Service in Public Sector:
The pension system in Mauritius and Superannuation

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Abstract

Purpose: This study aims at investigating the reforms in the pension system in Mauritius, which is faced with an ageing population and other challenges, and whether there is a shift towards a superannuation system. A profound research into the components of the pension system, the existing pension funds, their modus operandi and investment strategies, as well as the regulation and supervision of the system has been conducted and compared to the superannuation system in Australia. Moreover, an analysis of the attitudes and perspectives of people with regards to this shift was carried out.

Design / Methodology / Approach: Following an assessment of various research done about reforms in pension systems around the world and reforms being undertaken in the Mauritian pension system, this paper incorporates a survey analysing the attitudes and perspectives of a sample of 300 people with regards to the shift towards a superannuation system.

Findings: The comparison with the Australian superannuation system has revealed that the Mauritian pension system is moving in the direction of a superannuation system. The survey also reveals that people are of the opinion that we are shifting towards a superannuation system and that it will have positive effects on the economy as well as the society.

Keywords: Pension systems, superannuation systems, reforms, attitudes and perspectives.
1. Introduction

The pension system in Mauritius has witnessed many changes over the years, and is still evolving – from the provision of a single universal pension, the system has become more widespread and is now providing other retirement incomes.

However, faced with an ageing population and other challenges attributed to projected increases in social security expenditures weighting heavily on government budgets, poor administration and management and some ineffective schemes as is the case in many countries, World Bank (2006), pension in Mauritius has become a major concern and a key policy issue on the economic, political and social agenda. Therefore, given these challenges, and existing technical, legal and institutional imperfections, the Mauritian pension system is undergoing reforms in view of economic stability and financial sustainability, as is the case of pension systems in other countries - shifting from defined benefit (DB) towards defined contributions (DC) schemes, OECD (2008). Superannuation is one such DC scheme, found in few countries, namely in Australia, Singapore, New Zealand, and others. Some countries are adopting superannuation policies, and it is to be wondered if Mauritius is also espousing this system of pension.

The Mauritian pension system is undergoing reforms at the technical, institutional and legal levels; the fundamental issues behind these relate to the long-term affordability of the Basic Retirement Pension (BRP), the restructuring of the major players such as the National Pension Fund (NPF), National Saving Fund (NSF) and the role of occupational pension funds, Vittas (2003).

However, there is no research which has been carried out specifically on superannuation in Mauritius. Therefore, the underlying motive of this study is to shed light on the spheres of pensions in Mauritius, more specifically on superannuation. To achieve this purpose, a comparison is carried out with an existing superannuation system, the one in Australia. And a survey to analyse the attitudes of Mauritian people towards superannuation in the pension system.
2. Background to the study

4.1 Pension System in Mauritius

The Mauritian pension system, “in the light of the looming demographic crisis” as put by Clark (2000), is faced with an increasing expenditure on social security in the form of pensions.

The Mauritian pension system has focused mainly on defined benefit (DB), which calculates a fixed amount from the worker’s salary and at retirement a certain amount is provided, and defined contribution (DC) schemes, in which the benefits are dependant on the contributions that have been made to the workers’ account over their employment period including the return on investment of the fund (Weaver, 2003). The government completely finances the non-contributory benefits which are paid to all citizens of Mauritius under some conditions, (CSO, 2007).

The pension system in Mauritius is a “well-designed multi-pillar pension system”, as put by Vittas (2003). The World Bank (1994), in the report *Averting the Old Age Crisis*, has proposed a “multi-pillar” approach to pensions. For Mauritius it is in four pillars, FSC (2008), as follows:

- **Zero Pillar:** The basic pension, dates from 1950 and became universal in 1958; it has been described “as social assistance pensions”, Willmore (2003), and is also known as the Basic Retirement Pension (BRP).

- **First Pillar:** The National Pensions Fund (NPF), introduced in 1978, is a mandatory defined benefit scheme covering employees of the private sector, which makes up about 60 percent of the labour force (at 301,000 employees in 2001). However, it does not cover employees on very low wages and some sugar industry employees, Vittas (2003).

- **Second Pillar:** The National Savings Fund (NSF) is a defined-contribution scheme, which requires all employees to participate, including civil servants and employees of statutory bodies. Low income earners are not covered. The contribution rate is 2.5 percent of covered earnings, paid by employers. The accumulated resources are up to 2 percent of GDP, mostly invested in government securities, Vittas (2003).
Third Pillar: Private and occupational pension schemes, offered by private companies, and are voluntary. (FSC, 2008) There are nearly 1000 private company pension schemes, which are mostly non-contributory in nature. They operate as defined-benefit plans and offer pensions equalling two-thirds of final salary on the last month of employment after 40 years of service, Vittas (2003).

4.2 Superannuation System

The Oxford Dictionary defines superannuation as “a regular payment made into a fund by an employee towards a future pension.” In Australia, superannuation has been used as a policy instrument to increase incomes at retirement and to reduce dependence on the old age pension provided by the government, (Connolly and Kohler, 2004).

“The superannuation scheme requires and encourages saving for income needs in old age, especially after retiring fully or substantially from paid work. There is no comparable scheme of subsidised savings accounts for major causes of mid-life expenditures such as child-rearing, ill-health, unemployment, housing or education”, as stated by Disney (2007).

Superannuation in Australia

In Australia, there are financial incentives to receive benefits as pensions, however, it is comparatively unusual to do so. The retirement system is known as a ‘superannuation’ system rather than a pension system, Maddocks (2006). Retirement income policy in Australia is built on three pillars, though they differ from those in other countries, ASFA (2008): a needs-tested pension, compulsory superannuation and voluntary private contributions and savings (AustraliaTreasury, 2004b: 1). This is in line with the World Bank (1994) call for a three pillar model.

The age pensions combined with superannuation allow the preferred lifestyle of most Australians, ASFA (2008). Superannuation is the only major scheme of subsidised savings accounts and has grown due to compulsory contributions, now holding more than three times as much as is held in bank accounts – they are heavily responsible for Australian investment, Disney (2007). The retirement income system has been designed to provide adequate income at retirement, assistance in case of death or disability, reduce financial burden of the Age Pension, and increase national savings, ASFA (2001).
4.3 Mauritian pension system compared to Australian superannuation system

The Mauritian pension system, with its four pillars, comes very close to Australia’s superannuation system, consisting of three pillars.

The old age pension provision is almost the same in both countries; they are universal and non-contributory. And they are financed from general taxes, the costs of which are projected to increase in the future, (CSO, 2007). Both the governments of Mauritius and of Australia are faced with budgetary pressures regarding the provision of this universal pension.

The second pillar in Australia is the compulsory employer superannuation for most employees, whereby employers contribute 9% of employees’ wages and salaries. It is a DC scheme. This scheme covers almost all employees in Australia, ASFA (2008). In terms of contribution rate, this scheme comes close to the Mauritian NPF – the contributions to the NPF are paid by both employers and employees, 6 percent and 3 percent respectively.

However, given that the scheme of the NPF is a DB scheme, and the second pillar mandatory employer superannuation in Australia is a DC scheme, there is much difference between the two. In this respect, the Mauritian NSF is much more comparable to the second pillar superannuation plan in Australia. The NSF is equally a compulsory DC scheme which covers all employees. Moreover, the contribution to the NSF is made at the rate of 2.5% by employers, Vittas (2003). The scheme works as individual savings accounts, similar to that of the Australian employer superannuation.

Although, a comparison of the NSF with the Australian employer superannuation reveals that there is a great magnitude of similarities, the basic difference is that the contributions towards the NSF are pooled in this specific fund, while the Australian second pillar points out that there is mandatory occupational pension contribution. In other words, emphasis is laid on pension schemes according to occupation.

Furthermore, the third pillar of voluntary superannuation in Australia is much similar to the Mauritian third pillar of voluntary occupational schemes. Also, the fact that the voluntary schemes in Mauritius are legislated under the Employees Superannuation Fund Act of 1982 (as amended) highlights that the third pillar of the Mauritian pension system is made up of superannuation funds. However, these private occupational schemes in Mauritius are non-
contributory, and are planned as defined benefits. It is an important point which shows the difference between the private superannuation in Australia and that in Mauritius. However, some private pension schemes in Mauritius are converting their DB schemes to DC schemes. Therefore, there is a gradual move towards superannuation schemes.

The Pay Research Bureau (PRB) Report 2008, based on the Budget Speech 2006/07 and the Report of the Government Actuary’s Department (GAD) of UK, has recommended the introduction of a single modified contributory Defined Benefit (DB) Pension Scheme. The scheme is to be applicable to all officers in the public sector and is effective as from 1 July 2008. The scheme will be on a Pay As You Go basis.

The contribution rate for all employees is at 6% of pensionable emoluments, deducted at source and paid directly into the Consolidated Fund. The contribution rate for trainees, students, cadets or apprentices recruited under any traineeship, studentship, cadetship or apprenticeship scheme is set at 3% of their emoluments.

3. Research design and methodology

The aim behind the methodology used is to collect data on the attitudes of people with regards to the shift towards a superannuation system in Mauritius.

Therefore, the most appropriate research approach is the survey method so as to obtain the attitudes and perspectives of people towards the shift towards a superannuation system. The questionnaire technique has been adopted so as to yield the required data. The population of interest is the general population in Mauritius, so as to gather their attitudes and perspectives regarding superannuation in Mauritius. Given such a large population, a sample size is taken at random.

A sample size of 300 people has thus been decided to administer the designed questionnaire – three categories of people have been chosen and each category has been administered with 100 questionnaires so as to allow for easy comparison of opinions. The three categories are: students, professionals and non-professionals/unskilled from all ages and sectors of employment. The simple random sampling method has been used in gathering data from these three groups of people. However, the sample size of 300 is not representative of the large population of Mauritius. Saunders et al (2003) have proposed a sample size of 384 for a
population size of 1 million, given a 95% level of certainty. Hence, the sample size of 300 chosen for the purpose of this study is below the required sample size.

4. Findings

4.1 Expressed Preferences towards types of contributions towards Pension funds

Respondents of the survey have been given the opportunity to express their preferences about the types of contributions that should be made towards pension funds. There is a higher response towards contributions made by both employee and employer, with mean 4.1233. Also, the standard deviation and variance for contributions by both employee and employer is lower than for the other types of contributions – standard deviation 0.96500 and variance 0.931. This low standard deviation shows that there is not much dispersion of the set of opinions gathered from its mean. The preference for contributions made by both the employee and the employer is in line with the contributions made by the employee and employer to the NPF, Vittas (2003). As it can be noted from the table below, however, there is only a slight difference in the mean preference for compulsory contributions and contributions subsidised by the government, indicating that there could be a general liking for a scheme which is compulsory and at the same time subsidised by the government.

<p>| Table 1: Measures of Central Tendency: Preferences towards types of contributions towards Pension funds |</p>
<table>
<thead>
<tr>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>By employee</td>
<td>3.5600</td>
<td>1.10626</td>
</tr>
<tr>
<td>By employer</td>
<td>3.9400</td>
<td>1.02953</td>
</tr>
<tr>
<td>By both employee and employer</td>
<td>4.1233</td>
<td>.96500</td>
</tr>
<tr>
<td>Compulsory contributions to pension funds</td>
<td>3.6133</td>
<td>1.18681</td>
</tr>
<tr>
<td>Voluntary contributions to pension funds</td>
<td>3.0100</td>
<td>1.18091</td>
</tr>
<tr>
<td>Contributions to pension funds subsidised by government</td>
<td>3.5767</td>
<td>1.19256</td>
</tr>
</tbody>
</table>
4.2 Investigating perspectives towards a link between reform of the Mauritian pension system and a shift towards a superannuation system

This survey made to collect opinions of people regarding the pension system in Mauritius and the reforms being adopted by the government to maintain its financial sustainability has revealed that there are traces of a shift towards a superannuation system. Therefore, there is a need to test and analyse whether the perspectives which have been gathered to show a link between the reform of the pension system and the shift towards a superannuation system.

Hypotheses are developed to test this association at the 95% confidence level.

H₀: There is no link between reform of the Mauritian pension system and a shift towards a superannuation system
H₁: There is a link between reform of the Mauritian pension system and a shift towards a superannuation system

Table 2: Chi-Square Tests (Investigation of perspectives towards a link between reform of the Mauritian pension system and a shift towards a superannuation system)

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>82.582a</td>
<td>16</td>
<td>.000</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>72.857</td>
<td>16</td>
<td>.000</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>300</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 15 cells (60.0%) have expected count less than 5. The minimum expected count is .08.

Taking the Chi-Square statistics, since p = 0.000 < 5%, H₀ is rejected. At the 5% level of significance, it is concluded that there is a link between reform of the Mauritian pension system and a shift towards a superannuation system.

The Likelihood Ratio also confirms the results of the Pearson Chi-Square test, rejecting H₀ and concluding that there is a link between reform of the Mauritian pension system and a shift towards a superannuation system. A likelihood-ratio test is a statistical test for making a decision between two hypotheses based on the value of this ratio.

This shows that in general, people are of the opinion that the reforms which the Mauritian pension system is undergoing are proving to be a shift towards a superannuation system.
Hence, $H_1$ is accepted, concluding that people think there is a link between reforms of the Mauritian pension system and a shift towards a superannuation system.

### 4.3 Superannuation in Mauritius

Data about attitudes with respect to superannuation is being analysed in this section. This consists of attitudes towards a superannuation system and the attitudes towards the effects of superannuation on the economy.

**Assessing attitudes towards a Superannuation system**

Attitudes towards a superannuation system reveal that there is a preference for a superannuation system subsidised by the government. This is backed by the case of Australia, where superannuation is the “only major scheme of subsidised savings accounts”, Disney (2007). Also, the contributions are preferred to be compulsory, with mean 3.17, standard deviation 1.02857, which is lower compared to the standard deviations calculated for the voluntary scheme and the scheme subsidised by the government. However, the differences in the standard deviations are minimal. In fact the standard deviation figures for the voluntary and government subsidised schemes are almost the same.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compulsory superannuation system</td>
<td>3.17</td>
<td>1.02857</td>
<td>1.058</td>
</tr>
<tr>
<td>Voluntary superannuation system</td>
<td>3.1667</td>
<td>1.07832</td>
<td>1.163</td>
</tr>
<tr>
<td>Superannuation system subsidised by government</td>
<td>3.5433</td>
<td>1.0826</td>
<td>1.172</td>
</tr>
</tbody>
</table>

**Overall Effect of a Superannuation System**

The most important general effect is about the development of the economy. In Australia, superannuation funds have grown during the years and have shown their performance. They are responsible for a very large part of Australian investment, total holdings equalling the annual GDP and are projected to grow, Disney (2007). The opinions of the respondents of the survey conducted have been investigated on the subject – whether the superannuation system will contribute to the development of the economy. As can be seen from the table below,
again there are not huge differences in the opinions of the three categories of people. Taking these descriptive statistics, the standard deviation for the category non-professional/unskilled is lower, however, the standard deviation figures for the categories professional and student are very slightly different from the one for the non-professional group.

Table 4: Measures of Central Tendency – Attitudes towards overall effect of a superannuation system on the economy

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Professional</th>
<th>Non-professional/Unskilled</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.72</td>
<td>3.6</td>
<td>3.57</td>
</tr>
<tr>
<td>Variance</td>
<td>0.87</td>
<td>0.727</td>
<td>0.773</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>0.9329</td>
<td>0.8528</td>
<td>0.87911</td>
</tr>
</tbody>
</table>

Testing differences in opinions regarding the contribution of the superannuation system in the development of the economy with respect to the type of occupation

A Normality Test is conducted as follows:

Table 5: Results of Normality Test – Testing differences in opinions regarding the contribution of the superannuation system in the development of the economy with respect to the type of occupation

<table>
<thead>
<tr>
<th>Tests of Normality</th>
<th>Occupation</th>
<th>Kolmogorov-Smirnov²</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>df</td>
<td>Sig.</td>
</tr>
<tr>
<td>The superannuation system will contribute in the development of the economy</td>
<td>Professional</td>
<td>0.258</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Non-professional/Unskilled</td>
<td>0.27</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>0.238</td>
<td>100</td>
</tr>
</tbody>
</table>

The Shapiro-Wilk Test shows that the condition of normality is not satisfied since the p-values are below the 0.05 significance level. Therefore, the Kruskal Wallis test will be used. Kruskal Wallis test will be used to test the hypotheses:

\[ H_0: \mu_1 = \mu_2 = \mu_3 \] (opinions are the same irrespective of type of occupation)
H₁: H₀ is not true

**Table 6:** Results of Kruskal Wallis Test (6.7.4.1)

<table>
<thead>
<tr>
<th></th>
<th>Kruskal Wallis Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>The superannuation system will contribute in the development of the economy</td>
<td></td>
</tr>
<tr>
<td>Chi-Square</td>
<td>2.204</td>
</tr>
<tr>
<td>df</td>
<td>2</td>
</tr>
<tr>
<td>Asymp. Sig.</td>
<td>0.332</td>
</tr>
</tbody>
</table>

Statistics: Chi-square:2.204, p = 0.332 > 5%=0.05

It is concluded that since p-value is greater than 5%, H₀ is accepted. At 5% significance level, there is no difference in opinions regarding the contribution of the superannuation system in the development of the economy with respect to the type of occupation.

**Table 7:** Results of Kruskal Wallis Test (6.7.4.1) - Ranks

<table>
<thead>
<tr>
<th>Occupation</th>
<th>N</th>
<th>Mean Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>The superannuation system will contribute in the development of the economy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td>100</td>
<td>160.05</td>
</tr>
<tr>
<td>Non-professional/Unskilled</td>
<td>100</td>
<td>147.68</td>
</tr>
<tr>
<td>Student</td>
<td>100</td>
<td>143.78</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td></td>
</tr>
</tbody>
</table>

Professionals are highly of the opinion that the superannuation system will contribute in the development of the economy.

5. **Conclusion and final remarks**

The Mauritian pension system has strong foundations with its multi-pillar system. However, with demographic shift and other challenges it is facing, there is need for reform at every level to maintain its financial sustainability and its survival in this modern era where life expectancy has gone up as well as the population size in Mauritius and the whole planet.

In this search for the right measures and policies for reform, the pension systems worldwide have already started to shift from a defined benefit system towards a defined contribution system – the Mauritian pension system too has been gradually shifting towards this system, which is termed as superannuation in Australia, Singapore and other countries. This system
has proved its maturity in these countries. However, it is not without flaws – there are many areas as such which need close scrutiny to make the system work more efficiently.

The reforms being adopted by the government in Mauritius indicate that the pension system is being moulded into a superannuation system, although the terminology is not commonly used locally in all spheres. The survey reveals that people are of the opinion that we are shifting towards a superannuation system and that it will have positive effects on the economy as well as the society. It will contribute to the economic development.

Also, this type of pension system needs strict regulation and supervision as well as high calibre professionals in the areas of investment, operations, regulation or supervision, which we highly lack in Mauritius. There is also a lack of awareness on the subject of pension and pension types – the people have meagre information.
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