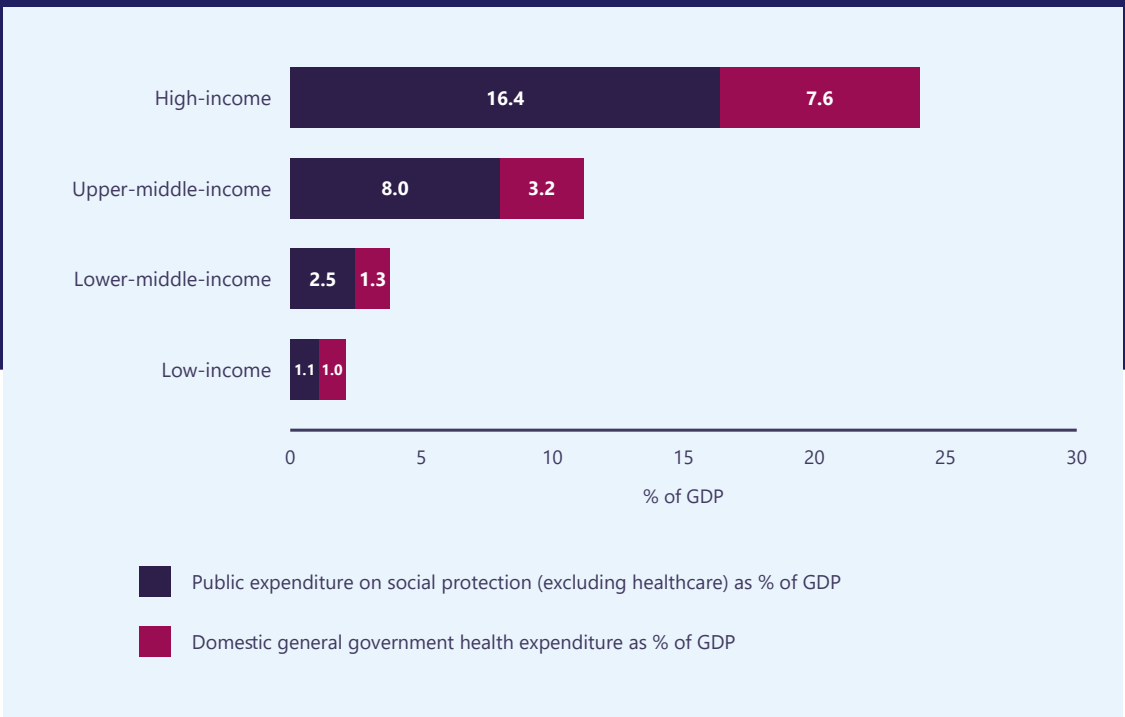
Universal Health Coverage in Tanzania: Potential Options, Financing and Budgetary Implications

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This research report is dedicated to the late Elineema Kisanga, who worked tirelessly to develop this study, but passed away before he could see this final version. May his soul rest in eternal peace

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Knowledge is Power

TABLE OF CONTENTS

ABSTRACT III

1. INTRODUCTION 1

2. UNIVERSAL HEALTH CARE: HISTORY, COVERAGE AND PROSPECTS 4

   2.1 History and Evolution 4

   2.2 Coverage, Financing and Prospects 5

3. BASIC HEALTH CARE PROVISION AND EFFORTS TOWARDS UNIVERSAL HEALTH CARE COVERAGE 11

4. METHODOLOGY 14

5. RESULTS AND DISCUSSIONS 16

6. SOME FINANCING OPTIONS FOR THE UHC 23

   6.1 Overview 23

   6.2 Mining Sector 24

   6.3 Tourism 24

   6.4 Fisheries Sector 26

   6.5 Telecommunication Sector 27

   6.6 Transport Sector 28

7. SUMMARY AND POLICY IMPLICATIONS 30

REFERENCES 33

APPENDIX 35

ABSTRACT

There is strong empirical evidence that improved health enhances productivity and economic growth. However, like other social sectors, healthcare is inherently costly by nature and influenced by among others the age structure of one's population. As a result of high fertility and improving life expectancy, Tanzania has a high dependency ratio of 94% which not only affects the financing (and hence provision) of key social services like health but also the country's ability to meet the Abuja Declaration commitment of spending 15% of the national budget on health. With public healthcare spending at only $16.84 per capita, out of pocket spending often accounts for as high as a quarter of all health expenditures in Tanzania, further underlining the vulnerability of Tanzania's similarly sized proportion of the poor. In such instances, Universal Health Coverage (UHC) can provide an invaluable lifeline to a population. However, Tanzania has been unable to introduce UHC primarily because of concerns over financing. This study employs a static tax-benefit microsimulation model for Tanzania (TAZMOD), underpinned by data derived from the Household Budget Survey 2017/18, to examine the status quo of health financing in Tanzania, and thereafter explore several scenarios with the aim of establishing the costs of introducing such programmes, eligibility criteria and its distribution effects. Based on member's contribution, and matching fund from the Government, this study reveals that Tanzania has quite a range of options to raise substantial revenue to attain universal health coverage for all. Considering only poor households, the programme needs to raise the equivalent of 0.79% of GDP (3.52% of the total expenditure), while if all the non-poor households contribute to the programme, then the government will be able to raise equivalent to 2.3% of GDP (10.37% of the total expenditure) to finance the programme. Combining what it takes to cover for the poor and non-poor households, programme need to raise amount equivalent to 3.15% of GDP (13.5% of the total expenditure), the amount which is still below what is advocated globally that countries in developing world need to spend to the tune of 4.5% to 5% of GDP on health care provision.

CHAPTER 1
INTRODUCTION

"We also recognized the importance of universal health coverage to enhancing health, social cohesion and sustainable human and economic development."

Ban Ki-moon, United Nations Secretary General
Speech during 2012 Rio+20 Conference

Provision of the basic health care is considered as one of the three pillars of human development. As early as 1972, economist such as Michael Grossman, made the case for health as human capital. In 1979, Theodore W. Schultz (1979), another human capital pioneers, argued that population quality was the 'decisive factor' of production and emphasized the merits of investing in health, just as investing in education. As the result, since the early 1990s, the impact of health on economic productivity has been well demonstrated. There is now strong empirical evidence, from both developed and developing countries, which demonstrate that much as economic growth improves health at the same time improved health also significantly enhances productivity and economic growth. There are thus economic and welfare benefits of increased investment in health, and investment in health is not a cost rather is the investment for the future (WHO, 2001).

Improved health supports labour productivity by augmenting life expectancy, and it encourages savings and private investment in education, as with better health there is a greater possibility of benefiting from these investments. Hence, through appropriate investment, health-led economic development is possible.

Increased life expectancy and adult survival rates exercise a positive impact on human capital formation and hence on productivity and economic growth; in turn, sustained growth rates allow for better health conditions as it allow more resources to be channelled into health investment. Thus, funds allocated to provision of health care are not costs, rather, they are investments that in the long run will lead to increased productivity and economic growth. Bloom, *et al.,* (2004) noted that 'the most basic human capabilities that is leading to a long life, being knowledgeable and enjoying a decent standard of living' can be represented by health, education, and income. Furthermore, health is consistently ranked as number one in the things people desire in life (UNDP, 1990).

The 2001 World Health Organization (WHO) Commission on 'Macroeconomics and Health' also made a strong economic case for investing in health. People who are ill and unable to work can be pushed deeper into poverty. For sick people are unproductive and there are substantial costs related to sickness, which are burdensome to households and countries. Conversely, the ability to work and earn lifts people out of poverty. Children who are healthy are better able to learn and adults better able to earn and contribute positively to their societies. Thus, a good quality health delivery system with universal access protects individuals from illness, stimulate economic growth and fight poverty by keeping people healthy. They also contribute to social harmony by providing assurance to the population that health services are available in the event of illness (WHO, 2001; Lancent, 2012).

More importantly, healthy as a service or a public good is not just like any other good. It has a special universal characteristic. It is part and parcel of human being, as investments in health and education benefit people directly as they are produced (T.W. Schultz, 1961). Health, just as education, is non-marketable goods – there is no markets for health (Arrow, 1963). Health and education cannot be redistributed from one person to another after production and are associated with large social externalities. Hence, equity in health and education outcomes must thus start with equity in their inputs, that is the investment from the beginning, as failure to do so from the beginning may lead to significant inequality of opportunities at advance and a later stage of life.

It is within this context that, from time immemorial, countries across the globe have been experimenting with various policies, programmes, and measures both in terms of reforms as well as investing resources and providing incentives to enhance the accessibility, availability, affordability, quantity and quality of basic health care delivery. Even though, achieving universal health coverage have remained the main challenge for many countries, especially those in the developing countries.

More than a billion people cannot use the health services they need because they are either unavailable or they cannot afford to use them. Universal health coverage requires that everyone can use the health services that they need. Equally important is what happens when people use them. Direct out of-pocket payments (e.g. user fees) levied at the time when people need services not only inhibit the poor and disadvantaged from seeking health care but are also a major cause of impoverishment for many who obtain it (Shahrawat, R and Rao, K., 2004).

Every year some 150 million people face severe financial hardships and 100 million are pushed below the poverty line because they fall ill, use health services, and pay out of pocket. Many must sell assets or go into debt to meet the payments (Xu, K. *et al,* 2007). The paradox is that the lack of access to health services impoverishes some people because they are unable to work, whereas using health services impoverishes others because they cannot afford the payments. This situation makes the links between health, sustainable development, and economic growth starkly clear.

Cognizant of the economic and welfare benefits of increased investment in health, immediately after independence in 1961, Tanzania adopted a free health care policy that lasted until the early 1990s; to provide adequate, quality and affordable health care services by allocating resources through taxation and some out of pocket (OOP). However, due to increased population size and following the structural adjustments programmes from mid 1980s, the Government introduced cost sharing system in 1993, which had a negative effect on the general access to health care system for the poor and vulnerable. In responding to these challenges, between 1900s and 2000s, the Government ushered in a series of health sector reform under the Health Sector Strategic Plan (HSSP) with the aim of providing health coverage for the whole of Tanzania population; starting with prepayment scheme (NHIF for the formal sector and CHF for the informal sector) in 2001 to protect the community from catastrophic health care expenditure.

The 4th HSSP published in 2015 committed itself to achieve universal health coverage for all by developing a 'Health Financing Strategy'; which too aimed to address the multiple/fragmented health insurance scheme the country had before launching of universal health coverage.

To attain the universal health coverage for all, in 2022 the Government has introduced the Universal Health Insurance (UHI) Bill 2022 providing compulsory conditions for people to have registered in insurance schemes to secure several social services. The Bill also introduces the Tanzania Insurance Regulatory Authority (TIRA) as the overall regulator mandated to oversee insurance schemes and quality of provided healthcare services. According to Section 32 (a)(h) of the Bill, it is compulsory for citizens to have health insurance, failure to do so one can be subjected to hefty penalties. It is therefore expected that about 73 percent of Tanzanians can comfortably subscribe to universal health insurance cover, with each person contributing TZS 65,000 annually to access services at health facilities across the country (URT, 2022).

Against this backdrop, and gauging from the best experiences from elsewhere, in this study we begin by modelling the status quo, that is the benefits as proposed in the 2022 UHI Bill, to establish the costs to government, eligibility and its distribution effects – as baseline analysis. Then we go further to model and explore various scenarios given the global discussions on universal health coverage that have put attention on the need for increased government funding for health care in many low- and middle-income countries; of at least four to five percent of GDP for progressing towards universal health coverage (Mcintyre. D., *et al.,* 2017). In addition to assessing the budgetary implications we also propose other financing options to fill the gap.

CHAPTER 2

UNIVERSAL HEALTH CARE: HISTORY, COVERAGE AND PROSPECTS

2.1 History and Evolution

The history and efforts towards universal health care (UHC) is not a recent phenomenon, it dates to the 19th century, following the industrial revolution in the 18th century. Otto von Bismarck established the world's first national social health insurance system in Germany in 1883. It was as the result of a series of social reforms introduced by Bismarck, seeking to quell political incursions by the social democrats in the late 19th century.

The industrial revolution had led to a rapid expansion in the population living in cities that far outstripped the physical infrastructure, with large numbers living in squalor. Their conditions provided an ideal breeding ground not only for disease but also, as importantly from the perspective of the elite, social revolution. Bismarck also faced pressure from labour unions and social democrats to implement safeguards for people if they became unemployed or fell ill, as well as for their families should they die. These protections included access to health care. The resulting so-called Bismarckian social insurance system was limited to those, largely men, in industrial employment (T. Bärnighausen and R. Sauerborn, 2002).

Women and children benefited to the extent that the family breadwinner was, or had been, in such employment. The system was financed largely by wage-related contributions, reflecting negotiations between employers and trade unions. Over time, governments played an increasing role as investments in health and welfare became a means of addressing social problems of industrialization (alcoholism, tuberculosis, and overcrowding), forging political alliances as well as transferring resources from the rich to the poor, from working ages to children and old people, and from healthy to ill.

Building on Otto von Bismarck attempt of the late 19th century, more recently the September 1978 Alma-Ata Declaration was yet another landmark event in the history and efforts towards achieving universal health care globally. The declaration raised awareness of 'health for all' as a universal human right, whose fulfilment reduces human misery and suffering, advances equality, and safeguards human dignity (Alma-Ata, USSR, 1978).[1] As the result, during the 20th century, many industrialized countries extended universal health care to their citizens. This often occurred after previously implementing social insurance schemes such as that in Germany.

[1] It also recognized economic and social development and international security as not only causes, but also consequences, of better health. In addition, it highlighted the power of primary health care and international cooperation to advance the protection and promotion of health in resource-constrained settings.

In some, local government took on the responsibility for health care, especially where there were little industrial infrastructure and employers' associations and trade unions were poorly developed, as was the case in Scandinavia (McKee, M., *et al.,* 2013).

Other countries sharing these characteristics, such as Greece and Ireland, were less fortunate, instead patching together composite systems that, collectively, provided coverage for most people but in multiple parallel systems. This was the situation that prevailed in Italy until 1978, although it would take another 14 years to address many of the tensions that the initial reforms left unresolved (Lo Scalzo, *et al.,* 2009). In other countries, such as the United Kingdom, it was a political decision by a socialist government, albeit taking advantage of events that created political opportunities for expanding welfare, in this case the creation of a nationwide Emergency Medical Service during the Second World War and the promise to military servicemen of building a better, fairer society for all (Abel-Smith B, 1992). Subsequent tax-based systems, such as those in Spain and Portugal, were also the result of political choices, as they made the transition from dictatorship to democracy in the 1970s.

A different form of politics had given rise to the Soviet model of universal care, extending often very basic services to a widely dispersed population. This model, with minor variations, followed the Soviet advance into Eastern Europe after the Second World War. Similar developments were taking place in other high-income countries. By the mid-20th century, countries such as Australia, Canada, Israel, Japan, and New Zealand had implemented universal health care in various forms. In Australia and Canada, it involved a partnership between the federal government and governments in the provinces, states, and territories. In New Zealand, with its small, tightly knit population and constitutional settlement facilitating rapid and wide-ranging legislative change, a universal tax-based system began to be implemented in 1938. In the 1990s, it was the turn of some of the emerging 'Asian tiger' economies, such as South Korea (Kwon H, 1995), Singapore, and Taiwan (Lee YC, 2010), where investments in social welfare eventually caught up with gains in economic development.

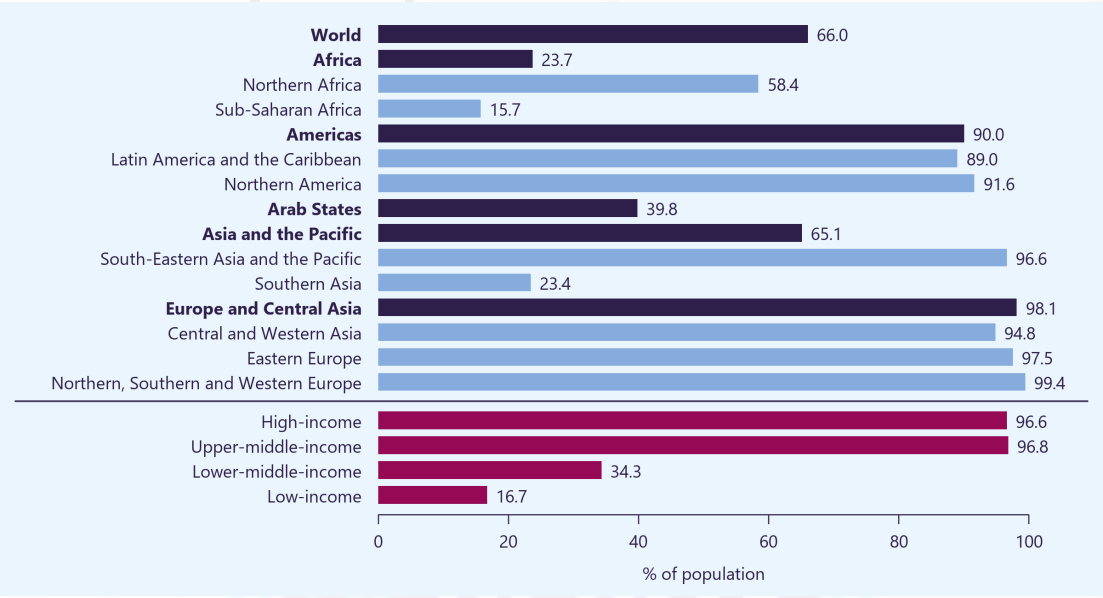
In developing countries, the situation continues to be quite different from that in developed countries (Reich, MR, 1994). This is despite a commitment by the countries of the world, in Alma-Atain1978, to the principle of universal primary healthcare. In recent years, Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs) set by the United Nations, achieving universal health coverage in all countries has emerged as a central imperative of the WHO, the United Nations and most of its member states, and much of civil society.

2.2 Coverage, Financing and Prospects

Building on the achievement of Alma-Ata and gaining further traction from the MDGs and SDGs, as shown in Figure 1, significant progress has been achieved in increasing health care population coverage, with almost two thirds of the global population protected by a health scheme.

Even though, still, people in the lowest income quintile and in rural areas often face challenges in meeting their health needs without hardship. While population coverage has increased, less attention has been paid to adequacy of coverage.

Figure 1: Percentage of the population covered by a social health scheme (protected persons), by region, sub-region and income level, 2020 or latest available year



Source: World Social Protection Report (ILO, 2021)

While almost two thirds of the global population, as shown, is protected by a social health protection scheme; there are pronounced regional coverage gaps, and populations in lower-middle and low-income countries are largely left unprotected. For instance, while regions such as Americas and Europe have attained more than 90 percent coverage, the coverage for South Asia is about 23.4 percent and for Africa is about 23.7 percent. The situation is much far worse for SSA with coverage accounting for about 15.7 percent; closely equivalent to the low-income coverage about 16.7 percent.

Furthermore, the Covid19 crisis highlighted the limitations of benefit adequacy and the need to reduce OOP payments. Given the low availability of health (Figure 2A) and skilled workers (Figure 2B) in rural areas, there is need to invest in public healthcare services to improve coordination with the social protection system as a whole to address key determinants of health (i.e. complementarity of healthcare and income support schemes). (i.e. out of pocket payments, physical distance, availability and acceptability of health services).

Thus, the right to social health protection is not yet a universal reality and barriers to accessing quality healthcare remains. Despite laudable progress, barriers to accessing healthcare remain in the form of OOP payments on health services, physical distance, limitations in the range, quality and acceptability of health services, long waiting times, and opportunity costs such as lost working time (ILO, 2021).

Figure 2A: Availability of health workers in rural areas, selected countries

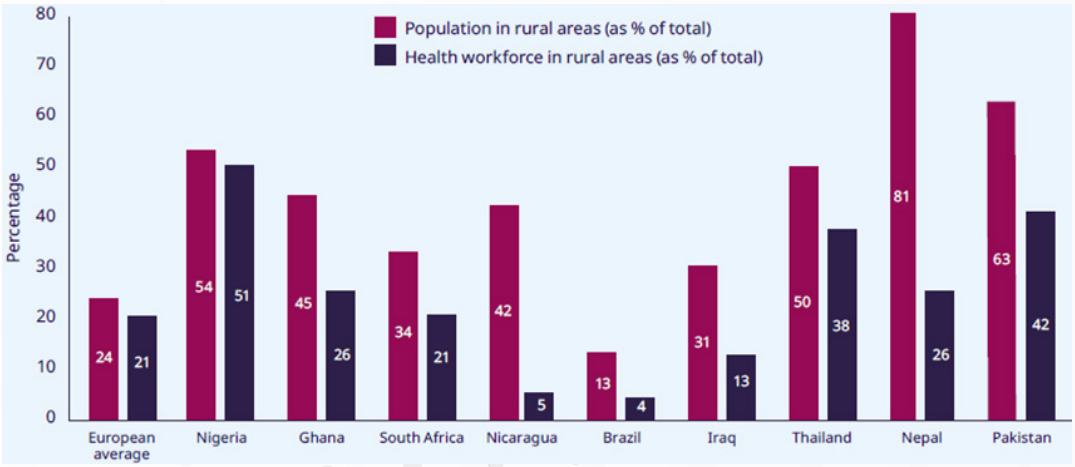
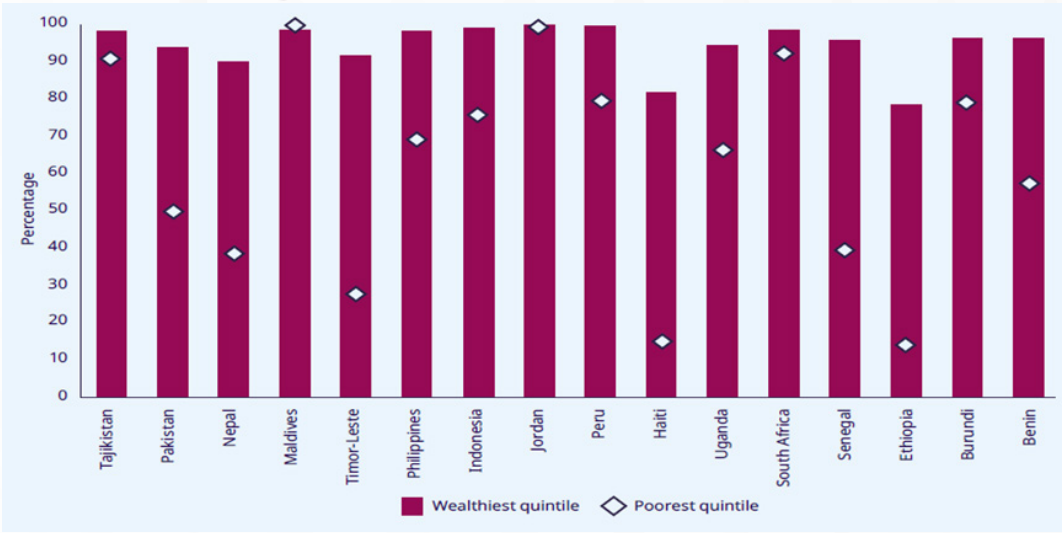


Figure 2B: % of live births attended by skilled health personnel, by wealth quintile, 2016 or later



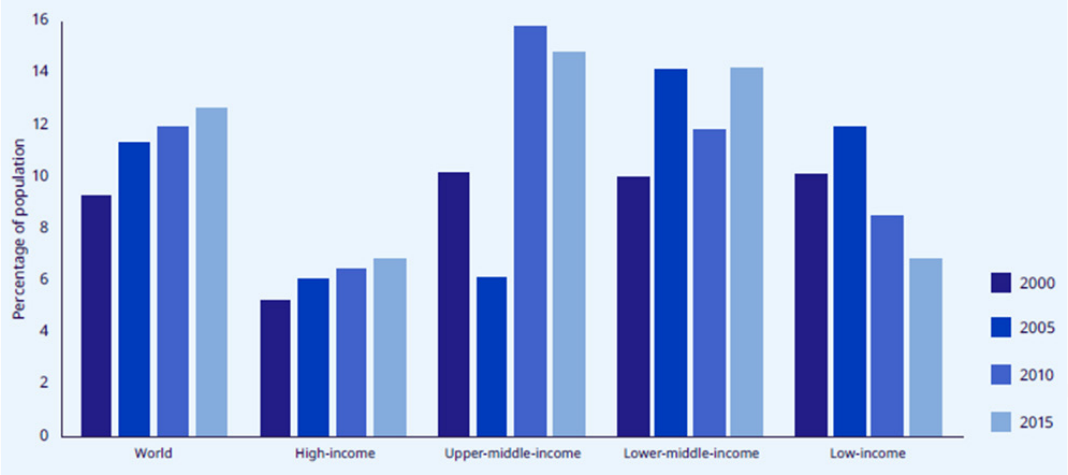
Source: World Social Protection Report (ILO, 2021)

Investing in the availability of quality healthcare services is crucial. The Covid19 pandemic has further revealed the need to invest in healthcare services and to improve coordination within health systems. The pandemic is drawing attention to the challenges faced in deploying, retaining and protecting well-trained, supported and motivated health workers to ensure the delivery of quality healthcare services.

More importantly, there is the need to improve equity in access to healthcare. A significant share of health costs is borne by households out of pocket, with 930 million people worldwide incurring catastrophic health spending in 2015 (ILO, 2021). Gaps in adequacy remain, linked to limited benefit packages, ineffective implementation, limited level of cost coverage, with remaining user fees,

co-payments and or high informal payments. This situation impacts health access, women in the poorest quintiles are less likely to have been attended by health staff during labour. The uneven availability and quality of health services is seen in many countries. Health workforce concentrated in urban areas and under-investments in primary care.

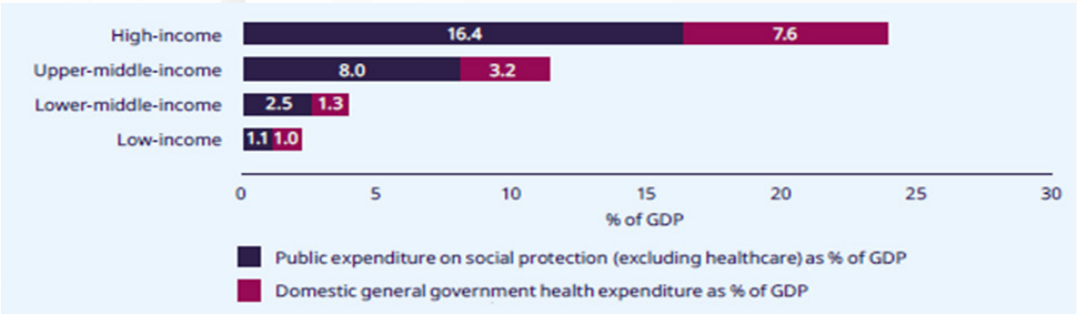
Figure 3: Incidence of catastrophic health spending (>10% of annual household income/consumption), by country income level (in respective year), evolution from 2000 to 2015



Source: World Social Protection Report (ILO, 2021)

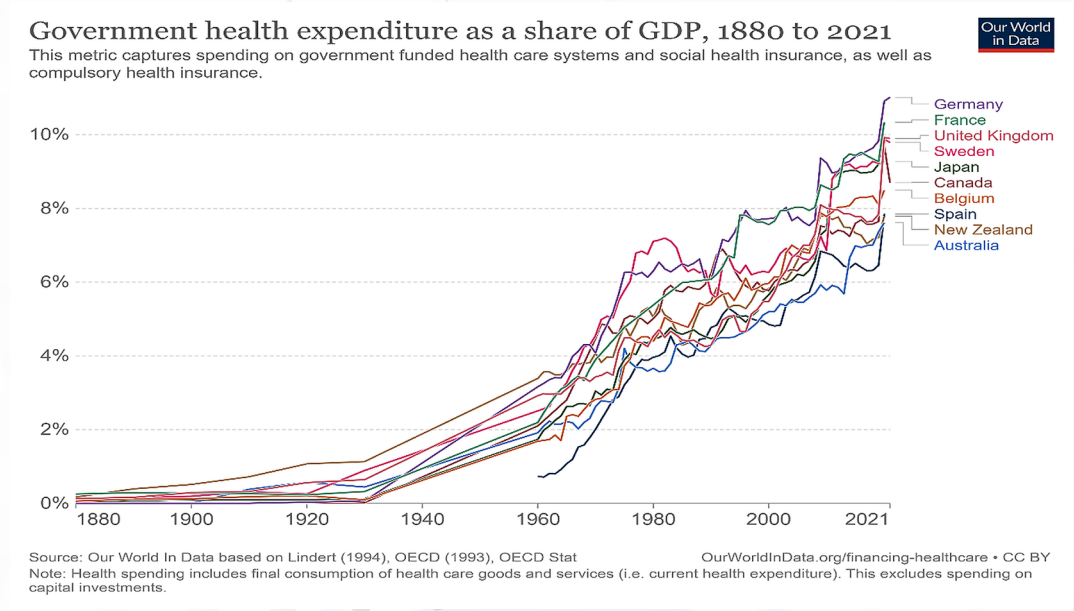
Adequate expenditure on health is paramount: inequalities prevail. Stark differences prevail in domestic general government health expenditure, with a global average of 5.8 percent of GDP (ILO, 2021). As shown in Figure 4, this conceals wide disparities between regions and country income levels, with difference in an order of magnitude of 7:1 between high- and low-income countries. Low public expenditure on health correlates with higher rates of impoverishment due to OOP expenses.

Figure 4: Public social protection expenditure, % of GDP, 2020 or latest available year, and domestic general government health expenditure, percentage of GDP, 2018, by country income level



Source: World Social Protection Report (ILO, 2021)

Figure 5: Government Health Expenditure as share of GDP, 1880 to 2021



Source: https://ourworldindata.org/financing-healthcare

Figure 5 further presents the top 10 countries that spends between 8 percent to 10 percent of their GDP on health expenditure; all of them are in high income countries

Box 1: Some Success Story and Best Practices Countries on Universal Health Coverage

- **China's** health insurance is provided through three main schemes: for urban workers, for urban residents and for rural residents. The first scheme provides a comprehensive benefit package that covers about 81 per cent of insurable costs. The two other schemes are voluntary insurance schemes that cover more than half the insurable medical costs up to a limit and reach 1.1 billion people. As a general rule for poor families, the Government covers part or all Out of Pocket (OOP) health expenses. The level of OOP as a share of national health expenditures declined from 60 per cent in 2001 to 34 per cent in 2013. The number of people covered by health insurance increased tenfold between 2003 and 2013 (96.9 per cent) of the population.
- **Colombia's** health system is based on the principle of universality, which obliges all citizens to join either the scheme for those with contributory capacity or the subsidized scheme for low-income workers. Members of both schemes are entitled to the same benefits. This has helped, in principle, to achieve high coverage rates and reduce OOP. Affiliation to social health insurance is estimated to have increased from 25 per cent in 1993 to 96 per cent in 2014. OOP fell to 15.9 per cent of national total health expenditures in 2011, and the share of live births attended by skilled health staff reached 99.2 per cent.

Box 1: Some Success Story and Best Practices Countries on Universal Health Coverage

- **Cuba** is one of the best practice globally that have achieved universal health coverage. By 2007 Cuba had a better doctor-to-patient ratio than that of USA or Western Europe. Today, Cuba's ratio is about double that found in developed nations, with a doctor for every 150 people. In Cuba, doctors are not just available to city dwellers, like in the most of Latin American countries, doctors are readily available to Cubans who live in the countryside (Pineo, 2019). Cuba's national health system is made up of multiple tiers: 1) the community containing individuals and families, 2) family doctor-and-nurse teams, 3) basic work teams, 4) community polyclinics, 5) hospitals, and 6) medical institutes. These have made high quality provision of health to all individuals in Cuba, either in urban or rural areas.

- **Rwanda's** experience shows that progress is possible for low-income countries, even when the vast majority of people live in rural areas and are part of the informal economy. The community-based health insurance (CBHI) schemes subsidize the contributions for poor and vulnerable people, which has helped to extend coverage to otherwise excluded groups. About 96 per cent of its population was covered by the various health insurance schemes in 2011, most of them (91 per cent) through CBHI schemes. Progress in coverage in Rwanda was achieved through political commitment by a decentralized and strong network of health facilities and health workers, and the use of cultural elements of collective action and mutual support.

- **Thailand's** UCS was conceived as a scheme for everybody and not as one targeted to the poor, vulnerable and disadvantaged in 2001. UCS is a tax-financed scheme, it provides free health care at the point of service. The Government consolidated several health insurance schemes and thereby reaching a large number of previously uncovered people, particularly in the informal sector. In the wake of the solidarity principal, the scheme offers benefit package, which includes general medical care and rehabilitation services, high-cost medical treatment and emergency care. As a universal scheme, it controls the cost and ensures the financial sustainability of the scheme by fixing the annual budget and putting a cap on provider payments. The scheme has encouraged the development of health infrastructure and increased access to health services.

Source: Author's Own Compilation from various sources

Only a small number of countries globally have managed to attain a universal health coverage as shown in Box 1 (China, Colombia, Cuba, Rwanda and Thailand). However, there other many countries that are advancing quickly towards universal health coverage. Even though, austerity or fiscal consolidation policies throughout the world, including in high-income countries, have a negative impact on the people and expansion of universal health coverage. More efforts are needed to extend access to health and long-term care, and to provide universal health coverage (ILO, 2017; 2021).

CHAPTER 3

BASIC HEALTH CARE PROVISION AND EFFORTS TOWARDS UNIVERSAL HEALTH CARE COVERAGE

From where the country was in 1960s to where it is right now, Tanzania has made substantial stride both in policy reforms and provision of basic health care. Immediately after independence in 1961, Tanzania adopted a free health care policy that lasted until the early 1990s; to provide adequate, quality and affordable health care services by allocating resources through taxation and some out-of-pocket payments (OOP).

In 1993 due to increased population, the Government introduced cost sharing system (introduction of user fees for certain services) to mobilize additional resources for health care provision accompanied by exemptions and waivers for the poor (Munishi, 2003). Even though, the introduction of user fees or OOPs payments had negative effects on the general access to the healthcare system. Especially people with low incomes experienced financial difficulties when considering medical treatment, and delay seeking medical care because of financial reasons.

To address these barriers, several risk pooling mechanisms were rolled out during the late 1990's and the early 2000's to provide financial coverage for the Tanzanian population. In 2001 prepayment scheme (NHIF for the formal sector and CHF for the informal sector) were introduced to mobilize more resources and protect the community from catastrophic expenditure, where donors started contributing to health budget through Basket Fund (BF) and vertical programme. The main objective is to ensure that adequate and quality health care services is affordable and accessible to everyone according to the 3rd Health Sector Strategic Plan (HSSP).

In 2015 the Tanzanian government published its fourth Health Sector Strategic Plan (HSSP IV); which laid out the policy direction of the Ministry of Health and Social Welfare (MoHSW) for the next five years. The 4th HSSP committed itself to achieve universal health coverage by developing a 'Health Financing Strategy' and by doing so 'providing universal and equitable access to essential health services, while improving sustainability of the health sector' (MoHSW, 2015). However, before the concept of universal health coverage (UHC) was launched, Tanzania had already invested considerable efforts by installing different kinds of national health insurance schemes. Tanzania currently has multiple health insurance schemes – including a social security fund, a private insurance option, a community-based insurance programme, as well as insurance schemes for both the informal sector and formal public sector. On the international stage, during the Abuja Declaration in 2001, Tanzania pledged to allocate at least 15 percent of their annual budget to health budget.[2]

According to the MoHSW, the fragmented insurance schemes have not reached sufficient scale of proportional coverage among the population. Approximately 15 percent of the population is covered by one of the health insurances schemes.

[2] Even though, the government did not live up to its promise, since public health allocations were only above 15% from 2006 until 2009

The two largest insurance schemes are the National Health Insurance Fund (NHIF) and the Community Health Fund (CHF)/Tiba Kwa Kadi (TIKA). The former is largely for the formal public sector and coverage is approximately 6.6 percent of the population, while the latter is for the informal sector where coverage is approximately 7.3 percent. The remaining three insurance schemes are a social security fund as well as private and community-based health insurance, which collectively cover approximately 2 percent of the population. Enrolment in the NHIF is only mandatory for civil servants, while then enrolment for the remainder of the schemes is voluntary.

The range of benefits varies across all the insurance schemes. Benefits are typically more comprehensive within the NHIF, social security fund and private insurance schemes – whereas benefits are sparse within the CHF/TIKA and community-based health insurance. The newly proposed health insurance scheme features a defined standard minimum benefits package, which will unify the covered services to eliminate such variance. Out-of-pocket payments for health account for approximately 0.85 percent of mean per capita incomes with catastrophic health expenditure representing between 5.3% and 6.6% of the total consumption expenditure in rural and urban areas (Massito and Hinju, 2025). Thus, a significant proportion of households face financial hardships due to health-related expenses.

Some 1 percent of Tanzanians become impoverished because of these payments. This lack of coverage is especially problematic because it demonstrates that the cost sharing element of the risk pooling scheme does not provide sufficient financial protection. OOPs disproportionately impacts the poorest segment of the population in Tanzania. In addition, there are implications for equity given the variance of benefits coverage among the five core health insurance schemes. For example, those who are low-income tend to be enrolled in the CHF/TIKA and community-based health insurance programmes. Given the differences in covered services, the poor may have different care than the rich – which is not equitable.

Besides several successes achieved, challenges remain with regards to the efforts toward attaining UHC for Tanzania. One, the health financing landscape in Tanzania is heavily fragmented with many financiers: i) insurance schemes (NHIF, CHF/TIKA, SHIB and private insurance); ii) user fees/Out of Pocket; iii) donors through vertical projects; iv) donors through basket funds; v) decentralized plan through Comprehensive Council Health Plans; and government budgetary funds to central and lower levels. Donor dependence is high on health development projects while Government Health Expenditure is 10 percent lower than the Abuja target of 15 percent of the National Budget; overlapping and duplicative Regulatory Health system. Based on these challenges the Government is in the process of developing Health Financing Strategy VI, which will pave way towards UHC.

The developed Health Sector Strategy 2015 – 2020 together with its implementation plan has been focusing on raising new/ alternative resources for health; creating a mandatory Single National Insurance; focusing on coverage strategies of the informal sector and the poor; and linking to quality improvement methods via strategic purchasing (e.g. RBF).

The vision of the strategy is to ensure cost-effective; quality health services are available to all Tanzanian residents without financial barriers at the time of need. Its mission is to put in place a Single National Health Insurance programme that will enable all Tanzanian residents to access appropriate and affordable health care at the time of need, while its goal is to enable equitable access to affordable and cost-effective quality care and financial protection in case of ill health, according to a nationally defined minimum benefit package.

Of the eight objectives of health care financing strategy, objective five states that the need to develop a health financing system which is responsive to the poor and this entail that: guarantee health insurance coverage for the poor and vulnerable; while objective six stipulate the need to ensure appropriate resource allocation and expenditure which entail establishment of a minimum benefit package (MBP).

In attempt to attain the universal health coverage for all, the Government has in 2022 introduced the Universal Health Insurance (UHI) Bill 2022 providing compulsory conditions for people to have registered in insurance schemes to secure several social services. The Bill also introduces the Tanzania Insurance Regulatory Authority (TIRA) as the overall regulator mandated to oversee insurance schemes and quality of provided healthcare services. According to Section 32 (a)(h) of the Bill, it is compulsory for citizens to have health insurance, failure to do so one can be subjected to hefty penalties. It is therefore expected that about 73 percent of Tanzanians can comfortably subscribe to universal health insurance cover, with each person contributing 65,000 TZS annually to access services at health facilities across the country (URT, 2022).

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CHAPTER 4

METHODOLOGY

The analysis of this study uses a static tax-benefit microsimulation model for Tanzania known as TAZMOD. The model is based on EUROMOD software which has been developed over the past 30 years by the University of Essex and widely used to design social policies in European countries (Sutherland and Figari 2013). Notable, TAZMOD generates static analysis and does not model behaviour change or effects of a certain intervention. It also does not provide impact at macro-level analysis but rather the model is powerful in providing insights about micro-level effects of a policy change which can be useful in the discussion of macro-level analysis.

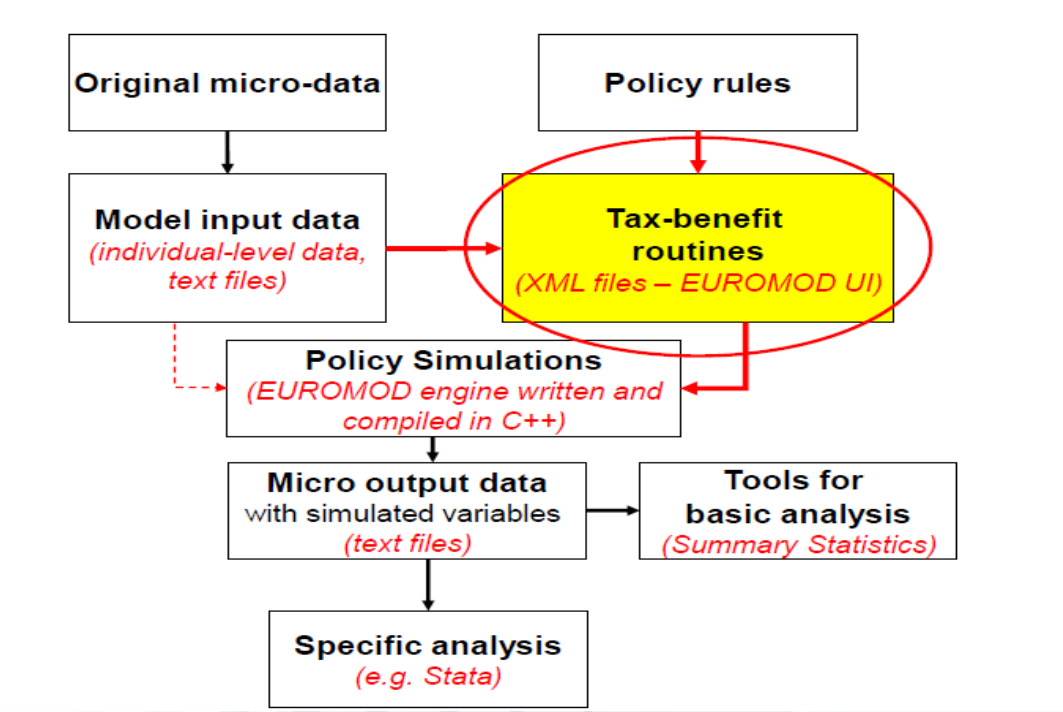
Currently, TAZMOD uses version (v2.7) and is underpinned by two versions of the Household Budget Surveys; HBS 2011/12 and HBS 2017/18. These surveys provide a representative sample of the Tanzania Mainland population. In the TAZMOD, the data from the HBS 2011/12 can be used for the analysis covering a period 2012 to 2017 inclusive; while HBS 2017/18 can used to analyse impacts for the period 2018 and beyond until the new dataset will be available. The TAZMOD is usually updated each year to uprate the monetary values and to accommodate new policy changes as per the government new financial years. Weights from the two surveys are used to calculate national figures from the simulations.

TAZMOD has modelled most of the existing direct and indirect taxes as per the Tanzania Finance Act. It has also modelled some of the existing social programmes such as pension, health insurance, Productive Social Safety Net (PSSN), etc. TAZMOD is a highly versatile of which the ability to model certain programme, highly depends on the content and quality of the underpinned dataset. Model workings are transparent, and the user has full control over the simulations carried out. To simulate a policy, one must be able to: translate the rules into a format that can be understood by the model; and collect the information needed to apply the rules (this is reliant on the information being in the survey).

To see how it works, as shown in the Figure 6, the tax and benefit policy rules are first converted into a form that is compatible with the modelling framework. These tax and benefits rules are then applied to a national representative underpinning dataset (derived from the Household Budget Survey) which contains information at the individual or household level on family structure, income and expenditure. An output dataset is then produced with simulated variables which allow the impacts on individuals and households in terms of poverty, inequality and redistribution.

This study has also tried to utilize the recently released 2022 census information to estimate some of the potential costs and collections for the programme. The simulation analysis has also used the 2017/18 poverty estimates to establish the number of households by category which is useful in the case the government decide to subsidize the poor households in the programme.

Figure 6: The Model: How does it works



Source: Author's own compilation

The next section present results of various contribution options by individuals based on different criteria as stipulated in the presented UHC Act in the parliament. The proposed contribution scenarios also consider the principles of healthcare financing of which resources raised to finance healthcare services should base on the ability to pay of individuals. The section also provides the insights about potential collection by the government as well as impacts on poverty and inequality.

CHAPTER 5

RESULTS AND DISCUSSIONS

This section provides simulation results based on different scenarios using TAZMOD version 2.7. As explained in the previous section, the results provide the first-round effects of introducing the UHC programme based on the simulated scenarios. The scenarios are based on main key membership criteria that is used in the draft UHC Act following the Universal Health Insurance (UHI) Bill 2022: first, a person must be aged 21 years and above; second, he or she is in a formal or informal sector as well as self-employed. It is important to note that the draft UHC Act provides consideration for the poor people and special groups as will be identified by the Minister responsible to the programme. The analysis has tried to consider these elements to reflect the rules that will be used when the programme starts to be implemented.

The other critical issue was the amount to be paid by individuals to the programme. There are three levels of monthly contribution amounts that have been used in the simulation scenarios; TZS 30,000; TZS 20,000 and TZS 10,000 (equivalent to 360,000, 240,000 and 120,000 per year). These amounts have tried to reflect those that was used in the iCHF[3] which is TZS 30,000 per annum for people living in other urban areas and rural areas. According to iCHF rules for those living in Dar es Salaam the amount is TZS 45,000 per annum (see Table 1).

Table 1. iCHF and iTika Premium Contributions by location (per annum)

Sn	Area	Household Type (Beneficiaries)	Premium (TZS)	Unit
1	Dar es Salaam	Single person	45,000	1 member
		6 members (2 adult and 4 children)	150,000	6 members
2	Other urban*	Single person	30,000	1 member
		6 members (2 adult and 4 children)		1 member
3	Rural**	6 members (2 adult and 4 children)	30,000	6 members

Notes: *In all other urban areas in the country, premiums are set per beneficiary at TZS 30,000. ** Household must pay 30,000/= for each additional adult and 10,000/= for each additional child (per year). Household may also decide to form separate family group. Government of Tanzania (GOT) provide a matching contribution of 30,000/= for rural household making a premium total of 60,000/= (from health basket fund (HBF) allocated to the ministry of health).

Source: Other's construction from Lee B, Tarimo K & Dutta A (2018)

Even though, there is difference with what this study proposes in terms of amount to be contributed. First, unlike the amount used in iCHF, the amount used in the analysis is monthly contribution of which makes the total annual contribution to be TZS 360,000; TZS 240,000 and TZS 120,000 respectively. This is charged the same across the proposed category.

[3] iCHF refers to the Improved Community Health Fund (iCHF), a voluntary health insurance scheme introduced in 2017/18 to make short-term improvements in coverage and financial risk protection for the informal sector. Improvements involved purchaser–provider split, portability of services, uniformity in premium and risk pooling at the regional level. iCHF is a natural successor to the Community Health Fund (CHF), originally established in the 19902.

The analysis also tried to consider the ability to pay in some categories as well as exclusion of special groups such as poor household and elderly people by limiting the age to 64 years, and level of income above basic need poverty amount of TZS 49,320. To ensure that there is treatment of equality to both individuals and there is no double counting, the analysis exclude spouse of individuals as well as adding back to their income the amount spent in healthcare services. Importantly, throughout, in the analysis we only consider individuals who do not have health insurance coverage.[4]

It is also important to note that, the thrust of the analysis is to deal with individuals working in the informal sector, which it is usually believed that they neither do not have health insurance nor pension. However, during the analysis it was observed that there were significant number of people working in the formal sector but do not have health insurance and thus call for the need to extend the analysis to integrate them in the simulation scenarios. These could be the missing middle, not capable but at the same not extremely poor (i.e. food poor) to cutter for. The following is the detail description of each scenario modeled in addition to the proposed monthly contribution amount:

Scenario 1 – considers all individuals aged 21 – 64 years that do not have health insurance and are working in the *informal sector*. The scenario has excluded spouse of the individual and adding back to their income the amount that was spent in healthcare expenditure.

Scenario 2 – considers all individuals aged 21 - 64 years that do not have health insurance and are working in the *informal sector only*. The scenario has excluded spouse of the individual and adding back to their income the amount that was spent in healthcare expenditure. This scenario has considered individuals that earn income TZS 50,000 and above from the following sources: income from agriculture, income from self-employment, turnover income, income from rent, income from private transfer, and other sources of income.

Scenario 3 – considers all individuals aged 21 - 64 years that do not have health insurance and are working either in formal *or informal sector*. The scenario excludes spouse of the individual and adding back to their income the amounts that was spent in healthcare expenditure.

Scenario 4 – considers all individuals aged 21 - 64 years that do not have health insurance and are working either in *formal or informal sector*. The scenario excludes spouse of the individual and adding back to their income the amount that was spent in the healthcare expenditure. This scenario has considered individuals that earn income TZS 50,000 and above from the following sources: income from agriculture, income from self-employment, turnover income, income from rent, income from private transfer, and other source of income.

Table 2 presents the impact of introducing the UHC programme in terms of revenue collection to the government given the three level of monthly contributions, and the likely number of contributors.

[4] It is thought that according to the TASAF there are about 6 million extremely poor (the food poor), and it is this group that the Government is looking the possibility to finance according the 2022 UHI Bill to the amount of TZS 340,000 per annum. There those with income and capable to pay for health insurance mostly employed in public and private sectors, and some in informal sector, who about 6 million. With the population of 59 million, then will have the remaining 47 million, the missing middle, without health insurance, these are considered as capable, though they are not that much capable, and the noise is big, is this group that our analysis will focus, to help reach universal health insurance coverage.

At TZS 30,000 monthly contribution, the government will likely raise about TZS 1,632.3 billion of which 4.5 million individuals will contribute to the scheme (scenario 1). This amount is equivalent to 1.01% of the 2021 Tanzania nominal GDP of 161,525,759.61. When the income level is considered to be TZS 50,000 per month for case of scenario 2, the government will likely raise TZS 678.4 billion (0.42% of GDP) and the number of contributors will drop to 1.8 million which is equivalent of 58% decline of contributors. When the analysis is extended to include those in the formal sector and not having health insurance, that is the case of scenario 3 and 4, findings show that the government will likely raise about TZS 1,805 billion (1.12% of GDP) and TZS 786.7 billion (0.49% of GDP) respectively. The number of contributors will also raise to 5 million and 2.2 million individuals respectively.

When the monthly contribution is reduced to TZS 20,000 and TZS 10,000, as shown in Table 2, there will be a significant reduction in the amount that the government will raise from individuals. Important to note is that what is the appropriate amount to be used depends on a several other factors for consideration. First, the strategic plan of the government in contributing to the UHC fund from the national budget. It is very likely that the amount raised from individuals will not suffice operational costs to run the fund given the nature of healthcare costs. However, it is important to consider budgeting resources for UHC programme as a top-up.

Second, the multiple interventions in the health sector whereby, more resources allocation are allocated on preventive measures accompanied with the introduction of UHC may likely improve the health of the population in the future and thus create an ample fiscal space to reduce or opt for the lower monthly contribution. Third, the implication on poverty and inequality is also critical in the process of deciding the contribution amount as presented and discussed in the following section.

Table 2: Simulated Reforms - Budgetary Implications and Number of Contributors

Category	*Simulation Scenario*	*Monthly amount of Contribution TZS)*	*Annual Contribution (TZS)*	*Total Government Collection (TZS Million)*	*Number of Contributors*
Informal Sector Only	Scenario 1	30,000	360,000	1,632,292.93	4,534,147
	Scenario 2	30,000	360,000	678,386.02	1,884,406
Informal and Formal Sector	Scenario 3	30,000	360,000	1,804,543.83	5,012,622
	Scenario 4	30,000	360,000	786,682.80	2,185,230
Informal Sector Only	Scenario 1	20,000	240,000	1,088,195.28	4,534,147
	Scenario 2	20,000	240,000	452,257.35	1,884,406
Informal and Formal Sector	Scenario 3	20,000	240,000	1,203,029.22	5,012,622
	Scenario 4	20,000	240,000	524,455.20	2,185,230
Informal Sector Only	Scenario 1	10,000	120,000	544,097.64	4,534,147
	Scenario 2	10,000	120,000	226,128.67	1,884,406
Informal and Formal Sector	Scenario 3	10,000	120,000	601,514.61	5,012,622
	Scenario 4	10,000	120,000	262,227.60	2,185,230

Source: Author's Own Calculation, TAZMOD v2.7

Table 3 presents the simulation results of introducing the UHC programme on poverty and inequality. Similar scenarios and assumptions have been used, and the results generally reveals that to larger extent the programme will increase poverty and inequality; except on few scenarios where it shows that poverty will decline. However, this is very likely caused by the decision to add back the health expenditures that was incurred by individuals who did not have health insurance of which the amount could be a significant share of their income. This is evident in all scenarios that poverty have declined, of which it includes individuals from the informal sector. Moreover, the effect is well observed for households that have relatively older persons, children and female headed households.

Critical results observed in Table 3 is that a TZS 30,000 monthly contribution increased poverty significantly. A TZS 20,000 monthly contribution with exclusion of people earning below TZS 50,000 is recommended, which will likely allow the government to raise about TZS 524.5 billion annually without impacting poverty significantly. However, it is imperative to explore how much NHIF is currently raising to idealize and conceive to what extent this simulated amount will sustain the UHC fund.

Table 3: Simulated Reforms - Poverty and Inequality

Category	*Simulation Scenario*	*Monthly amount of Contribution TZS)*	*All Households Basic Needs Poverty (P0)%*	*All Households Basic Needs Poverty (P1)%*	*Impact on Poverty*	*Male Headed Households*	*Female Headed Households*	*Households with Children*	*Households with Older Persons*	*Gini*
	Scenario 1	30,000	**26.24**	**29.04**	**2.80**	2.77	2.90	2.91	0.41	0.0119
Informal Sector Only	Scenario 2	30,000	**26.24**	**26.46**	**0.22**	0.44	-0.45	0.22	-0.52	0.0036
Informal and Formal	Scenario 3	30,000	**26.24**	**29.18**	**2.94**	2.92	3.02	3.06	0.41	0.0120
Sector	Scenario 4	30,000	**26.24**	**26.49**	**0.25**	0.48	-0.45	0.26	-0.52	0.0034
	Scenario 1	20,000	**26.24**	**27.91**	**1.67**	1.73	1.48	1.76	-0.01	0.0081
Informal Sector Only	Scenario 2	20,000	**26.24**	**26.15**	**-0.09**	0.13	-0.80	-0.10	-0.59	0.0028
Informal and Formal	Scenario 3	20,000	**26.24**	**27.99**	**1.75**	1.82	1.52	1.85	-0.01	0.0081
Sector	Scenario 4	20,000	**26.24**	**26.18**	**-0.06**	0.17	-0.80	-0.07	-0.59	0.0026
	Scenario 1	10,000	**26.24**	**26.54**	**0.30**	0.41	-0.05	0.32	-0.59	0.0046
Informal Sector Only	Scenario 2	10,000	**26.24**	**25.64**	**-0.60**	-0.49	-0.96	-0.65	-0.76	0.0021
Informal and Formal	Scenario 3	10,000	**26.24**	**26.58**	**0.34**	0.47	-0.05	0.37	-0.59	0.0046
Sector	Scenario 4	10,000	**26.24**	**25.67**	**-0.57**	-0.45	-0.96	-0.61	-0.76	0.0020

Source: Author's Own Calculation, TAZMOD v2.7

Simulation Analysis Based on Census and HBS Data.

We also try to simulate the implications of universal health care on financing based on 2022 census data, and data from 2017/18 household budget survey. As noted earlier, special groups such as those in extreme poor category (i.e., food poor) will be financed by government conditional on Ministry's responsible directives when the implementation starts. We attempt in this sub-section to estimate the impacts on finances by poverty status and implications on contributions. However, these results should be interpreted with caution. We use household as unit of analysis, that the contribution will be paid by household rather than individuals, aged 21 and above.

We scale up our estimate based on the number of households by 1.6 (the average number of household member eligible to pay for insurance) to arrive at closer estimate possible and consistent with the 2022 UHI Bill. We specifically, estimate the amount of subsidy/contribution by household poverty status based on the following formula:

$$Z^p = X^p_m \times H^p_n \times \theta \times 12$$

where Z is the estimated amount of subsidy/contribution. p is the household poverty status (extreme/food poor, basic need poor or non-poor). X is the monthly (m) contribution per eligible member (aged 21 and above). H_n is the number of households. θ is the scaling factor. We scale the amount to arrive at closer estimate as we are using household as unit of analysis. First, we use the average number of eligible members in households, those aged 21 and above except for the spouse and the other members who are already insured in the household based on the calculated average. Using the 2017/18 HBS the calculated average is 1.6 members per household except for the eldest spouse and is 1.48 if those already insured (with national health insurance (NHIF), TIKA, and community health fund insurance (CHF)) are further excluded. We finally multiply the figure by 12 to arrive at annual estimated subsidy or contribution.

Table 4 presents the parameters used for estimating the subsidy and contribution based on census and HBS data. As shown, according to the recent population census of 2022, Tanzania Mainland has a population of about 59.8[5] million people, 13 million households with average size of 4.6 individuals per household. Of the 13 million households, 20.1% are estimated to be poor and 5.6% as food/extreme poor households, which translated into 2.6 and 0.73 million household in poverty and extreme poverty[6]. The total poor households are estimated to be 3.3 million and 9.7 million households are in non-poor category. About one point six (1.6) of the household members are estimated to be eligible for contributing to health insurance (aged 21 and above, except the spouse).

Table 4: Number of Household by Category: 2022 Census and 2017/18 HBS data

Category	*Identity*	*Household*	*Population*
Total Population	A	59,851,347	59,851,347
Average household Size	B	4.6	4.6
Average eligible members*		1.63	1.63
Average eligible members**		1.48	1.48
Total Household/	C = A/B	13,011,162	13,011,162
Incidence of Poverty			
Basic Need Poverty	D	20.1	26.4
Food/Extreme Poverty	E	5.6	8
Number of Poor Households			
Basic Need Poor Households	F=C x D/100	2,615,244	-
Food Poor Households	G = C x E/100	728,625	-
Total Poor Households	H=F+G	3,343,869	-
Total Non-Poor Households	I=C-H	9,667,293	-

Source: Author's own calculation

* is the average number of members of the household with age above 20 (except the head's spouse for household with number of dependent less than 21 to allow for the household splitting) and ** excludes the eldest spouse of the household head and those already insured.

[5] Based on the most recent 2022 Tanzania population census data.

[6] 26.4 and 8.0 percent of the entire population are estimated to be in basic poverty and extreme poverty translating to about 15.8 and 4.8 million people, respectively.

Table 5 shows a case scenario when the government want to subsidize the poor households by contributing to the programme TZS 20,000 per month and allow the rest of the households that are considered not poor to contribute to the programme with a monthly amount equal to TZS 20,000. Given data limitation, we could not adjust for those already enrolled in insurance schemes, however, these figures provide the first insights on the roughly potential amount expected to be collected for the programme. The first panel (panel I) uses 1.63 as scaling factor (average number of eligible members per household except the eldest spouse) and panel II uses 1.48 (average number of eligible household members except eldest spouse and those with insurance).

Based on panel I of Table 5, the annual cost to the government to subsidize the poor household (both basic need and extreme poor) will be TZS 1,284 billion, equivalent to 0.79% of GDP[7] and 3.52% of the total government expenditure[8]. But if the government decides to narrow down and support only the extreme poor, then the annual cost will be TZS 285 billion, equivalent to 0.18% of GDP and 0.78% of total government expenditure.

Table 5: Estimated Total Cost of Subsidy to the Government

Number of Households		*Annual Subsidy*	*Total Annual Costs*	*% GDP*	*% Budget*
Panel I: Using θ = 1.63 and Monthly contribution/subsidy (X) = 20,000					
A. Estimated subsidy from Non-Poor Households					
Basic Need Poor	2,615,244	240,000	1,023,083,452,800	0.63	2.80
Food Poor	728,625	240,000	285,038,100,000	0.18	0.78
Total Poor Household	3,343,869	240,000	1,284,045,696,000	0.79	3.52
B. Estimated Contribution from Non-Poor Households					
Non-poor Households	9,667,293	240,000	3,781,845,021,600	2.341	10.37
C. Total UHC contribution			5,065,890,717,600	3.151	13.95
Panel II: Using θ = 1.48 and Monthly contribution/subsidy (X) = 20,000					
A. Estimated subsidy from Non-Poor Households					
Basic Need Poor	2,615,244	240,000	928,934,668,800	0.58	2.55
Food Poor	728,625	240,000	258,807,600,000	0.16	0.71
Total Poor Household	3,343,869	240,000	1,187,742,268,800	0.74	3.26
B. Estimated Contribution from Non-Poor Households					
Non-poor Households	9,667,293	240,000	3,433,822,473,600	2.13	9.41
C. Total UHC contribution			4,621,564,742,400	2.86	12.67

Notes: The estimate in Panel I uses 1.63 as scaling factor (average number of eligible members per household except the eldest spouse) and panel II uses a scaling factor of 1.48 (average number of eligible household members except eldest spouse and those already covered by insurance).

Source: Author's own calculation

[7] We use the 2021 nominal GDP at market prices amounting to 161,525.759 billion Tanzanian shillings for reference GDP.
[8] We use the 2021/22 actual government expenditure (36475.14 billion Tanzanian shillings) for reference.

On the other side, if all the non-poor households contribute to the programme a monthly amount of TZS 20,000, then the government will be able to collect an estimated amount equal to TZS 3.78 trillion, equivalent to 2.3% of GDP and 10.37% of the total government expenditure. This amount is considered fairly substantial in financing the UHC programme, assuming there will be a well-designed implementation plan and good buy-in by stakeholders from the scratch.

The results in panel I may overstate the subsidy and contribution estimate as it does not account for those already covered by insurance. In effort to eliminate the overstated amount the results in panel II uses a scaling factor that exclude those already covered by health insurance scheme. However, the estimate is yet closer to the original estimate (in Panel I) suggesting overstating of figures is not substantially large.

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CHAPTER 6

SOME FINANCING OPTIONS FOR THE UHC

6.1 Overview

This section provides an alternative source of financing for the proposed UHC programme. Notable, the previous section provided an insight on the estimates that might be raised from the contributions from eligible members in the community. As UHC will be one of the largest social programmes in the country, extending eyes to other sources for revenue generation to finance the programme is critical. The identified sources of financing consider the nature of activities and its potential to raise funds at relatively low costs.

The following sectors are noted to have potential to raise revenue to finance the programme: mining, tourism, fisheries, transport and telecommunication sector. The sectorial activities will be charged a very minimal amount, and it is proposed that the collected amount should be ring-fenced to finance the programme. The amount collected from these sources will act as a top-up to the amount raised from the contribution from members. As UHC is one among the programme that will have long terms impact to the population of which will benefit current and future generation, this implies extractive industry becomes important as well as other natural resources that exist the country. The study has tries to exclude areas that will add more burden to the community since on the other-side people will be paying the contribution.

Table 7.0 provide a summary of potential revenue from different sources using the 2021 year as a baseline. Projection of the other years is based on the assumption of 4% annual increase in revenue. The 2021 average GDP growth rate was 4.9% and considering the expected slowing down of global economic projections, the assumption here is that the country might also experience the same impact and thus opt for the low growth rate. Using the 2021 statistics, the government could have been able to raise an estimate of TZS 71.3 billion to fund the UHC programme (Table 7.0). The amount is projected to increase up to TZS 86.6 billion which is a significant amount to finance the programme. Generally, telecommunication, tourism, transport and fisheries have shown to have higher potential of raising funds for the programme, from sector projections using 2021 as the base year.

Table 7.0 Estimate of Potential Revenue to Finance UHC (TZS)						
Sector	*Baseline Year 2021*	*2022*	*2023*	*2024*	*2025*	*2026*
Mining	70,733,553.48	73,562,895.62	76,505,411.44	79,565,627.90	82,748,253.02	86,058,183.14
Wildlife	2,515,319,949.09	2,615,932,747.05	2,720,570,056.94	2,829,392,859.21	2,942,568,573.58	3,060,271,316.52
National Antiquities	1,270,285,562.52	1,321,096,985.02	1,373,940,864.42	1,428,898,499.00	1,486,054,438.96	1,545,496,616.52
Hunting	357,259,912.99	371,550,309.50	386,412,321.88	401,868,814.76	417,943,567.35	434,661,310.04
Fish Export	4,142,326,294.94	4,308,019,346.74	4,480,340,120.61	4,659,553,725.43	4,845,935,874.45	5,039,773,309.43
Nile Perch Export	3,371,034,081.89	3,505,875,445.17	3,646,110,462.97	3,791,954,881.49	3,943,633,076.75	4,101,378,399.82
Mobile Phone Users	54,116,218,000.00	56,280,866,720.00	58,532,101,388.80	60,873,385,444.35	63,308,320,862.13	65,840,653,696.61
Air transport Passengers	5,317,678,000.00	5,530,385,120.00	5,751,600,524.80	5,981,664,545.79	6,220,931,127.62	6,469,768,372.73
TOTAL	**71,160,855,354.91**	**74,007,289,569.10**	**76,967,581,151.87**	**80,046,284,397.94**	**83,248,135,773.86**	**86,578,061,204.81**

Source: Author's Own Estimation

6.2 Mining Sector

Mining sector is one of the growing sectors in the country, and with discoveries of new minerals deposits it is very likely the sector will have much more contribution to the programme. Countries such as Botswana have used revenue from minerals to finance social programmes in education, health, to mention a couple which have proven to be successful. Table 7.1 indicate potential revenue to be raise from mining sector if the government charge only 1% of the export value of the mineral products. This amount is expected to grow in the future as sector activities expands.

Table 7.1: Trend of Mineral Exports and Revenue Potential for UHC

		Quantity Exported				Value ('000 USD)				UHC Charge	TZS*
Mineral Type	**Unit**	**2018**	**2019**	**2020**	**2021**	**2018**	**2019**	**2020**	**2021**	**(1%)**	
Diamonds (Rough)	Carats	383,391	416,750	143,471	47,337	96,066	89,335	20,065	8,473	84.73	196,743.06
Gold	000 Grams	35,864	48,408	49,812	42,902	1,454,878	2,123,035	2,844,960	2,831,840	28,318.40	65,755,324.80
Gemstones-rough	000 Grams	284,321	761,814	128,461	4,493,669	28,006	-	-	16,501	165.01	383,153.22
Gemstones- cut&polished	Carats	-	-	1,435,273	166,728	-	27,314	19,215	7,426	74.26	172,431.72
Salt	Ton	36,392	99,510	-	21,095	1,207	5,576	1,927	2,360	23.60	54,799.20
Phosphate	Ton	-	-	14,241	15,632	-	-	1,945	3,442	34.42	79,923.24
Tin	Ton	8	-	41	155	-	-	420	4,603	46.03	106,881.66
Gypsum	Ton	241,260	2,916	4,252	9,129	-	317	446	936	9.36	21,733.92
Graphite	Ton	27,810	9,271	2,250	2,887	2,418	4,420	1,071	1,264	12.64	29,350.08
Silver	000 Grams	12,041	12,550	13,187	10,532	6,045	6,537	8,748	9,284	92.84	215,574.48
Copper	000 Lb	-	-	-	-	-	-	-	-		-
Copper concentrates	Ton	-	-	38,683	16,679	-	-	346,673	121,871	1,218.71	2,829,844.62
Industrial mineralS	Ton	783,180	336,844	7,419	206,137	35,783	23,994	374	24,697	246.97	573,464.34
Bauxite	Ton	7,140	-	25,995	12,570	335	-	1,349	630	6.30	14,628.60
Core	Ton	-	-	162,648	346,779	-	-	60,212	11,838	118.38	274,878.36
Quarry products	Ton	-	-	21,964	57,469	-	-	446	1,070	10.70	24,845.40
Total ('000 USD)						**1,624,739**	**2,280,529**	**3,307,850**	**3,046,234**	**30,462.34**	**70,733,553.48**

Source: Ministry of Minerals,
* Exchange rate TZS/USD 2,322
- Data not available

6.3 Tourism

Tourism sector is also a potential sector in raising revenue to finance the programme. Notable the sector has several sub-sectors, but this study opted for few selected sub-sectors since others have minimal impact and may compromise issues of efficiency and equity in raising the revenue.

With the on-going government efforts to promote tourism in the country more revenue will likely be raise in this sector. Table 7.2 shows that charging 1% will enable the government to raise TZS 2.5 billion from the wildlife sub-sector which is significant to contribute to the programme.

Table 7.2: Trends of Revenue from Wildlife Sub-sector and Revenue Potential for UHC

Year	*National Parks*	*Ngorongoro Conservation Area*	*Earnings from Hunting Tourism*	*Total*	*UHC Charge (1%)*
2017	207,587,218,000	103,090,458,000	19,202,957,607	329,880,633,607	3,298,806,336
2018	214,486,751,736	108,149,417,000	20,109,785,000	342,745,953,736	3,427,459,537
2019	292,539,502,030	147,043,375,161	20,864,030,536	460,446,907,727	4,604,469,077
2020	85,614,710,442	47,862,177,819	20,913,213,013	154,390,101,274	1,543,901,013
2021	127,028,556,252	63,852,180,870	60,651,257,787	251,531,994,909	2,515,319,949

Source: Ministry of Natural Resources and Tourism

Table 7.3: Tourists visited National Antiquities and Revenue Potential for UHC

Year	*Number of Tourists*		*Total*	*Revenue (Shillings)*	*UHC Charge (1%)*
	Foreign	*Local*			
2010	540,440	333,294	873,734	113,856,861,145	1,138,568,611
2011	586,869	360,928	947,797	119,549,704,203	1,195,497,042
2012	537,675	364,217	901,892	137,545,109,618	1,375,451,096
2013	530,142	427,208	957,350	150,861,426,031	1,508,614,260
2014	535,140	417,220	952,360	152,977,487,000	1,529,774,870
2015	432,124	526,110	958,234	149,957,485,000	1,499,574,850
2016	439,119	518,457	957,576	175,089,696,000	1,750,896,960
2017	386,529	595,811	982,340	207,587,218,000	2,075,872,180
2018	726,003	442,543	1,168,546	214,486,751,736	2,144,867,517
2019	763,276	494,676	1,257,952	292,539,502,030	2,925,395,020
2020	218,310	288,867	507,177	85,614,710,442	856,147,104
2021	317,654	518,480	836,134	127,028,556,252	1,270,285,563

Source: Ministry of Natural Resources and Tourism

The other source within the tourism sector that have shown to have potentials in raising revenue is the national antiquities. Charging a 1% to revenue collected will enable raising TZS 1.3 billion to finance the programme. As in the case of wildlife, it is expected that the amount will increase as a result of the on-going government efforts to promote tourism sector and to expand alternative attractions.

Table 7.4 Trends of Hunting Tourists and Revenue Potential

Year	Number of Tourists			Revenue (Shillings)	UHC Charge (1%)
	Hunters	Visitors	Total		
2015	608	393	1,001	28,802,391,200	288,023,912
2016	495	297	792	29,136,885,800	291,368,858
2017	473	291	764	19,202,957,607	192,029,576
2018	503	280	783	20,109,785,000	201,097,850
2019	519	483	1,002	20,864,030,536	208,640,305
2020	251	185	436	15,590,640,205	155,906,402
2021	548	101,382	101,930	35,725,991,299	357,259,913

Source: Ministry of Natural Resources and Tourism

Another tourism sub-sector is the hunting tourism which is becoming an attractive area for tourism in the country. Table 7.4 shows that charging a 1% of the revenue collected will enable the government to raise TZS 357.3 million to finance the programme. This amount is also expected to rise as the government continues to implement strategic efforts to promote the tourism sector.

6.4 Fisheries Sector

In the wake of the move towards the *"blue economy"* in the country, fishing activities will become one of the critical sectors in the economy. It is one of the areas that not much have been tapped and invested in the country but with the current government strategy towards blue economy, much can be raised from fishery sector. Table 7.5 shows that charging a 1% of the exported value of fishing will enable the government to raise TZS 4.1 billion to finance the programme.

Table 7.5: Trends of fish exports and revenue potential

Year	Quantity (Tons)	Live fish	Value (USD)	Value (Shillings)	Duty (Shillings)	UHC Charged TZS (1%)*
2011	37,996	61,215	152,973,357	254,901,017,111	6,153,278,023	2,337,145,900
2012	41,394	45,550	163,299,366	234,884,628,956	6,819,926,007	2,549,010,171
2013	38,574	44,260	147,659,779	234,884,628,956	6,117,769,194	2,348,846,290
2014	43,354	42,100	188,101,262	314,489,903,877	7,490,632,355	3,144,899,039
2015	41,060	87,630	259,286,762	547,228,222,096	13,097,411,199	5,472,282,221
2016	39,692	65,841	257,257,101	526,985,019,569	14,302,761,907	5,269,850,196
2017	36,063	101,110	182,450,278	406,568,122,272	10,446,850,539	4,065,681,223
2018	44,940	63,978	23,968,015	546,993,779,393	13,520,367,822	5,469,937,794
2019	45,775	136,915	158,657,946	376,763,802,643	25,567,600,873	3,767,638,026
2020	40,478	128,316	169,111,837	386,369,197,733	21,678,640,820	3,863,691,977
2021	42,302	181,268	176,083,787	414,232,629,494	18,436,276,859	4,142,326,295

Source: Ministry of Livestock and Fisheries-Fisheries Department,
* Charges from the total export value

Further, from the exportation of Nile Perch, the government will have the potential of raise TZS 3.4 billion if a 1% will be charged from the export values. With the on-going government efforts to protect harmful fishing, and conducive investment environment in the sector, it is very likely that Nile Perch fishing activities will significantly increase and contribute more to the programme.

Table 7.6: Export Trends of Nile Perch and Revenue Potential for UHC

Year	Quantity (Tons)	Value (USD)	Value (Shillings)	Duty (Shillings)	UHC Charged TZS (1%)
2008	38,721	153,740,723	180,366,779,818	5,412,912,979	1,803,667,798
2009	28,722	130,644,300	168,368,910,380	4,628,409,655	1,683,689,104
2010	27,229	139,666,995	194,012,069,314	4,509,670,994	1,940,120,693
2011	25,426	127,601,694	197,899,741,508	4,299,987,312	1,978,997,415
2012	28,951	141,189,162	220,149,518,646	4,967,311,025	2,201,495,186
2013	33,733	124,551,585	197,578,220,799	5,085,642,906	1,975,782,208
2014	24,473	665,856,773	1,131,575,531,076	4,569,314,170	11,315,755,311
2015	23,001	250,279,107	528,534,413,019	11,251,591,352	5,285,344,130
2016	26,045	177,338,054	345,417,803,263	6,964,514,349	3,454,178,033
2017	26,680	168,554,019	376,572,501,425	7,057,407,121	3,765,725,014
2018	32,167	179,522,959	409,654,290,065	9,689,153,198	4,096,542,901
2019	32,609	176,894,903	400,195,293,574	17,622,314,163	4,001,952,936
2020	24,173	132,369,802	302,303,225,916	13,627,647,551	3,023,032,259
2021	21,846	143,135,053	337,103,408,189	9,704,591,513	3,371,034,082

Source: Ministry of Livestock and Fisheries-Fisheries Department

6.5 Telecommunication Sector

Currently, the role of ICT in the economy is becoming the heart and engine of all economic activities. The internet of everything (IoE) in the globe have make ICT to become a very critical sector and have open-up new opportunities and increase efficiency in the production processes. This have made telecommunication to be a facilitator not only in production and trading activities but also in welfare improvement of the community.

Telecom industry in Tanzania have grown rapidly and the number of mobile phone owners have tremendously increased. This has made the sector to be important in raising revenue to the government. As the sector has several charges which are designed to be charged based on per use, in this section the study proposes to charge an annual flat rate of TZS 1,000 per each mobile phone and landline owner. This amount is considered to be very minimal equivalent to a monthly amount of TZS 83. Charging this amount will enable the government to raise an estimated amount of TZS 54.1 billion to finance the programme (Table 7.7). With the on-going investment in the ICT and the ongoing general digital transformation in the country and region in general, the telecom industry could continue to raise more revenue to the programme.

Table 7.7: Number of Landline and Mobile Phone Users and Revenue Potential for UHC

Mobile phones	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*Annual UHC Charge (TZS 1,000 per user)*
Mobitel/Tigo	10,639,610	11,677,344	11,044,520	12,583,640	12,572,826	13,032,073	13,369,276	13,369,276,000
Vodacom	12,520,645	12,419,425	12,714,297	14,143,657	15,672,390	15,621,457	15,913,553	15,913,553,000
Airtel	10,887,742	10,456,117	10,571,110	10,954,621	12,722,224	13,823,756	14,700,426	14,700,426,000
Zantel	1,563,503	1,083,157	934991	1,153,623	1,170,085	1,021,409	1,107,504	1,107,504,000
TTCL Mobile	165,460	166,383	175717	587,191	981,072	963,384	1,813,719	1,813,719,000
Smile	-	-	-	-	1,222	12,395	11,600	11,600,000
Hallotel	-	3,438,509	3,799,691	3,942,237	4,641,701	6,818,228	7,200,140	7,200,140,000
Total	**35,777,488**	**40,044,186**	**39,371,827**	**43,497,261**	**47,761,520**	**51,292,702**	**54,116,218**	**54,116,218,000**
Mobile Network							54,044,384	54,044,384,000
Fixed Network							71,834	71,834,000
Total							**54,116,218**	**54,116,218,000**

Source: National Bureau of Statistics and TCRA
- Data not available

6.6 Transport Sector

Transportation comprises of several modes of transport including road, water, rail, air and pipeline. The widely used mode of transport is road of which it accounts for more than 80 percent of movement of people and cargo. As transport is critical in facilitating economic activities across the country a careful analysis on how to use the sector to fund social programme such as the UHC will be needed.

This study has opted to charge a small token amount to the airline passengers since it is a mode that is used by relatively more well-off people. The option also emerged from experience from other countries such as the UAE which raises significant amount of revenues to finance strategic economic activities. The proposed charged amount differs according to the type of the trip. For domestic passengers the proposed charge is TZS 1,000 while for international passengers is TZS 2,000. This could be charged in the ticket purchased by a domestic traveller, or by arrival of an international passenger when entering the country. Charging this proposed amount will enable the government to raise TZS 5.3 billion to finance the programme. Like in other sectors, the aviation industry is closely associated with the growth of the economy and in particularly trade and tourism sectors, both of which have shown positive progress.

Table 7.8: Domestic and International Passengers and Revenue Potential for UHC

Category	*2017*	*2018*	*2019*	*2020*	*2021*	*UHC Charge*
International*	2,756,372	2,593,862	2,594,978	943,422	1,489,721	2,979,442,000
Domestic**	2,257,058	2,593,800	2,892,701	1,830,117	2,338,236	2,338,236,000
Total	**5,013,430**	**5,187,662**	**5,487,679**	**2,773,539**	**3,827,957**	**5,317,678,000**

Source: Tanzania Civil Aviation Authority (TCAA)
* UHC charge TZS 2,000 ** UHC charge TZS 1,000

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CHAPTER 7

SUMMARY AND POLICY IMPLICATIONS

As a country, Tanzania has made marked strides in her efforts towards achieving universal health coverage (UHC) for all. Cognizant of the economic and welfare benefits of increased investment in health, immediately after independence in 1961, Tanzania adopted a free health care policy that lasted until the early 1990s; to provide adequate, quality and affordable health care services by allocating resources through taxation and some out of pocket (OOP). Following the structural adjustments programmes from mid 1980s, however, the Government introduced cost sharing system in 1993, which had a negative effect on the general access to health care system for the poor and vulnerable.

In responding to these challenges, between 1900s and 2000s, the Government ushered in a series of health sector reform under the Health Sector Strategic Plan (HSSP) with the aim of providing health coverage the whole of Tanzania population. To attain the universal health coverage for all, 2022 the Government introduced the Universal Health Insurance (UHI) Bill 2022 providing compulsory conditions for people to have registered in insurance schemes in order to secure several social services.

It is in this context, and gauging from the best experiences from elsewhere, we model the introduction of universal health coverage base on benefits as proposed in new passed 2022 UHI Bill, to establish the costs to government, eligibility and its distribution effects – as baseline analysis. Then we go further to model and explore several scenarios given the global discussions on universal health coverage that have put attention on the need for increased government funding for health care in many low- and middle-income countries; of at least four to five percent of GDP for progressing towards universal health coverage. In addition to assessing the budgetary implications we also propose several other financing options to fill the gap.

Four scenarios are modelled for all individuals without health insurance, aged 21 – 64 years, working in the informal sector only, working either in formal or informal sector; considering both poor individuals (basic and food poor) and those earning income TZS 50,000 and above from the following sources: income from agriculture, income from self-employment, turnover income, income from rent, income from private transfer, and other source of income. In addition, there are three level monthly contribution amount that have been used in the simulation scenarios; TZS 30,000; TZS 20,000 and TZS 10,000 (equivalent to 360,000, 240,000 and 120,000 per year). These amounts have tried to reflect those that was used in the iCHF which is TZS 30,000 per annum for people living in other urban areas and rural areas.

Several findings at different level are derived in this study. First the impact of introducing the UHC programme in terms of revenue collection to the government given the three level of monthly contributions, and the likely number of contributors, and what that means in comparative terms as

share of nominal GDP. At TZS 30,000 monthly contribution, the government will likely raise about TZS 1,632.3 billion of which 4.5 million individuals will contribute to the scheme: equivalent to 1.01% of the 2021 Tanzania nominal GDP of 161,525,759.61. When the income level is considered to TZS 50,000 per month, then the government will likely raise TZS 678.4 billion (0.42% of GDP) with the number of contributors dropping to 1.8 million, equivalent of 58% decline of contributors.

When the analysis is extended to include those in the formal sector and not having health insurance, the government will likely raise about TZS 1,805 billion (1.12% of GDP) and TZS 786.7 billion (0.49% of GDP) respectively, where the number of contributors will raise to 5.0 million and 2.2 million individuals respectively. When the monthly contribution is reduced to either TZS 20,000 or TZS 10,000, there is a significant reduction in the amount that the government will raise from individuals, so is the share of GDP.

Unless there are more matching funds from the Government to compensate for the contributions and increase in the share of spending on universal health care spending in Tanzania, at 1.12% as share of GDP (the highest spending for our case), Tanzania is still by far behind the need to increase government funding for health care in many low- and middle-income countries; of at least four to five percent of GDP for progressing towards universal health coverage.

When looking at the simulation results of introducing the UHC programme on poverty and inequality, the results generally reveals that to larger extent, the programme, especially the one for TZS 30,000 monthly contribution, will increase poverty and inequality (as individuals are giving out contributions); except on few scenarios where the decision was made to add back the health expenditures incurred by individuals who did not have health insurance which shows that poverty declines.

While contributing a monthly amount of TZS 30,000 increased poverty significantly, a TZS 20,000 monthly contribution with exclusion of people that earn below TZS 50,000 is recommended which will likely to allow the government to raise about TZS 524.5 billion annually without impacting poverty significantly. This too calls for exploring how much NHIF is currently raising to idealize and conceive to what extent this simulated amount will sustain the UHC fund.

Furthermore, we also attempt to simulate the implications of universal health care on financing based on 2022 census data, and data from 2017/18 household budget survey - allowing for the extreme (or food), basic need poor and non-poor. We find that the annual cost to the government to subsidize the basic poor household, at TZS 20,000 per month will be TZS 1,308 billion, equivalent to 0.79 of GDP. But if the government decides to narrow down and support only the extreme poor to the tune of TZS 20,000 per month, then the annual cost will be TZS 285 billion, equivalent to 0.18% of GDP.

On the other side, if all the non-poor households contribute to the programme to the tune of TZS 20,000 per month, then the government will be able to collect an estimated amount equal to TZS 3.7 trillion, equivalent to 2.3% of GDP. This amount is considered substantial in financing the UHC programme, assuming there will be a well-designed implementation plan and good buy-in by stakeholders from the scratch.

In addition, we explore various alternative sources of financing for the proposed UHC programme other than the contributions from eligible members in the community. As UHC will be one of the largest social programmes in the country, extending eyes to other sources for revenue generation to finance the programme is critical. The identified sources include the following sectors, to begin with: mining, tourism, fisheries, transport and telecommunication sectors. A summary of potential revenue from different sources using the 2021 year as a baseline, with incremental projections to the year 2026 is also provided. Using the 2021 statistics, the government could have raised an estimate of TZS 71.3 billion, equivalent to 0.04% of GDP to fund the UHC programme and the amount is projected to increase up to TZS 86.6 billion, equivalent to 0.054% of GDP, which is a significant amount to finance the programme.

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APPENDIX

Table A1: Estimated Total Cost of Subsidy to the Government

Panel A: Using average eligible members as scaling factor (θ=1.6)

Number of Poor Households	*Number of Households*	*Monthly Subsidy*	*Annual Subsidy*	*Total Annual Costs*
Basic Need Poor	2,615,244	20,000	240,000	1,004,253,696,000
Food Poor	728,625	20,000	240,000	279,792,000,000
Total Poor Household	3,343,869	20,000	240,000	1,284,045,696,000
Estimated Contribution from Non-Poor Households				
Non-poor Households	9,667,293	20,000	240,000	3,712,240,512,000

Panel B: Using adult equivalent as scaling factors (θ=1.6)

Number of Poor Households	*Number of Households*	*Monthly Subsidy*	*Annual Subsidy*	*Total Annual Costs*
Basic Need Poor	2,615,244	30,000	360,000	1,506,380,544,000
Food Poor	728,625	30,000	360,000	419,688,000,000
Total Poor Household	3,343,869	30,000	360,000	1,926,068,544,000
Estimated Contribution from Non-Poor Households				
Non-poor Households	9,667,293	30,000	360,000	5,568,360,768,000

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