1 show that majority (72%) of the customers was female and the remaining 28% were male. This is followed by out of 100 customers, nearly $2/4^{th}$ of the customers belonged to middle age group (26-40 years), 28% of the customers belonged to the age group of 41-55 years, equal number of customers belonged to the young age group (16%) and elder age group (17%). Further, classification of respondents according to marital status, it informs that little more $9/10^{th}$ of the customers were married and the remaining $1/10^{th}$ was unmarried. The table 1 also indicates that 73% of the customers have completed higher education (both under & post graduation) and the remaining 27% of the customers had school level. This is followed by most (36%) of the customers are working in private companies and more than $8/10^{th}$ of the customers' family earn more than Rs.15,000 per month. $7/10^{th}$ of the customers are living in

nuclear family and the remaining 3/10 of them living in joint family. Majority (41.2%) of the respondents' family proportion of saving is >20% out of total income per month. Nearly 2/5th of the customers visit at two times per month at SKDS and majority (44%) of the customers come with their spouse.

Customers' Preference of Products type at SKDS: Garrett's Ranking Technique

Garrett's Ranking technique has been used to evaluate the preference of product type of the customers at SKDS using the sample size of 100. Using this technique the customers were asked to rank the given products according to the magnitude about different types. The orders of merit given by the customers which have been converted into ranks by using the following

% position=100(Rij-0.5)/Nj

Where,

Rij = Rank given for the ith sources by the jth respondents

Nj = Number of sources ranked by the jth respondents

Table - 2: Customer Preference of Products type at SKDS		
Products	**Garrett's Score**	**Mean**
Groceries	6080	60.8
Furniture	5383	53.83
Electronics	5549	55.49
Cosmetics	5151	51.51
Leather items (ex. Footwear, Bags, etc.)	4414	44.14
Stationery items	4475	44.75
Others (Ex.Toys etc.)	3848	38.48
Source: Primary data		

Table 2 concluded that groceries items are most preferred products type among customers at SKDS because mean value shows at 60.80 and then electronics items (Mean 55.49), Furniture items (Mean 53.83), Cosmetic items (Mean 51.51). On the other hand toys, footwear, bag items are least preferred products type at SKDS.

Analyze the Relationship of Variables: Kaiser-Meyer-Olkin (KMO) and Bartlett's test of Sphercity

The KMO measure of sampling adequacy is an index that compares the sizes of the observed correlation coefficients to the sizes of the partial correlation Coefficients. It is derived as follows

$$=(\sum\sum r^2_{ij})/(\sum\sum_{r2ij}+(\sum\sum a^2_{ij})$$

Further, Bartlett's test of Sphericity tests whether the correlation matrix is an identity matrix, which would indicate that the factor model is inappropriate or appropriate. Here, chi-square also considered and it is calculated as follows

$$= [(n-1)-1/6(2p+1+2/p)]\ [In|S|+pIn(1/p)\ \sum I_j]$$

p=number of variables

k=number of components

$\mathbf{I_j}$ =jth eigen value of Sdf=(p-a) (p-2)/2

Ho: There is no significant of correlation between variables

Ho1: There is a significant of correlation between variables

Table - 3: Test Statistics		
KMO Sampling Adequacy		0.667
Bartlett's test of Sphericity	Approx. $\chi 2$	1035.499** with df 325
** Sig, @ 1% & *Sig.@ 5% level		
Source: Primary data		

Bartlett's test of sphericity is used to test whether the correlation matrix is an identity matrix. The test value (1035.499**) and the significance level (P<.01) which are given above indicate that the correlation matrix is not an identity matrix, i.e., there exists correlations between the variables. The KMO measure of sampling adequacy measure is closer to 1, and then it is good to use for further analysis. The value of KMO test statistics gives that 0.667, which means for the selected variables is found to be appropriate to the data for conducting further interpretation.

Determining Factors on Customer Satisfaction at SKDS – Factor analysis Approach

Factor analysis is a generic name given to a class of multivariate statistical methods whose primary purpose is data reduction and summarization. Factor analysis identifies common dimensions of factors from the observed variables that link together the seemingly unrelated variables and provides insight in the underlying structure of the data. The common intention of factor analytic technique is to find way of condensing (summarizing) the information contained in a number of original variables into a smaller group of new composite factors with a minimum loss of information. In this current study, the Principal Component Analysis (PCA) was used. The PCA has been described as a mathematical procedure that uses an orthogonal transformation to convert a set of observations of possibly correlated variables into a set of uncorrelated variables called principal components. PCA is usually done when we have a number of observed variables that are believed to influence a given dependent variable, but then these variables are so many that they are correlated. In this situation we want a smaller number of important variables that will account for most of the variance in the observed variables. Further, varimax rotations have been used in order to simplify the factor structure by maximizing the variance of a column of pattern matrix because it is one of the most popular methods used in several social sciences research papers. In addition Eigen value is also used; it helps to find out the amount of variance in overall data. Finally, determination of the factors based on the factor score are estimated for each factor with a new name given about grouped variables. Below is the general form for the formula to compute scores on the first component extracted (created) in a PCA

$$\mathbf{Fi = W_{i1}X_1 + W_{i2}\ X_2 + \ldots\ldots\ldots\ldots\ldots\ W_{ik}\ \ X_k}$$

Where,

$\mathbf{F_i}$ = Estimate of the ith factor

$\mathbf{W_1}$ = Factor (weight) score co-efficient

k = Number of variables

Using all the variables regarding customer satisfaction SV1,SV2,SV3,……. and SV26, Factor analysis is performed in order to group the variables on priority basis based on the strength of inter-correlation between these opinions, called 'Factors' and clustering these variables in to the factors extracted and the results are presented in the following tables. Table - 4 gives the rotated factor loadings, communalities, eigen values and the percentage of variance explained by the factors. There were eight factors each having eigen value exceeding one for determine that the customer satisfaction. The Eigen values for five factors were 3.457, 2.901, 2.196, 2.186, 2.152, 1.737, 1.619, and 1.438 respectively. Further, factors have been extracted and these factors put together explain the total variance to the extent of 68%. In order to reduce the number of factors and enhance the interpretability, the factors are rotated. The rotation increases the quality of interpretation of the factors. There are several methods of the initial factor matrix to attain simple structure of the data. The varimax rotation is one such method to obtain better result for interpretation is employed and the results are given in Table – 5.

Table - 4: Antecedents of Customer Satisfaction at SKDS

Satisfaction	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Communalities**
SV1	0.079	-0.093	0.330	0.058	0.294	-0.051	0.113	0.700	0.719
SV2	-0.191	0.148	-0.193	-0.010	-0.158	0.105	0.053	0.730	0.668
SV3	0.046	0.059	-0.118	0.745	0.139	0.103	-0.032	-0.004	0.605
SV4	0.195	0.089	-0.003	0.781	0.054	0.083	0.087	0.184	0.707
SV5	0.309	0.079	0.208	0.655	0.034	-0.253	0.025	-0.107	0.651
SV6	0.364	0.127	0.158	0.153	-0.022	0.205	0.525	0.268	0.587
SV7	0.614	0.018	-0.116	-0.13	0.122	0.454	-0.035	0.080	0.638

				7					
SV8	0.749	-0.062	0.129	0.047	0.088	0.200	0.029	-0.235	0.687
SV9	0.684	0.098	0.256	0.067	-0.161	-0.238	0.080	-0.109	0.649
SV10	0.705	-0.005	0.243	0.070	-0.146	0.005	0.113	-0.133	0.613
SV11	0.318	0.268	0.551	-0.019	-0.045	-0.398	0.012	0.033	0.638
SV12	0.678	0.130	0.100	0.162	0.145	-0.100	-0.134	0.263	0.632
SV13	0.680	0.185	-0.154	0.085	0.310	-0.176	-0.200	0.077	0.700
SV14	0.0648	0.0594	0.427	0.135	-0.001	0.625	0.0683	0.0734	0.065
SV15	0.154	0.104	0.755	-0.044	0.071	0.210	-0.156	0.143	0.700
SV16	0.070	0.019	0.805	-0.025	0.035	0.097	0.075	-0.103	0.680
SV17	0.043	0.109	0.031	0.101	0.928	0.125	0.004	0.043	0.904
SV18	0.040	0.098	0.048	0.127	0.904	-0.100	0.108	-0.011	0.868
SV19	-0.035	0.812	0.037	0.064	-0.099	0.197	0.148	0.031	0.737
SV20	-0.022	0.684	-0.104	0.263	-0.059	0.285	0.198	0.183	0.706
SV21	0.136	0.787	0.081	-0.036	0.272	-0.143	0.156	0.024	0.765

SV22	0.184	0.683	0.178	0.011	0.190	-0.017	0.013	-0.060	0.573
SV23	-0.096	0.430	0.112	0.143	-0.039	0.614	-0.066	-0.015	0.610
SV24	0.327	0.007	0.042	-0.592	-0.028	-0.162	0.234	0.068	0.545
SV25	-0.009	0.317	-0.023	-0.069	0.030	0.255	0.739	0.189	0.753
SV26	0.114	0.407	0.090	0.071	0.126	-0.141	0.709	0.113	0.742
Eig. Value	3.457	2.901	2.196	2.186	2.152	1.737	1.619	1.438	17.686
% of Vari.	13.296	11.158	8.448	8.409	8.275	6.682	6.226	5.531	68.025
Cumu. % of Vari.	13.296	24.454	32.901	41.311	49.586	56.267	62.493	68.024	
Extraction Method: Principal Component Analysis									
Rotation Method: Varimax with Kaiser Normalization									
Source: Primary data									

Table - 5: Clustering of Parameters into Responsible Factors on Customer Satisfaction at SKDS

Factor	Variables	Factor loadings
Factor - I (13.296) {Customer value}	Parking facility (SV8)	0.749
	Complaint handling (SV10)	0.705
	Customer care (SV9)	0.684
	Store location (SV13)	0.680
	Employees knowledge about products (SV12)	0.678

	Longer opening hours (SV7)	0.614
Factor - II (11.158) {Easy to shop)	Displays about products information (SV19)	0.812
	Lighting arrangements (SV21)	0.787
	Availability of low price unbranded products (SV20)	0.684
	Timely service of products (SV22)	0.683
Factor - III (8.448) {Employees' response}	Response to queries (SV16)	0.805
	Individual attention given (SV15)	0.755
	Greeting on arrival to the store (SV11)	0.551
Factor - IV (8.409) {Service features)	Replacement of the product (SV4)	0.781
	Discount (SV3)	0.745
	Guarantee/Warrantee (SV5)	0.655
	Door delivery facility (SV24)	0.592
Factor - V (8.275) {Reputation of Store}	Store reputation (SV17)	0.928
	Personal choice for selection of items (SV18)	0.904
Factor - VI (6.682) {Service support)	Security arrangements (SV14)	0.625
	Sufficient stock (SV23)	0.614
Factor - VII (6.226) {Availability of products}	Availability of fresh products (SV25)	0.739
	Availability of branded products (SV26)	0.709
	All products under one-roof (SV6)	0.525
Factor - VIII (5.531) { Affordable price with good product quality}	Quality of the products (SV2)	0.730
	Price of the products (SV1)	0.700
Source: Primary data		

Interpretation-

Table-5 explains that the six variables SV8, SV10, SV9, SV13, SV12, and SV7 were grouped together as factor I and accounts 13.296% of the total variance. The four variables SV19,

SV21, SV20 and SV22 constituted the factor II and accounts 11.158% of the total variance. The three variables SV16, SV15 and SV11 constituted the factor III and accounts 8.448% of the total variance. The four variables SV4, SV3,SV5 and SV24 constituted the factor IV and accounts 8.409% of the total variance. The two variables SV17 and SV18 constituted the factor V and accounts 8.275% of the total variance. The two variables SV14 and SV23 constituted the factor VI and accounts 6.682% of the total variance. The three variables SV25, SV26 and SV6 constituted the factor VII and accounts 6.226% of the total variance. The two variables SV2 and SV1 constituted the factor VIII and accounts 5.531% of the total variance.

Regression Model for Answerable Factors on Customer satisfaction at SKDS

This part developing a model using proper multiple regression with the purpose of exploring the avswerable factors on customer satisfaction at SKDS. This analysis is made of Y-overall satisfaction, with the explanatory factors like X_1- customer value, X_2-easy to shop, X_3-employees' response, X_4-service features, X_5-reputation of store, X_6-service support, X_7 - availability of products andX_8- affordable price with good product quality The following regression model is fitted for performance:

$$\mathbf{Y = Y= b_o + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + e}$$

where,

b_1, b_2 are partial regression coefficients; b_o-constant

Ho_1: The factors like customer value, easy to shop, employees' response, service features, reputation of store, service support, availability of products and affordable price with good product quality have low answerable on the overall customer satisfaction at SKDS.

Table – 6: Final Model for Factors that Determine Customer Satisfaction at SKDS

Model	Unstandardized Coefficients		Standardized Coefficients	t	R^2
	B	Std. Error	Beta		
(Constant)	3.030	0.078		38.909**	
Affordable price with good product quality	0.972	0.078	0.700	12.423**	
Employees' response	0.458	0.078	0.330	5.857**	
Reputation of store	0.408	0.078	0.294	5.214**	.8
Availability of products	0.156	0.078	0.113	1.996**	36
** Sig, @ 1% & *Sig.@ 5% level					
Dependent Variable: Overall Satisfaction					
Source: Primary data					

Interpretation-

It is observed from the table – 6 that the coefficients for affordable price with good product quality, employees' response, reputation of store and availability of products are significant @ 1% level. It means that the above said factors are significantly responsible to determins the customer satisfaction at SKDS. Moreover, the above table report that every considered factor is positively related with the overall customer satisfaction at SKDS. The calculated value of 'f' in the analysis of variance of selected regression model for Y indicates the overall significance of the model fitted (Refer Table – 7). The coefficient of determination R^2 value shows that these variables put together explain the variations of Y to the extent of 83.6%.

Table - 7: Analysis of Variance for Regression

	SS	df	MS	f
Regression	133.297	4	33.324	54.95**
Residual	57.613	95	0.606	
Total	190.910	99		
** Sig, @ 1% & *Sig.@ 5% level				
Source: Primary data				

CONCLUSION

At present SKDS have greater competition in Coimbatore District with big retailers Like Reliance Fresh, Big Bazzar, More, The Nilgiris, Specenr's Retail, Mega mart etc. So, SKDS must assure quality and availability of new products and attractive promotional schemes, sufficient security arrangements and to enhance customer satisfaction. Besides these variables customer care activities are becoming significant issue. Further, customer relationship signifies identifying the needs of the customers and stretching out ways and means to satisfy them. The completed research work has reported that $2/5^{th}$ of the customers have made purchasing two times per month at SKDS. Finally, this empirical study concluded that the factors like affordable price with good product quality, employees' response, reputation of store and availability of products have highly responsible to determines the customer satisfaction at SKDS.

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RESEARCH OF THE REGION

ANALYZING THE STABILITY OF BETA FOR AUTO ANCILLARY STOCKS

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ABSTRACT:

The essence of this research work was to test the stability of Beta in different market phases on auto ancillary stocks for an insight to the volatility facet in the absence of the Arch (Autoregressive conditional heteroscedasticity) effect. Beta coefficients calculated by OLS estimates revealed that auto ancillary stocks are less risky than the auto index. Two econometric models viz. the dummy variable test and the chow test used to test structural breaks reject the null hypothesis of parameter stability. Finally the f test used to study an increase/decline in volatility revealed that volatility had declined for most of the stocks in the current period.

Key Words: Cumulative wealth index, Auto Index, Beta, Auto ancillary companies, Different market phases, dummy variable, parameter stability of beta.

INTRODUCTION:

The theory of beta estimates reflects investors' uncertainty about future cash flows to equity. The only determinant of an asset's systematic risk is its beta, i.e. a measure of variance of the portfolio to the market as a whole. This theory was developed by Sharpe (1964), Lintner (1965) and Mossin who propagated the Capital Asset Pricing Model (CAPM) (1966). Furthermore, Sharpe (1963) classified risk as systematic risk (relating to external factors which cannot be totally eradicated through diversification) and unsystematic risk (relating to company specific risk, which can be reduced to a considerable extent through portfolio diversification.) Hence, systematic risk influences all the securities in the market, whereas unsystematic risk is security specific.

Theoretically defined, (Rosenberg and Marathe, 1979) beta refers to the slope in a linear relationship fitted to data on the rate of return on an investment (dependent variable) and the rate of return of the market index (independent variable). A portfolio with beta greater than one refers to an aggressive portfolio, whereas a beta of less than one refers to a defensive portfolio. That means, in a booming market, an aggressive portfolio will achieve more than the benchmark, while in a bearish market, the fall of an aggressive portfolio would be prominent. On the other hand, when the market moves downwards, the fall in the defensive portfolio would be less than the benchmark portfolio.

To obtain better beta estimates, research focused on the use of time varying volatility models. Recent work supporting time-varying beta include Mckenzie et al (2000) for U.S. banks, Hillier (2000) for U.K. industry portfolio; and Shah (2002) for the Indian market. Their study shows that time varying betas re-estimate the relationship between risk factors and returns, contrary to traditional application of CAPM that assumes constant beta coefficient.

Hence the arch (1) model was applied to the study. However, in the absence of the arch effect, the f test was applied to study if volatility had increased or declined in the current period. Declining volatility in the sector could be attributed to recovery of the global economy and consolidation within the industry.

The Indian auto ancillary segment has transformed itself into a global hub for sourcing high value and critical components from a silent supplier of low value components to the domestic aftermarket. The transformation has come about on account of foreign collaborations, stringent practices and quality control measures. The result of this transformation was analyzed on security prices by assessing the stability of beta and measuring volatility.

The essence of this study is to analyze the stability of beta and assess its effect on the market value of auto ancillary stocks.
Section1 introduces the work, the review of literature is dealt with in section 2, data type and methodology is explained in section 3, section 4 provides the inference and section 5 concludes.

REVIEW OF LITERATURE:

Numerous studies have been carried out on nature, behavior and impact of the estimation interval of beta. Levitz (1974) showed that portfolio betas were highly stable whereas individual betas were highly unstable. Similar were the results of Blume (1970) and Altman et al (1974)

Evidence suggests that beta coefficient is sensitive to the chorological order and the formulae derived to assess its stability. For randomly selected portfolios, beta stability is comparatively trivial and unrelated to the number of securities in the portfolio. Porter and Ezzel (1975)
With reference to different securities market conditions Fabozzi and Francis (1977) considered the differential effect for bull and bear market on the NYSE for 700 securities. They used a Dual Beta Market Model (DBM) and recognized that most of the securities were stable in both market conditions.

Scott & Brown (1980) explored reasons for the instability of beta and concluded that instability resulted on account of concurrent auto correlated residuals and inter-temporal correlation between market returns and residuals. To estimate beta between two time periods, they derived an expression for instability.

Further, Chen (1981) proposed that a Bayesian approach is superior to the OLS estimate if the beta coefficient changes over time. Furthermore he reasoned that it was inappropriate to conclude that larger portfolio residual risk was associated with higher variability in beta.
Onour Ibrahim A (2010) analyzed risk (beta coefficients) for five sectors in the Kuwait Stock Market. The paper emphasized that higher volatility in risk factor implied additional difficulty in managing and controlling risk, than wider range of systematic risk which implied more exposure to risk. To model asymmetric impact of news on the market and skewness and fat-tailedness of stock return distribution, the normal distribution and skewed t-distribution specification was applied. The findings revealed that the Normal distribution model evidenced is superior in forecasting performance only in real estate sector. Also banks and real estate sectors exhibit relatively wider range of systematic risk variation compared to the other sectors.

Studies by Bildersee and Roberts (1981) had documented change in the value of beta in relation to the change in the interest rates. They showed that as interest rates fluctuated, betas fluctuated systematically. Jagannathan and Wang (1996) Lewellen and Nagel (2003) showed that betas varied on account of the leverage of the firm and the variance of the stock return.

The stability of beta was also examined with reference to security market conditions i.e the degree of return volatility persistence and time-varying nature of systematic risk by Schwert and Sequin (1990) on two Egyptian stock portfolios. The period of estimation was 2001 to June, 2004. The study propagated that persistent volatility of each portfolio and its systematic risk were significantly positively related. Hence the systematic risk of different portfolios tends to move in a different direction during the periods of increased market volatility.

Carl R. Chen examined the stability of beta and alpha in the market model resulting from the Three Mile Island accident. Weekly returns of seven utility stocks were assessed by a dummy variable test and Fisher F statistics to test stability of beta. Furthermore, the 70 utility stocks were partitioned into two portfolios for the test—nuclear and non-nuclear. For the non nuclear portfolio no changes were observed, whereas for the nuclear portfolio, alpha fell and beta rose—the impact, however, was momentary and immaterial; and the behavior of the residuals analyzed were consistent with an efficient market.

In the Indian perspective, studies conducted by Vipul (1999) examined company size, industry group and liquidity of the script on beta. The data consisted of 114 companies listed at Bombay Stock Exchange from July 1986 to June 1993. He documented that the size of the company affected beta values. However, the industry group and liquidity of the script do not affect beta.

Chawla D (2001) estimated the stability of beta using monthly data for a period of four years from April 1996 to March 2000. He used two econometric models including time variability in the regression equation and dummy variables for the slope coefficient. His conclusion rejected stable betas for most of the stocks.

Chawla Deepak (2003) examined the influence of bull and bear markets on the stability of alpha and beta for the single index market model. The period of the study was March 01, 1996 to March 31, 2001. The researcher estimated a dummy variable regression, conducted joint test (F test) on alphas and betas, tested for correlation coefficient and the paired t-test. The results suggested that alpha varied over both definitions of bull and bear market conditions whereas beta varied for one definition and was stable for the other. The variability of beta also depended upon specific industry groups and the choice of bull and bear market conditions.

DATA TYPE AND METHODOLOGY:

In order to estimate the stability of beta for the Indian auto ancillary industry, twenty–five leading companies in the segment that trade on the BSE were analyzed. Weekly data for a period of 6.5 years, from May 7th 2004 to Dec 18th 2011was assessed. The auto index was used as a proxy for the market index. The data was downloaded form www.yahoofinance.com.website.

The weekly returns based on adjusted closing prices were calculated, analyzing 398 data points for each of the 25 stocks. The time period chosen was 6.5 years because the data for compiling auto index was available from 2004 and according to Alexander and Chervany (1980) the best estimation interval is generally four to six years. The companies were chosen based on their market capitalization as depicted in annexure I. The companies that form part of the auto index are denoted by (*) mark.

The weekly returns for the auto index and the stocks had been computed by the following formula. Daily stock return or price change at time t, R(t) was converted to daily compounded return taking the logarithmic price relatives.
Return R(t) at time t is given by the following formula:

$$R_t = In\ (P_t/P_t\text{-}1) \quad \textbf{(Equation I)}$$

Where:
P_t is the adjusted closing price for day t relating to the auto index and the individual stocks respectively.

I) Regression Equation to Test Stability of Beta:

Beta for each of the 25 stocks for the entire span of 6.5 years was calculated using the regression equation for each phase separately.

The regression equation is given by

$$r_{i,t} = \alpha + \beta_{mt} + e \quad \textbf{(Equation II)}$$

Where:
$r_{i,t}$ = Return on stock i at time period t
mt = Return on auto index at time period t
e = Random error

α & β= Parameters to be estimated

If the beta (β) parameter is more than one, we conclude that the stock is riskier than the market. In order to test the stability of beta the null hypothesis (H_0) formulated was,
(H_0) = *beta is stable aver the entire period* under study.
The alternative hypothesis (H1) states that
H_1 = beta varies in different market phases.

II) <u>The Chow Test for Parameter Stability:</u>

While analyzing time series data by a regression model, structural changes may be noticed amid the relationship of the dependent and independent variables. A structural change means that the values of the parameters of the model do not remain the same through the entire time period. The structural changes may be due to external forces, or due to policy changes, e.g. Sept 06 to Dec 07 marked the beginning of the consolidation phase in the auto ancillary segment. A down turn in the sensex in Jan 2008 was attributed to the global financial crises established by the collapse of Lehman Brothers in September 2008. Hence analysis is carried out to find out whether values of parameters for auto ancillary stocks remain/do not remain the same throughout the period under study.

Hence six regression equations were estimated. One equation for the entire period of the study and five for the five market phases identified earlier, for each stock.

The regression equations are as follows:

$$\mathbf{r_{i,t} = \lambda_1 + \lambda_2 mt + u_t} \qquad \textbf{(Equation IV)}$$

$$\mathbf{r_{i,t} = \alpha_1 + \alpha_2 mt + u_t} \qquad \textbf{(Equation V)}$$

Equation (IV) for each market phase and Equation (V) for the whole period.
Hence, observations for the entire period were: n=398 and Observations for phase-I to phase-V were n_1=105, n_2=109, n_3= 34, n_4=102 and n_5=48 respectively. The *u*'s in the above regression equations represent the error terms.

Equation V assumes no structural changes for the entire period and estimates the relationship between stock prices and the market for the entire time period. (398 observations)

The possible structural change in the coefficient of the intercept, slope or both was tested by a formal chow test. Under the assumption of no parameter stability, equation (V) was estimated to obtain the restricted residual sum of squares (RSS_R) with df = $[(n_1+n_2+n_3+n_4+n_5) - k]$.

As two parameters were estimated; k=2 in the present case. As a restriction was imposed that the sub-period regressions were the same, the residuals are labeled restricted residual sum of squares. Secondly, estimated are the phase wise other regression equations and obtained is its

residual sum of squares, RSS_1 to RSS_8 with degrees of freedom, df = (no of observations in each phase − k).

Since the five sample sets are deemed independent, in the third step we add RSS_1 to RSS_8 to obtain what may be called the unrestricted residual sum of squares (RSS_{UR}**)** with **df = [(n_1+ n_2+ n_3+ n_4+ n_5) − 2k].**

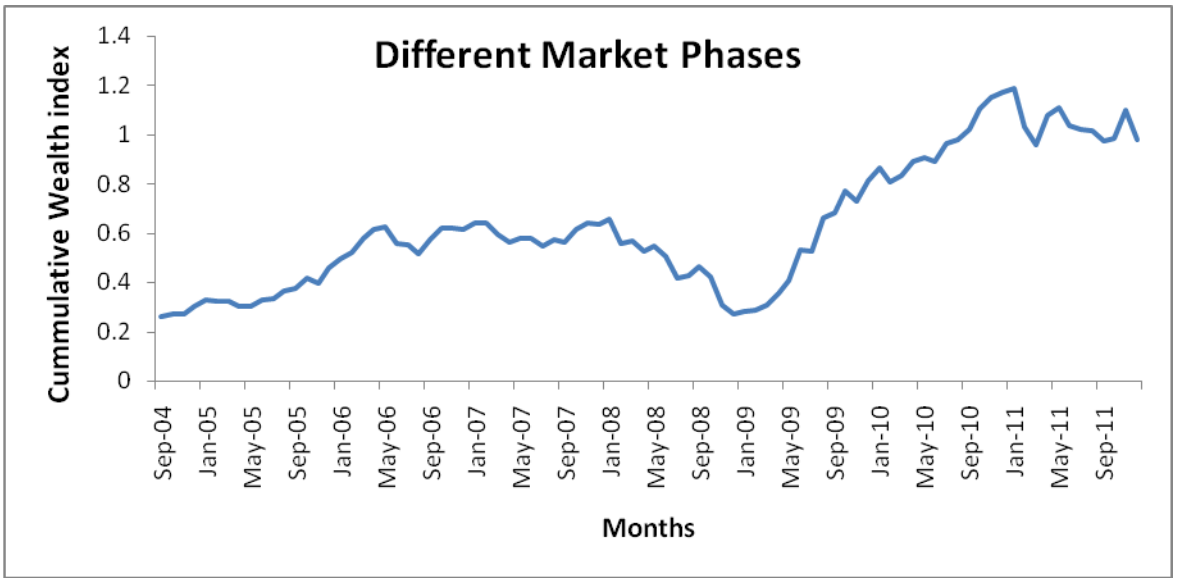
If the Chow test determined no structural change (i.e., all phases regressions found essentially the same), then RSS_R and RSS_{UR} cannot be statistically different.

In the fourth step the following ratio is formed to get the *F*-value.
$F = [(RSS_R - RSS_{UR})/k] / [(RSS_{UR}) / ((n_1 + n_2+n_3+n_4+n_5) - 2k)] \sim F [k, ((n_1+n_2+n_3+n_4+n_5) -2k)]$

The null hypothesis of parameter stability states no structural change if the calculated f value is less than the critical f value obtained from f table.

Based on the returns calculated using the wealth index (annexure II), the different market phases were identified using the chow test.
The five market phases identified are presented in the following table.

Market Phase	**Time**		**Trading/Trending Phase**
	Start Date	End Date	
I	9th Sept 04	1st May 06	Bullish (1)
II	8th May 06	26th May 08	Trending (1)
III	2nd June 08	19th Jan 09	Bearish
IV	27th Jan 09	3rd Jan 11	Bullish (2)
V	10th Jan 11	18th Dec 11	Trending (2)



Two trending phases identified are the II and V phase from 8th May 06 to 26th May 08 and 10th Jan 11 to 18th Dec 11.

The three trading phases identified are I, III and IV. Phase I and IV are bullish; 9th Sept 04 to 1st May 06 and 27th Jan 09 to 3rd Jan 11 respectively, whereas phase III is bearish - 2nd June 08 to 19th Jan 09.

III) <u>Testing the stability of Beta by analyzing Dummy Variables:</u>

As five market phases were identified, 4 dummy variables used in the new equation to avoid a dummy trap, are reframed as follows:

$$r_{i,t} = \beta_0 + \beta_1 * mt + \beta_2 * D1 * mt + \beta_3 * D2 * mt + \beta_4 * D3 * mt + \beta_5 * D4 * mt + e \quad \textbf{(Equation III)}$$

Where:
D1 = 1 for phase 1(9th Sept 04 to 9th Sept 04) data = 0 otherwise.

D2 = 1 for phase II (8th May 06 to 26th May 08) data = 0 otherwise

D3 = 1 for phase III (2nd June 08 to 19th Jan 09) data = 0 otherwise

D4 = 1 for phase IV (27th Jan 09 to 3rd Jan 11) data = 0 otherwise

Where:
$r_{i,t}$ = return on stock i in period t.
mt = return on market in period t.
e = error term and
$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$ & β_5 = coefficients to be estimated.

As five market phases were identified, four dummy variables were used in the above equation to avoid a dummy variable trap. The 5th phase viz. 10th Jan 11 to 18th Dec 11 was identified as the base period.

The insignificance of β_2, β_3, β_4 & β_5 indicate the stability of beta over time. If the coefficients are insignificant, the null hypothesis cannot be rejected.

If β_2, β_3, β_4 & β_5 are reported insignificant, the equation reduces to
$r_{it} = \beta_0 + \beta_1 * mt + e$
which implies that beta is stable over time. If the above coefficients are statistically significant, we conclude that the stock beta is not stable in different market phases. Hence, the alternate hypothesis cannot be rejected.

IV) <u>Volatility Estimates of the Ancillary Stocks:</u>

To find if volatility has increased or decreased in the current period, an attempt was made to test the phenomena of volatility clustering (I.e. periods of swings followed by periods of relative calm).

In order to estimate the volatility clustering phenomena, auto regressive conditional heteroskedasticity (ARCH) model or the arch (1) model was applied. Time series data was tested for all stocks and found to be 1st difference stationary. (Table 1)

The regression equation used to determine the Arch (1) effect was as follows: The Arch (1) process or ARIMA (1, 0, 0) model is given by:

$$\mathbf{Y_t = \beta_0 + \beta_1 Y_{t-1} + e} \qquad \textbf{(Equation VI)}$$

Where
$\mathbf{Y_t}$ = Return on the individual stocks (measure of volatility)
$\mathbf{Y_{t-1}}$ = One period lag of the stock return.
The model suggests that volatility in the current period is related to volatility in the past periods. If the β_1 coefficient is not statistically significant, the arch effect does not exist. The significance of the β_1 co efficient is tested by the OLS Estimates, i.e. T-Ratio and its probability as well as the ARCH LM residuals test.

The ARCH LM residuals test is given by the equation

$$e_t^2 = \beta_0 + \beta_1 e_{t-1}^2 + \beta_2 e_{t-2}^2 + \cdots + \beta_q e_{t-q}^2 + v_t \qquad \textbf{(Equation VII)}$$

Where e is the residual.
The *F*-statistic is an omitted variable test for the joint significance of all lagged squared residuals.
The Obs*R-squared statistic is Engle's LM test statistic, computed as the number of observations times
R^2 from the test regression i.e. nR^2.

The null hypothesis for the Lagrange Multiplier (LM) for ARCH residuals tests states that there is no ARCH up to order *q* in the residuals.

V) Assessing Volatility by F Statistics

The F test was used to study whether volatility had increased /declined in the recent period. For this purpose, the data set was split up into two halves.

Pre volatility period: May 7th 2004 to December 31st 2007. The standard deviation in the time series data range of a stock is denoted by S_1^2

Post volatility period: 7th Jan 2008 to Dec 18th 2011. The standard deviation in the time series data range of a stock is denoted by S_2^2

N_1 = the number of observations in S_1 -1

N_2 = the number of observations in S_2 -1

In order to study whether volatility had increased in the post volatility period, the following procedure is adapted:

S_2^2 / S_1^2 □ $F_1\ N_2, N_1$ (Equation VIII)

VI) Inference:

The beta coefficients calculated using the Ordinary Least Square (OLS) technique as defined in equation (1) is presented in annexure III. Results suggest that beta values for all the stocks for the entire period and phase wise (except MRF) is less than one. For the entire period beta is maximum for MRF ltd. (0.829), followed by Bosch ltd. (0.63).The beta values of as many as twenty – three stocks contained in a sample of twenty – five are statistically significant in the overall period.

For Bosch ltd. beta in the fifth (trending II) phase is negative (-0.16). Hence, a negative beta stock, when added to a portfolio reduces the overall risk of the portfolio.

The beta for MRF ltd. recorded in the third i.e. the bearish phase is 3.1.This signifies that the stock is very risky. Gabriel India ltd. (0.59) and Jay Bharat Maruti Ltd. (0.74) also recorded high beta values during this phase compared to all other phases. However there are as many as nine stocks in this phase which reveal a negative beta.

For most of the stocks beta values are less than 0.0 indicating that stocks in the auto ancillary sector are less risky than the market.

The estimated results of Chow test are depicted in annexure IV. The results show that, in all the 25 cases the *F*-value is statistically significant.

Based on the *F*- statistics and its corresponding p-values, the null hypothesis of beta stability for the estimated market phases is rejected in all the 25 cases. The F-values supported by log

likelihood ratio and it p-values, Wald test and its p – values, reported statistical significance in all the cases.

The coefficients of the constant, the auto index and the dummy variables in each of the five different market phases identified are shown in Annexure V. As many as 9 companies in the sample of 25 have all four coefficients (β_2, β_3, β_4 & β_5) statistically significant corresponding to D1*mt, D2*mt, D3*mt or D4*mt, seven companies have three coefficients statistically significant, seven companies have two coefficients statistically significant and two companies have one coefficient statistically significant. Not a single company in the ancillary segment recorded all its four coefficients statistically insignificant. The R^2 value ranges from 0.8 to 0.3 and as many as five companies have an R^2 value more than 0.8. Hence the null hypothesis of a stable beta is rejected.

Hence from the analysis it is evident that the auto ancillary stocks reveal structural breaks and stock betas are not stable over time.

Ancillary stocks do not reveal the arch effect. The coefficient of the lagged term β_1 according to T – ratios is insignificant, (p value > 0.05) Moreover the p values of the F statistics and observed nR^2 in the ARCH LM test are highly statistically insignificant. As the null hypothesis cannot be rejected, it is concluded that none of the ancillary stocks reveal the ARCH effect. (Table II)
In the absence of the arch effect, increase/decrease in variance is determined by the f test (annexure VI). Findings reveal that volatility increased for MRF Tyres Ltd. and Exide industries ltd., in the recent times. (The critical value of table f for df 182,216 is less than the calculated f value.) However for the remaining stocks, the critical value of the F statistics is much higher than the variance calculated. Hence it is concluded that volatility has decreased to a significant extent, in the current period, for most of the stocks.

VII) Reason for Decline in Volatility:

Initially the industry was fragmented. However mergers and consolidations have strengthened the industry's bargaining power as majority of the increase in input costs are absorbed internally, decreasing the risk profile of this sector.
Due to consolidation within the industry Tier I players i.e. original equipment manufacturers (OEM) are not adversely affected by raw material price fluctuations especially steel, as they were before.

Mergers and acquisitions overseas have improved technology and ancillary companies are now less prone to fluctuations on account of the prevailing exchange rates.
Another peculiar feature of the industry is that the market share is dominated by a few players. The production of fuel injection systems is dominated by auto component major Bosch Ltd. who controls more than 80% of the market share. In products like batteries only two to three companies control 80% of the market share. Hence, increase in asset turnover

ratio, return on assets employed and working capital to sales are reasons for declining volatility.

Following a slump in the industry on account of the global meltdown, the recovery since the last year and a half could be attributed to factors such as strong buoyancy in the end-user industry, improved consumer sentiment and return of adequate liquidity in the financial system.

CONCLUSION:

The characteristic feature revealed by the auto ancillary segment is that the industry is fragmented and a few major players dominate the market. Large companies in the auto ancillary segment do not constitute front line stocks, the beta of the stock is less than 1 and the absence of the arch effect implies that volatility is not time dependent. To examine the stability of beta in different market phases, weekly return data of 25 stocks for a 6.5 year period was analyzed from May 7th 2004 to Dec 5th 2011. The auto index (BSE) was used as a proxy for the market index. The entire study period was divided into five market phases, viz. two bullish phases, one bearish phase and two trending phases. Initially the beta had been estimated for different market phases and also for the entire span of 6.5 years. The OLS estimates show that the beta values are less than one, indicating that the ancillary stocks are less volatile than the market, except in a few cases (In the third i.e. bearish phase beta for MRF ltd. is recorded at 3.1). Stocks also reveal a negative beta in nine cases.

Furthermore the beta stability is examined using two econometric models. In the first method the chow test was used. The beta coefficient was calculated using dummy variables in the second method. Both tests suggest the rejection of the null hypothesis of beta stability for all the 25 stocks confirming that ancillary stocks reveal structural breaks.

In the absence of the arch effect as revealed by the T statistics and LM ARCH residuals test, the increase/decline in volatility was estimated by the f test. For most stocks, volatility had declined in the current period. The major reason attributed to the decline in volatility was recovery of the global economy and consolidation taking place in the industry resulting in better bargaining power and economies of scale.

Table 1: Based on (Ordinary Least Squares) OLS the unit root test for residuals is as follows:

Test Statistic / Company	DF	Max. log-likelihood	Akaike Information Criterion	Schwarz Bayesian Criterion	Hannan-Quinn Criterion
Satyam Comp.	95.08	-11.6124	-9.6318	95.6318	93.2861
ICICI Bank	91.061	-10.8631	-7.6118	95.2118	92.0823
Mahindra	96.01	-9.3134	-9.5318	95.4315	94.2463
Suzlon Energy	98.081	-7.8102	-7.4311	95.6313	94.2562
Unitech ltd.	95.021	-11.2614	-9.2718	95.2311	94.2961
Zee News	94.04	-12.8134	-6.4321	95.4017	94.2876

95% critical value for the Dickey-Fuller statistic = -3.8207
Since the AIC test statistics is more negative than the 95% critical value we conclude that the time series data is 1^{ST} difference stationary for all the stocks.

Table II: Testing the significance of Arch Coefficient (β_1) by T- Ratios and LM Arch Residual Test

Ancillary Companies	**OLS Estimates T-Ratio [Probability]**	**LM Arch Residual Test**	
Bosch Ltd.	β_0=1.6283[.204] β_1=321.9498[.100]	F-statistic Obs*R-squared	851.74[.157] 769.56 [.121]
Exide Industries Ltd.	β_0=.25174[.101] β_1=166.4715[.300]	F-statistic Obs*R-squared	797.31 [.105] 705.47[.703]
Cummins India Limited	β_0 =.1743[.502] β_1=216.4715[.300]	F-statistic Obs*R-squared	775.14[.612] 566.211[.502]
Bharat Forge Ltd.	β_0=.258[.801] β_1=317.4715[.335]	F-statistic Obs*R-squared	763.34[.856] 648.43 [.40]
Motherson Sumi Systems Ltd.	β_0=.461[.201] β_1=436.4715[.100]	F-statistic Obs*R-squared	691 .56[.250] 531.47[.110]
Apollo Tyres Ltd.	β_0=.5172[.351] β_1=112.4715[.076]	F-statistic Obs*R-squared	751.74[.423] 711.95[.085]
MRF Ltd.	β_0=1.6283[.104] β_1=321.9498[.310]	F-statistic Obs*R-squared	771.29[.107] 621.82[.402]
Amtek Auto Ltd.	β_0=.25174[.201] β_1=166.4715[.400]	F-statistic Obs*R-squared	832.43[.220] 815.45[.520]
Amtek India Ltd.	β_0 =.1643[.202] β_1=216.4715[.700]	F-statistic Obs*R-squared	875.14[.312] 766.42[.785]
Fag Bearings India Ltd	β_0=.274[.201] β_1=317.4715[.600]	F-statistic Obs*R-squared	751.71[.231] 648.47[.690]
Amara Raja Batteries Limited	β_0=.731[.101] β_1=616.4715[.350]	F-statistic Obs*R-squared	651.20[.109] 631.41[.371]
Balkrishna Industries Ltd	β_0=.172[.201] β_1=312.4715[.802]	F-statistic Obs*R-squared	601.60[.232] 546.75[.808]
Sunderam Clayton	β_0=1.834[.604] β_1=526.23409[.560]	F-statistic Obs*R-squared	670.91[.607] 521.82[.570]
Federal-Mogul Goetze	β_0=.254[.501] β_1=211.4713[.470]	F-statistic Obs*R-squared	517.412[.591] 415.47[.531]
Automotive Axles Ltd.	β_0 =.1345[.322] β_1=251.4715[.801]	F-statistic Obs*R-squared	571.42[.337] 476.47[.900]
Jamna Auto Industries Limited	β_0=.327[.431] β_1=914.4715[.260]	F-statistic Obs*R-squared	511.31[.501] 479.47[.310]
Gabriel India	β_0=.27616[.871]	F-statistic	503.74[.800]

	β_1=853.4715[.101]	Obs*R-squared	431.43[.204]
Munjal Showa Limited	β_0=.5284[.701]	F-statistic	501.67[.768]
	β_1=527.4914[.300]	Obs*R-squared	482.75[.452]
Hindustan Composites Ltd.	β_0=.42136[.604]	F-statistic	511.74[.790]
	β_1=926.5135[.230]	Obs*R-squared	431.47[.351]
Sona Koyo Steering Systems Ltd	β_0=1.6283[.204]	F-statistic	473.19[.254]
	β_1=419.6438[.403]	Obs*R-squared	421.22[.501]
Lumax Auto Technologies Ltd	β_0=.25514[.321]	F-statistic	432.65[.411]
	β_1=286.4621[.210]	Obs*R-squared	415.25[.250]
Automobile Corporation Of Goa	β_0 =.1743[.502]	F-statistic	475.14[.532]
	β_1=218.4314[.603]	Obs*R-squared	326.15[.752]
Rico Auto Industries Ltd	β_0=.274[.721]	F-statistic	401.67[.771]
	β_1=258.3912[.630]	Obs*R-squared	378.15[.671]
Jay Bharat Maruti Ltd.	β_0=.4561[.061]	F-statistic	307.81[.067]
	β_1=497.4218[.201]	Obs*R-squared	481.16[.243]
Clutch Auto Ltd.	β_0=.5192[.081]	F-statistic	311 .74[.092]
	β_1=196.5614[.060]	Obs*R-squared	289.96 [.070]

The arch coefficient is not significant for ancillary stocks. The P value of the arch co efficient is > 0.05 for all the 25 stocks according to the T ratios as well as the LM ARCH residuals test.

Annexure I

Auto Ancillary Companies	Ticker	Market Cap. (Rs.Bn.)
Bosch Ltd. *	BOSCHL.BO	220.25
Exide Industries Ltd.*	EXIDEIND.BO	101.83
Cummins India Limited*	CUMMINS.BO	95.06
Bharat Forge Ltd. *	BHARATFORG.BO	60.99
Motherson Sumi Systems Ltd.	MOTHERSUM.NS	58.49
Apollo Tyres Ltd. *	APOLLOTYRE.BO	33.27
MRF Ltd.*	MRF.BO	31.49
Amtek Auto Ltd.	AMTEKAUTO.BO	28.28
Amtek India Ltd.	AMTEKIN.BO	21.74
Fag Bearings India Ltd	FAGBEARING.BO	19.21
Amara Raja Batteries Limited	AMARARAJA.BO	18.54
Balkrishna Industries Ltd	BALKRISI.BO	16.53
Sunderam Clayton	SUNCLAYTON.BO	12.07
Federal-Mogul Goetze	FEDMOGGOE.BO	11.61
Automotive Axles Ltd.	AUTOAXLES.BO	5.36
Jamna Auto Industries Limited	JAMNAUTO.BO	3.54
Gabriel India	GABRIEL.BO	3.23
Munjal Showa Limited	MUNJALSHOWA.BO	2.74

Hindustan Composites Ltd.	HINDCOMPQ.BO	2.37
Sona Koyo Steering Systems Ltd	SONAKOYA.BO	2.34
Lumax Auto Technologies Ltd	LUMAXTECH.BO	2.04
Automobile Corporation Of Goa	ACGL.BO	1.74
Rico Auto Industries Ltd	RICOAUTO.BO	1.4
Jay Bharat Maruti Ltd.	JBML.BO	0.99
Clutch Auto Ltd.	CLUTCH.BO	0.522

*Companies forming part of the auto index.

Annexure II

Data	Adj. Close	Returns (a)	1+R (b)	CWI (a+b)	Market Phases
4-Oct	2353.14	0.099	1.099	1.099	1
4-Nov	2597.2	0.088	1.088	2.187	1
4-Dec	2836.39	-0.011	0.989	1.989	1
5-Jan-05	2804.58	-0.009	0.991	1.991	1
5-Feb	2779.79	-0.050	0.950	1.950	1
5-Mar	2644.94	-0.007	0.993	1.993	1
5-Apr	2627.11	0.071	1.071	2.071	1
5-May	2820.43	0.029	1.029	2.029	1
5-Jun	2904.75	0.089	1.089	2.089	1
5-Jul	3174.14	0.017	1.017	2.017	1
5-Aug	3230.1	0.113	1.113	2.113	1
5-Sep	3617.12	-0.058	0.942	1.942	1
5-Oct	3414.65	0.154	1.154	2.154	1
5-Nov	3984.29	0.066	1.066	2.066	1
5-Dec	4256.45	0.057	1.057	2.057	1
6-Jan-06	4506.53	0.104	1.104	2.104	1
6-Feb	4998.68	0.063	1.063	2.063	1
6-Mar	5322.73	0.018	1.018	2.018	1
6-Apr	5416.74	-0.118	0.882	1.882	1
6-May	4812.05	-0.012	0.988	1.988	1
6-Jun	4753.58	-0.060	0.940	1.940	2
6-Jul	4476.87	0.099	1.099	2.099	2
6-Aug	4944.95	0.082	1.082	2.082	2
6-Sep	5365.72	-0.002	0.998	1.998	2
6-Oct	5357.22	-0.007	0.993	1.993	2
6-Nov	5321.85	0.036	1.036	2.036	2
6-Dec	5518.5	-0.001	0.999	1.999	2
7-Jan-07	5515.36	-0.076	0.924	1.924	2
7-Feb	5109.38	-0.048	0.952	1.952	2
7-Mar	4869.13	0.026	1.026	2.026	2
7-Apr	4998.71	0.003	1.003	2.003	2
7-May	5012.28	-0.056	0.944	1.944	2

7-Jun	4739.57	0.040	1.040	2.040	2
7-Jul	4933.83	-0.011	0.989	1.989	2
7-Aug	4878.05	0.089	1.089	2.089	2
7-Sep	5332.26	0.032	1.032	2.032	2
7-Oct	5507.17	-0.007	0.993	1.993	2
7-Nov	5469.5	0.036	1.036	2.036	2
7-Dec	5667.45	-0.159	0.841	1.841	2
8-Jan-08	4832.48	0.011	1.011	2.011	2
8-Feb	4887.17	-0.077	0.923	1.923	2
8-Mar	4524.77	0.044	1.044	2.044	2
8-Apr	4726	-0.082	0.918	1.918	2
8-May	4355.76	-0.195	0.805	1.805	2
8-Jun	3585.62	0.026	1.026	2.026	2
8-Jul	3679.51	0.084	1.084	2.084	3
8-Aug	4001.23	-0.085	0.915	1.915	3
8-Sep	3674.98	-0.314	0.686	1.686	3
8-Oct	2685.62	-0.142	0.858	1.858	3
8-Nov	2330.56	0.048	1.048	2.048	3
8-Dec	2444.71	0.022	1.022	2.022	3
9-Jan-09	2500.23	0.070	1.070	2.070	3
9-Feb	2682.51	0.132	1.132	2.132	3
9-Mar	3061.67	0.133	1.133	2.133	4
9-Apr	3498.24	0.276	1.276	2.276	4
9-May	4610.61	-0.011	0.989	1.989	4
9-Jun	4558.43	0.226	1.226	2.226	4
9-Jul	5713.68	0.028	1.028	2.028	4
9-Aug	5878.23	0.126	1.126	2.126	4
9-Sep	6664.25	-0.055	0.945	1.945	4
9-Oct	6307.2	0.107	1.107	2.107	4
9-Nov	7016.66	0.058	1.058	2.058	4
9-Dec	7435.83	-0.067	0.933	1.933	4
10-Jan-10	6953.2	0.031	1.031	2.031	4
10-Feb	7170.99	0.067	1.067	2.067	4
10-Mar	7671.24	0.017	1.017	2.017	4
10-Apr	7799.85	-0.013	0.987	1.987	4
10-May	7699.94	0.078	1.078	2.078	4
10-Jun	8323.3	0.012	1.012	2.012	4
10-Jul	8424.2	0.045	1.045	2.045	4
10-Aug	8813.79	0.078	1.078	2.078	4
10-Sep	9527.64	0.039	1.039	2.039	4
10-Oct	9909.91	0.019	1.019	2.019	4
10-Nov	10099.95	0.013	1.013	2.013	4
10-Dec	10235.41	-0.140	0.860	1.860	4
11-Jan-11	8894.58	-0.075	0.925	1.925	4

11-Feb	8252.92	0.118	1.118	2.118	4
11-Mar	9290.75	0.029	1.029	2.029	5
11-Apr	9559.94	-0.068	0.932	1.932	5
11-May	8932.74	-0.015	0.985	1.985	5
11-Jun	8798.48	-0.005	0.995	1.995	5
11-Jul	8758.83	-0.042	0.958	1.958	5
11-Aug	8396.16	0.012	1.012	2.012	5
11-Sep	8498.42	0.109	1.109	2.109	5
11-Oct	9477.19	-0.117	0.883	1.883	5
11-Nov	8434.28	0.024	1.024	2.024	5
11-Dec	8636.93				

Annexture III												
Ancillary Companies	**Entire Period**		**Bullish (1)**		**Trending (I)**		**Bearish**		**Bullish (1I)**		**Trending (II)**	
	β	**p-val**	**β**	**p-val**	**β**	**p-val**	**β**	**p-val**	**β**	**p-val**	**B**	**p-val**
Bosch Ltd.	**0.63**	0.00*	**0.76**	0.00*	0.54	0.00*	**0.55**	0.00*	0.065	0.00*	-0.16	0.293
Exide Industries Ltd.	0.015	0.00*	0.016	0.00*	0.018	0.00*	-1.02	0.4	0.017	0.00*	0.006	0.23
Cummins India Ltd.	0.08	0.00*	0.094	0.00*	0.19	0.00*	0.064	0.00*	0.099	0.00*	0.085	0.075
Bharat Forge Ltd.	0.018	0.00*	0.046	0.00*	0.11	0.162	0.01	0.37	0.042	0.00*	0.052	0.00*
Motherson Sumi Systems Ltd.	0.017	0.00*	0.018	0.00*	0.031	0.00*	-0.02	0.00*	0.024	0.00*	0.010	0.201
Apollo Tyres Ltd.	0.007	0.00*	0.0026	0.04*	0.010	0.00*	0.008	0.015*	0.003	0.00*	0.005	0.05*
MRF Ltd.	**0.829**	0.00*	**0.528**	0.00*	0.90	0.00*	**3.1**	0.00*	0.60	0.00*	0.36	0.032*
Amtek Auto Ltd.	-0.005	0.02*	-0.007	0.03*	-0.00	**0.94**	0.036	0.051	-0.01	0.00*	0.014	0.049*
Amtek India Ltd.	-0.007	0.486	-0.003	0.31	0.007	0.03*	0.006	0.21	0.003	0.17	-0.008	0.31
Fag Bearings India Ltd	0.109	0.00*	0.09	0.08	0.087	0.00*	-0.028	0.078	0.153	0.00*	0.057	0.395
Amara Raja Batteries Limited	0.018	0.00*	0.005	0.98	0.019	0.00*	0.09	0.003*	0.013	0.00*	-0.01	0.08
Balkrishna Industries Ltd	0.010	0.046*	0.055	0.039*	0.085	0.00*	0.004	0.793	0.127	0.00*	0.04	0.2
Sunderam Clayton	-0.056	0.00*	0.025	0.00*	0.048	0.00*	-0.11	0.00*	0.028	0.00*	0.017	0.00*
Federal-Mogul Goetze	0.009	0.00*	0.02	0.018*	0.042	0.00*	-0.05	0.001*	0.021	0.00*	0.011	0.046*
Automotive Axles Ltd.	0.0257	0.00*	0.035	0.00*	0.092	0.00*	0.054	0.015*	0.033	0.00*	0.021	0.027*
Jamna Auto Industries Limited	0.019	0.00*	0.023	0.00*	0.013	0.00*	0.023	0.00*	0.030	0.00*	0.013	0.011*
Gabriel India	0.007	0.00*	0.005	0.00*	0.009	0.00*	**0.59**	0.00*	0.007	0.00*	0.008	0.00*

Munjal Showa Limited	0.004	0.00*	0.002	0.03*	-0.06	0.06	-0.004	0.19	0.003	0.00*	0.00	0.741
Hindustan Composites Ltd.	0.00009	0.167	0.001	0.37	-0.02	0.465	-0.003	0.3	0.001	0.85	0.007	0.22
Sona Koyo Steering Systems Ltd	-0.005	0.002*	0.004	0.04*	0.002	0.00*	0.007	0.00*	0.000	0.45	0.002	0.00*
Lumax Auto Technologies Ltd	0.023	0.00*	0.024	0.00*	0.041	0.00*	-0.006	0.013*	0.031	0.00*	-0.00	0.99
Automobile Corporation Of Goa	0.018	0.00*	0.057	0.00*	0.019	0.004*	-0.10	0.00*	0.054	0.00*	0.045	0.00*
Rico Auto Industries Ltd	0.001	0.00*	3.44E-05	0.97	0.001	0.079	0.009	0.00*	-0.01	0.24	0.003	0.001*
Jay Bharat Maruti Ltd.	0.008	0.00*	0.011	0.00*	0.017	0.00*	**0.74**	0.00*	0.009	0.00*	0.018	0.00*
Clutch Auto Ltd.	-0.001	0.06	0.001	0.45	0.02	0.00*	-0.01	0.028	-0.01	0.25	0.009	0.003*

Annexure IV

Ancillary Companies	**F Statistics (P Value)**	**Log Likelihood (P Value)**	**Wald Statistics (P Value)**
Bosch Ltd.	199.1289 (0.000)*	632.4480 (0.000)*	1593.031 (0.000)*
Exide Industries Ltd.	85.77322 (0.000)*	124.1685 (0.000)*	171.5464 (0.000)*
Cummins India Limited	98.08371 (0.000)*	431.5827 (0.000)*	784.6697 (0.000)*
Bharat Forge Ltd.	61.38109 (0.000)*	320.4468 (0.000)*	491.0487 (0.000)*
Motherson Sumi Systems Ltd.	137.7992 (0.000)*	523.6065 (0.000)*	1102.394 (0.000)*
Apollo Tyres Ltd.	54.56 (0.000)*	155.7529 (0.000)*	218.2545 (0.000)*
MRF Ltd.	52.50239 (0.000)*	287.8241 (0.000)*	420.0191 (0.000)*
Amtek Auto Ltd.	191.0190 (0.000)*	614.8298 (0.000)*	1528.152 (0.000)*
Amtek India Ltd.	613.8109 (0.000)*	720.4321 (0.000)*	567.0870 (0.000)*

Fag Bearings India Ltd	145.2190 (0.000)*	538.5661 (0.000)*	1161.752 (0.000)*
Amara Raja Batteries Limited	20.79601 (0.000)*	72.28311 (0.000)*	83.18406 (0.000)*
Balkrishna Industries Ltd	23.64113 (0.000)*	156.7619 (0.000)*	189.1290 (0.000)*
Sunderam Clayton	271.6639 (0.000)*	730.4292 (0.000)*	2173.311 (0.000)*
Federal-Mogul Goetze	129.8637 (0.000)*	506.9236 (0.000)*	1038.909 (0.000)*
Automotive Axles Ltd.	202.787 (0.000)*	724.2923 (0.000)*	833.1567 (0.000)*
Jamna Auto Industries Limited	144.4107 (0.000)*	536.9649 (0.000)*	1155.286 (0.000)*
Gabriel India	258.3545 (0.000)*	323.987 (0.000)*	569.9871 (0.000)*
Munjal Showa Limited	78.16531 (0.000)*	375.3436 (0.000)*	625.3225 (0.000)*
Hindustan Composites Ltd.	58.79315 (0.000)*	311.225 (0.000)*	470.3452 (0.000)*
Sona Koyo Steering Systems Ltd	88.23839 (0.000)*	54.36523 (0.000)*	87.7072 (0.000)*
Lumax Auto Technologies Ltd	118.3325 (0.000)*	345.9620 (0.000)*	709.9953 (0.000)*
Automobile Corporation Of Goa	110.89 (0.000)*	462.4489 (0.000)*	882.7424(0. 000)*
Rico Auto Industries Ltd	81.3565 (0.000)*	75.9620 (0.000)*	219.9345 (0.000)*
Jay Bharat Maruti Ltd.	54.3652 (0.000)*	87.70722 (0.000)*	108.7305 (0.000)*
Clutch Auto Ltd.	198.5714 (0.000)*	631.5873 (0.000)*	1588.571 (0.000)*

* Denotes that the p value is significant.

Annexure V

Ancillary Companies	**Constant β_0**	**mt β_1**	**D1*Mt β_2**	**D2*Mt β_3**	**D3*Mt β_4**	**D4*Mt β_5**	**R^2**
Bosch Ltd.	788.96 (0.0000)	0.60 (0.0000)	-0.23 (0.0000)*	-0.048 (0.0037)*	0.28 (0.0000)*	-0.07 (0.0000)*	0.848
Exide Industries Ltd.	6261.75	-0.493	0.8141	-0.003	-0.112	0.069	0.864

	(0.0000)	(0.0000)	(0.0000)*	(0.8141)	(0.0035)*	(0.0000)*	
Cummins India Limited	475.937 (0.0000)	-0.041 (0.0000)	0.083 (0.0000)*	0.004 (0.0642)	0.002 (0.6551)	0.005 (0.0034)*	0.820
Bharat Forge Ltd.	361.182 (0.0000)	-0.0139 (0.0000)	0.001 (0.442)	-0.0183 (0.0000)*	-0.003 (0.317)	0.011 (0.0000)*	0.5038
Motherson Sumi Systems Ltd.	175.413 (0.0000)	0.012 (0.0000)	0.013 (0.0000)*	-0.005 (0.0000)*	-0.010 (0.0000)*	0.001 (0.0002)*	0.7831
Apollo Tyres Ltd.	443.341 (0.0000)	-0.842 (0.0000)	0.178 (0.0000)*	0.183 (0.0000)*	0.223 (0.4604)	0.326 (0.0000)*	0.78
MRF Ltd.	5118.672 (0.0000)	-0.284 (0.0000)	0.881 (0.0000)*	0.022 (0.4604)	0.238 (0.0000)*	0.023 (0.327)	0.70
Amtek Auto Ltd.	345.58 (0.0000)	-0.014 (0.0000)	-0.036 (0.0000)*	-0.022 (0.0000)*	0.027 (0.0000)*	0.005 (0.0000)*	0.576
Amtek India Ltd.	153.808 (0.0000)	-0.002 (0.0369)	-0.017 (0.0000)*	-0.017 (0.0000)*	0.003 (0.0050)*	-0.003 (0.0000)*	0.771
Fag Bearings India Ltd	1182.303 (0.0000)	-0.110 (0.0000)	0.027 (0.0000)*	-0.043 (0.0000)*	-0.027 (0.0000)*	0.020 (0.0000)*	0.77
Amara Raja Batteries Limited	569.58 (0.0000)	-0.341 (0.0000)	0.027 (0.0000)*	0.0142 (0.431)	0.052 (0.5504)	0.025 (0.245)	0.78
Balkrishna Industries Ltd	1040.109 (0.0000)	-0.075 (0.0000)	-0.079 (0.0000)*	-0.042 (0.0000)*	-0.086 (0.0000)*	-0.002 0.5504	0.326
Sunderam Clayton	780.9850 (0.0000)	-0.005 0.3911	-0.160 (0.0000)*	-0.112 (0.0000)*	-0.018 (0.1281)	0.005 (0.1960)	0.721
Federal-Mogul Goetze	324.8824 (0.0000)	-0.012 (0.0000)	-0.026 (0.0000)*	-0.036 (0.0000)*	-0.044 (0.0000)*	0.002 (0.0000)*	0.647
Automotive Axles Ltd.	542.7327 (0.0000)	-0.023 (0.0336)	-0.008 (0.0000)*	-0.039 (0.0000)*	0.005 (0.355)	0.015 (0.0000)*	0.593
Jamna Auto Industries Limited	97.50131 (0.0000)	-0.011 (0.0000	0.019 (0.0000)*	0.001 (0.735)	0.004 (0.743)	0.006 (0.108)	0.846

		)					
Gabriel India	57.459 (0.0000)	-0.031 (0.0020)	0.0145 (0.0000)*	0.0245 (0.735)	0.0341 (0.743)	0.0132 (0.0000) *	0.81
Munjal Showa Limited	62.68156 (0.0000)	-0.003 (0.0000)	0.001 (0.0000)*	-0.002 (0.0000)*	-0.003 (0.0000)*	0.002 (0.0004) *	0.487
Hindustan Composites Ltd.	533.419 (0.0000)	-0.008 (0.0000)	-0.005 (0.0000)*	0.002 (0.0000)*	0.001 0.3570	0.002 (0.0000) *	0.332
Sona Koyo Steering Systems Ltd.	19.59862 (0.0000)	0.008 (0.0000)	-0.001 (0.0000)*	-0.002 (0.0000)*	0.009 (0.0019)*	0.006 (0.0000) *	0.696
Lumax Auto Technologies Ltd	823.419 (0.0000)	-0.013 (0.0000)	-0.025 (0.0000)*	0.012 (0.0000)*	0.001 0.3570	0.0132 (0.0000) *	0.73
Automobile Corporation Of Goa	497.1679 (0.0000)	-0.031 (0.0000)	-0.018 (0.0000)*	-0.028 (0.0000)*	-0.024 (0.0000)*	0.010 (0.0000) *	0.56
Rico Auto Industries Ltd	79.594 (0.0000)	-0.051 (0.0020)	0.0156 (0.0000)*	0.0245 (0.735)	0.0341 (0.743)	0.0182 (0.0000) *	0.58
Jay Bharat Maruti Ltd.	175.937 (0.0000)	-0.031 (0.0000)	0.0145 (0.0000)*	0.0604 (0.0642)	0.008 (0.6551)	0.005 (0.0034) *	0.718
Clutch Auto Ltd.	121.8916 (0.0000)	-0.004 (0.0000)	-0.013 (0.0000)*	-0.012 (0.0000)*	-0.001 (0.3226)	0.005 (0.0000) *	0.618

Annexure VI	
Ancillary Companies	Variance S_2^2 / S_1^2
Bosch Ltd.	0.22
Exide Industries Ltd.	**1.78**
Cummins India Limited	0.54
Bharat Forge Ltd.	0.62
Motherson Sumi Systems Ltd.	0.08
Apollo Tyres Ltd.	1.23
MRF Ltd.	**1.67**
Amtek Auto Ltd.	0.40
Amtek India Ltd.	0.02
Fag Bearings India Ltd	0.01
Amara Raja Batteries Limited	0.003
Balkrishna Industries Ltd	0.06
Sunderam Clayton	0.001
Federal-Mogul Goetze	0.08
Automotive Axles Ltd.	0.006
Jamna Auto Industries Limited	0.03
Gabriel India	0.07
Munjal Showa Limited	0.02
Hindustan Composites Ltd.	0.03
Sona Koyo Steering Systems Ltd	0.09
Lumax Auto Technologies Ltd	0.06
Automobile Corporation Of Goa	0.05
Rico Auto Industries Ltd	0.02
Jay Bharat Maruti Ltd.	0.01
Clutch Auto Ltd.	0.11

Volatility has increased in the current period, for two companies namely; MRF Tyres Ltd. and Exide Industries ltd., (the critical value of table f for df 182,216 is less than the calculated f value.)

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ALIGNING OUR EDUCATION SYSTEM WITH THE NEEDS OF DEVELOPING ENTREPRENEURSHIP AND SKILLS FOR THE MSME SEGMENT

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ABSTRACT-

We live in a country where industrialization took roots and progressed at a lightning rate. Yet being a developing country much goes to the credit of the small level organizations which worked phenomenally to contribute to the development of the country. Having recognized a separate sector of the Micro, Small and Medium Enterprises (MSME), it has been reported by the Ministry that this sector contributes nearly 8 percent of the country's GDP, 45 percent of the manufacturing output and 40 percent of the exports. They provide the largest share of employment after agriculture. Widely dispersed across the country and producing a diverse range of products and services, these are said to be the nurseries for entrepreneurship and innovation.

Through this case study we have tried to find out about the experience of an enterprise already existing in this sector. The observation about the working and the difficulties about the expansion in this business in this have been concentrated upon and suggestions about the same have been made. The primary source of data for this case study is through the interview method and the observation during the industrial visits.

Keywords- MSME, GDP.

INTRODUCTION-

a) How do we look at MSME Sector?

The Micro, Small and Medium Enterprises (MSMEs) in India are covered under the regulation of the Micro, Small and Medium Enterprises Development Act, 2006. Ever since the establishment of such a regulatory body, the Ministry had had a number of programmes to help and assist entrepreneurs and small businesses. Ministry of MSME has constantly encouraged and honoured innovation and enterprise. It calls the sector and its organizations as "the engines of the growth". How to take further this journey of growth and progress is the talk of the hour.

b*) What is expectation from this Sector*?

In order to boost the growth of the micro, small and medium enterprises (MSMEs) sector during the Twelfth Five Year Plan an outlay of Rs 24,124 crore has been allocated for Ministry of MSME. This XIIth Plan allocation represents an increase of 133.53 percent over the XIth Five Year Plan allocation of Rs 10,330 crore.* However, how to vouch on this opportunity is to be concentrated upon.

INFORMATION ABOUT THE ORGANIZATION UNDER STUDY-

BIOCARE INDIA PRIVATE LIMITED, Nagpur

❖ *Company Profile :*

This company is a private limited company. "Biocare India" was established as a proprietorship firm in 1996, by Mr.Suhas Buddhe. It was reconstituted into a private limited company and registered as "Biocare India Private Limited" in the year 2000.

❖ *Specialty :*

This company has been rated by CRISIL under SME 2- 'High' level of credit worthiness adjudged in relation to other SMEs. It has ISO 9001:2008 certification and is a member of the International Federation of Organic Agriculture movements (IFOAM). To list a few more achievements, the organization won the International Achiever's Award, 2010, Udyog Bharati Award and the ASSOCHAM- 3rd Innovation Excellence Gold Award.

❖ *Management:*

The promoters have 17years of experience in the business; thereby demonstrating the ability of the management to steer the company through operation hurdles. This company currently operates as a Medium-level firm and is into manufacturing of Agro Products and also Neutraceutical Products. The company caters to a huge crowd of customers across Maharashtra, Madhya Pradesh, Karnataka and Chhattisgarh.

Inferences from the Company Profile:

The management body has people from different fields. This diversity adds up to the impressive achievement and progress of the organization. Directors are from field of Science, Management, Marketing and Finance. This approach towards the business is required in all upcoming and proposed projects for setting up an industry under the MSME segment. As also mentioned by CRISIL in its report, a well-defined organization structure, supported by qualified and experienced second-tier management along-with well-established relationships with suppliers has helped in the smooth flow of operations and the success. The same scenario is required to be adopted by the organizations for better results.

DEALING WITH THE ISSUES OF THE COMPANY-

❖ ***Entrepreneurship v/s Professional Education***

"Entrepreneurship is not merely starting a new venture, it is a mindset." It requires a certain level of skills to be an entrepreneur. Some people are born with this mindset; others hone their skills and attitude through education. In the present scenario, the aim of education is to attain a job in a reputed company with a hefty package. However, it is essential to divert the attention of educationist towards requirement of qualified workforce in the field of sector development. To do justice with the opportunity provided by the Government to expand and develop the MSME sector, entrepreneurship initiative and skill development is a must.

Whether it is an employee or the owner of a business, the existence of entrepreneurial mindset and skills is a requisite. This can be a hereditary trait or can be developed through apposite education. If the education system develops this attitude and skills in the students, they can change the face of the earth with their innovative ideas and vigorous energy.

Issues with MSMEs:

It has been observed that there s lack of awareness about the career opportunity in the MSME segment. Thus, requirement for the awareness drives to attract the potential manpower for proper operation of the enterprises and to add potentiality to the working.

As it is well known that the MSME sector forms the backbone of any economy, the development of this sector will result in the propulsion of the economy. The need of the hour is to imbibe attitudinal traits of positivity, motivation, innovation, open-mindedness, telescopic vision and a balanced approach towards life. These are the traits of an entrepreneur- a person who can face challenges, a risk-taker, a decision-maker, an innovator, a visionary, a leader, one who can build consensus and lead from the front. MSME Segment needs employees who have this attitude, so that they can fit in the structure of the organization, and who are passionate and dedicated towards their work. Such employees will prove to be an asset to and add to the growth of the MSME unit they get associated with. Moreover, if such individuals setup their own ventures, they add to the overall growth of the economy of the nation.

Another important issue to be highlighted upon with regards to this topic is the requirement of proper marketing for the products. Not only there is lack of awareness about career options in this sector, but also the products do not get a sufficient market scope. The marketing of these products should be and can be improved only through a positive approach of the marketing steam towards this sector. Less effective Marketing Platform for products.

ISSUES FACED BY THE ENTREPRENEURS IN CASE STUDY:

The organization under study has had 61 permanent employees and 35 contractual employees. However, the organization observed that there is less scope for campus recruitments for direct placements in some small or medium level enterprises. The recruited staff still needs training for the specific job requirements. Not all potential workforce is capable of matching with the job specifications and prescribed job descriptions required for particular tasks and projects.

Management is required to allot an ample amount of investment into training and development of the hired manpower. Hence, it is necessary to align our education system in a way that it helps to overcome this hurdle.

Talking about the company refereed for the case study, the staff has faced problems in trying to convince the farmers about the use of organic products in agriculture. There needs to be special courses or seminars for the farmers to understand that going organic are the need of the hour. MSME sector provides a good platform to natural and safe products which are otherwise superseded by the synthetic products in market today. This platform needs to be done justice with. Missing soft skills to convince and coordinate with the customers

CONCLUSIONS AND SUGGESTIONS-

Having discussed the issues, we see that this puts an added responsibility on the management institutions which are at the core responsible for teaching management skills to the students; entrepreneurship development and marketing management in particular. The management institutions and the faculties need to create an environment which is suitable for the next generation entrepreneurship crop. The right platform and environment can help the students develop entrepreneurial mindset and skills that will enable them to be better employees and owners of businesses. The hidden talent and skills of the students needs to be identified and honed to perfection. The management course should not only teach the skills of managing a business but also cultivate the desired attitude and mindset leading to change in overall persona of the student.

For example- These days there are various diploma courses for Banking Industry or even the course offered by CII for expertise in Supply Chain Management. On a similar platform there should be some training or course designed to train the students for development of skills required in MSME sector. There are Training and Development programmes run by the MSME Development Institute yet a preliminary introduction of the work area can still be provided to the students and an ambit be framed for the students to divert their attention towards scope and opportunity in the MSME sector.

MSMEs need to be developed and can focus on the rural development through job options and chance for entrepreneurship development. For this there needs to be some sort of induction session for the rural population. For technical work also covered under MSME-products, there needs to be some special training programme. Not all rural population is

educated. So the courses be framed in a manner that literacy need not be the hindrance. Practically capable manpower can help MSME work in rural sector too. This would serve on a large basis for the development of the rural sector as well.

This awareness and awakening for the importance of MSMEs can also be brought to the limelight by the Industrial Associations in the state, like the VIA (Vidharbha Industrial Association). There is lack of information about the financing facilities available for the startups in MSME sector. Training youth about the financial aspect of development of MSME segment will also lead to better of the market scenario.

The students of Management can be taught about marketing related to the products provided by the MSMEs. Just like Brand Management as a subject these products from small enterprises need to be taught about and impetus be given to proper Segmentation, Targeting Market and Positioning of the products.

Developing Women Entrepreneurship or even women employee empowerment can help in expanding the purview of MSME in rural area. Off late, Women workforce has come forward with great capacity and capability to handle the challenges. If this workforce receives training through some distance learning courses on theoretical approach and some seminars and training programmes for practical approach, it will definitely show MSME a way towards growing industrialization.

Lastly, there is utmost requirement of development of soft skills for the workers already engaged as well as though willing to join the MSME segment. Marketing for the products definitely requires a good soft skill aspect of the employees. The education institutions can organize certificate programmes for the students who require this. It will change the scenario up to a great extent for sure.

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