Analysis of a Reform Option for the Tanzanian Pension System

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Abstract
In this study, an analysis of a reform option for the Tanzanian pension system was done. The current system is dominated by mandatory defined benefit operating under pay-as-you-go principles. The retirement benefits are based on the average of the three best final salaries in the ten years preceding retirement. Several studies and international experts have shown that such systems face unsustainability. We propose a reform to a notional defined contribution system in which the benefits depend on accumulated contributions indexed by internal rates of returns. Simulation of results for a time horizon of fifty years shows that the notional defined contribution reform will much improve the sustainability of the pension system. The liabilities are lower and allow higher funding ratios. Also benefit payouts are lower and improve cash flows.

Keywords: pay-as-you-go defined benefit, pension reform, defined contribution, notional defined contribution.

Introduction
Pay-as-you-go (PAYG) defined benefit is a pension system where current contributions from working members are used to pay benefits to retirees. The system is an inter-generational contract and operates easier when the younger population is larger than the older population in each step of time. In the past, most countries in the world had public pension systems operated under PAYG defined benefit principles. Initially, contributions exceeded benefit payments, but as the system matured, benefits increased relative to contributions, which lead to financial difficulties. The pension companies then became insolvent and depended on the government to meet their obligations (Edwards 1998). For example in North Africa, the pension systems matured and experienced the economic decline associated with the age pyramid brought by an ageing population (Chourouk 2003). Also the Zambian defined benefit schemes for public sector employees were running with high actuarial deficits and had accumulated substantial arrears in benefit payments (Queisser et al. 1999).

A pension reform is a process of transforming retirement benefit practices to improve performance and sustainability. Reforming the current pay-as-you-go pension systems is the main agenda facing governments around the world (Feldstein 1997). Each country has specific problems depending on historical background and political policies. Western Europe pension reforms were rooted in demographic ageing, increasing life expectancy, growing unemployment and slow economic growth (Hennessy and Steinwand 2014). Some pension experts claim that, it is impossible to transform PAYG programs,

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because they are popular among voters and supported by beneficiaries and trade unions (Kpessa 2009), and a transformation would therefore have adverse implications to politicians.

The history of pension reform processes is dominated by the experience of two major groups. The first group is of the countries that reformed their PAYG systems to fully funded defined contribution (DC). Amongst the earliest in this group are Chile together with several Latin American countries. Defined contribution is the fully funded system where contributions are deposited into individual accounts and invested. The benefit depends on the performance of the investment in the financial market, and the financial risk is borne by the individual member. The main challenge for a reform to defined contribution is the benefit payments during the transition period and the maturity of the financial markets. When the reform is implemented, it faces significant transition problems as current contributors face the double burden of contributing to their own social security accounts and also paying for previous generations' promises, that are continued and were unfunded. For example, Nigeria continued to carry significant pension arrears from the pre−2004 unfunded pension system, and some sources suggested that unpaid pensions had reached high records (Dostal 2010).

Another group includes countries like Sweden, Italy, Poland and Latvia, which moved from pay-as-you-go defined benefit to notional defined contribution (NDC). A notional defined contribution pension system is a pay-as-you-go system with an individual notional account. Notional defined contribution seems to be more resilient with respect to financial balance and sustainability. There is no advance funding, as opposed to defined contribution, instead contributions flowing into the system are used to finance current pension obligations, as in the traditional pay-as-you-go system. The NDC system addresses the fiscal, political, social and economic needs of a

reform while keeping the financial burden at a low level (Borsch-Supan 2006). The NDC system benefit is a life annuity. It can be claimed at any time from the minimum retirement age. The common annuity is based on an internal rate of return for credited accounts during the accumulation phase and the cohort life expectancy at the time the annuity is claimed. The NDC system retains the structure of an individual accumulating account but replaces market related interest rates by rates determined on alternative bases which are related to the labour market.

The countries where NDC has been implemented can however not guarantee sustainability, due to the choice of the notional rate of return paid to the contributions and the indexation rate paid to the pension (Alonso-Garcia and Devolder 2019). For instance, Italy, Latvia and Poland will run deficits when nominal wage-sum growth falls below the rate of inflation because their pension payments are price-indexed (Chłoń-Domińczak et al. 2012). Sweden developed an automatic balance mechanism to ensure the financial stability without legislative intervention (Settergren 2013).

Most European countries have transformed their defined benefit PAYG to NDC or DC, but some have retained the system with some modifications. For examples, the German pension system went through several reforms but remained a PAYG defined benefit system with a demographic factor which intends to reduce the overall pension level with increase in life expectancy (Borsch-Supan 2007). The system in the Netherlands consists of three pillars, of which two are operating under pay-as-you-go principles (Kremers 2002). The Netherlands' defined benefit (DB) pension formula changed from depending on final salary to average earnings (Nijman 2014). In the dominant Dutch DB the pension income depends on returns from financial market, interest rates and inflation rates.

Several studies and international reports show that the Tanzanian pension system needs a reform to ensure its long-term sustainability

(World Bank 2014, Andongwisye et al. 2017). The sustainability of pension systems is studied through their equity, liquidity and solvency (Alonso-Garcia et al. 2018). In our work, only the solvency and liquidity of the system are studied. The equity is not considered because NDC annuities reflect life expectancy, and in principle the NDC is an actuarial fair pension system. The effect of a reform of pay-as-you-go defined benefit to notional defined contribution are analysed through numerical experiments.

Tanzanian pension system

The Tanzanian pension system experiences several changes, and this is expected to continue in the future. In 2008 the government established the Social Security Regulatory Authority (SSRA). The main goal of SSRA is to regulate the social security activities in the country. Due to competition on attracting members, some funds were paying higher benefits, which put them in the risk of insolvency. In 2014, SSRA issued the pension benefit harmonization rules to be applied for all mandatory defined benefit pension schemes (SSRA 2014). The rules described two benefit formulas, which are, commuted benefit (lump sum) to be paid at retirement and monthly benefit to be paid after retirement until the death of the retiree. The harmonization rules lowered the benefits for some funds and removed the early retirement pensions such as withdrawal benefits.

Before 2018, the Tanzanian pension system comprised five mandatory defined benefit schemes operated under the pay-as-you-go principle. These funds were Parastatal Pension Fund (PPF), Public Service Pension Fund (PSPF), Local Authority Pension Fund (LAPF), Government Employees Provident Fund (GEPF) and National Security Social Fund (NSSF). In 2018, the parliament passed Act No. 2 of 2018 which consolidated the social security schemes by merging four public funds, PPF, PSPF, LAPF and GEPF, into one scheme which is the Public Service Social Security Fund (PSSSF). The main purpose of

PSSSF is to collect contributions and make payments of terminal benefits to employees of public service. NSSF remained for private sector employees.

As reported by National Bureau of Statistics (NBS), until December 2018 the PSSSF had registered 6,075 new members, which is still very little compared to the working population in Tanzania. In the same year, the contributions collected from members were 588.51 million Tanzanian shillings, and benefits paid were 888.40 million Tanzanian shillings to beneficiaries from all the funds merged to form PSSSF (NBS 2018). Hence, at the first year of operation, the fund paid far more benefits than the contributions collected.

Reports showed that the benefit payouts from the five earlier funds were growing fast. For example, a report issued by NBS for these funds showed that the payouts were growing significantly (NBS 2018), as seen in Figure 1.
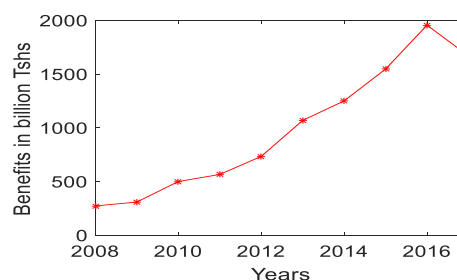
Figure 1: All funds' benefits paid in the period of 2008-2017.

The benefits were growing every year except from the year 2016 to 2017. The decline in 2017 was due to the implementation of the removal of withdrawal benefits as stated by the pension benefit harmonization rules.

The Tanzanian pension system policymakers have been doing several parametric reforms, which however face several problems including economic costs and political resistance. In 2018, the government stopped the implementation of the pension benefit harmonization rules due to complaints from members, politicians, and trade unions. Benefits are therefore currently paid as before the harmonization rules were introduced,

although more changes are expected in the near future.

Suggested reform

We suggest a reform of the Tanzanian pension system into an NDC system. The reform is proposed to start in 2026. A transition period of ten years is suggested, that is, up to 2035. We choose the year 1975 to be the starting point of the analysis. This means that the members born from 1975 will be shifted to the NDC system in 2026. The first batch under partial NDC system will retire in 2035. This assumption is based on Andongwisye et al. (2017), which showed that, in 2037 the benefit payouts will exceed the contributions. Therefore, the system will have the following three groups of beneficiaries.

(i) Individuals born before 1975 are suggested to receive all the benefits promised by the current system. This means that they will receive commuted and monthly benefits as recommended by the harmonization rules.

(ii) Retirement benefits for those born from 1975 and joined the fund before 2026 is suggested to come from a partial NDC system. The benefits will depend on the contributing period before the reform and the benefits created after the reform. The benefits created before the reform are suggested to be the commuted benefits based on the period of contributing to the fund. The benefits after reform will be the NDC benefits, as indexed in the notional accounts.

(iii) Members who join the fund from 2026 participate in the NDC system and receive benefits from this system.

Numerical experiments

Here, a numerical projection and analysis of the current system and the suggested NDC system reform are done. As a case study, an NDC system reform of NSSF, which is the largest fund, is examined. Table 1 shows the time indices used for the analysis.

Table 1: Time indices

t	The year of the horizon
T	The accounting year of NDC
k	The year after retirement

Fund population projection

Fund population projection assumptions are based on Andongwisye et al. (2017). The effects of the reform to an individual member and on the whole fund are studied. Initial data for NSSF are taken from the NBS data of the financial year 2017/2018, as shown in Table 2. Monetary amounts are in million Tanzanian shillings.

Table 2: NSSF report of financial year 2017/2018

Members	1,297,299
Retirees	48,383
Contributions	728,736.26
Benefits	402,477.43
Asset value	3,192,320

The projection is made for a horizon of 50 years from 2019 to 2068, followed by an assessment of the sustainability of the fund. An assumption is that the growth in the number of members will gradually decrease. The projection starts with the number of members growing at a rate of 15% per year from year 2019 to year 2028, followed by a growth rate of 12% from year 2029 to year 2033. Thereafter, the number of members grows at a rate of 3% per year from year 2034 to year 2043, and finally it drops to a growth rate of 2% from year 2044 to year 2068. Table 3 summarises this information.

Table 3: Number of members growth rates

Years	2019-2028	2029-2033	2034-2043	2044-2068
Rate	15%	12%	3%	2%

According to the fifth Tanzanian national census of 2012, the mortality rate for Tanzania working population was then 0.6%. By assuming that the mortality rate declines due to

the upgraded social services, it is assumed to start with a mortality rate of 0.5%. It is further assumed that the rate will then drop by 0.1% after each period of 10 years. Hence, in the last ten years the mortality rate is 0.1%, which is in line with that of developed countries.

The number of members by ages is defined by a vector M_t and is transformed by a matrix $\prod_t$, which depends on year t. There are ages of active members and retires, and there are dead members. An element π_{ijt} of the matrix $\prod_t$ is the fraction of the number of people in state i that transitions to state j. Hence,

$$\pi_{ij} \geq 0, \ i,j \in \{1, \dots, n\},$$

$$\sum_{j=1}^{n} \pi_{ij} = 1, \ i \in \{1, \dots, n\}.$$

The vector M_t is given by

$$M_t = \prod_t^T M_{t-1} + v_t M_{t-1}, \qquad (1)$$

where v_t is a matrix which expresses the growth rate in year t.

It is assumed that the entry age is 25 years. This assumption is based on minimizing the possible unsustainability. The retirement age is kept at 60 years during the whole horizon. The initial members are distributed in ages using the percentages for each age class from the 2012 census report. Andongwisye et al. (2017) used different men's life expectancy at an age of 60 years for different periods. In this study, only men's life expectancy in year 2013, which is 20.8, is used. This value is an underestimate of the future life expectancy for Tanzanian pension funds members and is used in order to minimize the unsustainability. For computational simplicity, the value is approximated to 21 years.

Benefit projections

Benefits under full pay-as-you-go defined benefits are calculated by using harmonization rule formulas for commuted (lump sum) and monthly (old age) pensions.

The final average salary S_{ftx} of a member aged x years in year t is assumed to be

$$S_{ftx} = S_t(1 + s)^{60-x}. \qquad (2)$$

Here, S_t is the annual average salary in year t and s is the salary growth rate. The salary is assumed to grow in line with the average rise in per capita income (PCI) from 2007 to 2018 at 2007 prices, which is 3.7% (NBS 2018).

The commuted benefit for a member aged x years in year t is denoted as cb_{tx}. It is given by

$$cb_{tx} = \frac{1}{580} \times dk \times S_{ftx} \times 12.5 \times 25\%, \quad (3)$$

where dk is the number of months a participant has been contributing to the fund, $1/580$ is the annual accrual factor, 12.5 is the commutation factor at retirement, and 25% is the commutation rate of the annual full amount of the pension.

The monthly benefit for a member aged x years in year t is denoted mb_{tx} and calculated from the equation

$$mb_{tx} = \frac{1}{580} \times dk \times S_{ftx} \times 75\% \times \frac{1}{12}, \quad (4)$$

where 75% is the commutation rate of the annual full amount of the pension. The minimum monthly retirement pension payable to a member shall however not be below 40% of the prescribed lowest sectorial minimum wage. The monthly benefit is expressed as an annual benefit instead of monthly.

The total expected benefit in year t for a member of age x is

$$B_{tx} = P_x^{60-x} \times n_x \times (cb_{tx} + mb_{tx}) \times LE_{60},$$

where P_x^{60-x} is the probability of a member aged x years in year t to live $60 - x$ years more, that is, until retirement, n_x is the number of members aged x years in year t and LE_{60} is the remaining life expectancy after age 60.

Liabilities projections
The liability for a PAYG defined benefit system is the discounted present value of the total future benefits of its members. The total liability in year t is therefore given by

$$L_t = \sum_{x=25}^{59} \frac{B_{tx}}{(1+d)^{60-x}}, \qquad (5)$$

where $d = 5\%$ is a discount factor. This discount factor is in line with other assumptions and modelling used by World Bank economists (World Bank 2014). For initial members, it is assumed that they had already been creating liabilities before the year 2019.

The NDC benefit depends on the accumulated wealth in the notional account. The accumulated capital of a member i aged x years at the accounting time T is given by

$$K_{ixT} = \sum_{t=1}^{T} c\omega_{ixt} I_t, \qquad (6)$$

where c is the contribution rate, ω_{ixt} is the salary of an individual i who is aged x years in the year t. Further, I_t is an index defined as

$$I_t = \prod_{t+1}^{T}(1 + z_t),$$

where z_t is the internal rate in the year t.

NDC benefits are annuities depending on the total capital in the notional account during contributing period. For computational simplicity, the monthly annuities are converted to an annual benefit. At retirement, the benefit for retiree κ is given by

$$B_{\kappa,60} = \frac{K_{\kappa,59}}{LE_{60}}, \qquad (7)$$

where $K_{\kappa,59}$ is the total capital accumulated in the notional account at retirement and is indexed to follow the annual growth in salary. The benefit for retiree κ for years following retirement are given as

$$B_{\kappa,60+k} = \frac{K_{\kappa,59} - \sum_k B_{\kappa,59+k}}{21-k}, \qquad (8)$$

where $k = 1, ..., 20$. During the last year, the benefit is given as

$$B_{\kappa,81} = K_{\kappa,59} - \sum_k B_{\kappa,80}. \qquad (9)$$

Thereafter the retiree is expected to be dead and has finished the accumulated capital.

Liabilities for the NDC scheme are total expected future benefits for active members and retirees. The liability of active member i aged x years at the accounting time T is given by

$$L_{ixT} = \frac{K_{ixT}}{(1+d)^{60-x}}. \qquad (10)$$

The liability of retiree κ at age $60 + k$ is given by

$$L_{\kappa,59+k} = \frac{B_{\kappa,60+k}}{(1+d)^{21-k}} \times (21 - k). \qquad (11)$$

Here, $k = 1, ..., 20$.

The total liability for the NDC scheme in a certain year is simply the sum of the liabilities for all currently active members and all the current retirees.

Sustainability indicators
To check the sustainability of the fund, we evaluate the liquidity and solvency of the fund. Alonso-Garcia et al. (2018) studied the adequacy, fairness and sustainability of PAYG defined benefit scheme. In this study, only the sustainability of the Tanzanian PAYG defined benefit is studied and compared with the outcome of the suggested reform to a notional defined contribution scheme.

Solvency of the pension fund
Solvency is the ability of the fund to carry out its obligations on a long term (Ferrouhi and Agdal 2014). Different countries use different approaches to check the solvency of pension funds. For example, Finland's insurance regulations use financial levels to define the solvency targets (Hilli et al. 2007), while the

Netherlands uses the funding ratio (Haneveld et al. 2010). In the Tanzanian pension system regulation, pension funds are required to undertake an actuarial valuation every year, in which the funding ratio is applied to define the financial status of the fund. The funding ratio in year t is given by

$$rf_t = \frac{A_t}{L_t} \times 100, \tag{12}$$

where A_t is the current asset value and L_t is the current total liability. The asset value is given by

$$A_t = A_{t-1}(1 + r_t), \tag{13}$$

where r_t is the interest rate in year t, which is assumed to be constant in the whole horizon at 3.7%, and A_0 being the initial asset value.

If the funding ratio is higher than 100%, then the fund's asset value is enough to pay future benefits. If the funding ratio is less than 100%, then the asset value is not enough to pay benefits in the future. In some countries, like the Netherlands, a sponsor of the fund makes a remedial contribution to cover a deficit when the asset value does not cover all liabilities (Haneveld et al. 2010).

Liquidity of the pension fund
Liquidity is the short term solvency. Therefore, liquidity is the ability of the fund to increase its assets and meet obligations as they come due (Ferrouhi and Agdal 2014). In pension funds, liquidity is the ability of the pension fund's contributions from active members to cover all pension expenditures in a particular year. The cash flow is the difference between contributions collected in a particular year and the benefits paid in the same year, that is

$$Cf_t = C_t - B_t . \tag{14}$$

Here C_t is total contributions in year t and B_t is the total pension benefits paid in the year t. When Cf_t is positive, it implies that the collected contributions are enough to pay all benefits in year t. Negative cash flow means that the contributions are not enough to cover the benefits, and then the fund should sell assets to cover the deficit benefit payments.

To measure the amount of asset value added to the fund or consumed by deficit benefits payments, the cash flow to asset value ratio is considered and is given by the following formula.

$$r_t = \frac{Cf_t}{A_t} \tag{15}$$

A negative r_t is the portion of asset value used to pay the benefits that have not been covered by contributions in year t.

### The effects of reform to an individual member
To illustrate the effects of the reform to an individual member, we take a member who was born in 1975 and joined the PAYG scheme in 2001. This member will retire in the year 2035 and then has a remaining life expectancy of 21 years, that is, until year 2056. The analysis with respect to liabilities, funding ratio, benefits paid, and cash flow is done.

Figure 2 shows the projected growth of liability for this member during the service. It is observed that for the current system, the liabilities are growing fast until retirement. In contrast, the liabilities of the reformed system grow slower until retirement. This shows that the NDC reform will lower the liability.
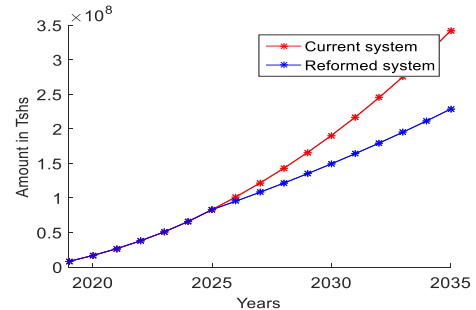

Figure 2: Projected liabilities for current and reformed systems from 2019 to 2035.

Projections for funding ratios are done similarly to those for liabilities. Figure 3 shows that the funding ratio decreases much in the current system due to the fast increase of liabilities. In contrast, for the reformed system, the funding ratio decreases slower after the reform.
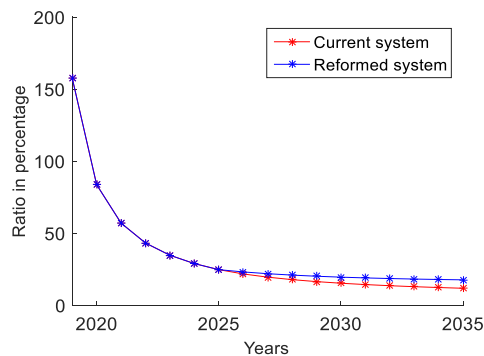

Figure 3: Projected funding ratios for current and reformed systems from 2019 to 2035.

Next, a comparison of the benefit payouts is analysed. As shown by Figure 4, benefits for the current system are higher and show generosity to the member compared to the reformed system. In the first year for the current system, the benefit paid is very high due to the lump sum benefit, that is, commuted benefit. The benefits paid then drop but remain a bit higher compared to those of the reformed system.
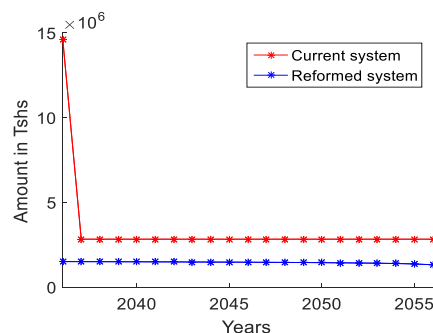
**Figure 4:** Projected benefits paid for current and reformed systems from 2036 to 2056.

Then, an analysis of the cash flow after retirement is done. Figure 5 shows a comparison of the accumulated contribution during the whole period of service minus the benefit payouts after retirement. The resulting cash flow in the current system turns to negative values six years after retirement. The cash flow of the reformed system remains positive until the last year of the expected lifetime.
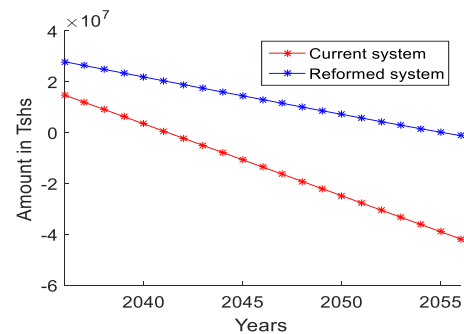
Figure 5: Projected cash flow for current and reformed systems from 2036 to 2056.

**The effects of reform to the whole fund**
The analysis starts with the projection of members, retirees and dependency ratio. As shown in Figure 6, the population of members grows fast in the first 15 years. Thereafter, the population grows slower up to the end of the horizon.
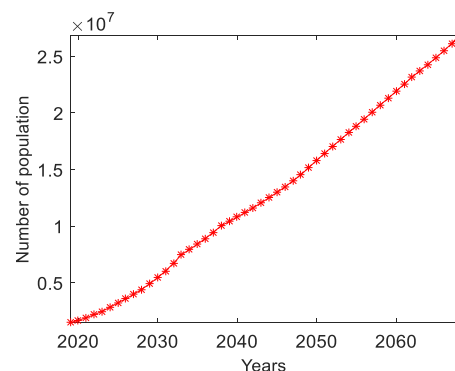
**Figure 6:** Projected number of members from 2019 to 2068.

As shown by Figure 7, the number of retirees grows slowly in the beginning and then grows faster during the later years of the horizon. This illustrates that, as the system matures, the number of retirees increases.
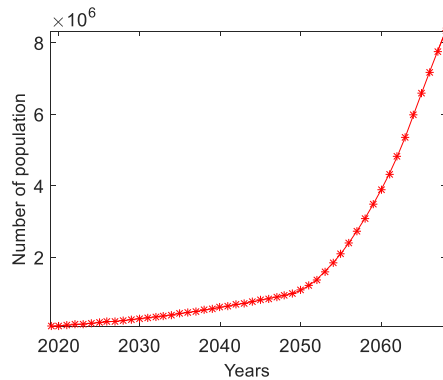
Figure 7: Projected number of retirees from 2019 to 2068.

Figure 8 shows the dependency ratio, that is, the percentage of the number of retirees to the number of active members. At the end of the horizon, the dependency ratio is 30%, which means contributions from 100 active members will be used to pay benefits to 30 retirees, which is a big burden to active members and the fund.
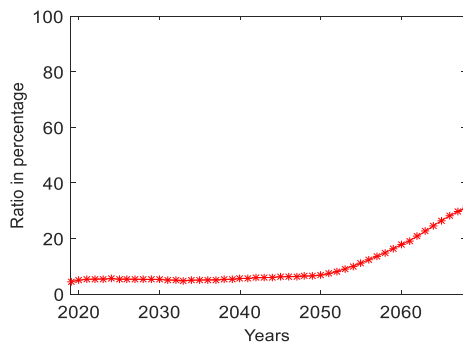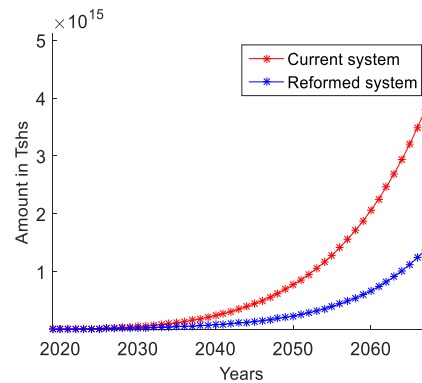

Figure 8: Projected dependency ratio from 2019 to 2068.

Projection of liabilities
Here a comparison of liabilities given by the two systems is done. As shown in Figure 9, the liability grows slowly up to the year 2025.

After the reform, the liability of the NDC system grows slower compared to the liability of the current system.

Figure 9: The comparison of projected liabilities from 2019 to 2068

Projection of benefit payouts
It is assumed that the benefits of the NDC scheme are indexed by the growth in GDP per capita which is kept fixed for the whole horizon. Therefore, after retirement, each year the remaining accumulated benefit for the NDC scheme is assumed to grow with the GDP per capita per year. Also, members who die before the retirement or after retirement but before expiration of life expectancy, their benefits are distributed to the members or retirees of the same age.

As can be seen in Figure 10, benefit payouts for the reformed system drop in 2036 after members affected by the reform start to retire in 2035. In 2057, payouts decrease a bit after the last retirees from pure PAYG scheme die and leave the system in 2056. Thereafter, the payouts grow slowly up to the end of the horizon. This predicts that in the later years the benefits will on a lower level and enable the fund to make excess from contributions and invest to increase the asset value. The increased asset value will create confidence that the fund is able to carry on its future obligations of paying benefits to retirees for the long term.

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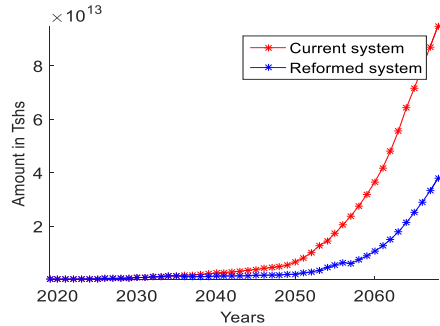
Figure 10: Comparison of projected benefit payouts from 2019 to 2068.

Projection of cash flows

An advantage of an NDC system is its ability to balance the benefit payouts and contributions. As shown by Figure 11, the cash flows improve in 2036 after the first members of the reformed system retire. The cash flow keeps increasing before improving even more in 2057. The cash flow remains positive until the end of the horizon. Since the NDC system is flexible and allows adjustments, this excess can be used to raise the benefits of the NDC members. The cash flow for the PAYG system falls to negative at the end of the horizon.
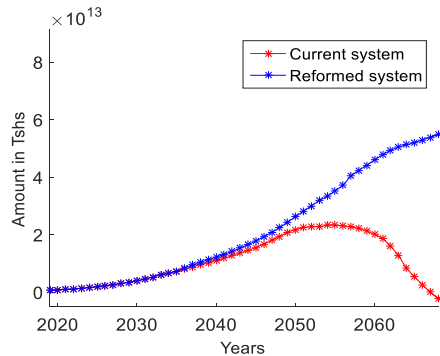
Figure 11: Comparison of projected cash flows from 2019 to 2068.
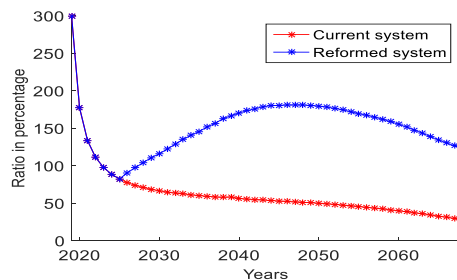
Projection of asset values

Figure 12 shows how the asset values grow. The asset growth for the reformed system is significantly higher than that of the current system.
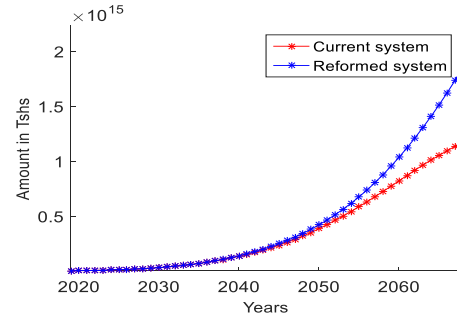
Figure 12: Comparison of projected asset values from 2019 to 2068.

Projection of funding ratios

The total NDC system asset value must be equal or greater than total liabilities and cause the funding ratio to be equal to or greater than 100%. As shown by Figure 13, the funding ratio of the reformed system is much higher than that of the current system. At the end of the horizon, the reformed system funding ratio is 122.8%, which implies that the asset values are enough to cover all liabilities in the whole horizon. Further, the funding ratio will stabilize as more members of the mixed system die and move out. For the current system, the funding ratio drops to 28.5% at the end of the horizon, which is very low.
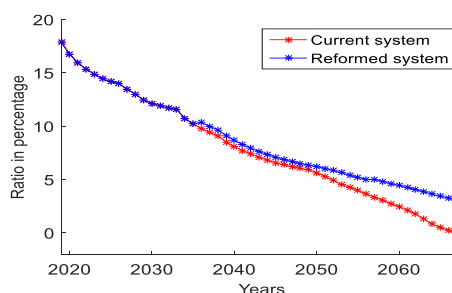

Figure 13: Comparison of projected funding ratios from 2019 to 2068.

Projection of cash flow to asset value ratios

As shown in Figure 14, the ratios of the reformed system's cash flows to its asset values remain positive until the end of the horizon. But for the current system, these ratios decrease to negative values at the end of the

horizon, meaning that asset value will start to deplete.

Figure 14: Comparison of projected cash flow to asset value ratio from 2019 to 2068.

Conclusion and future research

Our analysis gives insights into how the suggested NDC reform will improve the sustainability of the NSSF and, if implemented, of the PSSSF. Liabilities are lower, which means that the future obligations of the fund will be lower. The funding ratios keep higher than 100% on long term. The benefits are lower, which allow the cash flow to remain positive. The higher cash flow will enlarge the asset value. The main drawback of the NDC system is the lower benefits compared to that in the PAYG defined benefit scheme. This is a common property of all retirement systems in which benefit depends directly to the contribution. Though, policymakers may issue some built-in benefits, like minimum monthly pension to raise the level of benefits to retirees, depending on the economic status and demography of the society.

In the near future, Tanzania will experience an increased number of elderly, and pension will be a political agenda in the coming elections. The ageing population can lead to wealthier and more prosperous societies if well dealt with (Mason and Lee 2006). The problem is not yet big, but it is time for a reform which will ensure the wealth of future old people. The aim of this study was to give an early alert to policymakers to find a long-term solution, rather than shorter and temporary. Early reforms will enable the accumulation of pension assets, as shown by the analysis.

As reported by the World Bank technical team, the merging of pension funds will just lower government contingent liabilities but not provide a long-term sustainability (World Bank 2014). After merging the funds PPF, PSPF, LAPF and GEPF in 2018, still there are complaints from retirees due to the delay of their benefit payments. If this will continue, people will lose confidence in their retirement security and it will demoralise the working spirit in the country, which will affect government development efforts. For example, in Kenya, the introduction of the Retirement Benefits Authority in 1997 rekindled hopes among the ageing population (Masinde and Olukuru 2014).

In future we intend to study how the government may establish universal pension to all citizens. The system coverage is still very low, currently less than 5% of the whole population. Informal sectors like small businesses and agriculture, which are dominated by large populations including poor people, are left out of the social security system. Such a study is expected to come up with policy suggestions.

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