Pension System Reform in India: Analysis of the Impact on the Administration and Regulation within the Pension System

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Abstract
This research focuses on the pension system in India and the pension systems reform that have been adopted to make the pension system more effective and efficient. The clamor for the pension reforms was driven by the challenges that existed within the old pension system structure in India. The pension reforms that were adopted in India were driven by various factors that include low pension coverage, pension system fiscal effects, high elderly poverty and administrative and regulatory ineffectiveness and inefficiencies. This research was borne from the weak and inefficient administration and regulations structure that existed within the pension system in India. The main focus of this research was to evaluate the impact of the adopted pension reforms on the administration and regulation structure within the pension system.The primary data that was used to evaluate the impact that the pension reforms have had on the administration and regulation within the pension system was gathered by the use of questionnaires which were administered across five major states within India, based on the Census population data. The questionnaire that was used was in the form of a structured questionnaire. The research had a high response rate averaging over 80% in all the states that were considered with Andhra Pradesh at 85.19% having the highest. The questionnaire data that was used in the analysis had a Cronbach alpha of 99.7% indicating a high degree of reliability.The research used a five point Likert scale including strongly disagree, disagree, neutral, agree, and strongly agree. The research tested the null hypothesis that the pension reforms have led to improved administration and regulations within the pension system. Out of the total respondents 127 strongly agreed and agreed with the research proposition that the pension reforms have improved the administration and regulations within the pension system.190 of the 217 research respondents were of the opinion that the pension reforms had not led to improved regulations and administration within the pension system. The research concluded that the pension reforms have not resulted in the improvement of the administration and regulations within the pension system.
Keywords: OASIS, Pension reform, pension system administration and regulation.

INTRODUCTION:

The administration and regulations within the pension system are very crucial in the ensuring the operationalization of any pension reforms. Successful implementation of any pension reforms entail increasing the effectiveness and effectiveness at all the facets and components of the pension system. The key focus of any pension reform on the improvement of the following aspects related to the administration and regulations within the pension system: Contribution, Payments, Communication and dispute resolution mechanisms. It is generally expected that successful pension reform in respect to the administration and regulations within pension system should have the following outcomes. First in should lead to improved efficiency and effectiveness in the collection and recording of contributions made within the pension system. Secondly it should lead to improvement in the process and framework of paying the pension benefits on retirement.

The retired need to be paid their pension contributions accurately and on a timely manner. Thirdly there should be improved communication and information provision within the pension system. This improved communication helps in the optimization of the information available within the pension system in decision making. Lastly there should be an improvement in the dispute resolution mechanisms characterized by faster dispute resolution period. Dispute resolution mechanism improvement also entails the disputes being resolved more fairly with the decision being anchored on the laws in India.

Structure of the Pension System in India.

The pension systems that have existed in India can be classified into four broad pillars that make up the structure of the pension system in India. These four pillars; the first pillar contains pension schemes that cover the employees of the government employees both at the central and at the state levels. The second pillar covers the formal and organized sector employees in India. Then third pillar is a form of social pension that covers poor during their old age. Finally, the fourth pillar offers voluntary pension coverage that is available to all the citizens and this is where the informal and self-employed are covered (Reserve Bank of India, 2003).

I. 1st Pillar: Pension schemes for the government employees.

The first pillar of the pension system in India is composed of the pension covers for the state and government employees. Prior to the adoption of the pension reforms in India that began in earnest in 2001 there existed various schemes that offered pension cover to the government employees. Below are some of the major schemes that were used to ensure saving for old age within the government sector.

Civil Service Pension System (CSPS)
The CSPS is a pension scheme that covers federal and state civil servants within India. The CSPS is a defined benefit pension scheme whereby under this scheme the state and the federal employees do not make any contributions into the scheme. The employee's contributions into the CSPS is financed by the federal and the state government's budget. (Gillingham & Kanda, 2001). The entitlement age for the CSPS benefits is 60 years and the benefit is based on the average salary paid to the employees during their final year prior to the retirement age of 60 years. The CSPS is organized into various classifications based on the occupation. Some of the major classification include; Railways, telecommunication sector and the Defense sector.
Government Provident Fund (GPF)
The GPF is set up as a defined contribution scheme whereby the employees within the state and the federal government contribute 8.33% of their salaries to the GPF. The GPF is set up as a pay as you go provident fund with the workers getting a lump sum payment of their contributions when they attain the retirement age of 60. The rate of return on the contribution was initially set at 12% of the employee's fund balance with the rate of return being reduced by 1.5% as from 1996 to 10.5% (Gillingham & Kanda, 2001).
New Pension Scheme (NPS) Introduced in 2004.
The NPS introduction formed the major framework for the pension reforms that have been adopted in India. The NPS after its enactment became the major pension scheme that covers employees within the state and federal sector in India. NPS changed the pension system for the federal and state employees from Defined Benefit (DB) to the defined Contribution pension scheme (DC) with any new employees in the state and federal governments being required to make monthly pension contributions. Under the NPS pension system the state and federal employees are supposed to contribute a minimum of 10% of their salaries with the government matching the 10% contribution by the employees. The old Civil Service Pension System (CSPS) continues to offer coverage to the state and federal employees who were employed before 2004.
II. 2nd Pillar: Pension schemes for the formal organized sector.
Employees' Provident Fund Scheme (EPFS) of 1952.
The EPFS scheme was introduced in 1952 and is the largest among the fully funded pension plans in India. The EPFS is mandatory for all the public sector in India and all the firms that employ more than 20 employees. For the firms that employ less than 20 personnel the EPFS is voluntary. The EPFS is pegged on the basic pay plus any allowable allowance up to Rs 6,500. Any employee who earns more than the Rs 6,500 is only deducted contribution for the first 6,500 but may if they wish to make voluntary contributions. The employees contribute 12% of their covered wages and the employer is supposed to contribute 3.67% of the covered employee's wages. Under the EPFS scheme the members are entitled to be paid when any of the following occurs; when an employee retires from active employment on attainment of the retirement age of 55 years they are entitled to be paid the pension benefits. An employee will also be paid the benefits if they suffer permanent and total incapacitation such that they can no longer be able to work. The employees who are members of the scheme will also be paid if they are retrenched from employment.
Employees' Deposit Linked Insurance Scheme (EDLIS) established in 1976.
The EDLIS was established in 1976 and applies to all the employees who work for establishments that are bound by the Employees' Provident Fund and Miscellaneous Provisions Act of 1952.The contributions in this scheme is at the rate of 0.5% and 0.25% of the employee's payment for the employers and the central government respectively. Under this scheme with the provisions stipulated as amended in 1996 the average of the provident fund in the last 12 preceding months is paid when an employee dies in service. The paid benefit is however restricted to a maximum of Rs 60,000 and the employee must have worked for at least five years before their death.
Employees' Pension Scheme (EPS) of 1995.
EPS scheme was established in 1995 to serve the role that was previously played by the Family Pension Scheme (FPS). The pension scheme is funded by the employers and the central government. The employers make a contribution equivalent of 8.33% of the employees' wages while the central government makes a contribution equivalent to 1.16% of the employees' wages. The Family Pension Scheme (FPS) balances were transferred to the employees EPS accounts after the establishment of the EPS to replace the FPS. The EPS was established to tackle three major contingencies that include an employee's death during service before the attainment of the retirement age. The EPS also helps in addressing issues relating with super annuation and permanent disability and incapacitation of the employees.

The pension benefits under EPS are calculated based on the employee's earnings over the last 12 months preceding their retirement. The retirement age for the eligibility of the pension benefits under this scheme is 58 years and is capped at a pensionable salary of Rs 6,500. The super annuation pension under EPS is payable on attainment of 58 years whether the employee is in service or not. Reduced pension under the EPS is payable to an employee who has left service but had worked for over 50 years prior to the time that they left the employment. Disablement pension is paid in the employee suffers permanent and irreversible damage that renders them in capable of working again. Other pension schemes under the EPS include the Widow-children pension; orphan pension and the nominee pension that applies when a member dies and there is no spouse or any children below 25 years.

Other smaller pension schemes.

The also exist other small pension provident schemes in the organized sector that include the following; we have the Coal Miners Provident Fund that was established in 1948 which is a mandatory provident fund for the workers who work in the coal mining sector. We also have the Assam Tea Plantation Provident Fund established in 1955 that covers the workers that work in the tea plantation sector. We also have the Jammu and Kashmir Provident Fund that was established in 1961.We also have the Seamens' provident fund that was established in 1966.

III. 3rd Pillar: Social Pension schemes old.

The third pillar within the pension system seeks to provide pension coverage to those below the poverty line and aged above the age of 65 years. The main goal of this pension scheme is to alleviate the poverty levels among the old in India. The major scheme within the third pillar is the Indira Gandhi National Old Age Pension Scheme (NOAPS) that was established in 1995. (Gillingham & Kanda, 2001).

IV. 4th Pillar: Voluntary pension schemes.

There are no mandatory pension schemes that ensure that the informal and the self-employed save for the retirement. Most of the pension scheme coverage available to the informal and the self-employed in India are voluntary in nature. The voluntary pension schemes are open to all the citizens. The main option available to the informal and the self-employed is the Public Provident Fund (PPF).

Public Provident Fund (PPF).

The Public Provident Fund (PPF) is managed and administered by the Central Government of India. The membership of the PPF scheme is open to both the formal and the informal sector employees. Under the PPF the contributions are contributed on a voluntary basis and the amounts contributed can range from Rs 100 as the minimum and Rs 70,000 as the maximum contributions per year. The maturity of the contributions made to the PPF is after 15 years with the option to extend the maturity for a further 5 years if the member wishes so. Partial withdrawals from the contributed funds under the PPF scheme is only allowed after lapsing of 5 years. Under the PPF this is a tax-exempt mechanism for saving that is appealing for tax-paying self-employed individuals. Despite this fact, owing to rules that permit easy withdrawal, it does not play a role in saving for old age (Dave, 2006). The easy withdrawal rules mean that the members of this scheme have little savings to cater for their need during old age.

Project OASIS and Pension Reforms in India.

Following the above challenges that the pension system was faced with pension reforms were of immediate importance so as to alleviate the strain within the current pension system. The current pension system that existed in India before the onset of the pension reforms had a major impact on the elderly and who as a result of the failed pension system became even poorer. The pension reforms that were adopted in India were carried out in consultation with the World Bank, Asian Development Bank and the Ministry of Finance in India. Project OASIS was formulated in 1998 as an eight-member committee spearheaded by the Ministry of Social Justice and Empowerment in India. The committee was charged with the duty of finding ways in which people would be encouraged to save more for their retirement (Committee of the Old Age Social and Income Security (OASIS), 2000).

The main goal of the pension reforms was to be able to reach out more to the informal sector and broaden the pension coverage to the informal sector. The pension reforms would also ensure that there were better-formulated tax incentives that would be used to promote more retirement savings. The project OASIS committee recommended that there was need to introduce a new pension scheme with Individual Retirement Accounts (IRAs). The new pension scheme with IRAs would be linked to individual employees rather that the employers under the pension system before the reforms.

The IRAs would be tagged to a unique number for each worker that would help in enhancing portability within the Pension system. The new system would have a minimum contribution of Rs 500 so as to capture a broad segment of the Indian population and also there was to be tax exemptions for contributions up to a maximum of Rs 60,000. The committee also proposed the creation of points of presence to ensure reduced transaction costs. The points of presence were to be used to collect contributions and distribute the pension benefits with increased efficiency.

The committee also proposed the establishment of pension depository that would facilitate the pooling of the individual contributions into large blocks that would in turn be delivered to fund managers for investment. Under the new pension scheme there would be establishment of six private pension fund managers (PFMs) that was meant to provide the workers with broader investment options for their pension contributions. The new pension fund management firms were to offer three investment options based on the level of the risk attached to each. The new pension system would also require that every retired worker purchase insurance annuities and this would ensure that the retired workers don't misuse all their pension benefits as is when paid in a lump sum (Committee of the Old Age Social and Income Security (OASIS), 2000).

Under the new pension system early withdrawals were to be banned and only allowed for pension fund balances in excess of Rs 200,000 and any withdrawal was also subject to 10% taxation. Under the new system there would also be establishment of an independent regulator to manage the whole pension system. All lump sum pension withdrawals were also subject to taxation and this was to encourage taking of annuities on retirement instead of lump sum payments. Under the new pension system, a National Senior Citizen's Fund (NSCF) would be established to help improve the quality of life for the retired elderly population.

The OASIS committee also made several recommendations geared towards the improvement of the current pension schemes. The EPFS was to be remodeled based on the Individual Retirement Accounts (IRAs) framework with early withdrawals restricted by punitive taxation for any withdrawal. The governments contributions made to the EPS were also to be stopped. The EPS was also to be remodeled based on the Individual Retirement Accounts (IRAs) framework and the rate of contribution changed to 10% for the employer. There should also be steps taken to ensure that the EPS becomes self-funding and the lump sum benefit payments were also to be discouraged (Committee of the Old Age Social and Income Security (OASIS), 2000).

Statement of the Research Problem.

This research addresses the challenge of reforming India's Pension System by looking into the administration and regulations within the pension system. The pension reforms that led to the adoption of the National Pension System (NPS) was meant to address the following short comings within the pension system; Multiplicity of schemes, Low coverage, escalating expenditure and the risk of underfunding, Pension fund administration and record keeping, Lack of investment choice, Low transparency of the system, and Lack of focus on keeping asset management fees low (Sane and Thomas, 2014; Vaidyanathan, 2004).

Gillingham, & Kanda (2001) noted in their research into the impact of the pension reforms that the administration and regulations within the pension system was crucial in the attainment of the full benefits of a well-functioning and streamlined pension system. Their research revealed that in relation to administration and regulations before the pension reforms there was laxity in the regulations within the pension system. Under this the pension and gratuity funds were hardly supervised by any statutory body in India. The research also noted that information regarding the administration and regulation was available with a huge time lag.

Gillingham, & Kanda (2001) noted in their research that weak regulatory structure within the pension system had resulted in poor service quality within the mandatory pension schemes before the adoption of the pension system. Their research identified the following challenges relating to administration and regulation within the pension system before the pension reforms; delays in the processing of the pension claims to members on retirement which indicated ineffectiveness and inefficiency in the payment of the pension benefits structure. There was also the challenge of crediting and updating the member's accounts with the correct amounts contributed.

There also existed the challenge of ensuring that the members are able to get updated statements on a timely basis. Just as an illustration of this administration and regulation weakness in the pension system the Employees' Provident Fund Organisation (EFPO) in India rarely used to publish any audited financial and actuarial financial statements. These statements from EFPO were also not easily available to the public. The access of this statements is usually crucial in ensuring that there is accountability within the pension system among the regulatory bodies within the pension system. The pension reforms were meant to streamline administration in the following key areas within the pension system; contributions collection, pension system record keeping, management of the assets and the payment of benefits. This research main purpose is to evaluate to what extent the pension reforms have been successful in bringing about the improvement of the administration and regulation within the pension system. Prior to the introduction of the pension reforms in India there was weak regulatory environment for the management of the various pension schemes in India. The information and data regarding the operation and management of the various funds was also not necessarily provided on a timely manner and there was lags in terms of provision of the information. The weak regulation and administration within the pension system was manifested in the delayed processing of the pension claims, delays in issue of statement of account to the members and delayed crediting of the interest earned in member accounts.

Research objectives.

The research was driven by the following research objectives:

1. To analyze the administration and regulation dynamics that existed in the pension system in India before the adoption of the pension reforms in India.
2. To analyze the administration and regulation dynamics that existed in the pension system in India after the adoption of the pension reforms in India.
3. To analyze if the adopted pension reforms resulted in the improvement of the administration and regulations within the pension system in India.
4. To make countermeasure policy recommendations that will support the success of the pension reforms

in India resulting in improvement of the administration and regulations within the pension system in India.

Research Hypothesis:

To evaluate the impact of the adopted pension reforms the research tested the following hypothesis;

H_0 *The pension reforms have led to improved administration and Regulation within the pension system.*

H_1 *The pension reforms did not result in improved administration and Regulation within the pension system.*

The null ***(H_0)*** and the alternative hypothesis ***(H_1)*** are as stated above. The analysis of the above hypothesis facilitated the determination if the adopted pension reforms have had the desired effect of improving the administration and regulations within the pension system. The research hypothesis is represented diagrammatically in figure below.

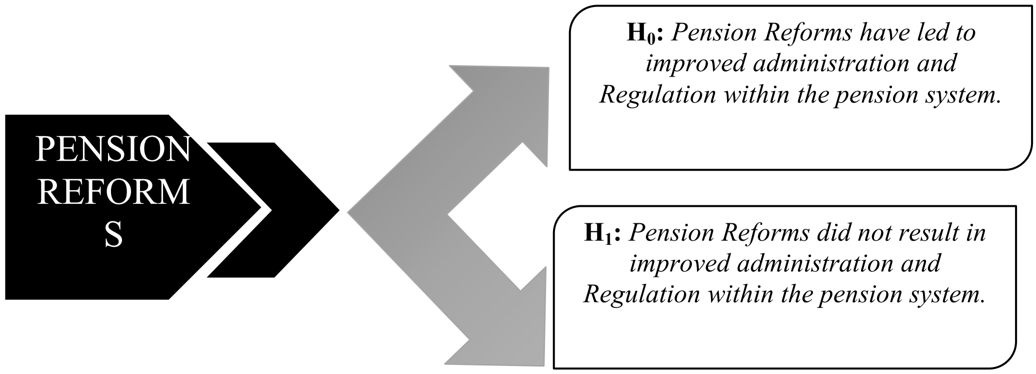

Figure 1: Administration and Regulation (Hypothesis).

LITERATURE REVIEW:

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Heller and Gillingham, (1999) through their research argued that any pension reform should be geared towards streamlining of the administration within the pension system. The research identified four administrative functions within the pension system that should be the goal of the pension reform. The first area is the streamlining of the contribution collection to ensure that the contributions are received and captured accurately on a timely basis. There also needs to be an effective and efficient record keeping system and infrastructure within the pension system. There also is the need to streamline asset management especially within the funded pension schemes. Finally, there should also be an effective and streamlined system of benefit payment within the pension system that ensures accurate pension benefits are paid and on a timely basis.

Dutta, (2008) carried out a research that sought to understand the social pensions performance in Rajasthan.

The research focused on various administrative aspects within Rajasthan. The research noted that the process of application for the registration into the social pension was a cumbersome one that required a lot of documentation. This in turn leads to ineffectiveness in the management of the social pensions thus having a negative impact of the administration within the pension system. The research also noted that there is significant time taken before the social pension benefits can be processed and sanctioned averaging six months in Rajasthan. The research also indicates that there was a slow disbursement process of the social pension benefits once approved for payment. This is due to the fact that over two thirds of the pension benefits were disbursed through money orders sent through the post office. The research proposed the introduction of a much faster medium of disbursing the pension benefits. Through the data analysis from the research it was apparent that another challenge in relation to the pension benefits payment was the fact that there was an increasing problem of irregular pension benefits payments. This meant that there were some pensioners that received social pension benefits that were contrary to the agreed schedule. Their research also identified an administrative problem in relation to poor record keeping where sampled data from various districts varied from the records that had been maintained.

Features of a good pension design.

A synthesis of the literature and theories explored suggest that there is the issue of acceptance of a particular pension scheme to the workforce for the sustainability of the scheme. Once that is achieved, certain key features of a good pension design include as Fornero (2013) summarizes it:

a. Good diversification of risks (i.e. a mixed pension provision, partly public and PAYGO and partly private and funded)
b. Good correlation, at the individual level, between contributions and benefits to enhance the “saving” role of a pension scheme
c. Direct correlation of benefits to the age of retirement (actuarial principle)
d. No “implicit taxation” of pension wealth with the postponement of retirement • Uniformity of rules, with limited and transparent exceptions
e. A balanced combination of mandates and choices (responsibilities)
f. Financial literacy

RESEARCH DATA:

To analyze the effect that the pension reforms had on the administration and regulation within the pension system the research adopted the qualitative research design based on the Questionnaire analysis. The research adopted the case study research design in the analysis of the impact that the pension reforms had on the administration and regulation within the pension system. Various descriptive, inferential and non-parametric methodologies were applied in the determination of the impact that the pension reforms had on the pension system in India. The testing of the hypothesis related to the impact of the pension reforms on the administration and regulation used primary data that was collected from five states in India that had the largest population as per the last Census in India.

The Questionnaire had three key sections. Section A of the questionnaire included the questions relating to the key features of the respondents. Information collected in Section A included the Gender of the respondent, Age, Location and the sector of the Employment. Section B of the questionnaire dealt with the impact of the pension reforms that had been adopted in India on the Administration and regulation within the pension system. Section C of the questionnaire dealt with the various independent variables that determine the administration and regulation aspects within the pension system.

The research had five broad determinants of the administration and regulation within the pension system. The five broad components of the administration and regulation within the pension system included; Communication and publicity, Pension Contribution, Pension benefits, the structure within the pension system and the dispute resolution within the pension system. The research had five question on each on the five component factors that determine the administration and regulation impact of the pension reforms. From this the research was able to establish the factors that are crucial for the success of the improvement of the administration and regulation within the pension system. The questionnaire adopted in the research had a five point Likert scale that was formulated as follows;(Strongly Disagree-1, Disagree-2, Neutral-3, Agree-4 and Strongly Agree-5). The higher the rating for each of the five components the higher the impact that component had on positive outcomes of the administration and administration. The research used the Chi square statistic and correlation to make conclusions regarding the hypothesis regarding the impact that the pension reforms had on the administration and regulation within the pension system.

The data used in the analysis of the impact of the pension reforms on the Administration and Regulation was based on primary data collected by use of questionnaires. The target population that was considered by the research when collecting the questionnaires was based on the India Census data. The target population for the research included the members within the top five most populated States in India based on the Census data as indicated in Table 4.1 below. The target population had a total of 591,772,355 members. The target population was further broken down into five categories according to the percentage of the State population to the total target population.

Table 4. 1 Target population for the Research.

Rank	State Name	Total Population	Percentage in Target population
1	Uttar Pradesh	199,581,477	34
2	Maharashtra	112,372,972	19
3	Bihar	103,804,637	18
4	West Bengal	91,347,736	15
5	Andhra Pradesh	84,665,533	14
	TOTALS	**591,772,355**	**100**

Source: (Census, 2011).

The percentage of each states population compared to the total population was used to determine the quota for each of the states. The Sample size that was used in the research to analyze the impact that the pension reforms had on the Administration and Regulation within the pension system was determined by the use of an online sample size calculator that applied the sample size formula given below. The sample size was determined using an online calculator from Survey Monkey ("Sample Size Calculator", 2017).

$$Sample\ Size = \frac{\frac{z^2 \times p(1-p)}{e^2}}{1+\left(\frac{z^2 \times p(1-p)}{e^2 N}\right)}$$

Where:
Population Size = N
Margin of error = e and z-score = z
The calculated sample size for the research is as indicated in the Figure 4.2 below:

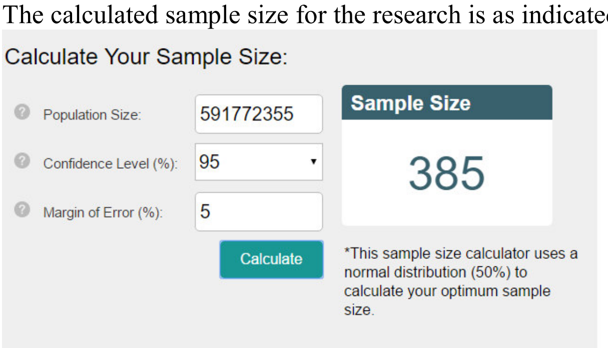

Figure 4.2Sample Size calculation:

The sample size used in the research was calculated as indicated in Figure 4.2 above where the confidence level used for the sample selection was 95% with a 5% margin of error. The sample size that was used in the research was a sample size of 385.The research used quota sampling method in the selection of the research respondents. The research was divided into five quotas based on the top five states in India according to the population totals from the Census that was conducted in India in 2011.The quota for each of the five groups was calculated by the use of the percentage of the state population in the target population multiplied by the total sample size as indicated in Table 4.2 below.

Table 4. 2 Sample size for the five Quotas.

Rank	State Name	Percentage in Target population	Sample Size
1	Uttar Pradesh	34	131
2	Maharashtra	19	73
3	Bihar	18	69
4	West Bengal	15	58
5	Andhra Pradesh	14	54
	TOTALS	**100**	385

Hypothesis Determination:

(a) **Reliability Analysis:**

Reliability analysis is very crucial in any research and more so a research that relies on the use of primary data gathered by the use of a questionnaire. For any questionnaire to be deemed as being reliable any respondents who are identical should have generally similar scores when answering the questions that underlie the questionnaire. On the other hand, respondents who are deemed to be completely different should not get similar scores but have differing scores (Field, 2009). For internal consistency and reliability within a questionnaire to be attained there needs to be a high degree of correlation among the component factors that are evaluating the same aspect. By splitting a data set into several groups and calculating the correlation there should be a high correlation for a questionnaire that is testing a similar aspect. The research used the Cronbach's alpha to evaluate the reliability of the questionnaire. The Cronbach's alpha analyzes and compares variances within the variables and the variance between the various scales used in the analysis.

Table 5.2.3. 13: Reliability Statistics.

	Cronbach's Alpha	Cronbach's Alpha %
a)Communication & Publicity:	0.986	98.6
b)Structure of the Pension System	0.985	98.5
c)Pension Contribution:	0.988	98.8
d)Pension Benefits:	0.988	98.8
e)Pension Disputes resolutions	0.99	99
Combined Dataset	0.997	99.7

The Cronbach's Alpha from the research is as indicated in Table 5.2.3.13 above where the Cronbach's Alpha for Communication & Publicity category is 0. 986.The Cronbach's Alpha for the Structure of the Pension System category is 0.985. The Cronbach's Alpha for Pension Contribution category is 0.988. The Cronbach's Alpha for Pension Disputes resolutions is 0.99 and finally, the Cronbach's Alpha for the whole data set factors is 0.997. The high Cronbach's Alpha indicated that this questionnaire data is highly reliable and hence appropriate for the analysis. The rule for a questionnaire to be reliable is the questionnaire should have a Cronbach's Alpha that is greater than 0.8 (Field, 2009).

(b) **Hypothesis evaluation:**

The research used a five point Likert scale with the rating scale ranging from 1 to 5 where 1 represented Strongly Disagree and 5 Strongly Agree as indicated in Table 5.2.3.14 below:

Table 5.2.3.14: Likert Scale.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

The hypothesis was evaluated by the main dependent variable which posed the statement that the pension reforms that had been adopted pension reforms have led to improved Administration and Regulation and within the pension system. The research also had other three factors that were closely related to the impact of the pension reforms on the administration and regulation within the pension system. Below in Table 5.2.3.15 we have the results for the impact of the pension reforms on the administration and regulation within the pension system.

Out of the 317 respondents who were included in this research 55 strongly disagreed with the statement that the pension reforms actually led to the improved administration and regulation within the pension system. Sixty-seven respondents disagreed with the statement that the pension reforms led to improved administration and regulation within the pension system.68 of the 317 respondents they were neutral to the fact that the pension reforms led to improved administration and regulation within the pension system.60 of the respondents supported the statement that the pension reforms led to improved administration and regulation within the pension system. Finally,68 strongly agreed with this statement.

Table 5.2.3.15: Pension reforms impact on Administration and Regulation.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
Frequency	55	67	68	60	67
Percentage	17.4	21.1	21.5	18.9	21.1

Table 5.2.3.16: Pension reforms impact on Administration and Regulation {Strongly Agree, Agree Vs. Strongly Disagree, Disagree and Neutral.

	Rating {1,2&3}	Rating {4&5}
Frequency	190	127
Percentage	59.94	40.06%

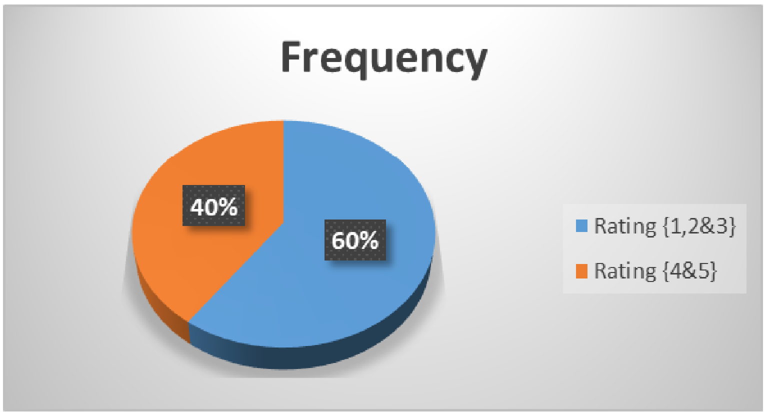

Figure 5.2.3.15: Rating 4&5 Vs. 1,2&3.

From Table 5.3.16 and figure 5.2.3.15 above we can see the distribution of the Strongly Agree, Agree Vs. Strongly Disagree, Disagree and Neutral. The total for those who Strongly Agreed and Agreed needed to be greater than the total of the respondents who Strongly Disagreed, Disagreed and the Neutral respondents for us to accept the null hypothesis. The null hypothesis is as stated below:

H_0 *The Pension reforms led to improved administration and Regulation within the pension system.*

H_1 *The Pension reforms did not result in improved administration and Regulation within the pension system.*

From Table 5.2.3.16 above the Total for the respondents who agree and strongly agreed is 127 and the total for the respondents who were Neutral, strongly disagreed and disagreed was 190.From this we can then go ahead and conclude that the null hypothesis is rejected and according to out sample respondents on average the pension reforms did not result to improved administration and regulation within the pension system.

Additional Regression Analysis:

To further understand the impact of the pension reforms on the administration and regulations within the pension system regression analysis was carried out. The regression analysis that was carried out.

Regression Model Specifications:

$\text{ADMNREG} = \beta_0 + \beta_1\text{COMT}+\beta_2\ \text{STRUT} +\beta_3\text{CONTRT}+\beta_4\text{BENET}+\beta_5\text{DISPT}+ \text{GENDER} +\text{AGE}+\text{STATE} + \text{WORKSECTOR} +\varepsilon$

Dependent Variable:

The dependent variable is ***(ADMNREG)*** which represents the percentage perception that the pension that have been adopted in India have resulted in the improvement of the administration and regulations within the pension system. The dependent variable is a derived variable from the research where people were asked to express the extent to which they perceived that administration and regulations within the pension system improved as a result of the pension reforms that had been adopted.

Explanatory Variables:

There are nine explanatory variables most of which are categorical in nature. The explanatory variables include the following. The main determinants of the improvement pension administration and regulation include the following five Likert based explanatory variables.

COMT: Represents the community and publicity question section total Likert score.
STRUT: Represents the structure of the pension system question section total Likert score.
CONTRT: Represents the Contribution question section total Likert score.
BENET: Represents the Benefit question section total Likert score.
DISPT: Represents the Dispute resolution question section total Likert score.

Regression Output Analysis:
From Table 5.2.3.17 below we can note the regression results for the various variables. The COMT variable is categorical that has five dummy variables within in. The dummy variables represent the various level of a five point Likert scale from 1 to five for Strongly disagree, Disagree, Neutral, Agree and Strongly agree respectively. The strongly agree is the base categorical variable. For the COMT variable we can see that the Neutral, Agree and strongly agree category strands are the only ones with significant relationships with the dependent variable.
STRUT: Structure of the pension system:
From Table 5.2.3.17 below we can note the regression results for the various variables. The Agree category strand has the only significant relationships with the dependent variable at the 0.05 level of testing.
CONTRT: Contribution:
From Table 5.2.3.17 below we can note the regression results for the various variables. The Disagree category strand is the only category which has non-significant relationship with the dependent variable.
BENET: Benefit:
From Table 5.2.3.17 below we can note the regression results for the various variables. For the BENET variable only the Neutral and Agree categorical strands have significant relationships with the dependent variable.
DISPT: Dispute resolution:
From Table 5.2.3.17 below we can note the regression results for the various variables. For the DISPT variable all the categorical strands have significant relationships with the dependent variable.

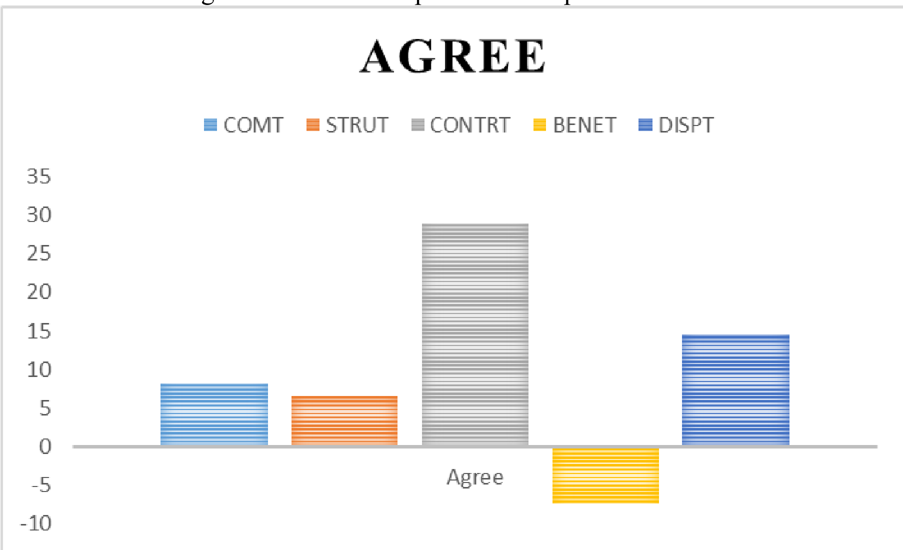

Figure 5.2.3.16: Factor rankings based on agree level.

From figure 5.2.3.16 above we can see the variable rankings based on the Agree level. By the use of the agree level the CONTRT has the strongest relationship with the dependent variable the percentage of improved pension administration and regulations resulting from the pension reforms. The dispute resolution mechanism component is the second strongest variable followed by the communication and publicity (COMT). The fourth is the improvement of the pension structure due to the pension reforms. The BENET has the weakest positive link resulting from the pension reforms. This situation holds true even when the Strongly Agree and both Agree and Strongly Agree combined as illustrated by figures 5.2.3.17 and 5.2.3.18 below.

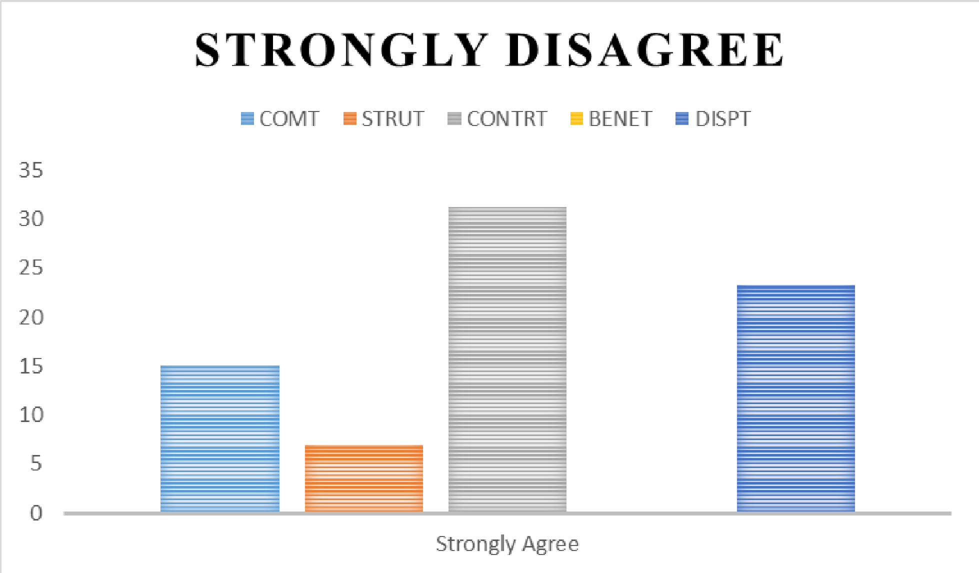

Figure 5.2.3.17: Factor rankings based on strongly agree level.

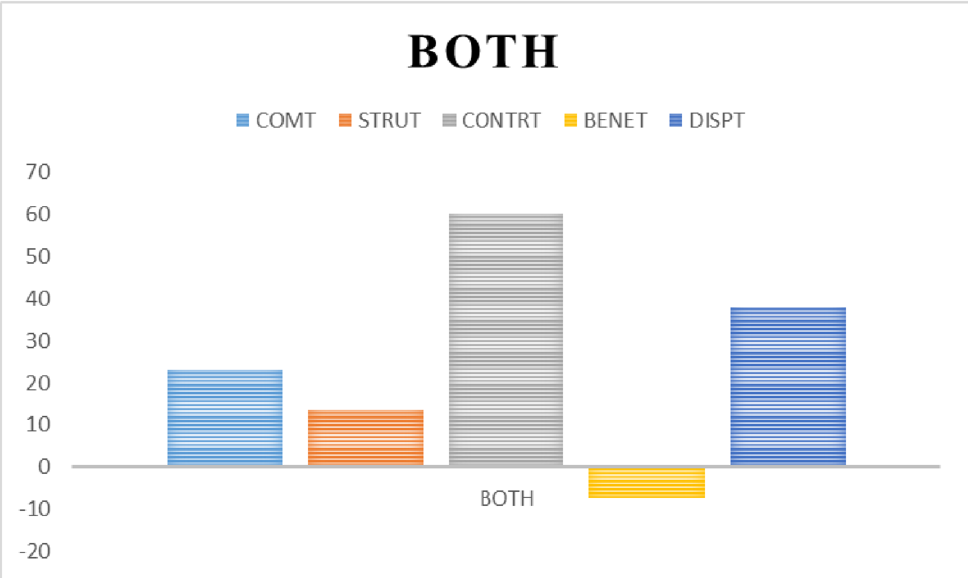

Figure 5.2.3.18: Factor rankings based on both agree and strongly agree level.

Table 5.2.3.17: Regression results for Explanatory Variables.

TOTAVERAGEPERCENTAGE	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
COMT						
Strongly Disagree	0	(base)				
Disagree	1.2151	1.0522	1.1500	0.2490	-0.8560	3.2862
Neutral	2.8714	1.3137	2.1900	0.0300	0.2857	5.4570
Agree	8.1290	1.5620	5.2000	0.0000	5.0545	11.2035
Strongly Agree	15.0020	2.6210	5.7200	0.0000	9.8431	20.1610
STRUT						
Strongly Disagree	0	(base)				
Disagree	1.7523	1.2238	1.4300	0.1530	-0.6564	4.1611
Neutral	2.2097	1.5205	1.4500	0.1470	-0.7831	5.2025
Agree	6.5628	1.7992	3.6500	0.0000	3.0215	10.1042
Strongly Agree	6.9072	3.3938	2.0400	0.0430	0.2272	13.5871
CONTRT						
Strongly Disagree	0	(base)				
Disagree	-0.7419	0.9384	-0.7900	0.4300	-2.5889	1.1051
Neutral	7.4382	1.2751	5.8300	0.0000	4.9284	9.9481
Agree	28.9035	1.6504	17.5100	0.0000	25.6550	32.1519
Strongly Agree	31.2349	1.8201	17.1600	0.0000	27.6524	34.8175
BENET						
Strongly Disagree	0	(base)				
Disagree	1.0676	1.0026	1.0600	0.2880	-0.9059	3.0411
Neutral	7.9666	1.1873	6.7100	0.0000	5.6297	10.3036
Agree	-7.3995	0.7182	-10.3000	0.0000	-8.8131	-5.9859
Strongly Agree	0	(omitted)				
DISPT						
Strongly Disagree	0	(base)				
Disagree	3.3965	1.1833	2.8700	0.0040	1.0673	5.7257
Neutral	9.9522	1.3918	7.1500	0.0000	7.2127	12.6917
Agree	14.5174	1.5904	9.1300	0.0000	11.3870	17.6478
Strongly Agree	23.3541	2.6375	8.8500	0.0000	18.1628	28.5454

Other Variables:

GENDER:

The GENDER variable was introduced in the regression analysis to further understand the dynamics of the link between the improvement percentage of the administration and regulation within the pension system as a result of the pension reforms. The GENDER was coded as 1 for Males and 0 for the Females. From the regression output in Table 5.2.3.18 below the Females had a higher percentage for the perception of improved administration and regulations within the pension system as a result of the pension reforms.

AGE:

For the AGE variable it is important that most of the links were significant at the 0.1 level of testing but not at the 0.05 level. From the regression data we can note that the oldest category of Over 50 had the highest positive perception of the improved administration and regulations resulting from the pension reforms.

STATE:

From the STATE variable regression output in Table 5.2.3.18 below the State where the highest improvement of the administration and regulations within the pension system from the pension reforms is Andhra Pradesh followed by Uttar Pradesh, Maharashtra, Bihar and finally West Bengal.

WORK SECTOR:

For the work sector the highest improvement in the administration and regulations within the pension system has been within the Private sector category employees. The category with the second highest positive improvement is in relation to the unemployed category and finally to the public sector and the self-employed category as indicated in Table 5.2.3.18 below.

Table 5.2.3.18: Regression output-Other Variables.

	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
GENDER						
Female	0	(base)				
Male	-0.1784	0.2635	-0.6800	0.4990	-0.6971	0.3403
AGE						
20-30 Years	0	(base)				
31-40 Years	-0.4557	0.3243	-1.4100	0.1610	-1.0940	0.1826
41-50 Years	-0.7208	0.3605	-2.0000	0.0470	-1.4303	-0.0112
Over 50 Years	0.3828	0.5006	0.7600	0.4450	-0.6025	1.3681
STATE						
Andhra Pradesh	0	(base)				
Bihar	-0.8573	0.4155	-2.0600	0.0400	-1.6751	-0.0396
Maharashtra	-0.6944	0.4202	-1.6500	0.1000	-1.5214	0.1327
Uttar Pradesh	-0.2691	0.3726	-0.7200	0.4710	-1.0025	0.4643
West Bengal	-0.9141	0.4443	-2.0600	0.0410	-1.7886	-0.0397
WORKSECTOR						
Currently Unemployed	0	(base)				
Private Sector	1.6007	0.5309	3.0200	0.0030	0.5558	2.6457
Public Sector	-0.2974	0.6129	-0.4900	0.6280	-1.5037	0.9089
Self Employed	-0.6489	0.6875	-0.9400	0.3460	-2.0020	0.7043
_cons	21.4303	0.8764	24.4500	0.0000	19.7052	23.1554

DISCUSION AND ANALYSIS:

This research focused on analyzing the impact of the pension reforms on the administration and regulation within the pension system in India. The null and alternative hypothesis are as stated below. The null hypothesis stated that the pension reforms led to improved administration and regulation within the pension system. The alternative hypothesis stated that the pension reforms did not lead to improved administration and regulations within the pension system.

H_0. *The Pension reforms led to improved administration and Regulation within the pension system.*

H_1. *The Pension reforms did not result in improved administration and Regulation within the pension system.*

The improvement of the administration and regulation within the pension system is a major goal of the pension reforms that have been adopted across various countries and India is no exception. The analysis of the impact of the impact of the pension reform was carried through questionnaire data analysis.

Hypothesis Determination:

The hypothesis was determined primarily through inferential statistics. Additional analysis relating to the questionnaire data was carried out to further understand the respondent data from the questionnaire. The research focused on five broad classification of various aspects of the pension system in relation to the administration and regulation: These broad categories within the pension system included the following:

- ✓ Communication & Publicity:
- ✓ Structure of the Pension System
- ✓ Pension Contribution:
- ✓ Pension Benefits:
- ✓ Pension Disputes resolutions

Reliability Analysis:

To ensure that the data that was used in the analysis was reliable reliability tests were carried out. For any questionnaire to be deemed as being reliable any respondents who are identical should have generally similar scores when answering the questions that underlie the questionnaire. On the other hand, respondents who are deemed to be completely different should not get similar scores but have differing scores (Field, 2009). For internal consistency and reliability within a questionnaire to be attained there needs to be a high degree of correlation among the component factors that are evaluating the same aspect. By splitting a data set into several groups and calculating the correlation there should be a high correlation for a questionnaire that is testing a similar aspect. The research used the Cronbach's alpha to evaluate the reliability of the questionnaire. The Cronbach's alpha analyzes and compares variances within the variables and the variance between the various scales used in the analysis.

Table 6.4. 1: Reliability Statistics.

	Cronbach's Alpha	Cronbach's Alpha %
a)Communication & Publicity:	0.986	98.6
b)Structure of the Pension System	0.985	98.5
c)Pension Contribution:	0.988	98.8
d)Pension Benefits:	0.988	98.8
e)Pension Disputes resolutions	0.99	99
Combined Dataset	0.997	99.7

The Cronbach's Alpha from the research is as indicated in Table 6.4.1 above where the Cronbach's Alpha for Communication & Publicity category is 0. 986. The Cronbach's Alpha for the Structure of the Pension System category is 0.985. The Cronbach's Alpha for Pension Contribution category is 0.988. The Cronbach's Alpha for Pension Disputes resolutions is 0.99 and finally, the Cronbach's Alpha for the whole data set factors is 0.997. The high Cronbach's Alpha indicated that this questionnaire data is highly reliable and hence appropriate for the analysis. The rule for a questionnaire to be reliable is the questionnaire should have a Cronbach's Alpha that is greater than 0.8 (Field, 2009).

Hypothesis evaluation:

The research used a five point Likert scale with the rating scale ranging from 1 to 5 where 1 represented Strongly Disagree and 5 Strongly Agree as indicated in Table 6.4.2 below:

Table 6.4. 2: Research Likert Scale.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

The hypothesis was evaluated by the main dependent variable which posed the statement that the pension reforms that had been adopted pension reforms have led to improved Administration and Regulation and within the pension system. The research also had other three factors that were closely related to the impact of the pension reforms on the administration and regulation within the pension system. Below in Table 6.4.3 we have the results for the impact of the pension reforms on the administration and regulation within the pension system.

Out of the 317 respondents who were included in this research 55 strongly disagreed with the statement that the pension reforms actually led to the improved administration and regulation within the pension system. Sixty-seven respondents disagreed with the statement that the pension reforms led to improved administration and regulation within the pension system.68 of the 317 respondents they were neutral to the fact that the pension reforms led to improved administration and regulation within the pension system.60 of the respondents supported the statement that the pension reforms led to improved administration and regulation within the pension system. Finally, 68 strongly agreed with this statement.

Table 6.4. 3: Pension reforms impact on Administration and Regulation.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
Frequency	55	67	68	60	67
Percentage	17.4	21.1	21.5	18.9	21.1

Table 6.4. 4: Pension reforms impact on Administration and Regulation {Strongly Agree, Agree vs. Strongly Disagree, Disagree and Neutral.

	Rating {1,2&3}	Rating {4&5}
Frequency	190	127
Percentage	59.94	40.06%

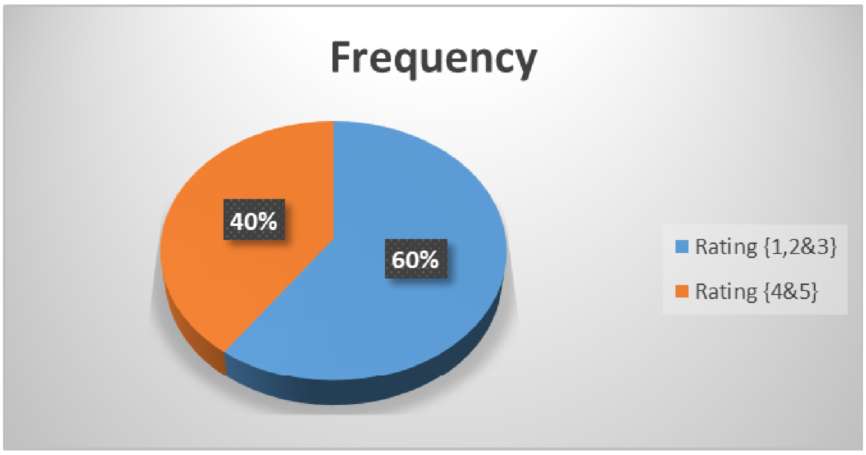

Figure 6.4. 1: The Rating 4&5 vs. 1, 2&3.

From Table 6.4.3 and figure 6.4.1 above we can see the distribution of the Strongly Agree, Agree vs. Strongly Disagree, Disagree and Neutral. The total for those who Strongly Agreed and Agreed needed to be greater than the total of the respondents who Strongly Disagreed, Disagreed and the Neutral respondents for us to accept the null hypothesis. The null hypothesis is as stated below:

H_0. *The Pension reforms led to improved administration and Regulation within the pension system.*

H_1. *The Pension reforms did not result in improved administration and Regulation within the pension system.*

From Table 6.4.4 above the Total for the respondents who agree and strongly agreed is 127 and the total for the respondents who were Neutral, strongly disagreed and disagreed was 190.From this we can then go ahead and conclude that the null hypothesis is rejected and according to out sample respondents on average the pension reforms did not result to improved administration and regulation within the pension system.

Additional Regression Analysis:

To further understand the impact of the pension reforms on the administration and regulations within the pension system regression analysis was carried out. The regression analysis was carried out so as to identify the strength of the various components that determine the effectiveness of the pension reforms in improving the administration and regulations within the pension system.

The regression analysis that was carried out.

Regression Model Specifications:

$ADMNREG = \beta_0 + \beta_1 COMT + \beta_2\ STRUT + \beta_3 CONTRT + \beta_4 BENET + \beta_5 DISPT + GENDER + AGE + STATE + WORKSECTOR + \varepsilon$

Dependent Variable:

The dependent variable is ***(ADMNREG)*** which represents the percentage perception that the pension that have been adopted in India have resulted in the improvement of the administration and regulations within the pension system. The dependent variable is a derived variable from the research where people were asked to express the extent to which they perceived that administration and regulations within the pension system improved as a result of the pension reforms that had been adopted.

Explanatory Variables:

There are nine explanatory variables most of which are categorical in nature. The explanatory variables include the following. The main determinants of the improvement pension administration and regulation include the following five Likert based explanatory variables.

COMT: Represents the community and publicity question section total Likert score.

STRUT: Represents the structure of the pension system question section total Likert score.

CONTRT: Represents the Contribution question section total Likert score.

BENET: Represents the Benefit question section total Likert score.

DISPT: Represents the Dispute resolution question section total Likert score.

The hypothesis relating to the impact of the pension reforms on the improvement of administration and regulation within the pension system was carried out on the basis of those who agreed and strongly agreed with the fact that the adopted pension system had improved the administration and regulations within the pension system in India. To further analyze and determine this hypothesis the above regression analysis was carried out on the five components of the pension system and the percentage perception regarding the improvement of administration and regulations attributable to the pension reforms. Further analysis on the agree and strongly agree Likert Scale categories of the five components and the dependent variable is presented in figures 6.4.2 and 6.4.3 below.

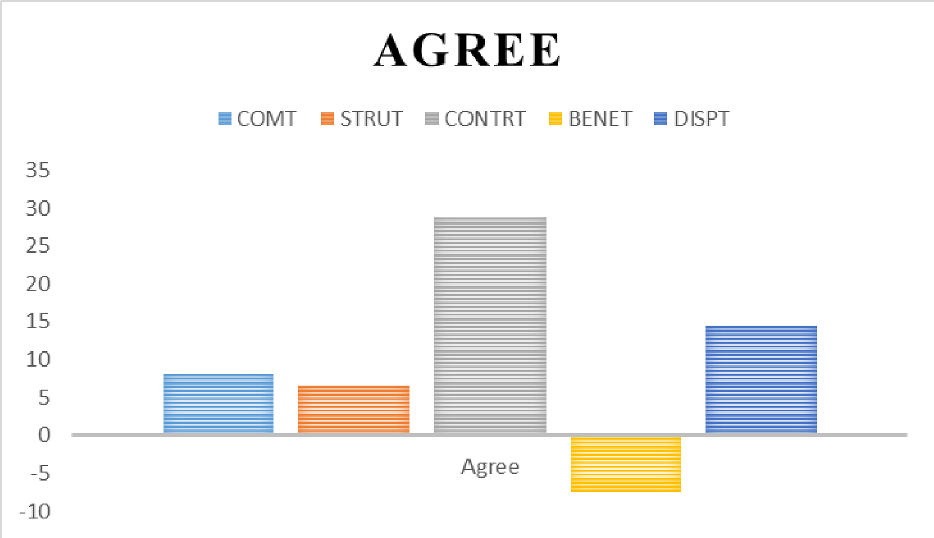

Figure 6.4. 2: Factor rankings based on agree level.

From figure 6.4.2 above we can see the variable rankings based on the Agree level. By the use of the agree level the CONTRT has the strongest relationship with the dependent variable the percentage of improved pension administration and regulations resulting from the pension reforms. The dispute resolution mechanism component is the second strongest variable followed by the communication and publicity (COMT). The fourth is the improvement of the pension structure due to the pension reforms. The BENET has the weakest positive link resulting from the pension reforms. This situation holds true even when the Strongly Agree and both Agree and Strongly Agree combined as illustrated by figures 6.4.3 and 6.4.4 below.

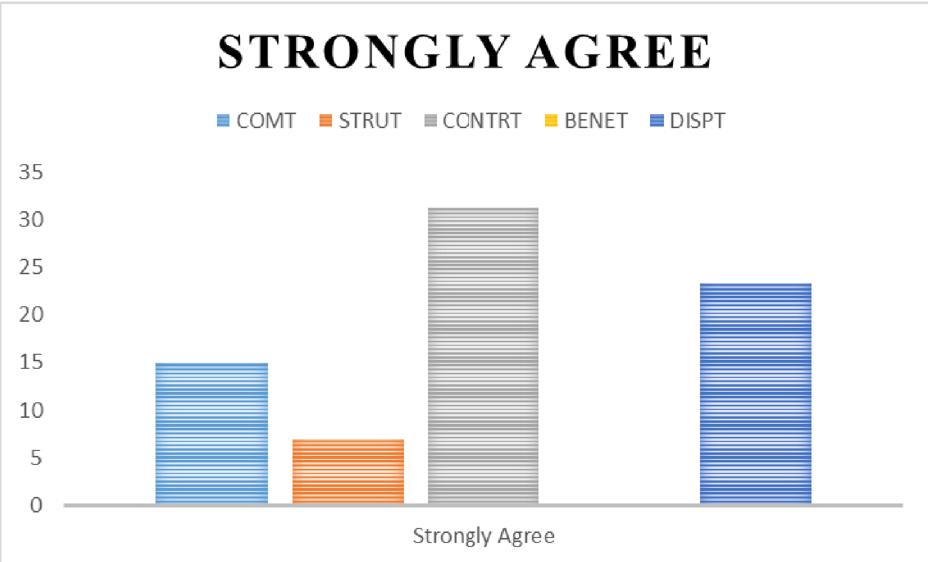

Figure 6.4. 3: Factor rankings based on strongly agree level.

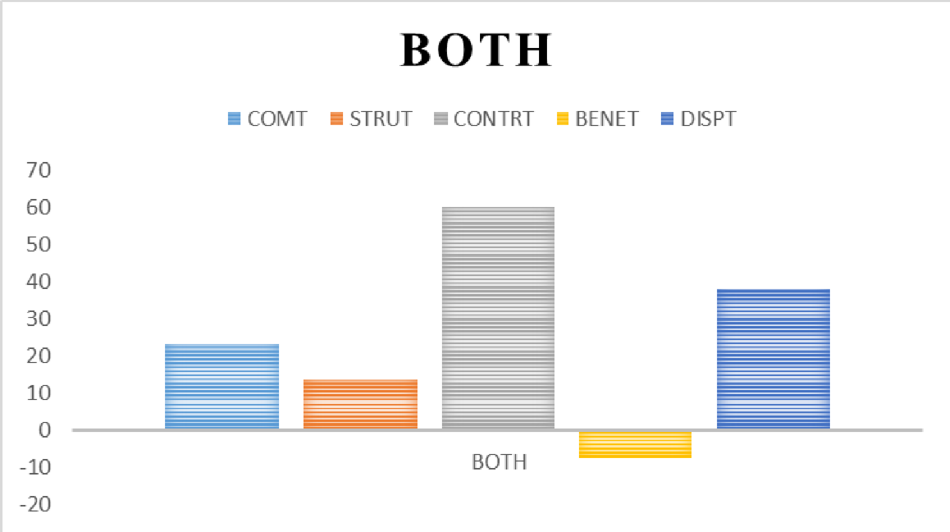

Figure 6.4. 4: Factor rankings based on both agree and strongly agree level.

From above we can conclude that the component of the pension system where we have had the biggest improvement of the pension administration and regulation is the pension contribution component followed by dispute resolutions, communication and publicity, pension structure and finally pension benefits.

From the above the cumulative perception among the respondents that were considered in this research is as indicated below:

Table 6.4. 5: Pension System Components.

	Perception magnitude	Cumulative
COMT: Community and publicity.	23.1310	23.1310
STRUT: Structure of the pension system.	13.4700	36.6010
CONTRT: Contribution.	60.1384	96.7394
BENET: Benefit.	-7.3995	89.3399
DISPT: Dispute resolution.	37.8715	127.2114
Cumulative Perception Magnitude		**127.2114**

The strength of the various components of the financial system in terms of the improvement of the administration and regulations within them resulting from the pension reform is as given above.

Other Variables:

GENDER:

The GENDER variable was introduced in the regression analysis to further understand the dynamics of the link between the improvement percentage of the administration and regulation within the pension system as a result of the pension reforms. The GENDER was coded as 1 for Males and 0 for the Females. The Females had a higher percentage for the perception of improved administration and regulations within the pension system as a result of the pension reforms. This may be interpreted as an indicator of the government adopting pension reform measures that boost the administration and regulations focused on the women in India.

AGE:

For the AGE variable it is important that most of the links were significant at the 0.1 level of testing but not at the 0.05 level. From the regression data we can note that the oldest category of Over 50 had the highest positive perception of the improved administration and regulations resulting from the pension reforms.

STATE:

From the STATE variable regression output the State where the highest improvement of the administration and regulations within the pension system from the pension reforms is Andhra Pradesh followed by Uttar Pradesh, Maharashtra, Bihar and finally West Bengal.

WORK SECTOR:

For the work sector the highest improvement in the administration and regulations within the pension system has been within the Private sector category employees. The category with the second highest positive improvement is in relation to the unemployed category and finally to the public sector and the self-employed category as indicated by the regression output.

Comparison with other research:

Gillingham, (2001) in conducting an analysis of the pension reforms in India highlighted the major role that is played by having effective administration and regulation within the pension system. The research noted that any reforms within the pension system should ensure that there is improved efficiency in the administration and regulatory framework. The research noted that weakness in the regulatory framework in the pension system will result in poor services being offered and increased complaints. They also noted that if there is an ineffective administration and regulation structure within the pension system there will be prevalence of problems like delayed pension benefit payments, delays in crediting customers' accounts with the contributions, delays in transfer of pension contributions from one pension scheme to another.

Their research proposed that an effective administrative structure within the pension system needs to focus on the following four key areas; Ensure that the pension contributions are streamlined and easy, ensure that accurate records are maintained within the pension system. There also need to be an effective structure of managing assets within the pension system. Finally, the distribution of the benefits need to take place devoid of any unnecessary delays and also ensure that there is accurate computation of benefits.

POLICY RECOMMENDATIONS:

The improvement of the administration and regulations within the pension system in India was a major driving factor that necessitated the pension reforms in India. The pension reforms that have been undertaken in India have been geared towards streamlining the administration and regulation within the pension system. The research carried out hypothesis testing to evaluate the effect of the of the pension reforms on the administration and regulations within the pension system. The research tested the null hypothesis that the pension reforms that had been adopted in India led to improved administration and efficiency within the pension system.

From the analysis of the respondent data from 317 respondents that came from five major States in India the null hypothesis and the pension reforms did not result in the improved administration and regulations within the pension system. From the research findings we can note various issues that need to be addressed relating to the administration and regulations within the pension system. The following recommendations should be adopted to improve the administration and regulations within the pension system.

i. ***Simplification of the pension structure:*** There is a need to simplify the pension system structure that exists in India. The system needs to be made much simpler to ensure that the stakeholders are able to understand how the system operates.

ii. ***Unification of various pension schemes:*** There should be enhanced unification of the various pension schemes that exist in India. The current structure of the pension schemes in India is huge and the various pension schemes need to be combined and this will make the management for the various pension schemes must more efficient.

iii. ***There should be increased measures to increase accountability:*** The central government should have more rules that ensure increased accountability in the pension system and this will ensure that fraud and corruption is eliminated from the pension system. There should be strict vetting of the managers of the various public institutions within the pension system.

iv. ***There should be a comprehensive national pension policy:*** The government should ensure that the scope of the National Pension Scheme is broadened and ensure that all the other pension schemes are run on the same structure as the NPS pension system.

v. ***More contracts should be signed with additional parties in the pension system:*** There should be legalization of more intermediaries to offer services in the pension system. More intermediaries should be involved in the pension contribution collection and pension benefits payments and this will improve efficiency and effectiveness in the pension system.

CONCLUSION:

This research focuses on the pension system in India and the pension systems that have been adopted to make the pension system more effective and efficient. The clamor for the pension reforms was driven by the challenges that existed within the old pension system structure in India. The pension reforms that were adopted in India were driven by various factors that include low pension coverage, pension system fiscal effects, high elderly poverty and administrative and regulatory ineffectiveness and inefficiencies. This research was borne from the weak and inefficient administration and regulations structure that existed within the pension system in India. The main focus of this research was to evaluate the impact of the adopted pension reforms on the administration and regulation structure within the pension system.

The primary data that was used to evaluate the impact that the pension reforms have had on the administration and regulation within the pension system was gathered by the use of questionnaires which were administered across five major states within India based on the Census population data. The questionnaire that was used was in the form of a structured questionnaire. The research had a high response rate averaging over 80% in all the states that were considered with Andhra Pradesh at 85.19% having the highest. The questionnaire data that was used in the analysis had a Cronbach alpha of 99.7% indicating a high degree of reliability.

The research used a five point Likert scale including strongly disagree, disagree, neutral, agree, and strongly agree. The research tested the null hypothesis that the pension reforms have led to improved administration and regulations within the pension system. Out of the total respondents 127 strongly agreed and agreed with the research proposition that the pension reforms have improved the administration and regulations within the pension system.190 of the 217 research respondents were of the opinion that the pension reforms had not led to improved regulations and administration within the pension system. The research concluded that the pension reforms have nor resulted in the improvement of the administration and regulations within the pension system.

Acknowledgment
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REFERENCES

1. Andreoua, M., & Pashardes, P. 2009, Income Inequality, Poverty and the Impact of the Pension Reform. *Cyprus Economic Policy Review*, 3(2): 41-55.
2. Ante, C. 2008, Pension Policy Reforms in Germany. Hertie School of Governance – Working Papers, 10.
3. Akobeng, A.K. 2005, Understanding systematic reviews and meta-analysis. *Archives of Disease in Childhood*. 90. pp. 845–848.
4. Apfel, K. 2014, Universal pension for Indians. Available from: http://www.livemint.com/Opinion/Dm7077Vme6Sj8dw6GG73sK/Universal-pension-for-Indians.html [Accessed: 29 th December 2015].
5. Arunachalam, R.S. 2007, *Micro-Pensions in India: Critical Issues, Challenges and Strategies for Future*. Study for CORDAID, NETHERLANDS
6. Asher, M. G. 2010, Pension Plans, Provident Fund Schemes and Retirement Policies: India's Social Security Reform Imperative. ASCI Journal of Management, 39(1): 1-18.
7. Asher, M.G. 2015, Pension system for the future needs new thinking. Available from:http://www.livemint.com/Money/RPcq0eT6ETpapLgndOOI8N/Pension-system-for-the-future-needs-new-thinking.html
8. Asher, M.G. & Bali, A.S. 2010, 'India's Social Security Systems : an Assessment',In Asher, M. G., S. Oum and F. Parulian (eds.), *Social Protection in East Asia – Current State and Challenges*. ERIA Research Project Report 2009-9, Jakarta: ERIA. pp. 399-423.
9. Asher, M.G., & Fauziah Zen, F. 2015, Social Protection in ASEAN: Challenges and Initiatives for Post-2015 Vision. ERIA Discussion Paper Series.
10. Asher, M.G. & Kimura, F. 2015, *Strengthening Social Protection in East Asia*. London: Routledge.
11. Asher, M.G. & Nandy, A. 2006, reforming provident and pension fund regulation in India. *Journal of Financial Regulation and Compliance*, 14(3): 273 – 284. http://dx.doi.org/10.1108/13581980610685865
12. Asher, M.G. & Vasudevan, D. 2010, *Market Structure and Challenges for Annuities in India*. Pension Research Council of the Wharton School of the University of Pennsylvania.
13. Asher, M.G., Vorab, Y., & Mauryaa, D. 2015, an Analysis of Selected Pension and Health Care Initiatives for Informal Sector Workers in India. Social Policy & Administration, 49(6): 738–751.
14. Ayyadevara, V. K. 2010, *has the Indian retirement fund industry come of age? A critical analysis of NPS.* PGDM, IIM Calcutta.
15. Bali, A.S. 2014, the political economy of pension reforms in India. *Public Admin. Dev*. 34: 294–304.
16. Baroni, E. 2007, *Pension Systems and Pension Reform in an Aging Society An Introduction to the Debate*. Institutet for Framtidsstudier.
17. Barr, N., & Diamond, P. 2009, reforming pensions: Principles, analytical errors and policy directions. *International Social Security Review*, 62(2).
18. Barr, N., & Diamond, P. 2010, Reforming Pensions: Lessons from Economic Theory and Some Policy Directions. *Economia*.
19. Barrientos, A. 2014, Is There a Role for Social Pensions in Asia? *Asia & the Pacific Policy Studies*, 2(1): 8–20.
20. Barrientos, A., Gorman, M., & Heslop, A. 2003, Old age poverty in developing countries: Contributions and dependence in later life. *World Development*, 31(3): 555–570.
21. Berg-Schlosser, D., De Meur, G., Rihoux, B. & Ragin, C. C. 2009, Qualitative Comparative Analysis as an Approach. In: Ragin, C. C. & 206 Rihoux, B. (eds.) Configurational Comparative Methods: Qualitative Comparative Analysis (QCA) and Related Techniques. California: Sage.
22. Bhattacharya, P. 2008, Micro Pension Plan: Indian Perspective. *Presented At The Living To 100 And Beyond Symposium*, Orlando, Fla. Society Of Actuaries.

23. Bloom, D.E., Chatterji, S., Kowal, P., Lloyd-Sherlock, P., McKee, M., Rechel, B., Rosenberg, L., & Smith, J.P. 2015, Macroeconomic implications of population ageing and selected policy responses. *Ageing*, 5, 385.
24. Bloom, D.E., & MacKinnon, R. 2013, *the Design and Implementation of Public Pension Systems in Developing Countries: Issues and Options*. Program on the Global Demography of Aging. Working Paper Series.
25. Börsch-Supan, A. 2013, Myths, scientific evidence and economic policy in an aging world. *The Journal of the Economics of Ageing*, 1-2: 3–15.
26. Brooks, S. 2005, Interdependent and Domestic Foundations of Policy Change: The Diffusion of Pension Privatization around the World. *International Studies Quarterly*, 49: 273-294.
27. Brooks, S.M., & Weaver, R.K. 2006, Lashed to the Mast? Chapter 14. The Politics of NDC Pension Reform. Pension Reform: Issues and Prospects for NDC Schemes.
28. Brzeska, J., Das, M., & Fan, S. 2015, Social protection for poor, vulnerable and disadvantaged groups, China Agricultural Economic Review, Vol. 7 Issue (4): 668 – 687. http://dx.doi.org/10.1108/CAER-09-2015-0123.
29. Capretta, J.C. 2007, *Global Aging and the Sustainability of Public Pension Systems. An Assessment of Reform Efforts in Twelve Developed Countries*. A Report of the Aging Vulnerability Index Project. Center for Strategic & International Studies.
30. Centre for Evidence-Based Conservation 2009, Guidelines for Systematic Review in Conservation and Environmental Management. Available from: http://www.cebc.bangor.ac.uk/Documents/Reviewguidelinesversion3.0_FINALpdf. [Accessed: 29 th December 2015].
31. Centre for Reviews and Dissemination 2009, Systematic Reviews: CRD's guidance for undertaking reviews in health care. York: University of York.
32. Cesaratto, S. 2014, *Pension Reform and Economic Theory*. Edward Elgar Publishing, Business & Economics.
33. Chakco, S., Chopra, S., Ekka, P., Gonsalves, S., Kalra, A., & Puri, R. 2013, *Report on Old Age and Widow Pensions in Chhattisgarh Lakhanpur Block, Surguja District*. Public Evaluation of Entitlement Programs (PEEP) Survey 2013.
34. Chauhan, P., Kokiwar, P.R., Shridevi, K., & Katkuri, S. 2016, Study On Prevalence And Correlates Of Depression Among Elderly Population Of Rural South India. *International Journal of Community Medicine and Public Health*, 3(1):236-239.
35. Chomik, R., & Piggott, J. 2015, Population Ageing and Social Security in Asia. *Asian Economic Policy Review* 10, 199–222.
36. Clements, B.J., Coady, D., Eich, F., Gupta, S., Kangur, A., Shang, B., & Soto, M. 2013, *The Challenge of Public Pension Reform in Advanced and Emerging Economies*. International Monetary Fund.
37. Collins, P.D., Podger, A., & Keyong Dong, K. 2014, Public Policy for Pensions Reform: A Governance Challenge for Public Administration and Development. *Public Admin. Dev*. 34, 223–230.
38. Curtis, C.C., Lugauer, S., Mark, N.C. 2015, *Demographics and Aggregate Household Saving In Japan, China, and India.* National Bureau of Economic Research, Working Paper 21555.
39. Curry, C. 1996, *PENSIM: A Dynamic Micro simulation model of Pensioners' income*. UK Government Economic Service Working Paper 129, London.
40. Dave, S. 2006, *India's pension reform: A case study in complex institutional change*.
41. De Haan, A. 2013, *the social policies of emerging economies: Growth and welfare in China and India*. Working Paper, International Policy Centre for Inclusive Growth, No 110.
42. Dept. of Financial Services - Ministry of Finance, Government of India n.d. Pension Reforms in India. Available from: http://financialservices.gov.in/PensionReforms_india_index.asp. [Accessed: 28 January 2016].
43. Devereux, S., Roelen, K., & Ulrichs, M. 2015, Policy Anticipation, Response and Evaluation: Where Next for Social Protection? IDS Evidence Report No 124.
44. DNA India 2014, Delhi University to challenge HC judgement on pension scheme. Available from: http://www.dnaindia.com/india/report-delhi-university-to-challenge-hc-judgement-on-pension-scheme-2011347. [Accessed: 27 January 2016].
45. Dobbs, R. & Madgavkar, A. 2014, Five Myths about India's Poverty. Available from: http://www.huffingtonpost.com/richard-dobbs-/india-poverty-myths_b_5429858.html. [Accessed: 24 January 2016].