Network for Studies on Pensions, Aging and Retirement

Netspar THESES

Belle Uwera

Social Security and Pension Systems in Rwanda

Limits and Alternatives

MSc Thesis 2013-010

Social Security and Pension systems in Rwanda: Limits and Alternatives

Belle Uwera
August, 2013

Master Thesis
Economics and Finance of Aging
Tilburg University

Thesis Supervisor: Prof. Anja De Waegenaere
Second Reader : Dr. Martin Salm

Table of Contents

List of Graphs and Tables

List of Abbreviations

BNR:	Banque Nationale du Rwanda (National Bank of Rwanda)
CBHI:	Community Based Health Insurance
CBHIS:	Community Based Health Insurance Schemes
CDC:	Collective Defined Contribution
CSR:	Caisse Sociale du Rwanda
DB:	Defined Benefit
DC:	Defined Contribution
EU:	European Union
GDP:	Gross Domestic Product
IMF:	International Monetary Fund
MINALOC:	The Ministry of Local Government of Rwanda
MINECOFIN:	Ministry of Finance and Economic Planning of Rwanda
MMI:	Military Medical Insurance
NSSF:	National Social Security Fund
OECD:	Organization for Economic Cooperation and Development
PAYG:	Pay-as-you-go
PFP:	Provident Fund Pillar
RAMA:	La Rwandaise d'assurance maladie
RSSB:	Rwanda Social Security Board
RWF:	Rwandan Franc
SACCO:	Savings and Credit Cooperative
SSF:	Social Security Fund
SSFR:	Social Security Fund of Rwanda
USD:	United States Dollar
ZAR:	South African Rand

Introduction

Over the past years, a great deal of attention was given and has been paid to the reform of the social security systems in developed countries and in developing countries. The focus of the discussion is centered on how to find an appropriate social security system in a rapidly changing economic and social environment (Van Ginneken (cited in Jütting 2000:1). According to Bloom et al (2011:2), population aging is a reality in both developed and developing countries, even if there are differences in terms of the contemporary significance of the phenomenon. While in the advanced countries there are more than 90% of the population covered by several forms of state social security schemes, more than 50% of the population in less developed nations is not covered against the basic risks according to Van Ginneken (cited in Jütting 2000:1).

As argued by Jütting (2000:1), the main risks that the populations in the developing countries face are "illness, disability, death, widowhood, riots and natural disasters are some examples of typical risks which lead to fluctuating incomes and thereby affect the quality of life". Unlike in developing countries, the population in the developed countries is generally protected either by state or by market-based insurance systems. In developing countries the majority of the population does not have access to state or to market-based social insurance (Jütting 2000:1).

According to Fapohunda (2012:36), "the informal sector is the part of an economy that is not taxed, monitored by any form of government, or included in any gross national product (GNP), unlike the formal economy".

According to National Social Security Fund (NSSF), the pension branch provides insurance against the risks associated with old age, disability and death. As many developed and developing countries, Rwanda has a social security and pension system consisting of three pillars which are: a Public Pension, Private Occupational Voluntary pension and Private Personal Voluntary pension. The main features of these pillars will be discussed in the first part of the thesis.

The Second part will analyze the current status of the pension system in Rwanda. The limits and reforms envisaged under the Rwandan Vision 2020 policies will be discussed. One major problem is that the coverage of the pension system in Rwanda is insufficient. For the pension and occupational hazards, only formal sector (+/- 6% of active population) is covered by the publicly managed scheme. However, all other workers are excluded. One of the objectives of the Rwandan Vision 2020 policies is to achieve universal social security coverage. Compared to the poor coverage under the pension system, Rwanda has one of the best health insurance in sub-Saharan Africa (Shimeles, 2010:6, 15), whereby above 90% of

Rwandans are covered. The contrast between the two systems under social security will be highlighted.

The third part will examine the current pension systems in Europe in order to determine what the Rwandan pension system can learn from the developed countries. Based on an analysis of the current status but also on envisaged reforms in the pensions systems in Rwanda; this third party will try to examine what a reform of pension system in Rwanda may learn from the developed countries.

Research Question: How can Rwanda improve its pension systems, learning from developed counties?

Research Methods: During the research I will make a review of literature, use existing data for Rwanda and both the European and OECD countries make a comparative analysis; electronic sources.

Chapter 1: Brief description of the current Social Security and pension system in Rwanda

1.1. Introduction

The main law on social security in Rwanda is the decree law of 22 August 1974 governing the Organization of Social Security as amended and completed to date and establishing the Rwandan NSSF[1]. In Rwanda the Social Security management is fragmented. It consists of a pension and a professional risks branches managed by the Social Security Fund of Rwanda (Ministry of Finance and Economic Planning (MINECOFIN), 2009:12), and health insurance schemes administered by three structures, i.e., Rwanda Health Insurance (RAMA) for public servants, Military Medical Insurance (MMI) for members of the military and Mutuelles de Santé (Mutual Health Insurance Scheme) covering members of the general public, excluding employees covered by formal sector and other private health insurance schemes (Barya, 2011:84).

"Generally people do not participate in the labour market in the last phase of their lives; they are not able to independently acquire income. Instead, they generally depend on several sources of income, which is made up of three pillars" (Meijdam, 2012:4). In Rwanda there are also three pension pillars systems which are the following: a Public Pension, Private Occupational Voluntary pension and Private Personal Voluntary pension.

The following sections will successively examine the three pension pillars and the three branches of Rwanda's social security system. The first section is dedicated to an examination of the three pension pillars of Rwanda social security system, the second examines pension branch, the third the professional risks branch, and the last covers the health insurance system.

1.2 The three pension pillars of social security systems in Rwanda

1.2.1. First pillar: Public Pension

According to the International Organization of Pension Survivors (IOPS, 2011:3) Rwanda has only one compulsory public pension scheme called "Caisse Sociale du Rwanda" (CSR) or the NSSF which is administered by a public agency. It is obligatory for all employers and workers within the public and private sectors to join the NSSF. It is currently a fully funded defined benefit (DB) plan and the government assumes the investment risk. The

[1] NSSF is better known in French as Caisse Sociale du Rwanda (CSR).

contribution rates are 3% and 5% of the gross salary by employees and employers respectively. Public pension system covers almost 5.6% of the active population (2009 data) (IOPS, 2011:3).

1.2.2. Second Pillar: Private Occupational Voluntary

The second pillar in Rwanda consist of occupational voluntary pension schemes that rely on the fact that financed through the contributions whose rates differ from one pension plan to another. The majority of the occupational voluntary pension schemes invest in insurance companies where capital and some limited level of return is certain. Benefits are paid as lump sums, under occupational voluntary schemes. All investments, employers and employees' contributions are taxed at a rate of 30% (IOPS, 2011:3).

According to the National Bank of Rwanda (BNR), it was estimated that in Rwanda there are more than 40 occupational pension schemes amounting to 0.27 percent of GDP (RF 6 billion, which is approx. USD 9.433.962) explained by International Monetary Fund (IMF, 2011:23). The schemes consist of either defined benefit (DB) plan or defined contribution (DC) plan.

The overall coverage by these 40 occupational pension schemes is very low and the government has to find the way to improve this by learning from other countries with occupational pension systems which are more developed and well managed.

The occupational pension schemes have been functioning without a suitable supervisory and controlling framework. The government has drafted a pension law which is pending enactment whose effect is to set standards for the pension sector in Rwanda and providing for a regulatory framework by the BNR.

1.2.3. Third Pillar: Private Personal Voluntary

The last pillar is a voluntary savings pillar, which is available to anyone who cares to supplement the retirement pension income provided by the first two pillars (Willmore, 2006:9). The Private Personal Voluntary scheme in Rwanda is characterized by the individually DC plans offered by insurance companies and the benefits are paid as lump sum. Both members' contributions and benefits are not taxed (IOPS, 2011:4).

1.3. The pension branch

According to the Rwanda Social Security Board (RSSB), the pension scheme aims at: 1) helping the worker who becomes old and incapable of working for a salary or becomes invalid and incapable of living by working; 2) helping the survivors of the deceased worker.[2] Individual workers are eligible for a monthly pension at the age of 65 years and individual can retire at the age of 55 when he/she has contributed for at least 15 years (Art. 124 of the Law on General Statutes of Rwandan Public Service).

The pension branch in Rwanda also covers: anticipated pension, invalidity pension, and old-age lump-sum allocation. These pension benefits are all administered by the SSFR (Ruberangeyo et al (2011:347). These pension benefits are all organized under the first pension pillar (public pension).

1.3.1. Retirement pension

Retirement pension coverage is mostly restricted to persons working in the formal sector. According to the MINECOFIN (2009:12), they represent between 5.6% and 7% of the working population in Rwanda and 2.3% of the total population. The same data from MINECOFIN indicate that 48,363 Rwandan pensioners were receiving retirement pensions in 2006. The Ministry of Local Government of Rwanda (MINALOC) (2011:11) estimated that there are 328,000 people over 65 years of age in Rwanda. The amount of the pension paid is calculated "according to a formula that takes into account the level of wages earned and number of years of service in the formal sector"(MINECOFIN, 2009:12) and the average monthly pension is 3,477 RwF (USD 63).

The pension is calculated based on the salaries of the beneficiary's last 3 or 5 years of activity which determine the monthly average remuneration used in the calculation of his/her old age pension[3]. For the first 15 years, the pension will be 30% of the average earnings during the last 3 or 5 years explained by the International Social Security Association (ISSA, 2008:3). Once someone has contributed for more than 15 years, his/her pension will rise by 2% every additional period of 12 months.[4] For instance, the beneficiary will receive 30% for 15 years, 32% for 16 years, 34% for 17 years and 36% for 18 years …

From the result above, Rwanda as many developing countries has the pension retirement coverage which is very low and insignificant. This is the important issue in the social security of Rwanda. The problem may be solved if the government of Rwanda encourages workers in the informal sector to adhere in the cooperatives[5] which can be the easier way

---

[2] Rwanda Social Security Board (RSSB), http://www.csr.gov.rw/content/pension-scheme-0 (accessed on 27 April 2013)

[3] Rwanda Social Security Board, http://www.csr.gov.rw/sites/default/files/rssb_bronchure_final.pdf, p 6

[4] Ibid, p 6

[5] The Government of Rwanda considers Cooperatives as a potential vehicle through which the Cooperatives members could create employment and expand access to income-generating activities, develop their business potential, including entrepreneurial and managerial capacities through education and training; increase savings and investment, and improve social well-being with special emphasis on gender equality, housing, education, health care and community development. http://www.rca.gov.rw/?article30

to collect the contribution from them. More details of this limit will be discussed in the next part.

1.3.2. Anticipated pension (Early retirement pension)

Rwanda social security board also provides early retirement benefit for its participants. An individual can apply for early retirement pension when he/she becomes physically or mentally disabled before the retirement age, in other words, when he/she is no longer able to work for a salary.[6] According to a draft law governing the organization of the pension schemes in Rwanda, an individual is eligible to early retirement when he/she has contributed for at least 15 years.[7]

1.3.3. Invalidity pension

According to the RSSB,[8] an individual may become an invalid following an accident or disease having no origin from occupational work-related circumstances. To be eligible to the invalidity pension, beneficiaries should have at least 5 years of contributions.[9] They should also have actively contributed for at least 6 of the last 12 months before the start of the disability (Barya, 2011:86). Invalidity is evaluated regularly by a doctor chosen by the NSSF (ISSA, 2008:3).

Pensioners (for both types of pension: old-age pension and invalidity pension) receive a minimum pension equal to 50% of the legal minimum wage and the monthly pension paid is adjusted periodically by presidential decree and the last adjustment was made in April 2002.[10] According to the MINECOFIN (2009:13), after the pensioner dies, the surviving spouse of a pensioner and the children up to the age of 25, if they are still students, continue to receive the pension until his or her death.

By comparing the invalidity pension of Rwanda to, for instance, the system of another developing country such as South Africa, it is clear that the monthly minimum wage provided by Rwanda is very low and should be increased. In South Africa, individuals between the age of 18 and 59 years are eligible to the invalidity insurance when they lost income due to the health conditions. The value of the subsidy was ZAR (South African rand)

---

[6] Rwanda Social Security Board, http://www.csr.gov.rw/sites/default/files/rssb_bronchure_final.pdf, p 7
[7] Copy with the author.
[8] Rwanda Social Security Board, http://www.csr.gov.rw/sites/default/files/rssb_bronchure_final.pdf, p 7
[9] The Draft law Governing the organisation of pension Schemes in Rwanda reduces this eligibility criteria to 36 months. The draft law clarifies that a participant who experiences disability before reaching at least 60 years is eligible for invalidity pension benefit.
[10] www.issa.int/content/download/57466/1053795/file/1-Rwanda.pdf, The International Social Security Association: Country profile for Rwanda 18-20 November 2008:3-4. The legal monthly minimum wage is RWF 10,400 (Approx. USD 16.3) (2002)

1,080 (approx. USD 140) per month in 2010 (Department of Social Development in South Africa, 2010:6).

1.3.4. Old age lump-sum

An individual may possibly reach the age of 55 and stop all salaried accomplishments without achieving the other required conditions for the normal old age pension (15 years of insurance). Such person will have the right to an old age Lump-Sum which he/she will receive once, and only once, she/he has at least 12 months of insurance with RSSB.[11]

1.3.5. Benefits for the survivors of the dead insured employee

When someone dies, eligible survivors will be allowed either to the survivor's monthly pension or to the survivor's Lump-sum.[12]

A. The survivor's pension:

A survivor's pension is paid when a deceased retiree of old age or invalidity or early retirement fulfills the necessary conditions for (early) retirement pension or disability pension and justifies at least 15 years of contributions to the RSSB.[13]

Depending on cases, the eligible survivors are the widow(er), legitimate children under 18 years of age (age 25 if a student, no limit if disabled), and parents (including adopting parents) in the absence of a surviving (ISSA, 2008:3).

Survivors pensions are calculated in percentages based on the pension which the deceased was receiving or was qualified to receive at the time of his death. [14] The percentages are as follow: 50 % of the retirement pension for the widow or widower, 25% for each orphan of one parent, 40% for each orphan of both parents and 25% for each direct or adopted parent at the time the deceased leaves no husband or wife or children.[15]

---

[11] Rwanda Social Security Board, http://www.csr.gov.rw/sites/default/files/rssb_bronchure_final.pdf,p 8

[12] Ibid

[13] Ibid

[14] Ibid

[15] As demonstrated by RSSB http://www.csr.gov.rw/sites/default/files/rssb_bronchure_final.pdf,pp 10-11 : if the deceased had the pension of 38.000 frws (approximately 57 $), the pensions' survivors will be calculated as follow: for example if the deceased left a widow/widower and 4 children; "the widow/widower will have 50% of the deceased pension

- 4 orphans will have the right of 25% * 4 = 100
- The total share for the wife and 4 children will be 50%+100%= 150%
- The widow will get : 38000Rwf*50/150% = 12.666 Rwf (approximately 19 $);
- Each orphan will get 38000Rwf *25/150% = 6.333 Rwf (approximately 9.5 $"

B. The survivor's Lump Sum

A survivor's lump sum is paid if death strikes when someone does not fulfill the conditions required for a monthly pension and has not been insured with RSSB for a period of 15 years.[16]

The survivors' Lump Sum is calculated as follow: the widow or widower will receive a lump sum equal to the pension to which the receiver was eligible to if he or she had completed 15 years of contributions multiplied by the number of 6 month-periods of his/her affiliation with RSSB.[17]

The Branch of Pension system's benefits are generally sponsored by employer and worker contributions which means the contribution rate is equal to 3% paid by the employer and 3% paid by the employee (MINECOFIN, 2009:13).

1.4. The Professional Risks Branch

As explained by MINECOFIN (2009:14), the Professional Risks Branch in Rwanda protects participants against the risk of income loss caused by work accidents or work-related sicknesses and these schemes cover only the workers in the formal sector.

In 2006, a total of 23 million RwF (USD 418,000) was paid in benefits to 3,561 beneficiaries. The average benefit paid was 6,559 RwF (USD 117) according to the MINECOFIN (2009:14). A contribution is 2% of salary is paid on behalf of mandatory members by employers. In this branch, there is no employee contribution towards this benefit and there are no voluntary contributions or membership allowed for this benefit.[18]

This branch functions relatively well because it is probable that benefit claims by participants will decrease over time due to workplace safety, working environments, and improvements in health and living standards: for these raisons a 2003 actuarial study concluded that this branch of occupational risks is well funded and may even be overfunded with MINECOFIN (2009:14).

---

[16] Ibid
[17] Ibid
[18] http://www.rssb.rw/content/occupational-hazards (accessed on 22 May 2013)

1.5. Some data on pension and occupational risks benefits in Rwanda.

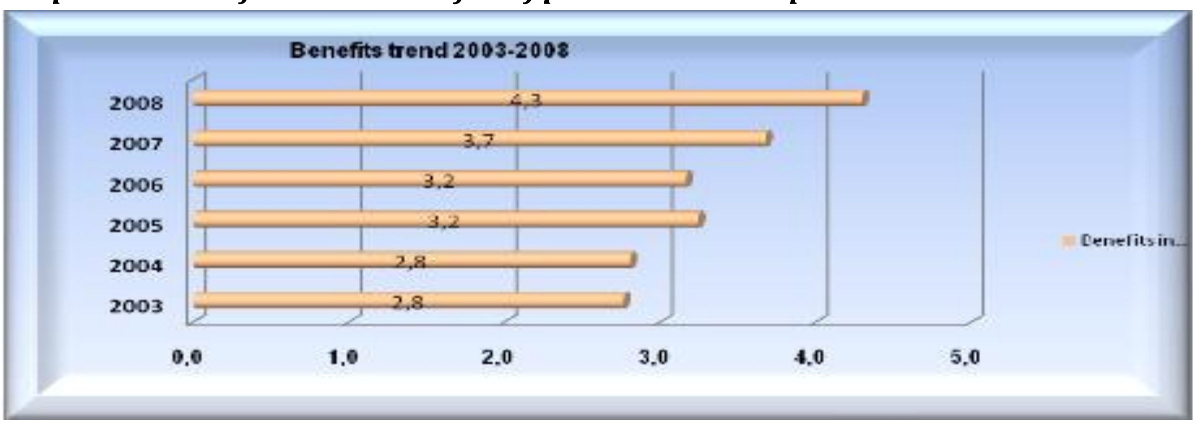
Reports of the SSFR covering the period between 2003 and 2008 provide an insight into the payment of pension and occupational risks benefits to beneficiaries.[19]

Table 1: Trend of benefits payment for both pension and occupational risks

Year	Pension	Occupational Risks	Total	Growth rate
2003	2,595,107,863	170, 574,443	**2,765,682,306**	-
2004	2,786,263,481	179, 958,252	**2,966,221,733**	7.3%
2005	3,199, 802,990	194, 075,862	**3,393,878,852**	14.4%
2006	3,068, 606,003	190, 728,520	**3,259,334,523**	-4.0%
2007	3,525, 524,113	215, 999,138	**3,741,523,251**	14.8%
2008	4,078, 071,636	232, 863,081	**4,310,934,717**	15.2%

Source: SSFR, Annual report, 2003-2008

Graph 1: Trend of the total benefits of pension and occupational risks 2003-2008



Source: SSFR, Annual report, 2003-2008

From the table and graph reproduced above, it is evident that in 2008, the fund paid 4, 3 billion (Approx. USD 6761006) in benefits. There were 23,725 pension recipients and 1,624 recipients of occupational risks benefits.[20] Since the year 2003, benefits have been increasing at an average growth rate of 9.5%. Previous annual reports highlighted the fact that, the processing of benefits had always been constrained by huge declaration records that have not been computerized. The SSFR started a process of computerization of declarations missing in the database. Over 6.7 million declarations were entered into the system.[21]

[19] http://www.memoireonline.com/09/10/3894/m_Role-of-social-security-fund-scheme-in-enhancing-the-socio-economic-development-of-Rwanda16.html#_Toc252365011 (accessed on 23 may 2013).

[20] Ibid

[21] Ibid.

1.6. Medical Insurance

According to the law (n°62 / 2007 of 30/12/2007) from 2008 in Rwanda, all Rwandans must be covered by health insurance. There co-exist several health insurance arrangements that are complementary; each of them focusing on diverse population groups (Ruberangeyo et al, 2011:342-343).

This variety permits each group of the population to access health care. With these diverse arrangements, Rwanda is now reaching nearly general coverage where the health coverage in June 2010 was 97%, namely 91% for community-based health insurance and 6 per cent for other types of insurance (Ruberangeyo et al, 2011:243)

1.6.1. Health insurance in the Formal Sector

In Rwanda, the health insurance scheme in formal sector is covered by RAMA, MMI and Private Insurers. Employees of the formal sector are covered by different health-care arrangements based to their professional position (Ruberangeyo et al 2011:243).

• According to (Ruberangeyo et al 2011:243), the Civil servants and other public sector employees are covered by the RAMA. RAMA was created in 2001 and is financed generally by monthly contributions (15 % of the member's base salary, 7.5 % of which is paid by the employee and 7.5 % by the employer). The benefit package covers all services. Members have access to all public health centers, district hospitals and referral hospitals as well as private facilities that have been contracted by RAMA. RAMA membership also provides access to pharmacies. The current coverage of RAMA is around 2.5 per cent of the national population.

• Members of the armed forces and their immediate family members are covered by MMI. The contribution to MMI is 22.5 per cent of the base salary of its members, of which 17.5 per cent is paid by the Government and the remaining 5 per cent by the member. MMI was created in 2005 and is managed by the Ministry of Defence (Ruberangeyo et al 2011:243).

• Other workers of the formal sectors such as private enterprises and their employees are usually covered by private insurance. This coverage is organized by private insurance companies, which are regulated by a law on insurance in Rwanda (Ruberangeyo et al 2011:243).

1.6.2. Health insurance in the Informal Sector

Rwanda health insurance in the informal sector is characterized by the community based Health Insurance Schemes (CBHIS), popularly known by their French name: *mutuelles de santé* (Ruberangeyo et al 2011:244). Historically, many Rwandans have been not able to access suitable health care due to their incapacity to pay for vital services (Samson 2009:14). A community based Health Insurance (CBHI) is a system aimed at improving the access to the health care by the population of the informal sector and the rural population. Based on pre-payment and risk pooling, CBHI objectives are to provide financial access to the health services in an equitable and in a fair way. In order to avoid stigmatization, CBHI seeks to include all sections of the population, especially vulnerable groups (Samson 2009:14).

Some CBHI systems in Rwanda were created in the 1960s (Ruberangeyo et al 2011:344)*:* but the current system was established by the government 1999 (Samson 2009:14). The number of CBHI schemes increased quickly from 6 in 1998 to 76 in 2001 and 226 in 2004. In December 2004, the Government adopted a national policy for the development of CBHI schemes. In 2005, CBHI schemes were extended to all 30 districts of the country thanks to the involvement of local authorities, health-care providers and awareness campaigns (Ruberangeyo et al 2011:344) and the programme was expanded nationwide in 2006 (Samson 2009:14).

According to Samson (2009:14), contribution rates are kept low in order to facilitate broad coverage, creating economies of scale for the scheme and the affiliated health-care providers. By 2008, mutual funds covered over 75 per cent of the target population in all provinces, and the use of health care had increased significantly. The scheme is reported to have improved local health-care facilities by increasing the number of medical staff, the availability of medical supplies; thereby raising community attendance.
"Over the past ten years the Government of Rwanda has developed a mandatory social health insurance scheme based on more than 400 community-based micro-insurance schemes, each linked to a local health centre"(Van Ginneken,2009:6)

As confirmed in the table below, the adhesion of the population to CBHI was progressive but the dynamics certainly started in 2004. The adhesion rates increased rapidly from 7% in 2003 to 85% at the end of June 2008 (Ministry of Health 2010:6).

Table 2: CBHI coverage rates

Years	**Adhesion Rate**
2003	7%
2004	27%
2005	44%
2006	73%
2007	75%
2008	85%
2009	86%

Source: MOH[22]

In June 2010, the CBHI system covered 91 per cent of the population of Rwanda. The strong will of the authorities at all levels to guarantee access to quality health care is crucial to achieving this coverage rate. Through the improvement of financial access to health care, CBHI also contributes to the well-being of families and the economic and social development of the country. CBHI is managed by the Ministry of Health (Ruberangeyo et al, 2011: 344).

Rwanda is one of the few countries in Africa that has taken CBHIS to a great length; there are clear indications to the fact that the Rwandan CBHIS has improved the utilization of the health care facilities and contributed to a better protection of income. CBHIS in Rwanda are one of the largest experiments in community based risk-sharing mechanisms in Sub-Saharan Africa for health related problems (Shimeles, 2010:6, 15). It also proves to be a successful model compared to other developing countries because it covers a high percent of individuals in the informal sector (*Ruberangeyo et al, 2011: 346)*.

[22] MOH (Ministry of Health): Annual Report 2010

Chapter 2: The limits of pension systems in Rwanda and Planned reforms

2.1. Introduction

Rwanda does not represent an exception vis-à-vis other developing nations. In spite of advances in some areas such as health care coverage; the pension system in the country remains weak. In this second part, the limits of the existing pension and social security systems in Rwanda will be analyzed. Following an analysis on the weaknesses of the system, the chapter will examine contemplated reforms of social security in Rwanda aimed at improving the system.

2.2. Main limits of the existing social security systems in Rwanda

Before discussing in details the first limit of social security systems in Rwanda which deals the limited coverage, it is necessary to first contrast the importance of the formal and the informal sectors in Rwanda.

The informal sector in Rwanda is characterized by the absence of the suitable instruments to protect its rights and as such it remains vulnerable to the employment challenges and labor related problems. According to a report submitted by Rwanda to the United Nations Human Rights Council (2010:19), the informal sector "constitute 93, 8% of the working population: agriculturalists and farmers working on family land (71%), salaried farming workers (6%), domestic workers (15, 2%), etc." The government conceded that even if this category of workers was increasingly organized in cooperatives, the existing labour law protected them only matters related to health and security. The report further acknowledged that "other mechanisms are needed for their protection in terms of pension and social security" (Republic of Rwanda, October 2010:19).

In a 2011 report (p.13), the Ministry of Trade and Industry (MINICOM), the National Institute of Statistics of Rwanda (NISR), the Ministry of Public Service and Labour (MIFOTRA) and the Private Sector Federation (PSF) explained that institutions are considered to be part of the formal sector if they: (a) have a physical address; (b) registered with Rwanda Revenue Authority (RRA), Rwanda Development Board (RDB), Rwanda Cooperative Agency (RCA) or Social Security Fund (SSF); (c) are engaged in the production of goods/services for sale or barter in nonagricultural (except value addition).

Data from the report show that 88.6 percent of all institutions/enterprises in Rwanda fall under the informal sector category while only 11.4 percent are classified within the formal sector.

Table 3: Number of Enterprises by Formal and Informal Sector Categorization

Sector	Number	%
Formal	13,275	11.4
Informal	103,142	88.6
Total	116,417	-

Source: Establishment Census (August 2011): Analytical Report

From the above table, it can be concluded that Rwanda has a great portion of institutions falling within the informal sector than the formal sector. The informal sector grows in developing countries because of the low rate of the industrial development and productivity but also because of the presence of surplus labor (Breman, 1980). The growth of the informal sector in the developing countries is also linked to the fact that they rely on an old economic mechanism such as the use of low technology and cheap unskilled and semi-skilled labor (Gërxhani, p 25)[23].These reasons for the growth of the informal sector in developing countries are also applicable to the case of Rwanda.

MINECOFIN (2009:4) examined the limits in the social security schemes in Rwanda and these limits were grouped into four areas which are the following: small coverage, insufficient benefits; long term financial imbalances and management of different schemes in scattered institutions. Following that analysis, the ministry formulated some recommendations for the development of those different areas.

2.2.1. The Social security coverage is insufficient

Explained by Barya (2011: 80), one of the most significant limits in pension systems of Rwanda is that more than 90% of the population is not covered. Given by the MINECOFIN (2009:18), the schemes cover (+/- 6% of active population) only the persons in the formal sector for both retirement and professional risks.

A 2001 report of the International Labour Conference found that it is difficult to encourage the adhesion of informal sector where workers are not covered by social security schemes because of a diversity of reasons (ILC, 2001: 26). First, it was found that it is extremely

[23] Klarita Gërxhani, 'Informal Sector in Developed and Less Developed Countries: A Literature Survey'; http://www.ifwea.org/@Bin/217843/Gerxhani.pdf (accessed on 25 may 2013, p 25)

difficult to collect contributions from workers and sometimes from their employers. Second, many workers were unable to contribute a relatively high percentage of their incomes since they had other urgent needs. Their "immediate priorities tend to include health care, in particular where structural adjustment measures have reduced access to free services. They feel less need for pensions, for example, as for many of them old age appears very remote and the idea of retirement perhaps unreal" (ILC, 2001:26). Third, workers were reluctant to contribute because they were either unfamiliar with social security schemes or distrusted the way they were managed (ILC, 2001:26).

Rwanda offers a case where these considerations are very relevant. As explained in the first chapter, health insurance coverage under the various schemes – Public sector, military and the community based health mutual insurances or *mutuelles de santé* - is rather very high.

2.2.2. The benefits are insufficient

The second limit of the social security scheme in Rwanda is that the benefits are not sufficient; with a significant problem that the financial sustainability is not guaranteed**.** A 2003 actuarial report concluded that the rate of the contribution must be raised from 6% to between 8.0 and 9.5% during the 15-years period from in 2003 in order to maintain actuarial and fiscal balance by 2018. A 17.7% of the contribution rate would be needed to pay all the benefits and the costs during the next 50 years; that is until 2053 (MINECOFIN, 2009: 20-21).

The MINECOFIN predicted: "[t]he current situation of a generous benefit formula with a low contribution rate is sustained as long as Rwanda has a favourable demographic ratio but this situation is likely to be reversed as more workers will be retiring….with the mandatory retirement age for civil servants put back to 65 years, the SSFR has been so far capable to fund benefits up to 60% (for those who contributed for 30 years) of the best last average salary (which means a replacement rate of almost 100% of net take home salary if contributions are based on gross salary), with a contribution rate of only 6%" (MINECOFIN, 2009:21). The situation was deemed to be sustainable only if the number of retired remained less than 1/10 of active workers.

In spite of what Rwandan policy-makers considered to be a generous benefit formula, the SSFR had a bad reputation of paying low sums because of "a low level of salaries combined with the lack of indexation mechanisms [that made] the purchasing power of the pensioners to be reduced day after day" (MINECOFIN, 2009:21

2.2.3. The financial imbalances in the schemes

The MINECOFIN (2009:10) explained that the financial imbalances in the schemes were characterized by the manner the pension scheme in Rwanda is organized under a DB plan which did not make "social security an appropriate vehicle for long term savings mobilization to finance national investment". Under that model, "contributions are meant to match the expenses (benefits and management fees) with a margin for reserves" (MINECOFIN, 2009:10).

A provident fund organized under a DC plan may be the perfect solution to address this third limit (MINECOFIN, 2009:10).

2.2.4. Management of different schemes in scattered institutions

The last limit enumerated by the MINECOFIN (2009:23) is that the social security system is dispersed, expensive and not coordinated. In this particular respect, the document identifies the need to improve information technologies, contribution remittance methods, investment management, and enforcement as areas that need particular focus (p.23). It also emphasized the need to "increase communication and consultation with social partners, including organizations of employees and employers, as well as the general public" MINECOFIN (2009:23).

2.3. Contemplated reforms of social security in Rwanda

2.3.1. Addressing the insufficiency of coverage

The Rwandan government embarked on reforms aimed at ensuring social security coverage for all. In the words of the MINECOFIN, the ambitious program of universal social security coverage would insure that all Rwandans are "covered with maximum benefits possible for retirement and key pre- retirement benefits such as housing and education, for professional risks benefits, sickness benefits, maternity benefits, health care, and eventually unemployment benefits when social and economic conditions will allow this last branch to be implemented" (MINECOFIN 2009:11).

The Rwandan government has formulated a number of recommendations in the previously mentioned Nations Social Security Policy (MINECOFIN, 2009). The government pledged to take measures aimed at encouraging total adhesion of workers in the formal sector, self-employed workers and informal sector workers in organized groups. (MINECOFIN, 2009:19).

The government further planned to encourage voluntary adhesion to these schemes by remunerated employees in organized groups through measures that would stimulate the formation of cooperatives, attractive tax incentives, education campaigns and capacity-building programs for the programs for the cooperatives (MINECOFIN, 2009:19). Rwandan authorities targeted a voluntary adhesion of around 70% for the urban and the rural informal sector workers to social security schemes; the figure represents the percentage of the population living above the poverty line (MINECOFIN, 2009:19).

Specifics objectives of Rwandan vision 2020

In line with other sectors of socio-economic life, the Rwandan government has set specific targets in improving social security coverage for the 2020 horizon under policies popularly known in the country as “vision 2020”. Below is an overview of the targets for the various social security branches (MINECOFIN 2009:11-12).

Branch		**Target**
Pension branch		Every resident in Rwanda must have a pension cover either by a public pension scheme or by a private one
	Type of Pension	
	Public pension	First pillar based on “DB” scheme will remain mandatory for the whole formal sector with 100% coverage.
	Provident fund	composed of complementary pension scheme on a “DC” plan, and schemes for pre-retirement benefits namely housing and education, will be also mandatory for formal sector;
	Private pension	For the rest of the population (meaning people in informal sector) adhesion to pension scheme will be also mandatory, with free choice to adhere either to a private pension scheme, or to the pension scheme managed by the public provident fund.
Occupational hazards branch		Will remain mandatory for formal sector with 100% coverage. It will be open to allow adhesion of all workers in organized groups of informal sector, especially cooperatives, with target to reach at least 70% coverage;
Health care branch		The vision of Rwanda is to achieve the goal of health for all through universal health insurance;
Maternity and Sickness branches		Will be mandatory for all formal sector; similarly to occupational hazards, intensive sensitization programs and appropriate incentives will contribute to promote

	voluntarily adhesion of at least 70% for urban and rural informal through organized groups;
Unemployment benefits	This scheme will be introduced as soon as economic conditions will allow it.

Charlton and McKinnon (cited in Bertranou et al, 2004:4) argue that the "key priority for pension policy in developing countries should be the regular provision of tax-financed cash benefits to poor older people". In that sense, the government of Rwanda may learn from a number of examples from Latin American countries such as Brazil and Chile by introducing tax-financed pensions as an "instrument to supplement contributory pension coverage and to increase overall social security coverage" (Bertranou et al, 2004:4).

Because a lot of people working in the informal sector or those without any labour market attachments in Rwanda have little or no ability to contribute, tax-financed social benefits can provide them with unique perspective for the social security coverage (Van Ginneken 2003:48). It has been argued that in certain circumstances, tax-financed social benefit schemes represent a more effective mechanism of providing income security than an employment guarantee or a food subsidy scheme (Van Ginneken 2003:7). This is particularly the case when "tax-financed social benefits are targeted to categorical groups (elderly people, widows and children) who have few or no potential links with the labour market" (Van Ginneken 2003:57).

2.3.2. Increasing benefits and reducing financial imbalances in the schemes

The Rwandan government plans to create a Provident Fund Pillar (PFP) which will be organized under the DC system and mandatory for all salaried workers. The PFP is intended to increase savings mobilization, increase benefits; prevent the financial imbalances, promote equity in the scheme, and establish effective mechanisms for housing and education savings plans (MINECOFIN, 2009:22). Besides savings plans for housing and education, the created fund would consider the possibility of offering pre-retirement benefits (MINECOFIN, 2009:23).
It is further argued that DC systems "have positive effects on savings and, in a growing economy with high returns to investment, will need lower contribution rates to provide a given replacement rate" (Barbone and Sanchez B., 1999:26-27).

The government plans to finance the system through a portion of contributions above the ceiling in the DB pillar, plus an additional contribution to be determined and, if needed, a matching or subsidy by the government. The PFP intends to provide contributors with separate individual accounts where their contributions are to be credited. The government plans to conduct regular actuarial studies that would be used as a basis for adjusting benefits for both the DB pillar and the PFP (MINECOFIN, 2009:22).

The Government is expected to be the guarantor for the contributions paid into the scheme and the benefits to be paid out to contributors and to put in place an investment strategy to guarantee that the funds are well invested and a fair interest rate is paid to employees (MINECOFIN, 2009:23).

The problem of insufficiency and unsustainability of benefits are also to be addressed through measures aimed at addressing retirement policies. As explained above, more Rwandan workers will be retiring in coming years. In order to guarantee the financial sustainability and sufficient benefit in the social security system, the government of Rwanda aims at an increased participation in the labour force by discouraging early retirement and increasing the retirement age. The increasing of the retirement age can be a good idea especially for those who work in the formal sector. In order to increase their expected benefits, workers are expected to continue to work full-time in order to retire later with sufficient social security benefits or to work part-time to complement lower benefits[24]. The government needs to encourage also the incentives of female workers. Those females who have to take care of their children are incapable of working in full time positions but are capable of working in part time positions (Bovenberg, 2008:62).

2.3.3. Improving the management of different schemes

The Rwandan government has tried to improve the management of scattered social security schemes through a gradual merger of the different branches. The creation of the RSSB in 2010 was precisely an initial step aimed at merging CSR and RAMA (Law N°45/2010 OF14/12/2010). In the long run, the policy aimed brining other medical insurance schemes within the RSSB. To ensure responsibility, transparency and accountability of the newly created organization (RSSB), the Rwandan government undertook to appoint independent-minded and competent individuals representing employees, employers and any other stakeholders (MINECOFIN, 2009:23).

The government was further urged to institute capacity-building programs for the staffs of each branch as well as regular data collection, audits and analysis to assess governance, internal controls, staff performance, and overall effectiveness of programs.

[24] http://www.actuary.org/files/Social_Sec_Retirement_Age_IB_October-2010.pdf (accessed on 25 May 2013:5)

Chapter 3: How Rwanda can improve its pension systems

3.1. Introduction

According to Bloom et al (2011:31), the economic impacts of aging are implausible to be uniform in all societies. Contrary to the developing countries, in the developed countries longer lifetimes were accompanied by a change in support for elderly people from their families to the state. In several developing countries, the families remain essential in taking care for the elderly. As lifetimes become longer, there may possibly be interruption to the structures of the families, resulting into a move in the direction of public transfer systems and savings identical to that qualified in the developed countries.

Bloom et al,(2011:31) note that "developed and developing countries differ from each other greatly in the extent of their progress through the demographic transition and in the financial and institutional resources they have available in responding to population aging". Though, in several developing countries the aging will be rapid. The countries that are directly confronted with the problem of aging of the population are mostly in the developed countries, where both pension and health care systems are facing unprecedented challenges. The additional thing is that the developed countries are more economically able of answering to the challenges posed by the aging population, this explained by the fact that they became rich before they became old (Bloom et al, 2011:32).

The quick aging of the population in developing countries means that large sections of the population in those countries will get old before their countries become rich. This situation will be much more difficult in comparison to the challenges that developed countries have confronted. As a result, setting up financially achievable pension systems will become more challenging for developing countries that are experiencing population aging than it was for developed countries (Bloom et al, 2011:32). More generally, in addition to resource constraints, "the predominance of informal sector labor in developing countries makes the design and implementation of such systems all the more difficult" (Bloom et al, 2011:32).

According to Bloom et al (2011:11), an aging population will necessitate increased support of several types, with the income security and higher access to healthcare. Whereas families have traditionally provided such support in various developing countries, progressively this support is less reliable, mainly when females enter the labor force in greater numbers. Another reason for the limited reliability is that "lower birthrates, the tendency of children to move away from their parents, widespread rural to urban migration and new cultural norms regarding filial obligations are increasingly leaving the elderly bereft of the security they once had" (Bloom et al, 2011:11).

The first two chapters give brief descriptions of how the current social security and pension systems work in Rwanda. Some limits and expected reforms were analyzed. In this last chapter, some alternatives will be given on how Rwanda can improve its pension systems. As a reminder, the central research question for this thesis is: *How can Rwanda improve its pension systems, learning from developed countries?* The present chapter explores answers to that question using the experience of a number of developed countries but still taking into account the realities of developing countries like Rwanda.

The first section covers the introduction, the second section covers an overview of pension systems in both European and Organization for Economic Cooperation and Development (OECD) countries and the last section covers some reforms due to the problem of the population aging in developed countries and those will be considered as alternatives to how Rwanda can improve its pension systems.

3.2. An overview of the European pension systems

The ageing of population is one of the most significant challenges in many developed countries, particularly in Europe. This phenomenon is due to a combination of the increasing of the life expectancy and a decline of the fertility rates (Palo, 2011:1).

As the European commission (2010:4) stated, "over the last 50 years, life expectancy has risen by about five years in the European Union" The increasing of life expectancy in Europe is due to better nutrition, a higher quality and increasing availability of health care, and the improving living conditions OECD (2012:16). However, according to Brown (2004:20) the lower fertility rate is caused by the introduction of the use of contraceptives, the legalization of abortion, the increasing of the age at marriage and the improving of the labour force participation for women in the labor markets.

According to Wöss and Türk (2011:2), the demographic dependency ratio within the European Union (EU) in the coming years is expected also to double from the present level of 26 per cent to 50 per cent in 2050. This means that "for every 100 persons aged 15-64 there will be 50 persons aged 65 and over" Wöss and Türk (2011:2). Within the wider OECD countries, Korea is projected to be the country with the most rapid population ageing. The dependency ratio is projected to grow to 77% by 2050. Korea will move from being the third youngest country in the OECD to the second oldest after Japan".[25]

In 2060 specifically, the ratio of dependency of Central and Eastern Europe countries will be the highest in the EU and is predicted to reach an average of 65%. At that time, there

[25] http://www.aegonglobalpensions.com/en/Home/Clients/Ageing-population/ (accessed on 15 June,2013)

will be simply four workers for every three retirees. Luxembourg is expected to be the only member of the EU countries with its dependency ratio under 40%.[26]

3.2.1. Different pension regimes in Europe

The pension systems in Europe differ broadly in their structure and relations among different pension pillars and in the corrections level in reaction to current demographic and economic modifications. In several countries the problem of the population ageing aggravated by the existing financial and economic crisis, those affects strongly on the financing of PAYGO pension arrangements and directs to changing the logical basics of pension systems (Palo 2011:1). There are three pension pillars: a public mandatory old-age pension, occupational pensions and private savings plans. Eichhorst et al, (2011:10), found that while the main structure is common across all pension systems, "the size of each pillar depends on the institutional context of each Member State and therefore differs across the EU".

The first pillar: These pillars are generally based on PAYG system, where the current pensioners are financed from the contributions and taxes paid by the current workers (Chybalski, 2009:3). "When today's workers retire, they have to hope that there will be another generation of workers behind them that will, in turn, transfer their wealth" (KPMG, 2011:4).

In the coming years, the financial expenses for public pension systems in many developed countries will become huge because those countries will face the increasing in their old-age dependency ratio due to declining fertility and increasing longevity. In other words, there will be more retirees' people and less working population (KPMG, 2011:5-6). Another point is that the baby boomers[27] are approaching the retirement age (IMF, 2005:9).

In several Member countries public pension systems require minimum pension arrangements to alleviate old-age poverty. The participation and provision in the first pillar pension system are habitually statutory. Nine countries[28] out of the 27 EU Member Countries moved part of their social security pension provision into statutory funded pension schemes (Eichhorst et al, 2011:10).

The second pillar: Occupational pension schemes .The goal of these schemes is to provide pensioners with a sufficient replacement rate which is more beneficial than the pension level provided by the first pillar alone. These schemes may be voluntary or obligatory

[26] Ibid

[27] From the end of the Second World War, mainly between 1946 and 1964, the fertility rate increased in many industrialized countries: this phenomenon is known as "baby boom" (Macunovich, 2000:1).

[28] Bulgaria, Denmark, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Sweden (Oxera, 2007:26)

whereas some Member Countries have both types. On the other hand, not all European countries have these schemes of occupational pension (Eichhorst et al, 2011:10).

The third pillar: is characterized by the individual private pension schemes. This pillar generally consists of a supplementary, voluntary scheme for those persons who need to save additional money during their professional life before reaching retirement (Elisa, 2007:25). Even though the third pillar is voluntary, in some European countries this is encouraged through tax subsidies (Eichhorst et al, 2011:10).

The aging of population has consequences for several forms of the pension arrangements. Firstly, the PAYG pension schemes are affected by the falling of the number of contributors although the number of receivers is expected to increase (Bloom et al, 2011:6). Secondly, "the fully funded systems are affected by falling asset values and reduced returns" (European commission, 2012:3). Increased longevity affect the fully funded systems, where in several world countries, individuals are living significantly longer lives than preceding years (Bloom et al, 2011:1). The combination of falling asset values and the increased longevity would cause the fully funded systems to be even worse. These schemes need a long period until they can yield generous pensions; it is so late to accumulate enough funds because the baby boomers have not saved so far (Bloom et al, 2011:6). Finally, "voluntary funded pension systems suffer from procrastination, while mandatory funded systems create governance problems. A mix of both systems is thus the risk-minimizing solution" (Bloom et al, 2011:6).

3.2.2. Impacts caused by the population aging

Before discussing the different reforms introduced by some European countries, let summarize some impact caused by the demographic aging in pension systems among those countries. According to European actuarial consultative group (2012:8), due to the population aging in EU, the increase of the expenditures on pension systems of more than 5 percent of the gross domestic product (GDP) between 2010 and 2060 is predicted to increase in the five countries: Malta, Spain, Romania, Ireland and Slovenia (European Economy (2009:78). As stated by the OECD, the pension expenses is predicted to increase from 9.2% of GDP to 18.0% of GDP by 2060 on average for 23 members of the OECD countries due to the aging population(OECD 2011:44).

The second impact of the aging of population is the existence of a fixed age at which individuals become eligible to pension in the most European countries in their social security systems. The dependency ratio is getting worse due to the increasing of life expectancy and the decline of birth rates. The last impact caused by the aging of population is the challenge for the financing of pension systems, where the systems are based on PAYG or funded schemes (European actuarial consultative group, 2012:8).

Owing to the retirement of the baby boomers, the decrease in the labor force and the increasing expenses of both the pension and the health care systems, particularly in Europe, North America, and Japan; policy adaptations to the population aging have become a necessity (Bloom et al, 2011:7). In the words of the European Commission (2012:3), "reforms of pension systems and retirement practices are essential for improving Europe's growth prospects, and they are urgently required in some countries as part of current actions to restore confidence in government finances".

3.3. Some reforms in the pension systems

The current reforms in European or OECD countries are based on the challenge of the aging population occurring in those countries. Rwanda does not currently face the same imminent challenges. Contrary to the OECD countries, the problem of an aging population is not yet a pressing issue. However, it is projected that the population aging in developing countries such as Rwanda will more than double by the 2050 horizon (Bloom et al, 2011:6). One clear indicator is that the fertility rate in Rwanda is decreasing over time: between 2005 and 2010 the total fertility rate dropped from 6.1 to 4.6, that is around 25% decline[29]. Accordingly, the Government of Rwanda can face this reality by taking inspiration from relevant measures taken some developed countries.

Rwanda is not in the same economic position as developed countries and as such, some reforms adopted in developed countries may be more expensive and complicated as alternatives for Rwanda. For that raison, in improving its social security systems, Rwanda can draw lessons from other developing countries where their pension systems work better than the domestic systems (for example Latin American countries).

This last chapter is not going to focus on all pension systems in Europe; it will only draw inspiration from few reforms introduced in Europe to guarantee the financial sustainability. Those will be used in seeking alternatives on how Rwanda can improve its pension systems. In answering this question, on how Rwanda can improve its pension systems, learning from developed countries and Latin American countries four ideas will be explored. These are: The increasing of statutory pension ages which has already been done by a number of European countries while others are expected to follow the example (European Commission 2011), the shift from DB to DC or collective defined contribution (CDC), the tax-financed social benefits and the increasing of labor force participation of women and older workers

[29] http://www.guttmacher.org/pubs/journals/3720911.html (accessed on 19 July, 2013)

3.3.1. Increasing the retirement age

Encouraging a late retirement has contributed to the improvement of financial sustainability for European countries that have taken such measures. In several countries, the public pension systems could be changed to eliminate motivations to early retirement, which means between the ages of 60 and 65 (Bloom et al, 2011:7). Another point is that, providing people with more independence in choosing when to retire is a good beginning point for public policy reform. The life expectancy in 43 selected countries[30] in the years between 1965 and 2005 shows an average increase of 9 years but during the same period the average statutory age of retirement increased by approximately 6 months (Bloom et al 2010:590). There are several countries in Europe (e.g., France, Ireland, Greece, and the United Kingdom) that have recently risen the normal statutory retirement age (Bloom et al 2010).

The majority of OECD countries have increased the retirement age but an explicit linkage between retirement age and life expectancy is still uncommon. For instance, Denmark has indexed retirement age to life expectancy. Statutory provisions were introduced which enable the age of retirement to be indexed in accordance with the increases in the life expectancy after an initial increase of the retirement age to 67(OECD, 2012:65). Besides Denmark, the Netherlands is also one of the countries planning to index the retirement age to the life expectancy. According to Broeders and Ponds (2012:65), the first pillar retirement age will be linked to average life expectancy in the Netherlands over the age of 65. Once life expectancy increases, the retirement age will also rise. This will be revised each five years and annual adjustments in the public pension will be indexed to wages in order to make the first pillar stronger. Overall, "normal pension ages will vary between 60 and (around) 69 in OECD countries once reforms are fully in place, with an average of 65.6 and 65 years for men and women respectively by 2050" (OECD, 2012:64).

There are two clearly positive effects from an increasing in the retirement age under the defined benefit schemes. One is that the benefit will be paid for a shorter period and the cost over the lifetime of individual will be reducing. The other effect is that since people will work longer, they will contribute more to the pension systems (OECD, 2012:64).

Rwanda has already increased the retirement age to 65, with a possibility of early retirement at the age of 55(Art. 124 of the Law on General Statutes of Rwandan Public Service). The life expectancy at birth in Rwanda is 58.44 years[31]. Since the proportion of the aging population in developing countries like Rwanda is projected to more than double by

[30] The sample includes all countries for which all data are available—mostly developed countries, with some middle-income and one very poor country included.
[31] http://www.indexmundi.com/rwanda/demographics_profile.html (accessed on 25 July,2013)

2050 (Bloom et al, 2011:6), further reforms regarding the retirement age may be contemplated, mostly with regards to limiting the possibility of early retirement. In order to guarantee the financial sustainability and sufficient benefit in the social security systems in Rwanda; the government of Rwanda may learn from the examples from Latin American countries by encouraging later retirement age for those who work in the formal sector. As in Brazil; a later retirement age in Rwanda would represent a cut in lifetime benefits and the elderly people would work longer where the younger workers will become relatively scarce (Jackson et al, 2009:41).

According to Bloom et al (2011:8), it can be concluded that in most advanced countries the retirement itself is a complex procedure, which is frequently more of a transition, concerning anticipated retirement, partial retirement, or un-retirement. An increase of the retirement age in developed countries seeks to improve the financial sustainability in the pension systems because those countries have a high percentage of the labor force in the markets (Bloom et al, 2009:41).

Whereas, in most developing countries in reality the statutory age of retirement applies virtually to only a small percentage of the labor force, and pension systems are somewhat uncommon. People in developing countries and which is the case of Rwanda, very often work till the moment they can no longer do so and most of them are supported by their children (Bloom et al, 2011:8). In my opinion I can say that the increasing of the retirement age in Rwanda cannot significantly improve the financial sustainability because the majority of the people work in the informal sectors and they are not covered with the pension systems. So to achieve this, the government of Rwanda has to solve the issue of lower coverage of its pension systems.

3.3.2. Shift from DB to DC or CDC

The second measure adopted by European countries to achieve the financial sustainability is the shift from DB to DC or CDC.

Under DC, the benefit received at the retirement pension is endogenous but the contribution rate to the system is exogenous. That means, the individuals know clearly the amount they contribute each year when working. However the final amount of retirement benefits is unknown, and rather depends on the real return on the member’s contributions calculated at the period of retirement. (Elisa, 2007:13).

DB on the other hand is characterized by a contribution rate which is not fixed while the benefit received at retirement is endogenous. It means that the final amount of retirement benefit is well known to the participant, whereas the contribution rate required to meet the following liability is adjusted consequently (Elisa, 2007:13).

According to Sender (2012:20), CDCs are plans characterized by the absence of sponsor guarantees and they only consist of the risk-sharing between workers. The principal difference between the DC and the CDC plans is principally in the manner in which risk is shared between participants: there is no sponsor in CDC. The latter plan "provides a collective risk management framework. In particular, in provides intra- and inter-generational risk sharing" (Sender, 2012:20).

According to Broadbent et al (2006), the DB schemes are slowly losing their domination in the occupational pension schemes of various states. Over the past few years, the move to the DC was slow but now in certain countries the DC systems represent the majority of assets invested in the private sector occupational pension plans. As the author explains, "it is widely anticipated that recent and prospective regulatory and accounting reforms in the pension sectors of a number of countries will accelerate the ongoing shift from DB to DC plans" (Broadbent et al, 2006: ii).

It is reported that eight OECD countries "have already collected over 50 per cent of pension sector assets in DC plans, some of them having a relatively short history with funded occupational pensions" (Broadbent et al, 2006:11). Unlike, DB systems stay the principal method of the pension and representing nearly all of sector assets in several countries, for instance: Norway (Broadbent et al, 2006:11).

Nowadays, approximately 60 million Europeans are enrolled in DC arrangements. The schemes are much more widespread currently than they were ten years ago and this is expected to continue to grow significantly (European Commission, 2010:14). The guarantors do not bear the financial risk and the encouragement structure of DC schemes may discourage people to take early retirement to avoid lower than predicted retirement income (European actuarial consultative group, 2012:15). The impact is that they shift the investment, inflation and longevity risks to scheme participants, who are unable to bear these risks individually (European Commission, 2010:14).

As explained in the second chapter, PFP is organized under DB plans which did not make "social security an appropriate vehicle for long term savings mobilization to finance national investment". The Rwandan government is currently planning to create a PFP which will be organized under DC (MINECOFIN, 2009:10). The move from DB to DC in Rwanda is intended to increase savings mobilization, increase benefits, prevent financial imbalances, promote equity in the scheme, and establish effective mechanisms for housing and education savings plans (MINECOFIN, 2009:22). By learning from experiences in developed countries Rwanda's pension systems reforms are trying to address challenges resulting from population aging that will have significant effects on financial markets and economic growth (IMF, 2005:7, 39).

The shift from DB to DC in both Rwanda and developed countries is a positive alternative to achieve the financial sustainability in a context characterized by an aging population. Even if in Rwanda the aging population is not yet a big problem, the decline in birth rates and increase in life expectancy are indications that the problem will arise in the coming years. Rwanda has a good opportunity to address the problem beforehand. This can also be a solution to the third limit of the pension systems in Rwanda, which deals with the financial imbalances in the schemes.

A number of developed countries have adopted CDC in their pension systems. One such country is the Netherlands where the importance of sponsor guarantees is decreasing and expensive nominal guarantees are questioned. For that reason, the Netherlands appears to be seriously considering CDC (Sender (2012:84). Learning from this trend, Rwanda may consider the introduction of CDC as an instrument to improve risk sharing between the participants in the country's the pension systems.

3.3.3. Tax-financed social benefits

The Tax-financed social benefit is the third possibility of how Rwanda can improve its pension systems. The government of Rwanda may learn from a number of examples from Latin American countries such as Brazil and Chile by introducing tax-financed pensions as an "instrument to supplement contributory pension coverage and boost overall social security coverage" (Bertranou et al, 2004:4). Since most people in Rwanda work in the informal sector and those without any labour market attachments have a little or no ability to contribute, tax-financed social benefits can provide them with a unique prospect for the social security coverage (Van Ginneken 2003:48). This is particularly the case when "tax-financed social benefits are targeted to categorical groups (elderly people, widows and children) who have few or no potential links with the labour market" (Van Ginneken 2003:57). As it works in Latin American countries, the funding of tax-financed benefits once introduced in Rwanda have to be paid out of the general tax revenues (Bertranou et al, 2004:5).

The principal advantage of the introduction of tax-financed social assistance benefits by Rwanda are that they can be targeted on those who are most in need, but they require a sophisticated administration to define who is truly eligible and to make sure that the benefits reach the target population efficiently (Van Ginneken, 1997).[32]

[32] http://www.ilo.org/public//french/protection/socsec/pol/publ/discus5.htm (accessed on 28 July,2013)

3.3.4. Increasing of labor force participation of women and older workers

Several states have a significant range for improving the sufficiency and sustainability of their pension arrangements by increasing employment rates. This does not concern only elderly people but also individuals with lower employment rates such as females, migrants and youths" (European Commission, 2012:7). The European Commission (2012:7) found that "reaching the EU employment target or catching up with the best-performing countries could almost neutralize the effects of population ageing on the weight of pensions in GDP".

In the EU countries, the tendency in recent decades towards anticipated retirement was yet inverted. The employment rate of the age group of 55-64 increased in the 27 EU member countries from 37.7% in 2001 to 46.3% in 2010. These figures may have changed due to the financial crises over the last two years. Reforming pension systems to increase the labour market participation rate will be essential to improve economic growth and to lay a solid beginning for sustainable and sufficient pensions (European Commission, 2012:7).

According to Africa Development Bank (2011:8), in spite of the significant improvements in gender equality in Rwanda, there is still much to be done to fight against inequalities in economic participation. It was explained that there are 40% of female who are all registered entrepreneurs and female-headed households accounted for 60% of the poor in 2006. Rwanda faces the limited access to non-agricultural employment and this is the key element of youth unemployment and the great poverty among female-headed households.

Existing programmes and action plans focusing on job creation and local entrepreneurship for example through incubation of small and medium enterprises (SMEs) in both rural and urban areas, with a focus on females and youth, must be developed and executed (Africa development bank, 2011:8). In the particular case of Rwanda, the government has prioritized microfinance through Village Development Programmes locally known as Umurenge SACCO (Savings and Credit Cooperative) as a "strategic initial step to increasing economic inclusion for women and the youth" (Africa development bank, 2011:8).

This last point can also be an important way to improve the pension systems of Rwanda. Such savings will greatly contribute to the reduction of the dependency ratio. Rwanda has to increase the employments rate, especially for the groups cited above not only for the elderly people but also for: women, migrants and youths. Rwanda has to increase the proportion of the female in the labour force participation to solve the problem of financial sustainability. According to the OECD (2012:19), increasing labour force participation by women and a better distribution of woman workers across occupations and economic sectors can contribute to economic growth. Learning from, for instance, the Norwegian experience, Rwanda may try to increase markets flexibility and opportunities to access the part-time job for females who have to take care of both their children and families in general. Currently, there are still some challenges in efforts to encourage people or female to move from part-time work to full-time work: for instance the child care infrastructure as well as family provisions are still very underdeveloped. [33]

[33] http://oecdobserver.org/news/fullstory.php/aid/3898/Women_in_work:_The_Norwegian_experience.html (accessed on 4 August, 2013)

Conclusion

Our investigations have focused on Social Security and Pension systems in Rwanda, for purposes of examining the limits and alternatives. The main question posted in this research was to find out how Rwanda could improve its pension systems, learning from experiences in developed countries.

To answer the research question, our thesis was subdivided in three chapters. The first chapter gave a brief description of how the current social security and pension systems work in Rwanda. Some of their limits and expected reforms aimed at addressing those limits were analyzed in the second chapter.

The research found that Rwanda does not represent an exception vis-à-vis other developing countries where the pension systems remain very weak. On a positive note, the research noted that Rwanda is one of the few countries in Africa that has taken CBHIS to a great length; there are clear indications to the fact that the Rwandan CBHIS have improved the utilization of the health care facilities and contributed to a better protection of income.

The last chapter explored answers to the main research question by using the experience of a number of developed countries; taking into account the particular realities of a developing country such as Rwanda. Because of the inevitability of population-aging in long-term, this thesis considered some reforms undertaken in a number of developed countries as alternatives to how Rwanda can improve its pension systems. Four ideas were specifically explored in the last chapter.

First, it was demonstrated that an increase of the retirement age in Rwanda may improve the financial sustainability of the country's pensions systems. This can only succeed if the percentage of the labour force in the market increases. This means that the government of Rwanda has to create opportunities for workers in the informal sector through job creation but also by encouraging people to adhere the cooperatives. Once a larger proportion of the population adheres to cooperatives, adherents will be able to pay the taxes or to save for their retirement. After that the increasing of retirement age and measures aimed at discouraging early retirement can be very important because they will contribute to a higher percentage of labour force in the markets.

Second, the thesis also discusses in detail the argument in favor of a shift from DB to DC in order to address the limit of financial imbalances in the schemes: where the pension schemes are organized under DB and provident fund organized under DC will be an answer to that limit. Additionally, it may be a positive step for Rwanda to introduce the CDC in the pension systems where participants can share the risks as opposed to the individual DC in which everybody bear risks himself.

Third, introducing tax-financed social benefits in Rwanda may also improve the sustainability of the country's pension systems. This is considered as an instrument to supplement contributory pension coverage and boost overall social security coverage. Even if this third idea can be an important way to improve the pension systems in Rwanda; it is very important to remember that affordability is a function of citizen's willingness to finance social benefits through taxes and contributions: these schemes are more expensive because they have administrative costs[34]. The size of these schemes may depend on the resources, the management capacity and the priorities of Rwanda (Van Ginneken, 1997). The high proportion of informal sector labor in Rwanda makes the design and execution of such systems all the more problematic (Bloom et al, 2011:32).

The main problem that the government has to address is the insufficiency of the coverage rate in the pension system and this should be increased. Introducing the tax-financed social benefits in Rwanda can be a good instrument to achieve the social security coverage for a large number of Rwandans. Research has shown that however whatever little the amount of the benefit received, it may have an important impact on hunger and poverty. Thus, the advantage of this is that, poor households can be less risk averse.[35]

Finally, Rwanda has to increase the proportion of the female in the labour force participation to solve the problem of financial unsustainability. Many women in Rwanda bear the burden of taking care of both their children and the old people in their family. The government has to create more opportunity for part-time jobs because those female cannot work full time due to the responsibility they have at their own home. A combination of increases in labour force participation by women and a better distribution of woman employees across occupations and economic sectors can contribute to economic growth of Rwanda. Opportunities arising from economic growth would contribute to the reinforcement of social security systems, through increased participation of a higher number of workers.

[34] http://www.socialsecurityextension.org/gimi/gess/ShowThemeQuestions.do;jsessionid=8b628cbc4a61d296be01ac7a6ad96a2c67945dae22649dab452b052e690864ea.e3aTbhuLbNmSe34Mby0?tid=447 (accessed on the 21 August,2013)

[35] Ibid

References

1. African Development Bank (2011). Rwanda: Bank Group Country Strategy Paper 2012-2016. Regional Department East A (OREA).
2. Barbone,L. and Sanchez L. B.,(1999): Pension and Social Security in Sub-Sahara Africa Issues and Options.
3. Barya, J.J, (2011), Social Security and Social Protection in the East African Community: Fountain Publishers Kampala;
4. Bertranou. F, M et al, (2004): The impact of tax-financed pensions on poverty reduction in Latin America: Evidence from Argentina, Brazil, Chile, Costa Rica and Uruguay. International Social Security Review , Vol. 57, 4/2004
5. Bloom, D.E et al (2011). Population Aging: Facts, Challenges, and Responses. PGDA Working Paper No. 71.
6. Bloom, D.E et al (2011): Implications of Population Aging for Economic Growth. PGDA Working Paper No. 64.
   http://diseaseriskindex.harvard.edu/pgda/WorkingPapers/2011/PGDA_WP_64.pdf
7. Bloom, D.E et al (2010). “Implications of Population Aging for Economic Growth”, Oxford Review of Economic Policy, Vol. 26, No. 4, 583-612.
8. Bloom, D.E et al (2007): Demographic change, social security systems, and savings. Journal of Monetary Economics, 54, 92–114.
9. Bovenberg, A.L, (October 2008): the Life-course Perspective and Social Policies: An Overview of the Issues. CESifo Economic Studies, Vol. 54, 4/2008, 593–641 doi:10.1093/cesifo/ifn029.
10. Bovenberg , A.L.(2008-b) Grey New World: Europe on the Road to Gerontocracy? CESifo Economic Studies, Vol. 54, 1/2008, 55–72 doi:10.1093/cesifo/ifn005
11. Broadbent et al (2006): The Shift from Defined Benefit to Defined Contribution Pension Plans - Implications for Asset Allocation and Risk Management
12. Brown. R, L (2004): baby boom and baby bust: fertility rate and why they vary. Contingencies.
13. Broeders, D and Ponds. H.M, E (2012): Dutch Pension System Reform a Step Closer to the Ideal System Design?
14. Chybalski, F (2009): Liberalization of pension systems in Central and Eastern Europe. EVN Worknig Paper.Europeanvalues.network.
15. Department of Social Development in South Africa: An overview of South Africa’s social security system. Pretoria 2010
16. European Commission (2010) Green Paper: towards adequate, sustainable and safe European pension systems. SEC (2010)830
17. European Commission (2011). Demography Report 2010. Older, More Numerous and Diverse Europeans. Brussels: Commission Staff Working Document.
18. European Commission (2012): White Paper: An Agenda for Adequate, Safe and Sustainable Pensions
19. European actuarial consultative group (2012:15): Sustainability of pension systems in Europe – the demographic challenge.
20. European Economy (2009) : Ageing Report: Economic and budgetary projections for the EU-27 Member States (2008-2060)
21. Eichhorst, W (2011): Pension systems in the EU – contingent liabilities and assets in the public and private sector. IZA Research Report No. 42.
    http://www.europarl.europa.eu/activities/committees/studies.do?language=EN

22. Fapohunda.M, T (2012): Women and the Informal Sector in Nigeria: Implications for Development. Department of Industrial Relations and Public Administration. Lagos State University Ojo. Nigeria.

23. IMF (2005): Ageing and pension system reform: implications for financial markets and economic policies. A report prepared at the request of the Deputies of the Group of Ten by an experts group chaired by Ignazio Visco, Central Manager for International Affairs at the Banca d'Italia. https://www.imf.org/external/np/g10/2005/pdf/092005.pdf.

24. International Labour Conference (ILC), Social security: Issues, challenges and prospects, Report VI, 89th Session 2001, http://www.ilo.org/public/english/standards/relm/ilc/ilc89/pdf/rep-vi.pdf (accessed on 1 June 2013).

25. International Monetary Fund (2011): Rwanda: Financial System Stability Assessment, IMF Country Report No. 11/244.

26. International organization of pension supervisors. IOPS Member country or territory pension system profile: RWANDA. Report issued on September 2011, validated by the National Bank of Rwanda

27. International Social Security Association (ISSA) 2008: Regional Social Security Forum for Africa: Country Profile for Rwanda. Social Security Fund of Rwanda. http://www.issa.int/ara/Resources/Conference-Reports/Country-profile-for Rwanda/(language)/eng-GB

28. Jackson, R et al (2009): Demographics and Retirement Policy in Brazil, Chile, and Mexico. Global aging initiative center for strategic and international studies. Latin America's aging challenge. http://csis.org/files/media/csis/pubs/090324_gai_english.pdf.

29. Jütting, J. (2000): Social security systems in low income countries: Concepts, constraints and the need for cooperation, http://www.zef.de/fileadmin/webfiles/downloads/articles/juetting-issr.pdf

30. KPMG (2011): Challenges of Pension Systems in the World. http://www.kpmg.com/by/en/issuesandinsights/articlespublications/press releases/pages/pension-systems.aspx. accessed on 5 july,2013.

31. LAW N° 22/2002 OF 09/07/2002 ON GENERAL STATUTES FOR RWANDA PUBLIC SERVICE, O.G., no 17of01/09/2002. http://www.mifotra.gov.rw/fileadmin/templates/downloads/laws/General%20Statutes%20for%20Rwanda%20Public%20Service.pdf

32. Law n°62 / 2007 of 30/12/2007 relating to the creation, organization, functioning and management of the mutual health insurance scheme. Official gazette special issue of 20 March 2008.

33. Law N°45/2010 OF14/12/2010 Establishing Rwanda Social Security Board (RSSB) and Determining Its Mission, Organisation and Functioning

34. Macunovich, Diane. J (2000): The Baby Boomers. Department of Economics. Barnard College, Columbia University. 3009 Broadway. New York, NY 10027 USA.

35. Meijdam, L. ,(September 20,2012): the Macroeconomics of Pensions and Ageing

36. Ministry of Finance and Economic Planning (MINECOFIN) (2009): National Social Security Policy, Republic of Rwanda.

37. Ministry of Health, (2010): Rwanda Community Based Health Insurance Policy. Republic of Rwanda.

38. Ministry of Local Government (MINALOC), (2011): National Social Protection Strategy http://www.minaloc.gov.rw/fileadmin/documents/Minaloc_Documents/National_Social_Protectiion_Strategy.pdf

39. Ministry of Trade and Industry (MINICOM), National Institute of Statistics of Rwanda (NISR), Ministry of Public Service and Labour (MIFOTRA) and Private Sector Federation (PSF), (2011): The Establishment Census. Analytical report.

40. OECD (2011), "Trends in Retirement and in Working at Older Ages", in Pensions at a Glance 2011: Retirement-income Systems in OECD and G20 Countries, OECD Publishing.

41. OECD (2012), OECD Pensions Outlook 2012, OECD Publishing.

42. OECD (2012), "Life expectancy and healthy life expectancy at birth", in Health at a Glance: Europe 2012, OECD Publishing. http://dx.doi.org/10.1787/9789264183896-en.

43. OECD (2012), Gender Equality in Education, Employment and Entrepreneurship: Final Report to the MCM. http://www.oecd.org/employment/50423364.pdf.

44. Oxera, "The effect of cross-border investment restrictions on certain pension schemes in the EU", Prepared for the European Commission DG Internal Market and Services, Brussels April 2007; http://ec.europa.eu/internal_market/capital/docs/oxera_report_en.pdf

45. Palo, D.C (2011). The demographic challenge on pension systems: empirical results from Italy. Department of Economics, University of Cassino, Italy. Review of Applied Socio- Economic Research. Issue 2.

46. Republic of Rwanda (2010): The government. Rwanda National Report Submitted in Accordance with Paragraph 15(a) of the Annex to the Human Rights Council Resolution 5/1 in the Framework of the Universal Periodic Review. October

47. Reynaud, E (2001), "The extension of social security coverage: The approach of the International Labour Organization" in Technical Commissions and Leo Wildmann Symposium, Reports presented at the 27th General Assembly of the International Social Security Association (ISSA), CHF30.00.

48. Ruberangeyo .T et al (2011): Social Protection: An Ongoing Process. Volume 18: Successful Social Protection Floor Experiences.

49. Samson. M, (2009): Good practice review: Extending social security coverage in Africa, Economic Policy Research Institute (Cape Town, South Africa). International Social Security Association, Geneva, Working Paper No. 2

50. Sender, S (2012:84), Shifting Towards Hybrid Pension Systems: A European Perspective. An EDHEC-Risk Institute Publication.

51. Shimeles. A, (2010): Community Based Health Insurance Schemes in Africa: the Case of Rwanda. Working Papers Series N° 120, African Development Bank, Tunis, Tunisia.

52. van Ginneken, W. (ed.) Social security for the informal sector: Investigating the feasibility of pilot projects in Benin, El Salvador, India and Tanzania, Geneva, International Labour Office, Social Security Department, 1997 (Issues in Social Protection, Discussion Paper No. 5). http://www.ilo.org/public//french/protection/socsec/pol/publ/discus5.htm

53. van Ginneken, Wouter. 2009b. Extending social security coverage: Good practices, lessons learnt and ways forward (Geneva, ISSA Project on examining the existing knowledge of social security coverage.Working Paper 14).

54. Van Ginneken, W., (2003): Extending Social Security: Policies for developing countries. International labour review, vol.142, No.3

55. Van Ginneken, W. (1999): Social Security for the Informal Sector. A new Challenge for the developing countries. In: International Social Security Review, 52, 1/99, 49-71;

56. Velkoff, V. A and Kowal, P. R, Aging in Sub-Saharan Africa: The Changing Demography of the Region in Barney. In the Cohen and Jane Menken (Eds) (2006). *Aging in Sub-Saharan Africa: Recommendations for Furthering Research.* The National Academies Press.

57. Westoff, C.F: The recent Fertility Transition in Rwanda. Population and Development Review 38 (supplement) : 169-178 (2012)

58. Willmore, L., (2006): Non-contributory Pensions: Bolivia and Antigua in an International Context, Financiamiento del Desarrollo 167, United Nations, Santiago, Chile;

59. Wöss, J and Türk, E (2011). Dependency ratios and demographic change: The labour market as a key element. ETUI Policy Brief. European Economic and Employment Policy. Issue 4.