



**Bridging Research and Policy: Assessment
of Population and Development Activities
of the Ethiopian Academy of Sciences**

Ethiopian Academy of Sciences
Addis Ababa
2025

Bridging Research and Policy

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Disclaimer

Unless stated otherwise, the views and positions expressed in this report are not necessarily shared by the Ethiopian Academy of Sciences.

Contents

List of Figures and Tables	vi
Acronyms and Abbreviations.....	viii
Executive Summary	xi
Acknowledgements	xxii
1. Introduction	1
1.1. Background	1
1.2. Objectives of the Study	7
1.3. Outline of the Report	8
2. Bridging Research and Policy: Conceptual Framework	9
3. Study Approaches and Methods	15
3.1. Study Approaches	15
3.2. Sources of Data	16
3.3. Methods of Data Collection	17
3.4. Methods of Data Analysis	21
3.5. Quality Assurance	22
4. Population and Development Situations in Ethiopia	23
4.1. Population Characteristics	23
4.2. Socioeconomic Situations	31
5. Population in Global, Regional, and Local Development Plans	34
6. Population and Development Projects of EAS	50
7. Major Findings of the Study	61
7.1. Achievements	61

7.1.1.	Consensus Studies	61
7.1.2.	Discussions, Congresses, Dialogues, and Workshops	84
7.1.3.	Gender Equality and Women Empowerment in Higher Education and Research Institutions	95
7.1.4.	Partnerships, Operational Setting, and Organisational Capacity Development	130
7.1.5.	Overall Effects of Consensus Studies and Discussion Forums	141
7.2.	Strengths and Weaknesses of EAS in Population and Development Activities	144
7.3.	Challenges and Lessons Learned	151
7.3.1.	Challenges	151
7.3.2.	Lessons Learned: Foundations for Effective Policy Influence	153
8.	Review of Experiences of Selected Academies of Sciences	156
8.1.	National Academy of Science of the United States of America	156
8.2.	Academy of Science of South Africa	166
8.3.	Lessons Learned from NAS and ASSAf	176
9.	Opportunities and Challenges of Establishing an EAS Population Programme	181
9.1.	Opportunities to Establish a Population Programme	181
9.2.	Challenges of Establishing a Population Programme	183
10.	Navigating Complexities: Emerging and Priority Areas for Research and Policy Dialogue	185

11. Conclusion and Recommendations	192
11.1. Conclusion	192
11.2. Recommendations	195
References	204
Annex I: List of Stakeholders Consulted	214
Annex II: Questionnaire for Survey of Gender Champions	215
Annex III: Questionnaire for Survey of Training Effectiveness	221
Annex IV: Interview Guide for Stakeholders	226
Annex V: Interview Guide for Donors	228
Annex VI: Interview Guide for Academies of Sciences	229

List of Figures and Tables

Figure 4.1:	Trends of population size of Ethiopia: 1950 -2050	24
Figure 4.2:	Trends of total fertility rate in Ethiopia: 1990-2024 ...	25
Figure 7.1:	Background characteristics of participants of the survey	105
Figure 7.2:	Percentage distribution of the relevance and characteristics of workshops	106
Figure 7.3:	Changes in knowledge/skill due to gender champions workshop	108
Figure 7.4:	Use of knowledge and skill gained from the workshop in workplaces	108
Figure 7.5:	Challenges faced by workshop participants to use knowledge/skill	110
Figure 7.6:	Future intent of using the knowledge/skill gained from the workshop	111
Figure 7.7:	Summary of characteristics of survey participants	114
Figure 7.8:	Percentage distribution of training relevance and balance of interaction	115
Figure 7.9:	Changes in knowledge/skill gained before and after the training	116
Figure 7.10:	Use of knowledge and skill gained	117
Figure 7.11:	Intended use of knowledge/skill gained from the training	118
Table 3.1:	Lists of reviewed documents	17
Table 3.2:	Summary of sources of data and methods of data collection and analysis	19

Table 7.12:	Summary of participants' reflections on the nature of the training	123
Table 8.1:	Comparative summary of the experiences of NAS and ASSAf	173

Acronyms and Abbreviations

AADPD	Addis Ababa Declaration on Population and Development
ASRH	Adolescent Sexual and Reproductive Health
ASSAf	Academy of Science of South Africa
AUC	African Union Commission
AUDA	African Union Development Agency
AYSRH	Adolescent and Youth Sexual and Reproductive Health
CORHA	Consortium of Reproductive Health Association
COVID-19	Corona Virus Disease
CSA	Central Statistical Agency
CSOs	Civil Society Organisations
DD	Demographic Dividend
DDEI	Demographic Dividend Effort Index
DHS	Demographic and Health Survey
DSW	German Foundation for World Population
EAS	Ethiopian Academy of Sciences
ED	Education
EGLF	Ethiopian Gender Learning Forum
EPHI	Ethiopian Public Health Institute
ESS	Ethiopian Statistical Service
FP	Family Planning
GBV	Gender-Based Violence
GDP	Gross Domestic Product

GEDI	Gender Equality and Diversity Inclusion Guideline
GEI	Governance and Economic Institutions
HIV	Human Immunodeficiency Virus
HPR	House of People’s Representatives
ICPD	International Conference on Population and Development
ICT	Information and Communication Technology
ILO	International Labour Organisation
INASP	International Network for Advancing Science and Policy
LM	Labour Market
MCH	Maternal and Child Health
MIS	Management Information System
MoPD	Ministry of Planning and Development
NAS	National Academy of Sciences (USA)
NGOs	Non-Governmental Organisations
NPPE	National Population Policy of Ethiopia
PDC	Planning and Development Commission
PHE Ethiopia	Population, Health and Environment Ethiopia Consortium
PoA	Programme of Action
PRB	Population Reference Bureau
SDGs	Sustainable Development Goals
SEWIST	Society of Ethiopian Women in Science and Technology
SRH	Sexual and Reproductive Health
SNNP	Southern Nations, Nationalities and Peoples
STEM	Science, Technology, Engineering, and Mathematics

ToR	Terms of Reference
TYDP	Ten Year Development Plan
UN	United Nations
UNESCO	United Nations Educational, Scientific, and Cultural Organisation
UNFPA	United Nations Population Fund
UNICEF	United Nations Children’s Fund
USAID	United States Agency for International Development
USD	United States Dollar
WE	Women Empowerment
WHO	World Health Organisation

Executive Summary

The interrelationships between population and development are complex, with varying implications for policy making, planning, and resource allocation. It is increasingly being recognised that both population structure and components of population dynamics (fertility, mortality, and migration) affect, either positively or negatively, development dynamics and vice versa. Population can boost development and development can benefit the population when the complex and contextual interrelationships are well understood, policies and strategies are developed to manage the interrelationships, and development plans are geared towards maximizing the benefits and minimising the negative impacts. These, in turn, require evidence generation and informing policies and strategies to manage effectively the population and development interrelationships. Global, regional, and national initiatives stipulate the roles of the population in development and the need for proactive actions to ensure sustainable development, improve the quality of life, and harness the benefit of the imminent population dynamics.

To this end, the Ethiopian Academy of Sciences has been engaged in population and development activities to bridge the gap between population and development policies and practices by providing scientific evidence synthesized systematically and professionally to contribute to the socioeconomic development of the country. Being supported by the David and Lucile Packard Foundation and other development partners, the Academy has been implementing several population and development projects between 2016 and 2024 to provide evidence-based policy advice on population and development. The projects mainly involve conducting consensus studies, organizing workshops and discussion forums and policy dialogues, and promoting gender equality and women empowerment in higher education and research institutions. Understanding the extent to which these activities of the Academy inform population-related policies is

essential as a basis to identify the ways forward to engage in population and development activities for a sustainable impact.

The main objective of this study is to assess the achievements of population and development projects, and the strengths and weaknesses as well as challenges and opportunities of the Academy in implementing population and development activities, fostering partnerships and strengthening operational setting and organisational capacity. It also explores priority areas for engagement in population and development in the future and the experiences of other academies of sciences in running similar projects and positively influencing policies. To achieve these objectives, the study used multi-pronged approaches for data collection from different sources. Primary data were collected from stakeholders that include government agencies, civil societies, UNs, donors, and training participants. Interviews were held with selected representatives of the organisations and online surveys were used to collect data from the training participants. Furthermore, secondary sources such as project proposals, performance reports, consensus study reports, and workshop reports were reviewed to collect pertinent information which helped address the objectives. Descriptive statistics were used to analyse the survey data and pertinent contents extracted from the reviewed documents were analysed thematically.

The Academy has conducted several consensus studies on pertinent topics that made significant contributions to knowledge generation for informing policies. A study report was prepared on population dynamics and priority issues in Ethiopia. It was planned to inform the preparation of the country's prospective development plan. The study identified the integration of population dynamics into the development plans. These include key priority areas such as addressing rapid population growth and high youth unemployment; diversifying the economy; investing in human capital; and promoting inclusive institutions to increase income and reduce poverty. Another study comprehensively assessed the implementation of the National Population Policy of Ethiopia. The study report revealed

remarkable achievements in the reduction of fertility and mortality. It also identified areas where inadequate progress was made, including a high unemployment rate, wide gender gaps in employment, limited progression to secondary schools and higher education, and prevalent gender-based violence. It further identified shortcomings in the implementation of the policy. These include the lack of a legal policy framework for policy implementation, institutional arrangement to implement the policy, a comprehensive population programme, and a monitoring and evaluation framework; failure to establish a National Population Council; poor integration of population variables into development plans, and budget constraints. The key recommendation of the study is a revision of the policy. The study, which analysed and mapped stakeholders engaged in population and development activities, identifies stakeholders based on their interest and influence. Government offices at the federal and regional levels are identified as key stakeholders whereas civil societies, UN agencies, academic and research institutions, and the private sector are identified as primary stakeholders. An Amharic glossary of demographic terms has been prepared to improve understanding of demographic concepts and use them in planning.

The demographic dividend is one of the important issues the Academy has given attention to. The policy booklet on Ethiopia's potential to harness demographic dividend indicates that the window of opportunity to harness demographic dividend is projected to open in 2040 and close in 2075. It recommends that education, health, employment, and governance are the priority areas where the government should continue to invest to use the opportunity. The study also warns that failure to act will result in a socio-economic crisis and political unrest. Focusing on the potential economic challenges, the study on labour productivity in industrial parks in Ethiopia shows lower labour productivity due to unfavourable working conditions, low capital and technology investment, poor work culture, and inadequate infrastructure. The study report indexing the efforts on demographic dividend tracks Ethiopia's progress in harnessing the demographic dividend.

The index was constructed considering six key sectors: family planning, maternal and child health, education, women empowerment, labour market, and governance and economic institutions. The results show a moderate level of effort in all sectors except the women empowerment sector where the effort is less than moderate. The study recommends exerting maximum efforts in all sectors to create a favourable environment to harness the demographic dividend. The Academy has also prepared a video presentation on demographic dividend in Ethiopia to promote policy dialogue focusing on the importance of investing in family planning, education, economic opportunities, and good governance.

The Academy has produced two study reports to generate evidence to promote actions aimed at addressing gender inequality and inequity. One study documented the best practices of the Awra Amba community in harnessing gender dividend. Although the study is not specifically linked to gender dividend, it shows that the Awra Amba community is an egalitarian community that provides equal rights to everyone including women and children. The community is identified as ‘unique’, for it ascertains gender equality in addition to providing equal opportunity for all in terms of accessing education, preventing early marriage, providing care for the elderly, exercising good parenting, and ensuring social security for community members. Another study documented the success stories of Ethiopian women in the fight against the impact of coronavirus disease. It reported the stories of 50 women drawn from health, education, business, art, mass media, and leadership sectors. However, the study did not clearly show the criteria being used to select the ‘heroine’ and explain whether the reported activities are regular duties and professional commitments or extraordinary tasks meriting recognition.

Several discussion forums were organised to raise the awareness of stakeholders and bring the issues and recommendations to the attention of policy makers. A high-level roundtable discussion was organised on the general relationship between population and development and its policy implications. Likewise, a panel discussion was held on population growth

and development. The platform allowed extensive discussion on the impact of population growth on demographic transition; the effect of population growth on Gross Domestic Product (GDP), per capita income, savings, investment, and living standard; and the influence of population growth on public health. A consultative workshop was organised on the perspectives of the regional states and city administrations on the revision of the national population policy. The workshop gave ample space to their views and perspectives to ensure that the policy review is inclusive in its process and comprehensive in the issues it addresses. Among the critical issues identified by the regions and city administrations are a clear definition of the roles and responsibilities of stakeholders involved in the review process, the use of up-to-date data to show gaps for policy intervention, consolidation of international experiences, and establishment of independent and clearly defined institutional structure to implement population activities. A high-level budget advocacy workshop was also held giving due emphasis to the need to dedicate a specific budget line to implement activities that address the sexual and reproductive health rights, needs, and priorities of adolescents and the youth.

A series of forums were organised to deliberate on the demographic dividend. The third science congress titled “Harnessing Demographic Dividend: Ethiopia’s Emerging Challenge” was one of the crucial events organised by the Academy to bring the agenda forward. Scientific papers were presented and panel discussions were held on demographic features of Ethiopia, access to reproductive healthcare services, quality education and skills development, youth employment and empowerment, and women and girls’ empowerment. The forum created a crystalized understanding of the process of demographic transition and the opportunities and challenges to harness demographic dividend. A congress declaration was issued that recognised the roles of demographic transition, emphasised the importance of appropriate policies to create a window of opportunity, and urged the government to take action to improve access to quality education, sustainable job creation, and inclusive and participatory political process to

harness demographic dividend. Another dialogue was organised on “realising demographic dividend focusing on human capital development”. It emphasised the need for a coordinated effort among the key development sectors for the realisation of an economically active, well-educated, and healthy nation, and accelerated economic growth. Further dialogue was organised on “Ethiopia’s preparedness towards harnessing demographic dividend”. The discussions emphasised the importance of investing in health, education, and skills training; ensuring good governance; and creating a conducive environment and employment opportunities for the working-age population to harness demographic dividend. It reaffirmed the crucial roles of integrated and synergistic actions that involve all major stakeholders.

Gender equality and equity are vital to ensure well-being, improve family welfare, and boost socioeconomic development. Given that there is a wide gender gap in the knowledge and research system, the Ethiopian Academy of Sciences has made notable efforts in addressing the problem focusing on higher education and research institutions. First and foremost, it facilitated the establishment of the Ethiopian Gender Learning Forum. The Forum has a mission of promoting gender equality/equity in these institutions by generating scientific evidence and providing evidence-based policy recommendations. Its members are higher education and research institutions and individuals working in these institutions. As a means to increase public awareness, it produced a booklet adequately explaining the extent of the problem of gender inequality in higher education and research institutions, the underlying causes, and the measures to be taken to overcome the problems. It also prepared its roadmap and five-year strategic plan for its transformation into an independent organisation. Furthermore, the Forum organised different rounds of gender champion workshops in different parts of the country to produce agents of change with the required knowledge and skills to advance gender issues in their respective institutions. The workshops involved transformational learning focusing on the identification of gender gaps and the underlying causes, gender

mainstreaming, managing resistance, and monitoring and evaluation. The workshop participants affirmed the relevance and effectiveness of the workshops. Despite all these efforts, the Ethiopian Gender Learning Forum is not currently active due to operational challenges associated with a lack of budget, the commitment of the board and members of the Forum, and the lack of a person coordinating its activities.

Capacity building trainings were organised for women researchers on the following topics: research project cycle management and research communication; writing and evaluating grant, research, thesis, and dissertation proposals; writing scientific reports, manuscripts, and policy briefs; and qualitative data analysis using MAXQDA. These trainings were organised with the dual objectives of enhancing the skill of women researchers in conducting scientific studies, publishing the findings, and improving their competence and representation in the knowledge and research systems in Ethiopia. The results of the feedback and follow-up surveys attested to the relevance of the training, enhancement of knowledge and skills, and practical use of the knowledge and skills gained from the training.

The consensus studies, discussion forums, and women empowerment activities undertaken by the Academy have yielded several positive outcomes. First and foremost, the evidence generated through the studies was useful in increasing the awareness of decision-makers on the current status of the population in Ethiopia and its roles, both positive and negative, for the country's development. The consensus studies were able to respond to the needs of government offices for scientific evidence. The studies, together with the discussion forums, brought issues of the interrelationship between population and development to the fore. They drew the attention of the government and other stakeholders to pertinent population issues including demographic dividend. They also invoked a proactive approach to consider the recommendations outlined in the studies and discussions to overcome the development challenges associated with the change in the age structure of the country's population, which is evident from the current

initiation of the revision of the population policy of Ethiopia. The discussion forums also created a platform for stakeholders to engage with the Academy in evidence generation and dissemination. The trainings created networking opportunities which the participants are actively using to exchange information on training opportunities and call for proposals, scholarships, and publications. This study affirmed that flexibility in project implementation, persistence in policy advice activities, government ownership of the process, collaboration with stakeholders, and responding to local needs and priorities were key factors for the activities to be impactful.

The Academy has both strengths that helped it to advance its population and development agenda and weaknesses that hinder the utilisation of its full potential to implement population and development activities. Being trusted by the government as a non-partisan organisation, using multiple media outlets to communicate research findings, engaging experts in the field in consensus studies and discussion forums, involvement of stakeholders, and conducting studies that are responsive to the needs of the potential users are the key strengths of the Academy. Its weaknesses are delays in and low quality of some project deliverables, failure to communicate some study findings, lack of continuity in policy dialogues and discussion forums, limited engagement of the key stakeholders in the process of evidence generation, limited involvement of regional states, reliance on a few donors, limited dissemination of study reports, weak linkages with other academies of sciences, absence of a monitoring and evaluation framework, and visibility problems. The Academy also faced the following challenges in the course of implementing population and development activities: the impact of COVID-19 and conflict in different parts of the country, high staff turnover and reshuffling in partner organisations, difficulties in sustaining partnerships, the weak tradition of evidence-based decision-making in the country, and budget limitations.

The interrelationship between population and development and its policy implications continue to be an issue of concern for Ethiopia. Several areas

are worth investigating to provide evidence-based policy advice to the government and its stakeholders. These include the politicisation of population issues in Ethiopia, growing demand for up-to-date population data and the opportunities and challenges to use modern technologies to avail the data, the effects of current and future demographic trends on the country's development, demographic impacts of mega projects, migration and remittance, urbanisation, population and climate change, adolescent and youth sexual and reproductive health, gender equality and women empowerment, policy implementation challenges, and use and impact of research on decision-making. Institutional credibility, the pool of experts with multidisciplinary expertise, continuity of concern about population, and the pressing population-related issues mentioned above give the Ethiopian Academy of Sciences a good opportunity to increase its role in population-related evidence generation and policy advice. However, there are also challenges that the Academy should pay attention to. These are inadequate political support, the weak institutional structure of the government to coordinate population activities, a lack of policy framework, misconceptions about the population itself and its roles in development, insufficient commitment of Fellows, competing priorities of stakeholders on population issues emanating from differing values and interests, and budget shortage.

The EAS plays a pivotal role in Ethiopia's population and development discourse. The Academy's rigorous consensus studies have been instrumental in generating evidence-based knowledge, directly informing critical policy discussions, and highlighting essential areas for intervention. The evidence derived from these studies elevated the awareness of decision-makers regarding Ethiopia's population dynamics and its multifaceted impact on development. The Academy utilised a series of policy dialogues and discussion forums creating a shared understanding and advocating for integrated and synergistic actions among all key stakeholders, which are crucial for Ethiopia to effectively realise demographic dividend and address broader development challenges. The

Academy has made a remarkable stride in addressing the critical gender gap within the knowledge and research system by establishing the Ethiopian Gender Learning Forum, cultivating gender champions, and training women educators and researchers. The success of the Academy in advancing its population and development agenda underscores the critical importance of flexibility in project implementation, persistent policy advice through multi-pronged discussion forums, government ownership, stakeholder collaboration, and responsiveness to local needs and priorities. However, the Academy did not fully utilise its potential due to a lack of continuity in policy dialogues, limited engagement of key stakeholders in evidence generation, absence of a robust monitoring and evaluation framework, limited institutional visibility, coronavirus, conflict, and a weak tradition of evidence-based decision-making. Overall, the Ethiopian Academy of Sciences can play a significant role in spearheading the evidence generation and policy actions needed to navigate the opportunities and mitigate the challenges of population dynamics in Ethiopia. To this end, the Academy must strategically address its internal weaknesses and operational/systemic hurdles while adapting to external challenges to fully realise its potential and overcome these impediments to raise its roles and excel in its impacts in the areas of population and development.

The study recommends measures to be taken to improve operational effectiveness and efficiency, stakeholder engagement, and financial sustainability. Reflecting on past strengths and weaknesses of the organisation, and using the lessons learned to design future interventions are important to increase effectiveness. Given the huge untapped potential of the Academy in supporting evidence-based policy-making, promoting the purposes of its establishment, contributions, and modalities of operation are important to raise its visibility and attract resources and stakeholders. Since the Academy heavily relies on its Fellows to generate evidence and bring about science-based societal impact, there is a need for redefining the modalities of engagement of the Fellows and specifying the incentives to

motivate them, tap their knowledge and experience, and acknowledge their efforts and contributions. Since stakeholders play fundamental roles in the process of evidence generation, dissemination, and use, the Academy needs to foster institution-based collaboration and evidence co-creation for sustainable impact. Owing to its focus on policy issues, designing strategies that increase the involvement of high-level decision-makers or developing tailored messages that reach them is required to increase the uptake of evidence-based recommendations for policy-making or amendment. Diversifying the sources of funds as well as active involvement in feasible and legitimate income-generating activities are required to ensure financial sustainability. Since population and development are intertwined in multifaceted ways, the Academy cannot address every aspect of this complex relationship and meet the demands of all stakeholders. This calls for the need to redefine areas of focus emphasising contemporary issues with clearly established metrics to measure impact. This complexity also entails sustained efforts in conducting consensus studies and organising policy dialogues or discussion forums to advance the agenda to attain global, regional, and national commitments related to population and development.

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1. Introduction

1.1. Background

The interrelationships between population and development are complex with varying implications for policy making, planning, and resource allocation. Although population is undeniably important for development and vice versa, the nature of the two-way relationships is neither definitive nor straightforward (McNicoll, 2003; Wilmoth et al., 2022). It is increasingly being recognised that both population structure and components of population dynamics (fertility, mortality, and migration) affect development dynamics. For instance, the decline in fertility and mortality and the consequent increase in the proportion of the working population boost socio-economic development. Conversely, development also shapes population dynamics. For instance, economic growth and the consequent increase in income reduce both fertility and mortality and improve the standard of living (McNicoll, 2003). However, economic growth may not necessarily change demographic outcomes and a decline in fertility or a slow population growth rate may not necessarily boost economic growth or reduce poverty. The effect of population on development is not static across space and time due to changes in fertility, mortality, and migration which impact development positively or negatively. Similar population characteristics may have differing effects on developments in different areas due to contextual differences at different spatial and temporal scales. In general, population is beneficial for development when it contributes to social changes, boosts productivity, and accelerates economic growth. Conversely, development benefits the population when it creates employment, reduces poverty and inequality, improves well-being, and protects the environment. These two-way benefits can be achieved when the contextual interrelationships are well understood, policies and strategies are developed to manage the interrelationships, and development plans are geared towards maximising the benefits and minimising the challenges.

Population is central to the attainment of the Sustainable Development Goals (SDGs) (Wilmoth et al., 2022). Global commitments may be missed if population issues are not specifically considered in the efforts. This is because population-related challenges may hamper the achievement of the targets. For instance, the goal of reducing poverty may not be achieved when fertility is very high as studies show a positive relationship between family size and poverty (Wietzke, 2020). Denoting multiplicative effects, high fertility contributes not only to high mortality due to too many and too frequent births but also to limited participation of women in the labour force due to reproductive and child-caring responsibilities, both leading to gender inequality. Likewise, poverty has generational effects as it limits investment in children's education and health. At a macro level, large population size and growing population constrains the government's expenditure on education, health, job creation, and provision of other social services, which undermine quality education, good health and wellbeing, and poverty reduction. Hence, addressing population issues is key to meeting the SDGs. It is with this recognition that African leaders adopted the Addis Ababa Declaration on Population and Development (AADPD) to guide population and development policies and strategies and spearhead continental activities.

Ethiopia is the second most populous country in Sub-Saharan Africa with an estimated population of 130 million and a population growth rate of 2.4 percent per annum. The population of Ethiopia is dominated by rural and young people. The rural population accounts for 77% of the total population while the young persons in the 10 to 24 age groups constitute 32%. In Ethiopia, fertility has shown a declining trend from about 6 children per woman in the 1990s to about 4.6 children per woman in 2016 (Central Statistical Agency (CSA) & ICF, 2016) and is estimated to be about 4 at the moment. As a result of the expansion of health infrastructure and adoption of innovative approaches such as the health extension programme, Ethiopia has achieved significant reductions in infant, child, and maternal mortality rates and improvements in life expectancy. According to the United Nations

Population Fund (UNFPA, 2024), the life expectancy at birth for males is about 64 years while it has reached 70 for females. The use of modern family planning methods has shown significant improvement as the contraceptive prevalence rate among married women has increased from 8% in 2000 to 36% in 2016 (CSA & ICF, 2016) and is estimated to reach 42% at the moment.

Internal and international migration has become the typical feature of the Ethiopian youth who move in search of education and employment opportunities (UNFPA, 2023). Youth irregular migration to the Middle East, South Africa and other part of the world has also increased irrespective of sex mainly due to better access to information and social networking. The need for employment opportunities as a result of the increased unemployment rate in the country is among the major driving forces for migration among the young generation. The increase in urbanization due to rural-urban migration also shapes development positively by driving economic growth and negatively by causing infrastructure deficits. The country has adopted a home-grown economic reform programme to sustain economic growth by creating an economic environment supportive of higher private investment and structural transformation that creates wider employment opportunities for the youth (Federal Democratic Republic of Ethiopia, 2020) which can reduce irregular and unsafe migration.

Ethiopia has made efforts to improve access to services, which are important to reduce poverty and improve livelihoods. Universal health coverage has reached 35% while 73% of the population is expected to have access to sexual and reproductive health care, information and education (UNFPA, 2024). The same source also states that in Ethiopia the primary net enrolment rate is 85% and the primary completion rate is 54%. Total net enrolment in lower and upper secondary schools is 50% and 33%, respectively with the gender parity index getting closer to 1. Participation in decision-making on women's own health care is 82% while 27% of the

women are still suffering from intimate partner violence. Access to electricity is about 54% while the percentage of households accessing safe water has reached 72% at the moment (UNFPA, 2024).

Population dynamics affect development outcomes in Ethiopia both positively and negatively. Population growth provides a substantial opportunity for development. This opportunity is specifically related to the larger size of its young population. Owing to declining fertility and mortality, the age structure of the country's population is shifting from a dominantly dependent to a dominantly working-age population (Degefa, 2019; Minale, 2020). A large number of the young population is entering the working age, which increases the size of the labour force, creating a favourable condition to harness the demographic dividend. With an increase in the proportion of the working-age population, relative to children and the elderly, there is a greater chance for increased productivity, savings, and investment which altogether boost socioeconomic development (Minale, 2020). Hence, Ethiopia's growing young population could become an engine for accelerated and sustained development if there is an enabling environment for human capital development, the creation of decent jobs, and good governance.

The negative effects of high fertility rates and rapid population growth are manifested particularly in the areas of access to services, poverty reduction and livelihood improvements, and environmental degradation. The rapid growth of the young population puts pressure on the education system by increasing the resource requirements to build schools that can accommodate a large number of the school-age population, produce a large number of qualified teachers, and supply learning materials. Although Ethiopia is progressing well in terms of increasing access to schooling, failure to meet these demands compromises the quality of education (UNICEF, 2024). Likewise, population growth increases the pressure on the healthcare infrastructure and services, resulting in the difficulty of ensuring quality healthcare (including maternal and child healthcare) and achieving universal health coverage. This is evident from financial constraints,

inadequate healthcare infrastructure, and the lowest health professional-to-population ratio (Daba, 2024). Although a significant progress has been made in expanding sexual and reproductive health services, there is limited access to reproductive healthcare services (DeMaria et al., 2022) which is a challenge to curbing the effects of unplanned pregnancies, adolescent pregnancies, unsafe abortions, STIs, and intimate violence. Consequently, despite the remarkable progress, maternal, infant, and child death rates remain relatively higher (Melesse et al., 2024). A growing population also puts immense pressure on housing and urban infrastructure (Ethiopian Economics Association, 2021). Consequently, a sizeable proportion of the population lives in informal settlements with poor living conditions, particularly in urban areas. The adverse economic impacts of a growing population include a lack of adequate and decent employment opportunities, lower savings and investment, and persistent poverty. High fertility also reduces women's labour force participation, further contributing to gender inequality. Rapid population growth increases the demand for farmland and decreases per capita landholding, often contributing to persistent food insecurity. The increasing demand for food on the one hand and small landholding and limited availability of non-farm economic opportunities, on the other hand, leads to unsustainable use of land, leading to environmental degradation (Wondie et al., 2016) further exacerbating food insecurity, poverty, and vulnerability. Hence, addressing the imbalance between population growth and the demand for and the supply of social services and productive employment are critical challenges for Ethiopia, requiring both evidence and action.

The complex relationship between population dynamics and development in Ethiopia is mediated by several social, economic, and institutional factors. For instance, human capital development (particularly education and health) is critical in determining whether population dynamics facilitate or hinder development (Degefa, 2019). The economic benefits of a large labour force hinge on the level and quality of education. In this regard, the key challenges Ethiopia is facing include quality of education, limited

progression of students to secondary and tertiary education, and gender inequality. The health status of the labour force is equally important as a healthier and well-nourished population is more productive. Greater investment in health in general and in sexual and reproductive health in particular is essential to reduce morbidity and mortality among children, women, and the general population. Fertility preferences and gender equality are also ingrained in social norms and cultural values (Rodrigues et al., 2022). Economic structures play paramount roles in shaping the contribution of the population to economic growth. The key issues here are the creation of adequate productive employment opportunities, savings and investment, and infrastructure development, which determine the extent to which the growing young population can be meaningfully employed to improve individual well-being, family welfare, and ultimately contribute to national economic growth (Degefa, 2019). Transparent, accountable, and effective governance is also fundamental to harnessing demographic dividend (DD). Conversely, economic growth problems in the past years were related to other factors such as climate change and corona virus disease (COVID-19) (Ethiopian Economics Association, 2021; Yalew et al., 2018). Education and health facilities in different parts of the country are also severely affected by climate shocks and conflict (UNICEF, 2024; WHO, 2024).

The Ethiopian Academy of Sciences (EAS) is a not-for-profit autonomous organisation established to promote a culture of scientific inquiry and creativity and the pursuit of excellence and scholarship in the sciences among Ethiopians (Federal Democratic Republic of Ethiopia, 2013). Its mission is to foster scientific culture and innovation and advance the knowledge of the sciences, arts, and indigenous knowledge to stimulate the development of problem-solving technologies and research that help to improve quality of life by actively engaging all, including women and other underprivileged and marginalized groups. EAS has been engaged in population and development activities to bridge the gap between population and development policies and practices by providing

scientifically proven evidence synthesized systematically and professionally to contribute to the socioeconomic development of the country (EAS, 2019). Being supported by the David and Lucile Packard Foundation and other development partners, the Academy has been conducting population and development activities between 2016 and 2024 to provide evidence-based policy advice and inform policies on population and development. The activities mainly include conducting studies, organising workshops and discussion and policy dialogue forums, and promoting gender equality and women empowerment in higher education and research institutions. Given the massiveness of the size of the population of Ethiopia and its role in the development of the country, ensuring the sustainability of population-related activities is detrimental for national development. In this regard, continuous generation of empirical evidence on emerging population issues and clearly showing their policy implications are key areas where the engagement of EAS is most needed. Accordingly, understanding the extent to which the past activities of EAS inform population-related policies is essential to identify strengths and weaknesses as well as challenges and opportunities as a basis to identify ways forward to engage in population and development activities.

1.2. Objectives of the Study

The main objective of this study is to produce an assessment report that helps the EAS to reflect on its past activities to redefine its future engagement in the population and development issues.

The study has the following specific objectives:

- Reviewing population and development activities of EAS;
- Identifying achievements, strengths, weaknesses, and challenges of implementation of the project activities;

- Assessing the partnership and operational setting as well as organisational capacity of EAS to implement population and development activities;
- Consolidating lessons learned from the experiences and best practices of selected academies of sciences; and
- Identifying priority areas and emerging issues for future engagement in population and development activities.

1.3. Outline of the Report

The study report has eleven sections. The introductory section presents background information and objectives of the study. The next section deals with the conceptual framework guiding the perspectives of the study. Section three indicates the study methods including study approaches, sources of data and methods of data collection, techniques of data analysis, and quality assurance mechanisms. A summary of the population and development situation in Ethiopia is presented in the fourth section. Section five reviews the emphasis given to population issues in the global, regional, and national development plans. An overview of the population and development projects implemented by the EAS in the past eight years is briefly presented in section six. Section seven presents project achievements focusing on research, policy advice, gender equality and women empowerment, and organisational capacity development. It further explains the Academy's strengths and weaknesses as well as its challenges and opportunities. The next section summarises the experiences of two academies of sciences regarding evidence generation to inform policies and the lessons learned. Section nine presents the challenges and opportunities of establishing an independent unit running population and development activities. Section ten summarises population-related emerging issues and priority areas for research and policy dialogue. Lastly, section eleven provides the conclusions and recommendations.

2. Bridging Research and Policy: Conceptual Framework

Evidence-based policymaking is a deliberate and transparent process of using the most robust evidence available to inform policy decisions (Cairney, 2016). Its success depends on policymakers' capacity and commitment to utilize evidence for well-informed choices that aim to achieve positive societal outcomes. This approach offers a direct alternative to policymaking driven by political ideologies, anecdotal evidence, intuition, or the self-interest of specific groups. As a result, evidence-based policymaking has gained considerable momentum in recent years. The rationale for promoting this approach lies in its potential to enhance policy effectiveness in achieving desired societal goals, improve the efficiency of resource allocation, increase accountability and transparency in governance, and ultimately build greater public trust and acceptance of policies and strategies. Evidence-based decision-making can improve policies in at least three ways (Nduku et al., 2024). From an economic point of view, it allows the formulation of the most impactful and cost-effective policies. From the point of view of equity, it considers the viewpoints of groups traditionally excluded from decision-making processes. Politically, it enhances accountability and trust in the policymaking process. Effective utilisation of evidence to inform policies and practices has the multifaceted benefits of saving lives, reducing poverty and improving the quality of life (Court & Young, 2006). The evidence considered in this process encompasses scientific research, statistical data, expert insights, stakeholder contributions, and the findings from policy evaluations (Cairney, 2016).

The path from research-based knowledge creation to real-world impact within policy circles is intricate (Lavis et al., 2003). A substantial body of work was developed to address this challenge, focusing on comprehending and bridging the "research-policy gap." This interface is a dynamic system involving various actors – researchers, policymakers, civil servants, lobbyists, journalists, knowledge brokers, and citizens – each operating

within distinct institutional cultures, incentive systems, timelines, and communication styles (Cairney, 2016). Conceptual frameworks developed over the years illustrate an evolving understanding of this relationship, shifting from straightforward, linear models to more sophisticated, interactive, and context-aware perspectives. Early linear or rational models envisioned a logical progression: research findings are disseminated and then ultimately utilised to influence the decisions of policymakers (Sanderson, 2002). These models prioritised the supply of research and effective communication as primary drivers (Lavis et al., 2003). However, while highlighting the importance of dissemination, they largely overlooked the interactive nature of knowledge exchange in dynamic and complex ways.

An alternative framework to understand the link between research and policy is the collaborative knowledge model (Van Kerkhoff & Lebel, 2015; Cairney & Oliver, 2017). This model advocates for researchers and policymakers (along with other relevant stakeholders) to work collaboratively throughout the research process, from defining questions to interpreting findings and developing recommendations. The model underscores the significance of meaningful engagement and partnership between researchers and policymakers across the entire research process by moving beyond a one-way flow of findings (Oliver et al., 2014). The model posits that such collaboration enhances the uptake of research in policy by increasing its relevance, strengthening trust and legitimacy, improving comprehension of various contexts, facilitating effective communication, and fostering a greater sense of ownership among stakeholders. Proponents of the co-production of knowledge emphasise the democratic nature of this approach to produce high-quality research evidence (Cairney & Oliver, 2017). However, the practical implementation of collaboration to generate a policy-relevant audience is influenced by several factors. These include the characteristics of the evidence produced (credibility and communication), the influence and legitimacy of links between different actors, political context and external influences (Court &

Young, 2006). These factors denote the important roles of contextual factors in bridging research and policy. Context plays a multifaceted and crucial role in bridging the gap between research and policy (Cairney & Oliver, 2017). It influences how research is conducted, interpreted, communicated, and ultimately utilised in policymaking processes (Nutley et al., 2007).

The uptake of research recommendations is not solely determined by the findings themselves but is significantly shaped by how those findings are perceived based on the characteristics of evidence (Lavis et al., 2003; Oliver et al., 2014). The perceived quality, credibility, relevance, and timeliness matter to use the evidence for policymaking. Research findings that are available when policy decisions are being made have a greater chance of influencing those decisions (Oliver et al., 2014). Research employing sound methodologies, transparent processes, and minimizing bias is viewed as more trustworthy and reliable. Policymakers need to be confident in the validity of the findings. The reputation and trustworthiness of the researchers and the research institution influence the perceived credibility of the evidence.

Researchers and policymakers often operate in an independent environment with distinct languages, values and goals. Similarly, based on a systematic review of 145 studies, Oliver et al. (2014) show that poor access to good quality relevant research and lack of timely research output are the barriers to evidence uptake. This entails that effective communication is the cornerstone of bridging the gap between research and policy (Oliver et al., 2014). Effective transfer of knowledge to decision-makers is the function of clearly defining the message to be transferred, identification of the target audience to whom the knowledge is transferred, who transfers the knowledge, selecting appropriate channels, and defining the purpose (Gold, 2009; Lavis et al., 2003). Research findings presented in a clear, concise, and easily understandable manner are more likely to be absorbed by policymakers who often have limited time and may not be experts in the

research area (Oliver et al., 2014). Utilising appropriate communication channels and formats (e.g., policy briefs, summaries, presentations) tailored to the needs and preferences of policymakers enhances uptake. Furthermore, effective communication requires adapting research findings and recommendations to the specific language, norms, and communication channels of policymakers and other relevant actors within the given context. Researchers need to communicate findings in a way that is relevant and accessible to policymakers, avoiding jargon and highlighting policy implications. Regular dialogue and feedback mechanisms are also crucial (Lavis et al., 2003).

Understanding the context of stakeholders (i.e., their interests, values, power dynamics, and existing knowledge) is crucial for effective engagement and for tailoring research communication. The perceived credibility of researchers and research institutions is heavily influenced by the context. Factors like local involvement and transparency can build trust and enhance the legitimacy of research in the eyes of policymakers and the public. The active engagement of stakeholders in the process of knowledge creation has a substantial positive impact on the uptake of research findings (Ogbe et al., 2018). Collaboration between researchers and policymakers as well as improved relationships and skills are facilitators of the use of evidence for decision-making (Oliver et al., 2014). Among the key strategies for the translation of research into policy are joint agenda-setting between researchers and policymakers, and building trust and partnerships with different stakeholders (Ogbe et al., 2018). According to Erismann and Colleagues (2021), three key strategies can boost the effective use of scientific evidence to inform policies and practices. First, stakeholders actively seeking evidence from researchers are highly likely to use it directly, entailing the importance of conducting demand-driven studies. Second, the likelihood of translating research into policy is high when stakeholders are involved in the design and implementation of research projects. Third, the co-production of knowledge through stakeholders'

engagement in participatory and transdisciplinary research approaches allows for bringing research evidence into policy.

One of the barriers to the use of research findings for decision-making is a lack of awareness about the availability and relevance of existing studies (Gold, 2009; Lavis et al., 2003; Nutley et al., 2007; Oliver et al., 2014). In this case, knowledge intermediaries or networks can play a significant role in facilitating the connections between the needs of policymakers and research findings and increase the uptake of research recommendations in policy and practice (Michaels, 2009). The mass media can also serve as an intermediary to make policymakers aware of critical societal problems and evidence-based solutions (Gold, 2009). The nature and quality of relationships between researchers, policymakers, and intermediaries are crucial in facilitating the flow of information, building trust, and fostering collaboration, all of which are essential for evidence-informed decision-making. Networks provide platforms for researchers and evidence users to interact, share knowledge, and learn from each other's experiences. This exchange can lead to a better understanding of both the research and policy landscapes. Networks can also bring together diverse actors to collaboratively identify research needs, shape research questions, interpret findings, and develop policy recommendations. This co-creation process can increase the relevance and ownership of research. Strong, trusting relationships between researchers and evidence users are fundamental, for which knowledge brokers can play substantial roles. Policymakers are more likely to use research from sources they trust and with whom they have established connections. Trust is built through consistent engagement, transparency, and mutual respect.

The political context influencing the translation of research into policy includes the roles of key policy actors, demand for research findings, causes of resistance to evidence-based policymaking, the overall policy environment (policymaking structures, processes, policy frameworks), global and national socioeconomic and political contexts, and assumptions and prevailing narratives (Court & Young, 2006). The external environment

includes international actors (priorities related to funding, policy agenda, and research), social structures, economic situations, political processes, and exogenous shocks affecting policy processes (Court & Young, 2006; Gold, 2009).

In Ethiopia, although interest in using evidence for decision-making is growing, the use of research evidence to inform policies and practices is generally weak. Researchers often state that policymakers are resistant to using scientific evidence to make policy decisions. On the other hand, policymakers claim that researchers do not undertake policy-relevant studies. A bigger challenge in bridging research and policy is the weak link between researchers and policymakers (Hailu et al., 2020; Workicho, 2024). Consequently, there is a limited chance for the co-creation of knowledge, which in turn reduces the use of evidence for decision-making. Another key challenge is the lack of availability and accessibility of high-quality evidence as well as ineffective communication by researchers due to which policymakers often rely on poor-quality evidence to make decisions. Poor research quality, emphasis on technical reports, and limited cross-linkage reduce the potential use of evidence for decision-making (Mitchell & Font, 2017; Hailu et al., 2020). Failure to consider the political economy of the policymaking environment increases resistance to the adoption of research recommendations (Mitchell & Font, 2017). The political context associated with weak research-policy linkage includes selectivity and incomplete use of research evidence as well as complete rejection. Although policymaking is a complex process demanding careful consideration of a wide range of factors influencing the policy problem, policymakers may limit their understanding and selectively use evidence based on their perception of the problem (Workicho, 2024). Incomplete evidence may also be used to quickly fix a pressing problem instead of addressing the complex web of causalities. Furthermore, policymakers may reject scientific evidence or consider only part of it to legitimise their political decisions (Workicho, 2024). Policymakers may also be influenced by special interest groups who provide

them with data supporting their agenda. The institutional capacity to absorb scientific evidence is also limited.

This study report is, therefore, designed to assess the achievements being obtained so far and identify barriers encountered in engaging in research and dissemination of the study results to the end users with the ultimate goal of providing scientific evidence to policymakers and supporting the Ethiopian government to adopt the culture of making decisions based on scientific evidence than on political ideologies and/or the influence of certain groups that have vested interest on a given issue.

3. Study Approaches and Methods

3.1. Study Approaches

The study integrates multiple methods involving the utilisation of primary data collection and literature review. The integration of different methods helps provide in-depth insights into how and why changes occur and captures a wide range of perspectives (United States Agency for International Development (USAID), 2013). Primary data were used to generate rich textual data from stakeholders to gain a deeper understanding of the views of project stakeholders (Patton, 2015) on past activities and future directions whereas the second approach involves an extensive review of scientific and administrative reports produced by the EAS and its stakeholders in the course of implementation of the BRIDGE project as well as literature on broader areas of population and development in Ethiopia. Using multiple methods to generate data is helpful to fully understand the achievements and challenges of the project implementation and uncover contextualised insights of the stakeholders on the achievements and challenges as well as modalities of future engagements. This integration of the two approaches provides methodological rigour for full grasp of project achievements, challenges,

opportunities, and ways forward. Nevertheless, since there are spill over effects from interventions by other organisations, this study does not establish causal roles of the project activities. It aims at explaining the contributions made by the EAS in raising awareness and informing policies, strategies, plans, and activities on population issues.

3.2. Sources of Data

The required information was obtained from documents produced by the Academy, project stakeholders (governmental and non-governmental organisations), and two Academies of Sciences (Table 3.1). This combination of sources of data reflects the important roles of the convergence of the views and insights of researchers and the stakeholder community to shape and clearly define future priority areas (McKenna & Main, 2013).

EAS documents: The documents produced by the EAS and other partners were used as the major secondary sources of information to prepare the report. The EAS has been implementing the BRIDGE project for eight years during which several project-related documents were produced. These served as major sources of information; they include reports on the progress of project implementation, consensus studies, training/workshops, policy dialogues, consultative meetings, and discussion forums.

Stakeholders: The Academy has been working with government offices and development partners. Senior experts working with the EAS and participating in the project activities were consulted. The consulted government offices were those that have provided technical support to and/or participated in the project activities of the Academy. These include the Ministry of Planning and Development (MoPD), Ministry of Health, Ministry of Women and Social Affairs, Ministry of Labour and Skill, and Ministry of Education. In addition, development partners that have supported the Academy, financially and/or technically, to undertake population and development activities were consulted. These partners are UNFPA, The David and Lucile Packard Foundation, the German Foundation

for World Population (DSW), United Nations Educational, Scientific, and Cultural Organisation (UNESCO), the Austrian Embassy, Population Studies Institute, Consortium of Reproductive Health Association (CORHA), Population, Health and Environment (PHE) Ethiopia Consortium, Pathfinder International, Ethiopian Gender Learning Forum, Society of Women in Science and Technology, Women Health Research Working Group, Women Research Working Group, and African Women Research Centre for Adolescent Girls’ Health. The information collected from these organisations was very useful in defining the scope and contents of the EAS activities to set its population and development programme.

Two Academies of Sciences: Data were also obtained from the National Academy of Science of the United States of America and the Academy of Science of South Africa to learn from their experiences and best practices. The two academies were selected based on the consideration of implementation of population-related projects and programmes.

Table 3.1 Lists of reviewed documents

Documents to be reviewed	Purpose
Official statistics and reports	Brief review of the current status of population and development in Ethiopia
Global, regional, and national development plans	Define the roles of the population in the SDG, International Conference on Population and Development (ICPD), AADPD, and Ten Year Development Plan (TYDP)
Documents produced by the EAS and its population-related projects	Assess project achievements, challenges, and lessons learned
Documents obtained from two National Academies of Sciences	Consolidate best practices and lessons to be learned

3.3. Methods of Data Collection

Different data collection methods were used for the report (Table 3.2).

Review of literature: Extensive information was collected from the review of relevant literature. The major one was reviewing the reports produced by the EAS on population and development issues in the last eight years. A template was developed to guide the extraction of pertinent information from the reviewed documents (activity reports, consensus study reports, and administrative reports). The required information includes the objectives of the activity, interim outcomes of the activity implementation, challenges, and lessons learned. Documents produced by the selected academies of sciences were also reviewed to synthesise best practices and draw lessons to be learned by the EAS for its impending population and development activities.

Key informant interviews: Data were collected from the above-mentioned government and non-government organisations collaboratively working with the EAS through key informant interviews. It involves interviewing individuals who have an informed perspective on an aspect of the project being evaluated (Akhter, 2022). It is an ideal method to understand the perspectives of the key informants to explain the achievements and challenges of the project activities and generate recommendations for future planning. Specifically, this method was selected because it allows not only the collection of information from experts who have the relevant knowledge and experience on the project activities but also the discovery of unanticipated issues and ideas that are essential to inform the EAS about its future population and development activities. It is also an affordable technique for getting in-depth insights about the project (USAID, 1996). An interview was conducted with key personnel of the designated stakeholders. One person, who is supposed to have worked with the EAS or have participated in the project activities implemented by the Academy, was identified from each selected institution for the interview. The interview process was guided by a semi-structured interview protocol.

Table 3.2 Summary of sources of data and methods of data collection and analysis

Objectives	Sources of Data	Methods of Data Collection	Methods of Data Analysis
Review population and development activities of EAS	EAS documents	Extracting pertinent information from the EAS documents	Content analysis
Identify achievements, strengths, weaknesses, and challenges of implementation of the project activities	EAS documents, key project stakeholders	Extracting pertinent information from the EAS documents, key informant interviews	Descriptive statistics, content analysis, thematic analysis
Assess the partnership and operational setting of EAS in the areas of population and development	EAS documents, key project stakeholders	Extracting pertinent information from the EAS documents, key informant interviews	Content analysis, thematic analysis
Consolidate lessons learned from the experiences and best practices of selected academies of sciences	Documents to be provided by the selected Academies of Sciences	Extracting pertinent information from the available documents	Content analysis of the documents
Identify new priority areas in the field of population and development	EAS documents, key project stakeholders	Extracting emerging issues and priority areas from the available documents; key informant interview	Content analysis; thematic analysis of the interview transcripts

Key informant interviews were carried out with key government officials and responsible persons in the development partner organisations. Key personnel (i.e., experts) from the selected governmental and non-governmental institutions were the other sources used to generate qualitative data on the project achievements, challenges, opportunities, and ways forward to address population and development problems in Ethiopia. The interviews mainly focused on planned activities and expected outcomes, achievements, challenges encountered whilst implementing

population and development activities with the EAS, best practices, and lessons learned. In addition, special emphasis was given to the opportunities to be explored and potentials to be tapped by the EAS whilst dealing with population and development issues to pave the way towards setting their contribution to the realisation of the SDG, ICPD, and AADPD targets as well as national development plan of the country. The interviews were held with top government officials such as directors or senior experts in government offices, as well as executive directors and programme officers of key development partners. Emphasis was given to possible ways of harnessing the demographic dividend (DD), integrating population issues into development plans, monitoring and evaluating population and development activities, offering short-term training on key issues of population and development, as well as producing reports on key achievements of the population and development activities. The interviews were conducted following the oral consent of the interviewees.

The data collected from the EAS documents and through key informant interviews were generally categorised into four major areas in line with the mission of the Academy and the objectives of the BRIDGE project. These are research/consensus studies, policy advice (including consultative meetings and discussion forums), gender equality and women empowerment, and organisational capacity development. The Academy implemented several activities corresponding to these major areas. The collected information constitutes the types of activities being implemented, their relevance, achievements, effectiveness, strengths, weaknesses, challenges, sustainability of the outputs, and potential areas of future work. Since the project activities were implemented in collaboration with other partners, information was collected on the nature of the partnership (e.g., participation, roles) and operational setting. The detailed questions are given in the interview guide. The information collected from the two Academies of Sciences focuses on agenda setting, how they address population and development issues in their activities, approaches to informing policies and strategies in their respective countries, modalities of

stakeholder engagement, institutionalisation of population programmes, and strategies of mobilising resources to ensure programme sustainability.

Online survey: An online survey was used to collect information from stakeholders who have participated in the training organised by the EAS. The Academy organised several trainings on selected topics. The effectiveness of the training was assessed using a survey questionnaire adopted from the Centers for Disease Control and Prevention (2019) and SmartSurvey (2023). The assessment was made to inform improvements and identify priority areas. The survey mainly focused on content relevance, trainer effectiveness, training materials and resources, participant engagement, skill and knowledge acquisition, and application and impact. Since the number of training participants is limited on the one hand and there is a possibility for some to decline, the online survey targeted all of them, which helps to get feedback from a reasonable number of the participants. Accordingly, the survey questionnaire was sent to 130 individuals and responses were received from 50 training participants. In addition, a post-training online feedback survey was used to collect data from 43 training participants.

3.4. Methods of Data Analysis

Descriptive statistics: The survey data were analysed using descriptive statistics to summarise the key results. Frequency and percentage distributions were computed to show group variations, and presented in tabular and graphical formats.

Content analysis: The information collected from the literature was analysed using content analysis. Content analysis is a rigorous analytical technique employed for the subjective interpretation of the contents of qualitative information in a systematic and content-dependent manner (Selvi, 2019). In the context of this study, it is used to compare the contents of the documents produced by the EAS against the objectives set in the

project document (Drisko & Maschi, 2016). The analysis paid due attention to the objectives of the project, activities implemented, achievements, strengths, challenges, and lessons learned. The analysis also shows emerging issues and new priority areas guiding future interventions.

Thematic analysis: A thematic analysis was used to analyse the interview transcripts (Clarke & Braun, 2016). It involves coding the transcripts, identifying themes, and understanding connections between themes to explain the achievements of BRIDGE projects in addressing population and development issues, challenges faced, and feasible mechanisms of future engagement. An inductive approach was used to develop themes in line with the objectives of the assignment. An in-depth analysis of the qualitative data, together with document analysis, was used to comprehensively understand and clearly show how the Academy has been implementing population and development activities together with the partners and identify promising strategies to establish a sustainable population and development programme by the Academy as part of its evidence-based policy advice to the government and other development partners. The analytical results are synthesised to show the link of the Academy's activities with the existing policies, plans and programmes set by the Government of Ethiopia.

3.5. Quality Assurance

Several measures were taken to ensure the production of a high-quality report. First, the interview guide was designed in ways that address the objectives of the study. Second, the inception report and the interview guides were reviewed by experts in the field and stakeholders attending the validation workshop of the inception report. The comments and suggestions of the reviewers were used to revise the documents. Third, since the quality of data immensely determines the quality of the report, careful attention was given to the process of qualitative data collection. In this regard, the data were collected by the consultants themselves to make sure that all the

required information was properly captured. Furthermore, as much as possible, information was obtained from the senior experts or representatives of the development partners who oversee or are directly involved and have first-hand information on the implementation of population and development activities in collaboration with the EAS. Fourth, the data analysis was carried out independently by the two team members and cross-checked for consistency. Further discussions were made on inconsistencies and consensus was reached before writing the report. Fifth, the findings of the qualitative data analysis were checked against the evidence obtained from the document reviews. Sixth, a validation workshop was organised to discuss the key findings with the stakeholders and incorporate their comments and suggestions.

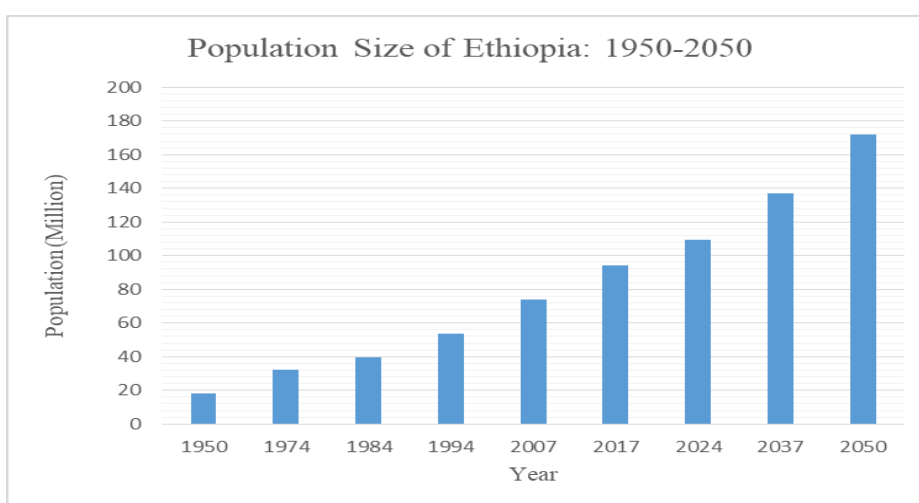
4. Population and Development Situations in Ethiopia

4.1. Population Characteristics

Population size and structure: Ethiopia is the second most populous country in sub-Saharan Africa and ranks 12th at the global level in population size. It is also the fifth among the nine countries contributing to global population growth. As shown in Figure 4.1, the population of the country was estimated at 18 million in 1950 and 32 million in the mid-1970s, and enumerated as 39.6 million in 1984 when the first census was taken (Office of the Population and Housing Census Commission, 1991). The second (1994) and third (2007) Population and Housing Censuses enumerated 54.2 and 73.8 million populations, respectively (CSA, 1999; 2010). In a span of three decades (1994-2024), Ethiopia's population increased by 60 million (or 74%) as it grew from 54 million to 114 million at an average growth rate of 2.6%. Population projection based on the 2012 inter-censal population survey has also projected the country's population to reach 140.2 million in 2037 (CSA, 2013) and about 171.8 million by 2050. The proportion of the population living in urban Ethiopia is 23% while more than three-fourths (77%) are living in rural areas. The country is experiencing rapid urbanisation, which is taking

place at an average annual growth rate of 5.5%. However, urban development in Ethiopia is biased towards primate cities and metropolitan regions as an agglomeration of the population is the result of movement to major cities that are serving as political centres than industrial settings (Sewnet, 2019). Secondary cities are not a priority urban agenda in Ethiopia as they do not have the requisite human capital and lack essential infrastructure for the growth of urbanisation.

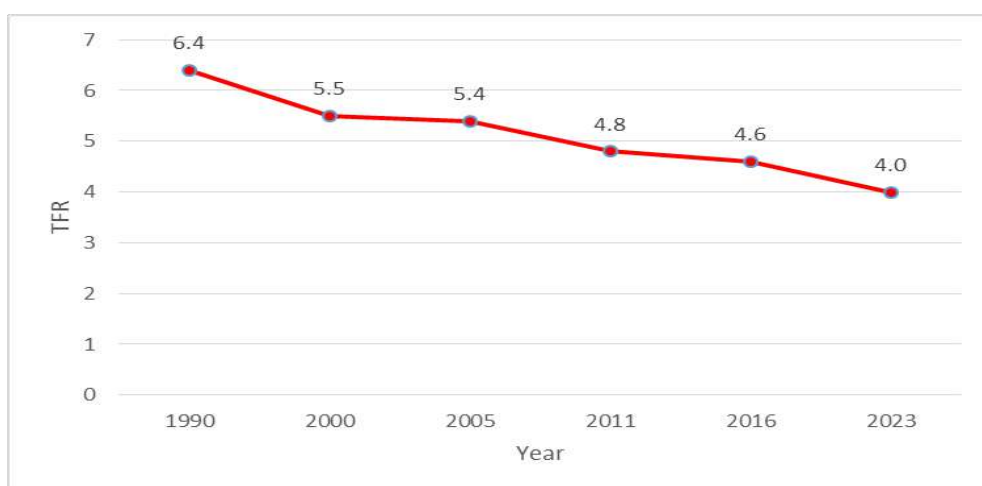
Figure 4.1: Trends of population size of Ethiopia: 1950 -2050



Source: OPHCC (1991); CSA (1999); CSA (2010); CSA (2013); Bekele & Lakew (2015)

Fertility levels and trends: The total fertility rate of Ethiopia was 6.4 children per woman in 1990 which declined to 5.5 in 2000, to 5.4 in 2005, to 4.8 in 2011 and to 4.6 in 2016 (CSA & ICF, 2016). It is predicted to reach 4.0 in 2023 if the decline in fertility between 2011 and 2016 prevails. This suggests that fertility has been declining by about 1.1 percentage points per year between 1990 and 2023, which is a very slow decline. If the fertility decline in the country continues at this pace, it will take Ethiopia several years to reach a replacement level.

Figure 4.2: Trends of total fertility rate in Ethiopia: 1990-2024



Source: CSA & ORC Macro, 2001; CSA & ICF, 2016.

The country is also experiencing a high level of adolescent fertility that has a significant impact on the overall development of the country as it has severe consequences such as school dropout, lost productivity and inter-generational transition of poverty. Early pregnancies and motherhood disrupts education, leading to lower educational attainment and fewer opportunities for skilled labour. Adolescent mothers often face challenges in finding and retaining employment due to childcare responsibilities and lack of skills and education. Their limited economic opportunities perpetuate the cycle of poverty as it potentially affects the future of their children. Moreover, adolescent pregnancies pose health risks to both the mother and child (McQueston et al., 2012; Palanca-Tan et al., 2017). Reducing adolescent pregnancy and the multiple factors underlying adolescent fertility are some of the issues that were given due attention by the 1994 ICPD. Even though teenage pregnancy has declined from 16% in 2000 to 13% in 2016, teenagers in rural areas are more vulnerable to early childbearing compared to their urban counterparts. There are regional disparities in teenage pregnancy and motherhood due to cultural variation

and differences in the level of socioeconomic development (CSA & ICF, 2016).

Mortality levels and trends: The reduction in neonatal, infant and under-five children's deaths is mainly attributable to improved access to health care, higher vaccination coverage, and improved nutrition with a further possible reduction if the intervention continues. Consequently, life expectancy at birth increased from about 50.7 years for both sexes (49.3 years for males and 52.2 for females) during 1995-2000 to 54 for both sexes (52.3 for males and 52 for males) during 2005-10, and further increased to 63 years (61 for males and 65 for females) during the period 2010-2015. It was estimated at 66 years for both sexes (64 for males and 68 for females) from 2016 to 2020 and is anticipated to further improve to 68 years from 2020 to 2025, with women achieving a higher life expectancy of 70 years compared to 66 years for males (Ministry of Health, 2023).

Ethiopia has also recorded encouraging improvements in reducing maternal mortality. The maternal mortality ratio was 871, 673, and 412 deaths per 100,000 live births in 2000, 2005 and 2016, respectively, and had decreased by 53% from 2000 to 2016 (CSA & ICF, 2016). The mortality ratio in Ethiopia was estimated to be 267 deaths per 100,000 live births in 2020 (WHO et al., 2023). The decline in maternal mortality ratio is attributed to the ongoing improvements in access to health and delivery care services specifically the provision of skilled birth attendance, and emergency obstetric care services. Maternal death can disrupt families, leaving children without a primary caregiver and potentially leading to economic hardship and instability that has an impact on their educational opportunities. The loss of a mother affects children's emotional and social development and further hinders their success in school. It can also lead to a decrease in the overall workforce and productivity that has broader societal and economic implications (Moucheraud et al, 2015).

Migration situations in Ethiopia: Migration in Ethiopia is very complex and involves a variety of factors including social, economic, political, and

climatic factors. The country experiences both internal and international migration, with youth being more likely to migrate than other population groups (UNFPA, 2023). Internal migration contributed to 17.1% of the population in 2022. The country is also serving as a transit and destination for migrants, with women migrating more frequently than men, and economic factors, political instability, and conflict driving migration (International Labour Organisation (ILO), 2023). Migration in Ethiopia also includes the movement of people within the country, as well as the displacement of people within and outside the country. Evidence also shows that urban-ward travel is increasing due to population and economic growth, and the households' income mobility is affected by access to institutional services such as markets, employment opportunities, and access to credit (Tamirat et al., 2024).

Rural-to-urban migration (i.e., rural out-migration to urban areas) increased from 24% to 33% from 2005 to 2013 and further increased to 42% in 2021 (Ethiopian Statistical Service (ESS), 2022). Internal migration has increased from 11.4% of the population in 1984 to 17.1% in 2021. The pattern of internal migration is inclined towards young and educated rural dwellers moving to urban areas in search of work and better opportunities. The bulk of internal migration is also occurring within regional states, with migrants often moving to other zones within the same region (Bundervolt, 2018). Unlike this, Addis Ababa attracts migrants from various regions, except for the emerging regions, with more migrants coming from some pockets of the country than others. The country is also affected by the internal displacement crisis, with millions uprooted by conflict and climate-related disasters, particularly in regions like Tigray and Somali. Conflict is the primary driver while drought and floods also contribute to displacement. An estimated 4.5 million people are currently displaced in both rural and urban locations, mainly in Somali, Oromia, and Tigray regions. The number of internally displaced people in Ethiopia has been on the rise, with the highest number recorded in 2021, when over 5.38 million people were displaced (Tsegaye & Gezahegn, 2023).

Ethiopia is identified as a country of origin, transit, and destination for migrants, with both Ethiopians migrating abroad and refugees and asylum seekers arriving from neighbouring countries (ILO, 2023). It is one of the major migrant-sending countries and the largest refugee-hosting country in Africa. Even though labour migration has been increasing in recent decades, there is a low international migration rate driven by structural factors in the country's economy and society. In 2015, as compared to other Sub-Saharan countries, Ethiopia had a low emigration rate of 1.1% (Tsegaye & Gezahegn, 2023). The country's migrant population has remained below 1% for over a decade. The 2021 National Labour Force and Migration Survey estimated that about two million Ethiopians live and work abroad, though this appears to be an underestimation since out-migration has recently increased. The survey indicated that there is an increasing trend of international migration: from 4.9% in 2010/2011 to 14.1% in 2018/2019 (ESS, 2022).

Women's empowerment and reproductive health: The availability of reproductive health services has brought about a significant improvement in maternal and child mortality and morbidity situations. The increase in antenatal care from 27% to 62%, institutional delivery care from 6% to 28% and skilled birth attendance from 10% in 2000 to 50% in 2019 (CSA & ORC Macro, 2001) have improved the health of mothers and children. However, still, a large number of deliveries are taking place outside the health institution. The prevalence of reproductive health organ cancer is increasing and becoming a major health threat in Ethiopia (Burrowes, 2022). The country is also showing better progress in the adoption of modern contraceptive use as the prevalence has increased nearly fivefold from 8% in 2000 to 41% in 2019 (Ethiopian Public Health Institute (EPHI) & ICF, 2022). However, efforts should still be put in place to further reduce the unmet need for family planning which is 22% in 2016 (CSA & ICF, 2016). Given the impact of the COVID-19 pandemic that desperately affected the country's health system, and the social unrest and conflicts in different parts of the country that affect the health infrastructure and the country's health system at large, it is important to critically investigate the

sustainability of the gains in the past and the status of reproductive health and family planning at the moment.

Improving access to women's health service and their access to education, and efforts to eradicate harmful traditional practices through community engagement, education, and campaigns, as well as creating awareness among law enforcement bodies are some of the achievements aimed at improving the status of women (Federal Democratic Republic of Ethiopia, 2019). In addition, efforts were made to improve the economic status of women, particularly by engaging them in micro-economic activities and arranging loans. Engaging women in the decision-making process was also one of the areas where a significant improvement was registered. However, a lot remains to be done for Ethiopian women to enjoy their rights. The discrimination and violence experienced by women and girls is deep-rooted in gender inequality. In Ethiopia, women and girls are still suffering from physical injury and disability, mental health problems, reproductive health problems, and sexual health problems. The 2016 demographic and health survey indicates that 26% of all women aged 15 to 49 reported having experienced physical or sexual violence in their lifetime, with 23% reporting physical violence and 10% experiencing sexual violence (CSA & ICF, 2016). Help-seeking behaviour of gender-based violence survivors was limited to 23% of women who experienced physical and/or sexual violence. Fear of stigmatisation, retaliation, and rejection are factors impeding women from reporting experiences of violence or seeking care.

Gender-based violence (GBV), especially sexual violence, can make girls feel unsafe in school or on their way to school, leading to absenteeism. When girls are unable to cope with the psychological and emotional toll of the violence, they often struggle to concentrate in class, experience anxiety, and have low self-esteem, and all of these have the potential to negatively impact their academic performance. It can also lead them to leave school to work or marry and become the victims of unintended pregnancies, which would further disrupt their productivity and career development (Beyene et

al., 2021; UNESCO, 2013). GBV has a significant impact on health expenditure, both directly and indirectly, as survivors of GBV are more likely to seek healthcare services, leading to increased medical costs. It also causes indirect costs, including increased demand for emergency services, specialised care for trauma survivors, and public health intervention (Samba, 2023).

In Ethiopia, realising the demographic dividend (economic growth fueled by a shifting age structure) is intertwined with addressing persistent gender inequalities. Women's education, health, and economic participation are crucial for achieving this dividend, and current gender disparities appear to hinder this potential. The country faces significant gender disparities including lower education levels for women, limited access to healthcare, and lower labor force participation rates. These disparities impact women's ability to participate fully in the workforce and contribute to economic growth, hindering the potential for a full demographic dividend. Therefore, investing in girls' education, promoting women's health, and expanding their economic opportunities are key to realising the demographic dividend in Ethiopia. Addressing social norms that limit women's roles and participation is also very crucial.

Population, resources and environment: Ethiopia is known for its wealth of natural resources and biodiversity, which results from extreme altitude variation (4,620 meters above to 116 meters below sea level) and a tropical location. The population of Ethiopia has traditionally been highly concentrated in the highlands, and forests are crucial in ensuring food security and sustainable livelihoods for millions of households. However, as population pressure increases, particularly in the highlands, farmers intensively exercise deforestation. Consequently, farmlands and grazing lands are exposed to erosion followed by massive land degradation. Besides, overgrazing has already exacerbated the problem of land degradation. The intertwined challenges of high population growth, environmental degradation, slow technological adaptation, and rural

development have deepened rural poverty and vulnerability in the country (Wassie, 2020).

4.2. Socioeconomic Situations

Economy: The Ethiopian economy has been predominated by the agricultural sector though the service sector has grown in importance, especially against the backdrop of weak growth in the industry sector. The share of agriculture in GDP declined from 37.2% in 2015/16 to 31.7% in 2022/23, while the contribution of the service sector has shown a negligible increase from 39.3% in 2015/16 to 39.8% in 2022/23 (National Bank of Ethiopia, 2023). During the same period, the share of the industry sector in GDP increased from 23.5% to 28.5%. The service sector grew by 7.9% followed by the industry (6.9%) and agriculture (6.3%) sectors.

The real GDP growth rate of Ethiopia has been consistently increasing from 6.1% in 2019/20 to 7.2% in 2022/23 (National Bank of Ethiopia, 2023). Similarly, the nominal GDP per capita of Ethiopia has shown a consistent increase from 814.6 United States Dollars (USD) in 2015/16 to 1548.7 USD in 2022/23. However, the real per capita GDP was 444.1 USD in 2022/23 which was less than the rate of the preceding year by 4.3%. This decline is partly related to slow industrial growth, persistent trade deficits, and a high inflation rate. Although the average annual inflation rate has declined from 33.8 in 2021/22 to 32.5 in 2022/23, it remains very high (National Bank of Ethiopia, 2023). The overall balance of payments was negative between 2015/16 and 2022/23, indicating that the monetary value of the imported goods and services exceeds that of the exported goods and services. The domestic and external effects of the occurrence of the COVID-19 pandemic as well as internal instability challenges in the northern part of the country had a slowdown effect instead of reversing the previously observed achievements and growth targets.

Employment: According to the latest National Labour Force and Migration Survey data conducted in 2021 (ESS, 2022), about 65.0% of the employed

persons are working in the agricultural sector, making it the most popular sector for employment. The service sectors, which include public administration, defence, compulsory social security, education, health, other social and household activities account for 24% and wholesale and retail trades constitute 5.9%, followed by manufacturing, mining, quarrying and construction industrial divisions altogether constituting 5.2%. Disaggregated data on major occupations in rural and urban areas also show that agriculture continues to play a predominant role in absorbing the rural employed persons (77.3%) while the service sector is more popular in urban areas (73.4%) (ESS, 2022).

Poverty: According to the Planning and Development Commission (PDC, 2018), the poverty headcount ratio at the national poverty lines has declined from 45.5% in 1995/96 to 23.5% in 2015/16. Despite the decline of poverty incidence in both rural and urban areas, rural poverty incidence (25.6%) is double the urban (14.8%) poverty incidence. Poverty incidence was estimated to be 19% in 2019/20 and is planned to decrease to 16% in 2030. Although the percentage of the population below the poverty line has shown a declining trend, a large size of the population is still living under the national absolute poverty line (PDC, 2020). Similarly, 24.8% of the population is living below the national food poverty line, and the food poverty incidence is the highest in urban areas (27.1%) compared to rural areas (15.2%) (PDC, 2018). Child malnutrition is still the highest although stunting and underweight, respectively, declined from 38% and 37% in 2016 to 24 % and 21% in 2019 (EPHI & ICF, 2021).

Labour force participation: The labour force participation rate among the working age was 64.7% in 2021, and the percentage of employed persons in the agricultural, service, and industry sectors is 65%, 30% and 6%, respectively. Employed persons working in the agricultural sector continue to play a predominant role and absorb most of the rural employed persons (77.3%), while the service sector is more popular in urban areas (73.4%). Unlike this, the unemployment rate at the national level increased from 5% in 2005 to 8% in 2021. Similarly, the urban unemployment rate increased

from 16.9% in 2016 to 17.9% in 2021. The youth unemployment rate in urban areas is found to be 23.1% with the male unemployment rate reaching 15.9% and females standing at 28.8% (ESS, 2022).

Access to education: Net enrolment in primary school was 85.5% in Ethiopia in 2022 while it has reached the highest level of enrolment in primary school of 88.7% in 2021. The primary completion rate in Ethiopia is 54%, thus showing that there is a wider discrepancy between enrolment and completion of the primary school (United Nations Children’s Fund (UNICEF), 2023). While the country is making significant progress in increasing primary school enrolment, a substantial number of students drop out before completing the eighth grade of primary education. Only 33.1% of the students are transiting to secondary school. The reasons for dropout include low quality of education: students may struggle to progress due to poor learning environments and teacher quality; household circumstances: poverty, lack of resources, and the need for children to work contribute to dropouts; and repetition and late entry; students who repeat grades or enter school later are more likely to fall behind and drop out (UNICEF, 2023). The low completion rate means many children leave school without acquiring the basic skills and knowledge needed to succeed in secondary education and future opportunities. Addressing the challenges of dropout and improving the quality of education are crucial for achieving universal primary education completion in Ethiopia and ensuring that children can reach their full potential (Woldehanna et al., 2021). Likewise, the gross enrolment rate in tertiary education was 10.4% in 2018. This means that only 10.4% of the eligible population enrolled in tertiary education (World Bank, 2023).

Despite variation in the school enrolment rate, the likelihood of children going to school, staying in school, and performing well is significantly lower in rural settings. The country also faces a shortage of trained teachers, particularly in rural areas. Apart from this, there is a lack of basic educational infrastructure and resources that hinder enrolment and student

success. Poverty, the ongoing conflict in different parts of the country, and internal displacement also severely impacted education. While higher education enrolment has increased significantly, there are concerns about labour market alignment and the need for more job-driven education policies. The rapid increase in higher education enrolment is causing concern in Ethiopia, as there's a mismatch between the skills graduates are acquiring and what the labour market demands. As the disconnect leads to high unemployment rates, there is a strong need for more job-oriented education policies (Herut et al., 2025).

5. Population in Global, Regional, and Local Development Plans

Population in the International Conference on Population and Development: The ICPD was held in Cairo in 1994. The conference recognised population and development as a global development agenda by placing a greater emphasis on people's dignity and rights to achieve sustainable development. Unlike the previous similar global conferences considering population in isolation but building on their consensus and recommendations, the ICPD emphasised understanding the interconnection between population and development and addressing the critical challenges. Unlike the past population conferences, the ICPD emphasised the importance of women's empowerment and introduced the concept of women's reproductive health and rights as a means to empower them, achieve gender equality, and ensure sustainable development. The ICPD acknowledges that empowering women and advancing gender equality is at the core of population and development programmes. It recognised that population and development are integrally linked in multifaceted ways and that women's reproductive health and rights are intertwined with their empowerment.

The ICPD shifted the focus from achieving demographic targets to the realisation of the rights, aspirations, and dignity of men and women as an essential means for global development. The principle of the ICPD clearly sets out that people are at the centre of concerns for sustainable development. People are not only the resources countries can rely on to attain sustainable development but are also entitled to the right to equally benefit from development as a means to reduce poverty, improve the quality of life, and meet the needs of the present and future generations. It recognises that people's rights, choices, and well-being are the path to sustainable development (UNFPA, 2019). The principle also emphasises gender equality and women empowerment, poverty reduction, access to education and sexual and reproductive health care services, protection of children as well as migrants and refugees, and integration of population issues into development policies and programmes. Although the ICPD was initially designed for 20 years, the United Nations General Assembly convened in 2014 to deliberate on the follow-up to the ICPD Programme of Action (PoA) and committed with renewed determination and vision to implement the PoA beyond 2014 until the targets are fulfilled.

The 179 governments that convened at the conference adopted the PoA to guide global, regional, and national actions in the areas of population and development and spearhead people-centred development (United Nations, 1995). This adoption reaffirms the commitment of the governments to give priority to human rights emphasising sexual and reproductive health rights, women empowerment, and 'addressing inequalities', and meeting the needs of men and women instead of focusing on the achievements of demographic targets. The PoA further stated that advancing gender equality through women empowerment and ensuring that women are capable of controlling their reproductive health choices and decisions are at the heart of the population and development programmes. It also recognised the family as the basic unit of society that should be strengthened. Concerning sexual and reproductive health rights, the PoA specifically calls for access to voluntary family planning services as well as

safe pregnancy and childbirth, prevention and treatment of sexually transmitted infections.

The PoA sets specific objectives in the areas of population and sustainable development, gender equality and women empowerment, population growth and structure, reproductive health and rights, health and mortality, population distribution, migration, education, research and development, and partnership (UNFPA, 2004). The key objectives set in the PoA include evidence-based integration of population and development strategies, raising the quality of life of all people through sustained economic growth and poverty reduction, achieving gender equality to enable women and girls realise their full potential, facilitating demographic transition to stabilise population growth, promoting the health and wellbeing of all children and youth, reducing infant and under-five mortality rates, making reproductive health care services accessible to all individuals of appropriate age, reducing the incidence of and providing treatment for sexually transmitted infections, improving access to basic healthcare services. Other PoA objectives are fostering balanced population distribution, addressing the root causes of migration, achieving universal access to quality education, building the capacity for basic data collection, analysis, and dissemination, and promoting effective partnership between all relevant stakeholders to design, implement, monitor, and evaluate population and development programmes (UNFPA, 2004).

The progress made in the past three decades in fulfilling the mandates of the ICPD PoA has been reviewed (UNFPA, 2019; United Nations, 2024a). Among the notable progresses made are a substantial reduction in the number of people living in extreme poverty from 34% to 9% between 1994 and 2021, greater access to primary and secondary education and increase in the levels of educational attainment, improvements in the quality of reproductive health services, increase in access to and utilisation of modern family planning methods and decline in unintended pregnancies, improvements in gender equality, substantial decline in the prevalence of harmful traditional practices such as female genital mutilation and child

marriage, improvements in maternal and child health, decline in maternal mortality, increase in life expectancy at birth from 64.5 years to 73.7 years between 1994 and 2024, transformation in the age structure of the population due to smaller families and longer lives, and increase in the proportion of urban population from 44% in 1994 to 58% in 2024.

Despite the progress, some challenges require prompt action. Among the challenges are high population growth rate in many developing countries, inequalities in wealth, geographical disparities in population and development achievements in which rural areas lag far behind urban areas, high poverty in Sub-Saharan Africa, high fertility rates particularly in Sub-Saharan Africa and Latin America and the Caribbean, limited progress in improving the quality of education, high prevalence of harmful traditional practices including intimate partner violence and female genital mutilation, inadequate representation of women in decision-making at different levels, high unmet need for family planning, high maternal mortality, limited progress in reducing youth unemployment and the proportion of people in working poverty, and decrease in women's participation in the labour market and slow progress in narrowing earning differentials (UNFPA, 2019; United Nations, 2024a). Furthermore, in addition to substantial differences between regions and geographical areas, there is slow progress in some indicators and a reversal of the achievements attained so far in the other indicators due to the effects of climate change, political instability, and health crises such as COVID-19.

These challenges call for a holistic understanding of the linkage between population dynamics and sustainable development, following a people-centred and rights-based approach to development, promoting women empowerment and gender equality, designing data-driven and evidence-based population and development policies and programmes, and monitoring and evaluation of the achievements and challenges disaggregated by demographic and socioeconomic indicators (UNFPA, 2019). In the 57th session of the Commission of Population and Development, member states of the United Nations have also

acknowledged the important roles of population dynamics for development, reaffirmed their commitment to the full and accelerated implementation of the PoA of the ICPD, recognised the importance of the implementation of the PoA to achieve the SDGs, and committed to advancing the availability of and accessibility to high-quality, timely, relevant, and disaggregated population data for effective implementation of the PoA and monitoring and evaluation of progress towards the achievement of the SDG targets (United Nations, 2024b).

Population in the Addis Ababa Declaration on Population and Development: The AADPD was adopted by African ministers in 2013 at the regional conference on Population and Development and endorsed by African Heads of State and Government in 2014 at the African Union Executive Council. The AADPD not only customises the ICPD to the African context but also reaffirms the commitment of the continent to the PoA of the ICPD. It consists of a total of 88 commitments grouped under six pillars: dignity and equality, health, place and mobility, governance, data and statistics, and partnership and international cooperation (United Nations Economic Commission for Africa, African Union Commission, and UNFPA, 2013). These commitments and pillars, being integrally linked to and drawn from the ICPD, address key population and development challenges of member states and guide the implementation of population and development activities in Africa. Harnessing DD was recognised as a key dimension of the AADPD and a pathway to fulfil its commitments and attain the SDGs.

Dignity and equality are envisaged to improve the well-being of people by reducing poverty and inequality, addressing gender inequality and promoting women's empowerment, improving child nutrition status and reducing child mortality, improving women's rights and ending gender-based violence, and enhancing universal access to quality education for all. The health pillar of the AADPD emphasises fulfilling sexual and reproductive health rights, including the reduction of unmet need for family planning, improving adolescent sexual and reproductive health, reducing maternal

mortality, combating human immunodeficiency virus (HIV) and other infectious diseases, reducing the burden of non-communicable diseases, and strengthening health systems to ensure universal access to healthcare. The place and mobility pillar emphasises managing migration (facilitation of free movement of people and protection of vulnerable groups), improving the living conditions of people in urban areas, and improving access to basic services including safe drinking water and electricity. The governance pillar pays attention to the integration of population issues into development plans and establishing strong systems of monitoring and evaluation of population and development interventions. The data and statistics pillar emphasises evidence-based policy-making by building institutional capacity for data collection and analysis, establishing civil registration systems, and regularly conducting censuses. Lastly, partnerships and international cooperation involve strengthening partnerships with regional and international organisations, civil societies, non-governmental organisations, and the private sector in all matters related to population and development.

Now, ten years have lapsed since the adoption of the AADPD. A review of the ten-year implementation of the declaration was made to monitor progress made in implementing the commitments, identify gaps, and make evidence-based recommendations to accelerate the achievement of the commitments and harness DD (African Union, 2023). The key achievements related to dignity and equality include a reduction of the percentage of the population living below the poverty line (less than 1.90 USD a day) in almost all countries, improvements towards achieving gender parity in education and decision-making, improvements in child nutrition and survival, reduction of female genital mutilation, increase in primary school completion rate, increase in life expectancy from 60.7 to 61.7 between 2014 and 2021, and reduction in maternal mortality and HIV prevalence in many countries. Significant progress was made in reducing unmet needs for family planning and the prevalence of child marriage, increasing skilled birth attendance, and strengthening the performance of the health system to

improve the health of the population. The percentage of the population with access to electricity increased from 38.8% to 50.6%. Information communication technology (ICT) infrastructure (e.g., access to mobile phones and the internet) is improving, offering opportunities for the availability of data and statistics. Most countries have also recognised the importance of partnerships and cooperation and have taken steps to involve civil society and international organisations.

Several challenges were also noted in the review (African Union, 2023). First and foremost, there are notable differences between different regions of the continent in the achievements listed above. At the continent level, there was a steady increase in deaths due to non-communicable diseases. Except in the Maghreb region, one in two of the urban population lives in a slum with poor living conditions, health, and well-being. Africa is also far away from ensuring universal access to electricity and safe drinking water. The governance system remains weak with only slight improvements in security and rule of law, participation, rights and inclusion, foundations for economic opportunity, and human development. Furthermore, only a few countries have established monitoring and evaluation systems to ensure accountability and monitor progress in population and development interventions. There are irregularities across countries in conducting censuses and demographic health surveys to ensure the availability of up-to-date and disaggregated data. The COVID-19 pandemic and insecurity adversely affected the efforts being made and the progress underway for several pillars and commitments of the AADPD.

Population in Sustainable Development: The global population is growing. A medium variant projection shows that the estimated number will reach 8.5 billion in 2030 and 10.3 billion in 2080. A growing population can have both positive and negative effects. In a nutshell, with an increase in population size, the size of the labour force increases correspondingly; this may consequently spur labour force productivity. Similarly, a growing population increases the demand for goods and services which boosts innovation, production, and productivity, ultimately contributing to

accelerated economic growth. Nevertheless, population growth may also harm development. For instance, with rapid population growth, countries may not be able to meet the need for education, health, and other social services. Population growth may also put pressure on natural resources such as land, water, and biodiversity to meet the food demand, resulting in environmental degradation. The scarcity of natural resources and environmental degradation, coupled with better living conditions in urban areas, may induce rural-urban migration, leading to rising unemployment, expansion of slums and squatters, and limited access to social amenities. Hence, maximising the beneficial roles and minimising the adverse effects of population dynamics require proactive planning, implementation, and monitoring and evaluation of population and development interventions.

The United Nations adopted the SDGs in 2015 to guide efforts being made to address pressing development challenges and create an equitable and sustainable world in 2030. The SDG encompasses 17 overarching goals and 169 specific targets. The 17 goals are no poverty, zero hunger, good health and wellbeing, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, reduced inequalities, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, peace, justice and strong institutions, and partnerships for the goals. Addressing population-related challenges is key to achieving all the 17 SDGs. Failure to consider population issues in the SDGs not only hinders the progress towards attaining the targets but also widens the inequality between countries with distinct demographic characteristics. There is also a backward negative linkage in which insufficient progress towards the achievement of the SDGs denotes that a significant number of people continue to suffer from poverty and malnutrition, women and girls suffer from different forms of harmful traditional practices including gender-based violence, socioeconomic inequality (e.g., in education and employment) between men and women, and biodiversity is threatened.

Population is critical to achieving the SDG targets. Population issues are directly related to poverty reduction, education, health, and gender equality. The roles are particularly more apparent in the areas of poverty reduction, gender equality, health, and education. Reducing poverty constitutes one of the effective levers for sustainable development. Reduction of high fertility immensely contributes to poverty reduction. Smaller family brings more benefits to the whole family by favouring investment in children's education and health as well as allowing the parents to have time for production activities and earn more, ultimately living happy lives. With smaller family sizes, women are empowered to benefit from education and employment, and the consequent rise in social status and economic opportunities ensures gender equality. Investing in healthcare provision and improving the quality of healthcare services not only enhances the well-being of people but also addresses the underlying causes of high fertility and mortality which are crucial to achieve the SDG targets. Better access to quality reproductive healthcare services reduces the prevalence of unwanted pregnancy, increases the utilisation of maternal healthcare services, lowers fertility, and most importantly decreases child and maternal morbidities and mortalities. A well-educated, healthier, and empowered population can meet the SDGs and build a resilient society. Furthermore, population plays a crucial role in the achievements of the other SDGs. For instance, optimum population size reduces the pressure on natural resources and biodiversity and protects the ecosystem (SDG 15), promotes sustainable cities (SDG 11), and thereby contributes to the measures taken to combat climate change (SDG 13).

Conversely, population growth also puts pressure on healthcare services and the expansion of health infrastructure. Lack of access to quality education hampers progress towards the SDGs as it breeds poverty and gender inequality, increases early marriage, and reduces access to and utilisation of reproductive healthcare services. In contrast, quality education (SDG 4) delays age at first marriage and first birth, lowers desired family size, fosters formal employment, raises earnings and economic

independence, elevates decision-making power, and challenges patriarchal social norms, all of which are aligned with the targets of the SDGs. Addressing gender inequality (SDG 5) is the means to ending early and child marriage, overcoming gender-based violence, increasing the power to exercise sexual and reproductive health rights, and increasing employment prospects, the achievements of which are also important to meet the other goals. Measures taken to ensure gender equality are crucial to ensure equal participation of men and women in education and employment; enhance access to and utilisation of reproductive health services; end harmful traditional practices including early and forced marriage as well as gender-based violence and female genital mutilation; eliminate patriarchal norms that work against women's rights to and power of making decisions about their lives, and reduce fertility and child and maternal mortality.

The ICPD has immensely contributed to the 2030 agenda for sustainable development (UNFPA, 2019). This is evident from the synergy between the two in their focus on improving the quality of life through appropriate population and development programmes aimed at reducing poverty and inequality, ensuring sustained economic growth, achieving gender equality and empowerment of women and girls, guaranteeing all human rights including the right to development as a universal and inalienable right, and ultimately ensuring that all human beings fulfil their potential in dignity and equality. Among the key issues stated in both development agendas are reproductive health choices and services, universal health coverage, access to education, decent work, and prevention of harmful traditional practices such as female genital mutilation and child marriage. Specifically, the first, third, fourth, fifth, eighth, tenth, eleventh, thirteenth, and seventeenth goals of SDGs address the PoA of the ICPD.

The status of implementation of the SDGs is regularly monitored to track the progress towards the attainment of the goals and the delivery of the specific targets. Overall, progress related to SDGs such as no poverty, zero hunger, quality education, and decent work and economic growth is stagnating (Sachs et al., 2024). However, moderate improvements are

observed in relation to good health and well-being and gender equality. Among 135 targets that can be assessed using the available data, only 17% of them are on track to be achieved in 2030 at the global level (United Nations, 2024c). Nearly half of the targets (48%) showed minimal or moderate progress. However, the progress of 18% of the targets was stagnated and the remaining 17% was reversed when compared to the 2015 baseline levels. In 2022, 712 million people lived in extreme poverty. In 2023, nearly 733 million people faced hunger and 2.33 billion people experienced moderate to severe food insecurity. Despite progress, more than half of the global population is not covered by essential health services. The current rate of maternal mortality ratio is three times higher than the target set for 2030. Academic proficiency and secondary school completion rates remain very low. Women and girls continue to face several challenges including harmful traditional practices, violence, participation in decision-making, and extensive involvement in unpaid domestic and care work. The risk of unemployment remains high among women and youth. The proportion of workers in informal employment is also high. The limited or moderate progress for some targets and stagnation or reversal for others is partly caused by the COVID-19 pandemic and the consequent economic shocks, climate change, geopolitical strains, war, and conflicts (United Nations, 2024c).

Population in the African Union's Agenda 2063: African heads of state and government adopted Agenda 2063 in 2013 to realise the vision of “*an integrated, prosperous and peaceful Africa, driven by its citizens, representing a dynamic force in the international arena*” over 50 years (African Union Commission, 2015). Agenda 2063 identified a set of seven aspirations to be delivered to boost socio-economic growth and development and speed up the process of transformation of the continent. These are a prosperous Africa based on inclusive growth and sustainable development; an integrated continent, politically united and based on the ideals of Pan-Africanism and the vision of Africa's Renaissance; an Africa of good governance, democracy, respect for human rights, justice and the rule

of law; a peaceful and secure Africa; an Africa with a strong cultural identity, common heritage, shared values and ethics; an Africa, whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children; and Africa as a strong, united, resilient and influential global player and partner. A total of 20 goals were set corresponding to these aspirations (African Union Commission, 2015; African Union Commission and African Union Development Agency, 2022). These include, but not limited to, attaining a high standard of living and quality of life by ending poverty, reducing income inequality, and addressing youth unemployment; well-educated, healthy, and nourished citizens; transforming economies and jobs by raising productivity and competitiveness; modernising agriculture with increased production and productivity; enhancing climate-resilient economies and communities; ensuring gender equality in all spheres of life by eliminating all forms of discrimination and violence against women and girls; and building strong institutions and transformed leadership to ensure good governance.

The five key transformational outcomes are improvements in living standards; transformed, inclusive and sustainable economies; integrated Africa; empowered women, youth and children; and well-governed, peaceful and cultural-centric Africa in a global context (African Union Commission, 2015). Improvements in living standards are expected to be achieved through an increase in real per capita income, reduction of hunger, creation of job opportunities, improved access to education at all levels, reduction of malnutrition and mortality particularly among mothers and under-five children, and improved access to social services such as safe drinking water and electricity. A GDP growth rate of at least 7%, doubling of the total agricultural factor productivity, and expansion of labour-intensive manufacturing are among the priorities set forth to attain inclusive and sustained economies. Free movement of people, goods, services, and capital is assumed to enhance regional integration. Empowerment of women, youth, and children was planned to be attained by improving women's access to and control of productive assets, ensuring gender parity

in decision-making and representation, reducing all forms of violence against women, ending all harmful social norms and customary practices, reduction of youth unemployment, and ending child labour exploitation, marriages, trafficking, and soldiering. Demonstrating good democratic values and practising good governance are among the key paths to preserving and enhancing Africa's cultural identity.

Agenda 2063 is well aligned with the United Nations Agenda 2030. This is evident from the common priority areas stipulated in the two development agenda such as raising income, creation of decent work, reduction of poverty and hunger, education, health, nutrition, sustainable and inclusive growth, agricultural production and productivity, women and girls' empowerment, reduction of violence and discrimination against women and girls, youth empowerment, support of and care for children, institutions and leadership, and partnership (Africa Union Commission, 2015). The goals and priority areas outlined in the Agenda 2063 are planned to be executed in five ten-year implementation plans, the first spanning 2014 to 2023.

The current status of the first ten-year implementation plan was assessed by the African Union drawing on the analysis of member states and regional reports to track progress towards the achievement of the seven aspirations and the twenty goals of the Agenda 2063 (African Union Commission (AUC) and African Union Development Agency (AUDA), 2022). Positive changes were observed in the performance of all aspirations. An integrated continent, politically united and based on the ideals of Pan-Africanism and a vision of African renaissance (Aspiration 2) was the best-implemented aspiration with an overall performance of 84% which is partly attributable to the implementation of the African Continental Free Trade Agreement. This is followed by an African whose development is people-driven, relying on the potential of the African people (Aspiration 6) with an overall performance of 67%. This achievement is mainly associated with improvements in women's ownership of and secure rights over agricultural land and increased participation in leadership at different levels of administration. A peaceful and secure Africa (Aspiration 4) stands as the

third (63%). The least achieved aspirations are an Africa of good governance, democracy, respect for human rights and the rule of law (Aspiration 3) and a prosperous Africa based on inclusive growth and sustainable development (Aspiration 1) with performance levels of 42% and 37%, respectively.

The best continental performance was observed in the implementation of goal 8 (United Africa) showing a 92% improvement (AUC and AUDA, 2022). This achievement reflects the increased recognition of an integrated continent through the adoption of the African Continental Free Trade Agreement to advance the African development agenda. Goal 17 (full gender equality in all spheres of life) stands second in the level of performance (81%). This achievement is partly explained by an increase in access to agricultural land, increased participation in decision-making, and a reduced proportion of women and girls subjected to violence and genital mutilation. The third goal of healthy and well-nourished citizens showed improvements of 77%. The promising change is partly explained by increased investments in the health sector, improved access to sexual and reproductive health services, and reduced under-five mortality rates. Goal 13 emphasising the preservation of peace, security, and stability registered a performance level of 72%. Africa as a major partner in global affairs and peaceful coexistence (goal 19) showed a performance level of 64%. The overall performance score of goal 5 emphasising modern agriculture for increased productivity and production was 58%. The second goal of well-educated citizens and skills revolution showed a performance level of 44%. The weak performance is related to the outbreak of the COVID-19 pandemic and the measures taken to contain it. The continent performed poorly on goal 18 – engaged and empowered youth and children (33%), goal 12 – capable institutions and transformed leadership in place at all levels (32%), and goal 1 – a high standard of living, quality of life and well-being (31%). These dismal achievements were associated with high youth unemployment and child labour as well as a higher percentage of child marriage and trafficking, corruption, below-expected economic growth and

the resulting rise in unemployment in 2063 (AUC and AUDA, 2022). The least achievement (17%) was observed in economic transformation and job creation (goal 4) which is attributable to the overall impact of the COVID-19 pandemic on the global, regional, and national economies.

Population in the Ten-Year Development Plan of Ethiopia: The ten years preceding the adoption of the ten-year development plan (TYDP) were characterised by an annual average GDP growth rate of 9.2%. Agriculture, industry, and service sectors grew by an average annual growth rate of 5.3%, 17.2%, and 9.7%, respectively, during the same period. However, this period was also characterised by several challenges. One of the challenges was the high urban unemployment rate, particularly among youth and females. Although sustained economic growth was achieved, the number of jobs created by the economy was not adequate to accommodate the growing labour force. There is also high external debt due to the imbalance between the growing demand for imported commodities and the limited number and quality of exported items, mainly agricultural products. Domestic saving is also limited to meet the demand for local investment. The persistently high inflation rate, partly associated with macroeconomic instability, not only challenged the sustainability of investment and economic growth but also affected the quality of life by raising living costs. There is also inadequate access to and quality of social services and basic infrastructure with significant differences between rural and urban areas.

In response to these challenges, the government introduced a home-grown economic reform aimed at maintaining a stable macroeconomic environment by enhancing productivity and competitiveness and creating adequate and sustainable employment opportunities, ultimately ensuring sustained and rapid economic growth. The reform mainly constitutes macroeconomic, sectoral, and economic reforms. The macroeconomic reform constitutes ensuring sustained and broad-based economic growth through active involvement of the private sector; enhancing tax collection capacity and improving tax administration; ensuring effective budget administration and auditing system; increasing domestic saving and

facilitating access to credit services by the private sector; increasing export market and inflow of capital; and reducing external public debt. Sectoral reform emphasises diversification of sources of economic growth with a focus on the agricultural, manufacturing, mineral, and tourism sectors. The structural reform recognises the indispensable roles the private sector can play and emphasises their active involvement in all sectors of the economy.

Ethiopia adopted its TYDP spanning 2021-2030 as a strategic pathway to prosperity. Its preparation took into account the achievements and challenges of the preceding development plans (Growth and Transformation Plan (GTP) I and II) and the strategic directions outlined in the home-grown economic reform. It envisions making Ethiopia an “African Beacon of Prosperity” which transcends an increase in per capita income to include improvements in the quality of lives and life satisfaction. The overriding objectives of the plan are ensuring rapid and sustained economic growth through a broad-based economic system, creation of decent jobs, raising productivity and competitiveness, and ensuring macroeconomic stability; improving the quality of and access to social services; and building strong and inclusive institutions to uphold the rule of law, ensure effective civil service system, and enhance good governance.

Population and development were considered as one of the cross-cutting issues in the first GTP (2010/11-2014/15). Although targets to be attained at the end of the plan period were set, most of them were qualitatively stated, which challenges proper monitoring and evaluation. The second GTP (2015/16-2019/20) acknowledged a lack of evidence on population and development to inform policies, a weak linkage between population and development partners at federal and regional levels, and a weak monitoring and evaluation framework. Population and development remain a cross-cutting issue in this plan. It targeted reducing the dependency ratio and increasing the share of the urban population. On the other hand, the TYDP gave more emphasis to population issues than did the previous two development plans. The plan has identified six key priority areas, one of which is specifically related to population and development issues. These

priority areas are multi-sectoral and diversified sources of growth and job opportunities, sustainable and inclusive financial sector development, harnessing the DD, quality and efficient infrastructure development, sustainable urban development, and peace, justice, and inclusive institutions (PDC, 2020). The strategic pillars of the plan are aligned with the SDGs and regional development commitments.

The plan, in its focus on demography and human resource development, emphasises revision of population policy by incorporating emerging issues, proper implementation of the policy, harnessing the DD through careful management of the demographic transition, expanding access to education and health including reproductive health, and integration of population issues into development plans, with the ultimate aim of developing human resource capacity, increasing economic performance, and boosting socioeconomic development. Among the main targets of the demography and human resource development plan are limiting population growth rate to a maximum of 2%, increasing access to family planning services to 54%, reducing maternal mortality rate to 140 per 100,000 live births, reducing infant mortality rate to 29 per 1,000 live births, raising average life expectancy to 70 years, ensuring universal and pre-school and primary school enrolment, raising secondary school net enrolment to 75%, increasing intake capacity of higher education institutions to 23%, raising the ratio of primary hospitals per 100,000 people to 0.85, and increasing the ratio of medical doctors per 10,000 patients to 2.7 (PDC, 2020).

6. Population and Development Projects of EAS

The EAS started implementing population and development activities through the Bridge Project in 2016 with the support of the David and Lucile Packard Foundation to promote evidence-based policy engagement in Ethiopia. It started with the preparation of a policymakers' booklet on the DD in Ethiopia, which was the Africa Union's theme for the year 2017. The

Academy also dedicated its third 2017 Science Congress to *Harnessing the Demographic Dividend: Ethiopia's Emerging Challenge*. The congress brought together policymakers and academics to deliberate on how Ethiopia can maximise its potential of achieving the DD while tackling current and future challenges. Then, the Academy conducted a background study on priority population issues in Ethiopia to be factored into the 15-year development plan which was at the early stage of preparation at the time. The Academy has organised several forums in which participants from governmental, non-governmental, and private sectors were involved to deliberate on population and development issues to raise awareness, bring population issues high on the policy agenda, and increase the uptake of evidence-based policy advice.

The overall long-term objectives of the EAS concerning population and development activities are bridging the gap between evidence and policies in population issues in Ethiopia and becoming the premium institution for generating and communicating evidence geared toward informing policies. Since EAS was new to work in the areas of population, it initially received technical support from the Population Reference Bureau (PRB). Through the “Supporting Population Evidence and Champions” project funded by the Packard Foundation, PRB gave technical support to the Academy to undertake activities mainly related to DD.

Bridge-I: The BRIDGE-I project was proposed to ensure the continuity of the already started activities and advance the promising results obtained and best practices learned from these engagements. Specifically, the project was intended to advance the Academy's long-term goals through activities which generate and contextualise evidence, build the skills of emerging professionals, and strengthen EAS's institutional capacity. The Phase I project is primarily aimed at building consensus among stakeholders on critical population issues, creating platforms for evidence-based policy dialogue, and enhancing the capacity of emerging researchers to ensure continuity of bridging the gap between evidence and policy. The implementation of the Bridge-I project started in July 2019 and was planned

to be completed in July 2021 but extended to July 2022 due to delays caused by the COVID-19 pandemic. The expected outcomes of the project were:

- Expanded evidence-based advice on population issues and increased stakeholders' consensus on critical population issues;
- Increased knowledge on population issues among policymakers and other stakeholders by creating platforms that convene policymakers and researchers for evidence-based dialogue;
- Enhanced capacity of emerging women researchers to ensure the continuity of efforts being made to bridge the gap between evidence and policy;
- Strengthened institutional capacity of EAS on population issues.

The following activities were planned to be implemented to deliver the outcomes:

- A systematic review of the nexus among fertility rate, unemployment and migration in Ethiopia;
- Assessment of the implementation of the national population policy of Ethiopia;
- Technical support for a possible revision of the national population policy of Ethiopia;
- Preparation of a report on Ethiopia's progress in achieving the DD using the scorecard;
- A report on the role of women in the fight against COVID-19;
- Preparation of communication materials – videos, infographics, and factsheets;
- Dialogue on realising DD (focusing on human capital development) and the controversies of population growth and development;
- Establishing a partnership with sister academies of sciences; and

- Building the capacity of women researchers and academics in science.

Bridge - II: The second phase of the Bridge project (Bridge-II) was built on the gains of the first phase of the project and emphasises linking demographic variables to reproductive health and rights as well as human capital development issues with the intent of improving reproductive health outcomes and empowering women, ultimately enhancing human capital and harnessing gender dividend to sustain socioeconomic development. The project particularly followed an integrated approach in which the key focus areas were reproductive health, women empowerment and gender equality, and human capital development.

The Bridge-II followed integrated programming to enhance human capital formation and improve equity to eventually help the nation achieve sustainable development goals, particularly SDG3. The specific objectives were promoting national strategies to fully harness the benefits of the DD through validation and consolidation of available evidence focusing on human capital formation; strengthening national capacity to deliver integrated sexual and reproductive health services through multi-stakeholder collaboration; and advancing gender equality, women's and girls' empowerment, and reproductive rights, including adolescents and youth.

The proposed activities of the project in the thematic areas of DD, gender dividend, and reproductive health and rights which are aimed at promoting human capital development were:

- Facilitating a broad-based conference to popularise and validate the results of the recent review of Ethiopia's preparedness to harness DD;

- Conducting a comprehensive national study to assess the potential and challenges of labour productivity and the policy environment in Ethiopia and facilitating a round table to review the results;
- Documenting and disseminating good practices in harnessing gender dividend;
- Facilitating national dialogue to review structural and operational issues impeding economic empowerment of women in Ethiopia, particularly factors contributing to the limited participation of women in the employment sector;
- Providing technical support in the formulation of the new Population Policy to ensure that RH and Rights issues of the country are well taken and integrated into the policy document;
- Studying the Awra Amba Community lifestyle to identify the major features that can serve as good examples of gender equality and can be considered for scaling up and promoting the gender dividend in other communities;
- Conducting a study on mapping and analysis of stakeholders in population and development activities, the output of which is expected to identify the major stakeholders that have to be actively engaged in revising the National Population Policy;
- Capacitating women researchers' network (which includes website design for the network) and strengthening the skills of emerging young and female researchers, particularly in the areas of reproductive health and gender-related research; and
- Organising capacity-building training for emerging and young women researchers on research project cycle management and research communication.

Bridge – Consolidation phase: The overriding objective of the consolidation phase of the bridge project was wrapping up the completed and ongoing

activities of the Academy. Consolidation of the activities is particularly important to ensure the sustainability of the population and development activities of the Academy. This involves critical review and identification of strengths, weaknesses, challenges, and lessons learned. Furthermore, it emphasises the assessment of institutional capacity to carry out population and development activities in the future and the identification of gaps that need to be addressed in its future engagement.

This project was expected to deliver two outcomes. The first one is setting a clear organisational setting and strong commitment from EAS to pursue studies, dialogues, training, and other actions to contribute towards achieving national goals related to population and socioeconomic development. This will enable EAS to expand its structure and technical capacity to bring population and demography to the level of the programme unit. The second one is strengthening gender activities at EAS to guide, coordinate, and support women researchers on various issues. These outcomes were envisaged to achieve the ultimate goal of ensuring the sustainability of EAS's efforts in empowering women researchers and engaging in population and development issues of national priority.

The consolidation phase of the Bridge project was intended to implement the following activities to deliver the two outcomes:

- Consolidating all activities to identify the major achievements and their strengths, weaknesses, and gaps;
- Organising consultative meetings with the major stakeholders to increase their awareness of the findings of EAS on the issues of population and development and building mechanisms for joint engagement as a way forward;
- Organising workshops for women researchers from higher education and research institutions on different relevant topics (project proposal writing, project cycle management, research management, publishing, data analysis software, etc.);

- Supporting the Ethiopian Gender Learning Forum (EGLF) to promote gender equality and equity in higher education and research institutions;
- Providing financial support for female graduate students to carry out their thesis and dissertation research; and
- Establishing a women researchers' desk and advisory council from female EAS Fellows.

Ensuring gender equality in higher education institutions: The Academy has been implementing a project aimed at empowering women and girls and ensuring gender equality in higher education institutions. The project supported by the International Network for Advancing Science and Policy (INASP) and the David and Lucile Packard Foundation was envisaged to empower women and girls and ensure gender equality and equity. In Ethiopia, pronounced gender inequality and inequity are observed in access to education, healthcare, employment, earnings, resources, and decision-making. Their socioeconomic and political marginalisation contributes to high fertility and mortality, rapid population growth, and negative development outcomes. Consequent to low socioeconomic status, they are more vulnerable to harmful traditional practices including gender and sex-based violence. Higher education institutions are one of the areas where women and girls are underrepresented. Specifically, the proportion of women and girls in Science, Technology, Engineering, and Mathematics (STEM) is negligible. For instance, only 13% of researchers in Ethiopia are women (EGLF, 2022). In this vein, the project on empowerment and gender equality focuses on higher education and research institutions for two main reasons. First, higher education and research institutions are instrumental in empowering women, ensuring gender equality, and challenging social norms and customary practices favouring discrimination against women in all spheres of life. Adequate representation of women and girls in these institutions immensely contributes to empowerment and equality and equity by raising their knowledge, building their skills, enhancing their

competitiveness in the labour market, raising their earning potential, and increasing their decision-making power on personal, family, community, and national affairs. On the other hand, underrepresentation perpetuates gender inequality and discrimination against women.

To this end, the EAS implemented an EGLF project in collaboration with INASP to ensure an equitable research and knowledge system in Ethiopia. As a means to realise empowerment and gender equality, the project envisaged to implement the following activities:

- Establishing the Ethiopian Gender Learning Forum;
- Preparing a gender-inclusion manual;
- Conducting a study on “Best Practices in Harnessing Gender Dividend: The Case of Awra Amba Community”;
- Documenting the extraordinary roles of Ethiopian women in the combat against COVID-19;
- Organising gender champions workshops; and
- Strengthening partnership and networking opportunities for increased participation of women in science, technology and innovation.

Capacity building training: Through the support of the David and Lucile Packard Foundation and the Austrian Embassy, the EAS organised training on several topics to build the capacities of young female researchers by training them on research project cycle management and research communication. This training primarily targeted emerging young female researchers to enhance their knowledge, skills, and commitment to quality research and innovation. The importance of the training is rooted in the need to thoroughly understand socioeconomic, cultural, and institutional complexities underlying gender inequalities and make evidence-based solutions to combat gender disparities and foster gender equality and social inclusion. Training female researchers in the areas of gender and social

inclusion research has dual purposes of increasing the roles of females in higher education and research institutions by creating a more inclusive and equitable research environment but also raising the understanding of gender dynamics and using the knowledge to ensure gender equality and social inclusion. The general objective of the training was to empower emerging young and female researchers by improving their knowledge and skills in efficiently managing research projects, data analysis, scientific writing, and research communication.

Promoting women's' representation in science and technology: The Academy collaborated with UNESCO and STEM Power to commemorate International Day of Girls and Women through exhibition and panel discussion. It was founded on the decision of the Assembly of the United Nations to establish an International Day of women and girls to recognise their critical roles in science and technology. This initiative clearly acknowledges the significant gender gap in higher education institutions in general and in the participation of women and girls in STEM in particular. The objectives of the event were to

- Enhance awareness of the role Ethiopian women can play in the achievement of SDG 6, 7, 9, and 11;
- Present and discuss relevant and topical issues on how the role of women in STI can be further strengthened;
- Strengthen partnerships and networking opportunities for increased participation of women in science, technology and innovation for sustainable development;
- Realise current initiatives to promote gender-transformative STEM education in Ethiopia; and
- Showcase opportunities, challenges, strategies, and applied solutions in addressing SDGs challenges and opportunities, women in science and women in scientific leadership.

Budget advocacy workshop through the support of DSW: The EAS worked with DSW to promote the agenda for enhancing domestic resource utilisation and inclusion of the adolescent sexual and reproductive health (ASRH) budget line in the health sector budget allocation. Ethiopian adolescents face multifaceted sexual and reproductive health (SRH) challenges that hinder their growth and development and hamper the realisation of their potential. The sexual and reproductive health problems of adolescents and their vulnerability to sexual and reproductive health risks are rooted in their lack of comprehensive knowledge about sexual and reproductive health issues as well as limited access to and utilisation of healthcare services. Hence, increasing the availability of and access to friendly healthcare services is essential to overcome the challenges faced by adolescents, ensure their all-round development, and prepare them for the world of work. The key issue here is the allocation of sufficient resources to avail quality SRH services. Nevertheless, no budget line is specifically allocated for ASRH activities. Part of the funding is obtained from external sources which may not be sustainable. This calls for increased recognition of the short-term and long-term costs of inaction, the importance of domestic funding, the dedication of specific budget lines for ASRH activities in the health sector, and the integration of ASRH issues into the activities of other sectors to promote ASRH and rights.

The general objective of the advocacy workshop was to promote the agenda for enhancing domestic resource mobilisation and inclusion of the ASRH budget line in the Health Sector budget document. The specific objectives were to advocate for

- Increased domestic resource mobilisation for adolescent-friendly SRHR services;
- Allocation of specific budget for ASRH and improve the tracking mechanism for the allocated budget.

Organisational capacity development project: The EAS planned to undertake an organisational capacity assessment with two overriding objectives: deepening understanding of the current organisational capacity and creating an action plan to guide the institutional capacity-building work over two years. The two key activities under the organisational capacity assessment project were assessing the capacity of the Academy using the Integrated Technical and Organisational Capacity Assessment tool and developing an organisational capacity development action plan. Then, the Academy moved on to implementing the Organisational Capacity Development Project to strengthen its capacity to sustain its work and deepen its impact. The desired outcomes of this project are to:

- Advance key organisational priorities as specified in the organisational capacity development action plan;
- Enhance capacity and more efficient operational system to realise the organisational priorities and sustain improvements beyond the two years.

The top capacity development priority areas identified by the Academy were leadership and governance; management practices and systems; gender and social inclusion; government engagement, and external relations and networking; programme/project strategy; finance and grant/sub-grant management; and human resource and knowledge management.

The key project activities were:

- Identifying organisational development consultants who are well-equipped to fill gaps in skills, knowledge and experience;
- Implementing key identified organisational priorities in the organisational capacity development action plan by deploying EAS staff, involving Fellows and governing organs, and assigning external consultants as appropriate; and

- Engaging in shared learning activities as relevant for identified focus areas, including networking, gender mainstreaming, and development of strategies.

7. Major Findings of the Study

This section presents the findings of this study focusing on the achievements of the projects, strengths and weaknesses, challenges and opportunities, and partnerships and operational settings.

7.1. Achievements

The section below explains the achievements of the Academy in undertaking consensus studies, organising discussion forums, and addressing gender inequality in higher education and research institutions.

7.1.1. Consensus Studies

The EAS has undertaken several consensus studies aimed at providing evidence to inform policy engagement in population issues through the generation, synthesis, and contextualisation of scientific evidence. Consensus studies are highly relevant for the EAS since they provide a platform for expert collaboration, knowledge sharing, and evidence-based decision-making on critical national issues. They help the EAS to fulfil its mission of contributing to Ethiopia's national development and promoting scientific progress. They also help the EAS to bring together experts from various fields to address complex problems facing Ethiopia such as population growth, development challenges, and resource management. By facilitating knowledge exchange and collaboration among experts, consensus studies help drive research and innovation in areas that are critical for Ethiopia's development. Moreover, EAS's engagement in consensus studies enhances its visibility and relevance as a key player in

national development, as it provides a platform for public discourse and engagement. They also help to establish a national research council that recognises the importance of advancing scientific research in the country. The consensus studies conducted by the EAS and their key findings are summarised as follows.

i. Population dynamics and priority issues for Ethiopia's 15 Years Prospective Development Plan (2015/16—2029/30)

Whilst drafting the 15 Years Prospective Development Plan (2015/16—2029/30) of Ethiopia, the then National PDC (the current MoPD) requested the EAS to undertake a study on Population Dynamics and Priority issues for Ethiopia's 15 years Perspective Development Plan (2015/16—2029/30). Accordingly, the Academy engaged in the preparation of the document and submitted the report to the Commission on time. The country's 15-year prospective development plan has focused on the integration of population dynamics into the development plans by way of addressing challenges such as rapid population growth, high youth unemployment, and the need for sustainable resource management. Key priorities of the development plan include diversifying the economy, investing in human capital, and promoting inclusive institutions to achieve higher income, reduce poverty, and enhance competitiveness.

In order for the prospective development plan to consider population dynamics and related key issues, the study paid due attention to the interrelationship between population and development, as well as a review of policies and sector strategies pertaining to population and development. The review covered the implementation of the National Population Policy of Ethiopia (NPPE) and other policies such as the Education and Training Policy, National Health Policy of Ethiopia, National Policy on Ethiopian Women, Ethiopian Youth Policy, Social Protection Policy, Environment Policy and the previous national development plans of the county. The report also reviewed the demographic trends in four selected lower and

middle-income countries; namely, India, Bangladesh and Ghana, suggested that the country needs to revise its population policy, renew interest in family planning and reduce the level of total fertility rate, work towards accelerating the demographic transition and achieve a favourable age structure and age dependency ratio to harness the benefits of the DD. Moreover, the study critically assessed the trends in population structure and dynamics in the country by considering population size, age structure, and growth; population distribution, urbanisation, growth in the labour force, drivers of change in the population size and structure; and prospects and challenges of harnessing the DD in the country (EAS, 2018). The report also looked at the dimension of economic growth, poverty and human development on the population growth and their implications for the development strategies. Accordingly, the following issues were identified as areas of critical intervention: improving and expanding family planning and maternal and child health services; empowering women, developing human resources, managing migration properly and expanding the infrastructure in urban areas, addressing environmental sustainability, alleviating poverty, absorbing the labour force in the economy and tackling unemployment and underemployment, encouraging local and foreign investment in production activities, working towards shifting to higher productivity industry and service sector, and finally ensuring the integration of population policy elements into sector policies.

ii. A Comprehensive assessment of the implementation of the 1993 National Population Policy of Ethiopia

The EAS has taken the initiative to undertake a comprehensive assessment of the National Population Policy of Ethiopia that was adopted in 1993. Results of the assessment show that the adoption of the population policy was a landmark measure taken by the Ethiopian Government to speed up the economic and social transformation of the country. Even though the implementation of the policy was slow due to several reasons, such as lack of political support, lack of adequate knowledge about the ongoing

population programmes, diversion of the budget allocated for population activities to other sectors such as education, health, water and roads having considered population as a cross-cutting issue, and reduction in the financial support of population programme by stakeholders such as the UNFPA after 2003, considerable progress has been made to achieve some of its objectives (EAS, 2017a). One of the remarkable achievements of the policy is the reduction of the total fertility rate from 6.2 children per woman in 1990 to 4.6 children in 2016 (a decline of 33% over a quarter of a century), a reduction in infant mortality rate from 114 deaths per 1000 live births in 1990 to 48 deaths per 1000 live births in 2016, and a decline of under-five mortality rate from 190 in 1990 to 67 in 2016. Maternal mortality has also declined by more than two-thirds as the maternal mortality ratio was reduced from 1250 maternal deaths per 100,000 live births in 1990 to 412 in 2016. The report noted that the population growth rate has shown a modest decline from 3.0% in 1990 to 2.6% in 2017 (EAS, 2017a).

The assessment report shows that the adoption of the 1993 NPPE has facilitated the implementation of various intervention mechanisms such as improving gender equity, equality and empowerment of women, removing harmful traditional practices, and narrowing the gender gap in school enrollment by expanding access to schools in rural communities. Maintaining environmental security, improving agricultural productivity and expanding population information, education and communication were also areas where improvements were observed as a result of the implementation of the policy. The report has also identified intervention areas where adequate progress was not observed. These include the high unemployment rate among the youth in rural and urban areas, the wider gender gaps in employment, enrolment in secondary, tertiary, technical and vocational education, as well as the widespread harmful practices and high prevalence rate of gender-based violence which reflect the gaps in achieving gender equity and equality. The high level of youth out-migration in rural Ethiopia is also an indicator of the failure to achieve the promised

expansion of off-farm employment opportunities to create better living conditions for young persons in rural areas.

The report has clearly indicated shortcomings in the implementation of the policy. These shortcomings encompass a lack of legal policy framework to implement the policy as stipulated in the policy document, failure to establish a National Population Council, poor integration of population variables into development plans, lack of comprehensive population programme, absence of monitoring and evaluation framework for the implementation of the policy, as well as budgetary constraint to implement the policy. Furthermore, the lack of institutional arrangements affected coordination between the federal and regional governments on the implementation of the policy in a responsible, accountable and transparent manner. The effects of the weak technical and institutional capacities at the regional and federal levels were also documented as one of the causes of the poor implementation of the policy in the last three decades.

Having assessed the weaknesses and strengths of the policy, the assessment report suggests several recommendations and possible actions to be taken to implement a revised policy more effectively. The report has been submitted to the MoPD and served as the major input to revitalise the initiatives of the Ethiopian government to revise the population policy of the country. At the moment, a technical working group comprising 28 members drawn from different government offices, civil society organisations (CSOs), development partners, funding agencies and individual consultants has been set up and is working on the development of the population policy framework. The initiatives taken by the EAS in producing such a valuable document are well acknowledged by the MoPD and the policy revision advisement is bearing fruits. Moreover, the recommendations and suggestions made in the assessment report are very useful to address the shortcomings of the previous policy and consider issues requiring attention whilst producing a new policy document.

iii. Mapping and analysis of stakeholders engaged in population and development interventions in Ethiopia

This study was undertaken to provide demand-driven technical support to the planned revision of the NPPE. Given that population is a cross-cutting issue, several governmental and non-governmental organisations are engaged in population-related activities. Besides mapping stakeholders from different sectors and levels of governance, the study analysed the stakeholders that are involved, both directly and indirectly, in population and development activities in Ethiopia (EAS, 2022a). The study also identified the level of engagement and influences of the stakeholders in their engagement in population and development activities. Furthermore, it defined the rationales and mechanisms for the stakeholders' participation in the revision and monitoring and evaluation of the NPPE.

The study on mapping and analysis of stakeholders engaged in population and development interventions in Ethiopia was conducted in 2022. The study team visited different offices located in five regional states; namely, the Amhara, Oromia, Sidama, Southern Nations, Nationalities and Peoples (SNNP) and Somali regional states, several government offices at the federal level and many local and international NGOs, CSOs, professional associations, faith-based organisations, development partners and UN agencies operating in the areas of population and development to collect information on who is engaged in what type of activities and evaluate the organisation's interests in and the power of influence on key population and development policy issues. The study team surveyed the stakeholders engaged not only in population issues but also in various sectors such as health, education, agriculture, climate change, natural resources, urbanisation and infrastructure, water supply and energy, gender, migration and labour, finance and legislation issues. The study focused not only on their areas of engagement but also their level of engagement determined as low, medium, and high using a three-point Likert-scale measurement.

The EAS conducted the study upon the MoPD's request to map and analyse the relevant stakeholders engaged in population and development activities. The Ministry sought this information to identify the stakeholders in accordance with their areas of interest and intervention to develop plans and strategies that would enable them to engage in population and development activities, generate resources and provide support whilst implementing population and related policies, programmes, and plans. Moreover, the information generated through the mapping of stakeholders was useful to avoid duplication of efforts and wastage of resources.

Even though the report has clearly indicated the roles of each of the stakeholders and areas of their intervention, it has depicted that there is limited information on who is doing what, and their interests and perspectives have been changing from time to time. To clearly show their areas of intervention and level of involvement, the study used a four-grid matrix that plots their interest and influence on a vertical and horizontal axis. The matrix has helped to classify them as 'Key Stakeholder, Primary Stakeholder', 'Context Setter', and 'Low Priority' or 'Passive Stakeholder'. Following this approach, government ministries and regional state bureaus that were highly interested and very influential actors were identified as key stakeholders while CSOs, UN agencies, academic and research institutions and the private sector that were found to have high interest but not a strong influence in exerting change are classified among the primary stakeholders (EAS, 2022a).

The study conducted on the mapping of stakeholders engaged in population and development in Ethiopia is one of the most successfully accomplished activities undertaken by the EAS under the BRIDGE Project. The results of the study can be used by the MoPD to identify stakeholders involved in a particular area in a given sector and geographic location. The document will also immensely contribute to the revision and implementation of the population policy of the country.

iv. Assessment of the status, potential and challenge of labour productivity and the policy environment in Ethiopia: Case study of industrial parks

The quantity and quality of human capital are detrimental to social transformation and economic growth. One of the dimensions of human capital development is labour productivity. Improved labour productivity enhances technological innovation, increases efficiency and returns to capital, reduces poverty, and ultimately contributes to sustainable economic growth. Given the increasing problem of unemployment on the one hand and the need to utilise its human resources to boost economic growth, enhancing labour productivity is a crucial concern for Ethiopia, which is striving to effectively utilise human resources, accelerate poverty reduction, and sustain economic growth.

The EAS has conducted an in-depth assessment of workers' productivity focusing on industrial parks in Ethiopia. The study provides an extensive examination of labour productivity within manufacturing firms situated in the industrial parks in the country and forwards recommendations to improve the situation. The main objective of the study is to undertake a comprehensive assessment of the status and determinants of labour productivity and policy environments in Ethiopia and document its implications for human capital formation in industrial parks. Results of the study show that there is a wider disparity in productivity among different industrial parks, and their productivity is influenced by the ownership structure of firms (EAS, 2024). It also reveals that labour productivity is a function of capital and technology-intensive activities as variables such as capital intensity, material intensity, non-wage benefits for employees, piece-rate-based wage payment, access to water, and workers' training have a positive and statistically significant impact on labour productivity. On the other hand, structural and administrative factors such as the average duration of power outages, firm size and the export orientation of firms have negative and statistically significant effects on labour productivity. This

clearly shows that unfavourable working conditions such as scarcity of foreign currency to import raw materials, staff turnover, political instability, inflation, and macroeconomic instability are factors affecting labour productivity in the industrial parks. To put it differently, the labour productivity in the industrial parks in Ethiopia is suffering from workers' lower know-how and skills, frequent power outages, absenteeism (poor culture of work), insufficient water supply, and lack of coordination among government institutions providing the necessary support (EAS, 2024). Evidence from the study report has also shown that factors that highly contribute to the high turnover of employees such as poor working conditions leading to cultural shocks and unexpected working environment, language barriers that lead to communication gaps, poor remuneration that falls beyond the workers' expectations, poor management conditions should be given due attention and improved without taking time. Administrative hassles such as lengthy customs procedures, poor marketing networks, and weak linkages between the manufacturers and raw material suppliers or distributors and transporters are also bottlenecks to improving the economic growth of the country. Although the study has indicated the challenges being faced and the intervention required by the coordinating bodies and the government, it is not accompanied by the required policy advisement for the government to take corrective measures and move forward.

v. The demographic dividend: Imperative for Ethiopia's transformation, a policy makers' booklet

The engagement of EAS in population activities through the support of the Packard Foundation began through engagement in activities related to DD and the production of a policymakers' booklet on the subject. The selected topic aligns with the African Union's theme in 2017, the year of the DD. This study is an eye-opener on the basic concepts and approaches of the DD and its contribution to the revision of the population policy in Ethiopia. It is also a magnificent policy advocacy document to let the country make efforts to

benefit from its very large youth population. The study was initiated by the EAS in collaboration with the then PDC of Ethiopia. The purpose of the study was to produce a note that briefly explains the opportunities and challenges of benefiting from the demographic transition in Ethiopia, and the conditions under which the country could accelerate the opening of the window of opportunity for DD. The document was prepared to raise familiarity with the concept among policymakers and planners so that necessary preparations are made and steps are taken on time to use the opportunities that may arise from the change in the age structure of the population (EAS, 2017b).

The report explains how the demographic transition, that is, the shift from high birth and death rates to lower birth and death rates, leads to the opening of the windows of opportunity by decreasing the dependency ratio and increasing the proportion of the working-age population that would accelerate economic growth. This demographic shift is the result of the decline in fertility and the consequent rise in the number of young population, usually 15 to 24 years of age. The report explains that the window of opportunity for DD usually occurs when the decline in birth rate, which normally follows the decline in death rates with the onset of the demographic transition, leads to changes in the age structure of a population to allow the youth bulge enter the working age group. This brings about a significant increase in the working-age population that surpasses the total number of dependent children (0-14) and old age (65 and above) population to open the windows of opportunity. The larger proportion of the working age (15 – 64 years) population, compared to that of the dependent population, will, however, be reverted in about 35 to 50 years when the proportion of the elderly population increases due to improvement in standard of living and an increase in life expectancy.

The study iterates that harnessing the DD is not autonomic but requires the adoption and implementation of several policies to facilitate the advancement of socioeconomic growth. It states that to harness the DD, countries need to simultaneously invest in five key areas that are the

pillars of DD. These are (a) changes in population structure to facilitate rapid fertility decline through improved use of effective contraceptive methods, enhanced child survival, and improved education and general empowerment of women, (b) improvements in health to nurture a healthy and productive labour force, (c) education and skills development to create a well-educated, skilled, and innovative labour force, (d) economic reforms to accelerate economic growth and create jobs for the rapidly expanding labour force, and (e) good governance to enhance savings, attract foreign direct investment and ensure efficiency and accountability in the use of public resources.

To substantiate the arguments on the contexts which speed up the process of harnessing DD, the study presents a review of contrasting international experiences. Demographic transition in the East Asian countries (i.e., the Republic of Korea and Thailand) has occurred relatively rapidly over 50-75 years. This transition resulted in a significant gain from the age structural transition and harnessed the DD. The study also documented the experiences of Latin American countries (i.e., Mexico and Brazil) where the demographic transition occurred over a relatively short period. However, they were not able to benefit from the change in their population age structures as much as the East Asian countries. This was due to issues related to income inequality, lack of adequate education and skills to foster human capital development, unbalanced economic structure resulting from resource-intensive industries highly dependent on the exploitation of natural resources instead of fully utilising a larger workforce, external dependencies, social and political instabilities and infrastructure limitation (Amendolara, 2022). In the review of the situation in two African countries (i.e., Botswana and Ghana), the study report shows that they have not yet benefited from DD despite gaining considerable economic growth. This is because the decline in fertility and infant and child mortality rates have not yet reached the levels that would transform the age structure of their populations to harness DD.

The study has also indicated the lessons to be drawn from the international experiences to benefit from the youth bulge and harness the DD. It shows that education, employment, health and other sectors are the key areas where developing countries should continue to invest to empower the youth. In addition, developing the principles of openness to trade in global markets is considered vital to creating wider and gainful employment opportunities for the enlarged working-age cohort. It advises the promotion of savings and investment via reform of financial institutions and targeting the poor with microfinance programmes as a pre-requisite to giving developing countries the chance to generate resources that help to invest in the future when the boom generation enters the workforce. On the other hand, the study warns that failure to act on the aforementioned issues could have a damaging effect on the future generation as rapid population growth results not only in rising unemployment but in the crumbling of the social fabric and leads to social conflict and political unrest. If the window of opportunity to harness the DD is not properly used, the rise in the number of older people could overwhelm available resources soon (EAS, 2017b).

The study assesses the demographic and socioeconomic conditions of Ethiopia and advises the need to create a favourable policy environment and attractive conditions that take into account the population growth rate and the changing age structure of the population to have a wider opportunity to benefit from the youth bulge entering into the labour force. Having realised the prevailing situation in the country, the study report states that it is very likely that Ethiopia's windows of opportunities to harness DD could be opened in 2040 due to a sharp decline in the child dependency ratio and a greater increase in the proportion of the working-age population. The window will be closed in 2075 as the increase in the proportion of the elderly population due to improvement in living conditions and increased longevity will reverse the demographic trend.

The study report advises policy-makers and planners to consider both the opportunities to be utilised and the challenges the country could face to

benefit from the DD in the near future. The DD presents a significant opportunity for accelerated economic growth and development as a country's working-age population grows relative to its young dependents. It advocates the continuation of the hard work to reduce further reduce the yearly population growth rate so as to accelerate the age structural change of the country's population and improve the policy environment to attract more and more investment to create job opportunities for the growing young population. It also calls upon the policy-makers and planners to cautiously watch for and avoid any mismatch between the demand (i.e., population) and supply (e.g., production requirement, services to be provided, etc.) that could affect the successful implementation of the development plans aimed at improving the well-being of citizens. To effectively monitor and evaluate the implementation of national and regional development plans, population-related information is required to make decisions on issues such as resettlement plans, the building of new schools and health facilities, housing, environmental conservation, etc., that often result in irreversible high public costs, need to be accurate and precise. The report also stresses the fact that the absence or inaccuracy of this information could result in disastrous situations as the invested resources, energy and time are subject to wastage for being not rehabilitated (EAS, 2017b).

Last but not least, the study states that the country's economy should significantly enhance its employment-generating capacity as high levels of unemployment and underemployment would result in a chaotic situation. It also recommends the need to maximise the utilisation of the demographic window of opportunity, capital investment in infrastructure, improved technology, manufacturing plant, and market liberalisation to benefit from the gains of the DD. In addition, it advocates for having greater access to quality education that enhances the skills of the young generation, and behavioural changes towards saving and investment to increase productivity as these are key requirements to benefit from the DD.

vi. Demographic dividend effort index report

This is a document that tracks the progress towards the realisation of DD: This report tracks the progress of Ethiopia in achieving DD. It provides empirical evidence to understand the progress being made in accelerating the demographic transition to pave ways to harness the DD, know the current status, and measures to be taken to create an enabling policy environment that speeds up the transition and realises the potential to harness DD (EAS, 2020). The demographic dividend effort index (DDEI) is a robust tool that takes researchers, policymakers, advocates, service providers and programme implementers through a process of assessing local efforts in high-impact policies and programmes. It fosters measurements, dialogue and innovation in six key sectors that have the potential to cultivate the DD. These are: family planning (FP), maternal and child health (MCH), education (ED), women empowerment (WE), labour market (LM), and governance and economic institutions (GEI). The measures from these sectors allow users to measure the strength of national efforts towards reaping the benefits of DD for inclusive and sustainable development and facilitate the learning process across developing countries. The report suggests that to harness DD, countries require targeted investments in human, social, and physical capital. The exercise reveals where Ethiopia needs to invest to obtain the benefits of DD. It is an approach that shows how DD is operating as an interrelated system of multiple sectors operating together to create a favourable policy environment.

The report was produced by a team of experts from the Bill & Melinda Gates Institute for Population and Reproductive Health, Johns Hopkins Bloomberg School of Public Health, and another team composed of Fellows of the EAS. The team identified experts working in the FP, MCH, ED, WE, GEI, and LM sectors and collected information on the five dimensions that facilitate and influence the favourable environment for DD. They used a Likert scale to measure efforts from 1 to 10, with 1 representing non-

existing or weak effort, and 10 a very strong effort. Each sector-specific survey is divided into five selected dimensions; namely, policy-making, services and programmes, advocacy, research, and civil society. These indicators of dimensions are selected based on a review of the literature that demonstrates their influential placements throughout a society, and their potential for fostering a DD-favourable environment in the country.

Summary results of the DDEI show that there is a moderate level of effort being devoted towards creating an enabling environment that would allow Ethiopia to harness the benefits of the DD. Most of the efforts are within moderate levels: the MCH sector (5.7), the FP sector (5.4), the ED sector (5.2), the WE sector (5.1) and the GEI sector (5.0). However, the WE sector (4.3) is less than the moderate level of effort implying that much attention is required to be paid to the initiative to ensure gender equality and women empowerment. Based on the results, the study report made recommendations to accelerate Ethiopia's progress to create a favourable environment for harnessing a DD. These are:

- Implementing sound macroeconomic and fiscal policies that expand the demand for labour to improve the investment climate, ensure employment generation and absorb the increasing workforce, especially young female workers;
- Upholding good governance by strengthening the rule of law, improving the efficiency of government institutions, reducing corruption, and guaranteeing contract enforcement procedures;
- Strengthening coordination among government, civil society, and communities to promote efficient use of available resources for FP programmes;
- Creating a system to monitor government commitments and ensure accountability and transparency for reproductive, maternal, new-born, and child health programmes;

- Enhancing focus on secondary education with greater focus on adult and non-formal education; and
- Reworking on gender equality and women empowerment policy priority areas at national and regional levels and guiding and promoting gender equality and women empowerment through concerted, actionable legal, regulatory and policy frameworks and tools.

Despite conducting the study very successfully and having plausible recommendations for action, the Academy hasn't made subsequent efforts to influence the policy-makers by providing them with policy advice to act accordingly. Generating evidence-based study results alone would not help much unless the recommendations are implemented on time. If the policy advisement actions are not taken along with the generation of evidence-based studies and the Academy is unable to discharge its responsibilities in due course, the country may not benefit from the anticipated DD for lack of timely actions.

vii. Ethiopia's demographic dividend: A video presentation guideline

Ethiopia's DD video presentation guideline was developed in 2019 by the EAS in collaboration with the Population Reference Bureau and with guidance from Ethiopia's DD Technical Committee. The guide is prepared in such a way that it (i) identifies opportunities to use the presentation with various audiences, (ii) responds to frequently asked questions about the issues it addresses, and (iii) fosters dialogue with audiences about key messages in the presentations. The guideline is also prepared in the form of a handout that is readable and serves as an aid for the presentation.

The major goal of the video presentation is to promote policy dialogue on the critical roles of investments in family planning, education, economic opportunities and good governance. Specifically, it aims to (i) generate evidence-based policy dialogue to ensure that the DD is prioritised on the

national agenda; (ii) increase commitment to mobilising resources for health, education, economic opportunities and good governance, (iii) improve target audience's understanding of the impact of the age structure change due to slower population growth in economic development and health goals, and (iv) encourage policy-makers to build on best practices in health, education, economic opportunity and good governance.

The video is designed to be used with different audiences: policy-makers, academics, students, civil society, the media and the general public to achieve the aforementioned objectives. The video is supposed to be played during meetings, visits to the EAS Science Center, television and radio discussions, and waiting for service acquisition in health facilities and other public centres. It is advised that the video be used in smaller groups for further discussion and experience sharing. The presenter is also expected to provide definitions for terms that may be new to some of the audiences.

In addition to setting the goals and objectives of the video presentation, the guideline provides the definition of DD, the current health and education service provisions in Ethiopia, as well as available job opportunities and the governance situation in the country. General discussion questions are also included in the document to guide the discussion along with frequently asked questions and possible answers.

In spite of developing the video presentation guideline and producing the video, the circulation of the video presentation within the narrow group is the major shortcoming of the initiative to achieve its goals. The distribution is limited to a small group (i.e., the population and reproductive health communities) and it was played repeatedly for the same group attending the meeting on population and development issues. It could have been circulated within the school system to reach many audiences, specifically young people and students, and in health facilities to reach out to women of reproductive age and the general public. The lack of a proactive dissemination strategy limited its influence on propagating the process of

demographic transition and the importance of changes in age structure to facilitate the opening of the window of opportunity to harness DD.

viii. Amharic glossary of demographic terms

The EAS has taken the initiative to develop an Amharic glossary of demographic terms to improve citizens' understanding of the basic concepts and definitions of demographic terms using the working language of the Federal Government of Ethiopia. The purpose of the glossary is to provide insights into the meanings of the key demographic terms during policy-making and planning exercises. It is expected to ease the application of key demographic terms and concepts for experts working in the areas of population and development in government and non-government organisations and the media. It also makes understanding demographic concepts easier for users from other disciplines.

Efforts are made to identify key demographic terms often used not only in the population sphere but also in other related development sectors. The glossary is composed of relevant terms and concepts that are used quite often by experts in the field, and those that have much relevance in the context of Ethiopia. The terms and concepts are compiled by experienced and qualified population experts and are collected from reliable and accredited sources to maintain credibility.

The glossary has been translated into Amharic by a qualified language expert and a qualified demographer who is a native speaker of the Amharic language. They have made efforts to look for equivalent words in Amharic by not only associating the language but also the conceptual meaning of the terms. For some of the terms that do not have equivalent Amharic words, an equivalent word from Ge'ez was sought to facilitate the translation. For some concepts with no equivalent words in Amharic and Ge'ez, the English words were taken directly. The translation was guided by the rules set by the 'International Standards Organisation'. Accuracy,

precision/no-ambiguity, transparency/self-explanatory, generativity, conciseness, and simplicity for wider use were used as guiding principles. The glossary is organised in the English alphabetical order of the entry words.

Despite making efforts to develop the Amharic glossary of demographic terms, it has not been used as widely as expected for several reasons such as the difficulty of understanding the words borrowed from Ge'ez, the difficulty of conceptualising the infrequently used Amharic terms included in the glossary, lack of equivalent Amharic or Ge'ez words for some of the English terms with the same concept but with different meanings. Moreover, familiarity with the Amharic glossary of demographic terms requires frequent use of the material in the day-to-day activities of the community. Nonetheless, the document has not been distributed widely and popularised for application in formal government structural settings. Only a few copies were initially printed and circulated within limited groups and organisations. Its wider use needs popularising the material and translating it into other languages to ensure equity among others who use different languages as working languages in their respective regional administration. The Academy has integrated the glossary into its new and comprehensive dictionary of science and technology soon to be published.

ix. Documenting best practices in harnessing gender dividend: The case of Awra Amba community

This study was conducted to document the experiences and best practices of the Awra Amba community and disseminate the best practices to the other communities to enhance gender equality and harness the benefits thereof. Awra Amba is a community established by Zumra Nuru in Ethiopia in the 1970s based on the principles of equality, self-sufficiency, and communal life, with a focus on gender equality, caring for the vulnerable, and avoiding negative behaviour. It is located in the Fogera woreda of Debub Gondar Zone, Amhara regional state, about 73 kilo metres east of

Bahir Dar, the capital of the regional state. The community is governed by committees that have various functions such as maintaining peace and security within neighbourhoods, providing water and sanitation, engaging in fieldwork, and promoting education among members of the community. The community has faced some local hostility due to its principle of avoiding traditional patriarchal hierarchies and religious dogma in its way of life but its egalitarian system has gained attention and recognition. The study was conducted to draw lessons from the experiences of the community to harness gender dividend by maximising the socio-economic benefits of gender equality.

Gender dividend refers to the economic, social, and developmental benefits that societies can gain by closing gender gaps and promoting gender equality, particularly in areas like labour force participation, education, and political representation (World Bank, 2020). The concept of gender dividend posits that societies become more productive and equitable when women have equal opportunities and participate fully in all aspects of life. Harnessing gender dividend is rooted in addressing gender inequality to unlock the effect of human capital on economic growth, reducing poverty, and improving overall well-being. It is manifested through (a) economic growth: increased female labour force participation can boost economic productivity and growth, (b) social progress: greater gender equality can lead to better education, healthcare, and social outcomes for both women and men, and (3) political stability: when women are empowered and have a voice in decision-making, the society can become more stable.

According to the report, the Awra Amba community provides equal rights to everyone, including women and children. The community is identified as 'unique' for assuring gender equality in addition to providing equal opportunity for all in terms of access to education, prevention of early marriage, providing care for the elderly, exercising good parenting and ensuring social security for community members. It manifests the effect of a 'cooperative way of life' on the living conditions of the community

members rather than the contribution of women's social, economic and political empowerment which result in transformed roles of women in the community. Harnessing gender dividend requires focusing on policies and practices that promote gender equality and empowering women by way of investing in education and skills, promoting equal access to resources, and addressing gender-based violence and discrimination.

However, the study seems to deviate a bit from such a framework and focus on the assessment of the activities of the Awra Amba community. The study has investigated how and under what conditions women's education has been expanded; how their skills have been developed; how women's equal access to land, property, and other resources has been assured; measures taken to enhance their access to financial resources; mechanisms put in place to improve women's access to quality healthcare (including reproductive health services, as this improves their overall well-being and productivity); the legal frameworks to address gender-based violence and discrimination, and the awareness raising campaign to eradicate gender-based violence and discrimination, and promote positive gender norms. The study followed the conventional data collection techniques instead of applying the gender-responsive approach that collects sex-disaggregated data to illustrate manifestations of gender equality and identify areas where further actions are needed. The study did not aim to integrate gender perspectives into all policies and programmes.

x. Ethiopian heroines in the fight against COVID-19

Reports produced during the pandemic years revealed that COVID-19 and the measures taken to contain the virus increased women's vulnerability to economic problems as well as gender-based violence including sexual harassment. On the other hand, women played substantial roles in the prevention of the pandemic. This study was conducted with the primary objective of documenting the success stories of Ethiopian women in the fight against the impact of COVID-19. It documents best practices and success stories of women at the global, national, and community levels. The

report contains the stories of 50 women drawn from different sectors, mainly health, education, business, art, mass media, and leadership (EAS, 2022b). The women were selected reportedly using snowball sampling; spotting and in-depth interviews were held with the selected women.

As indicated in the Webster's dictionary, a 'heroine' is an individual who deserves admiration and emulation due to her extraordinary actions or exceptional qualities. The following key characteristics can be taken to identify a person as a 'heroine': (a) bravery and courage: heroines often display remarkable courage in the face of adversity, both physical and mental; (b) selflessness: they prioritise the well-being of others, even at their own expense; (c) nobility: heroines are admired for their strong moral values and their commitment to doing what is right; (d) achievement: they may be known for outstanding accomplishments in various fields, demonstrating exceptional skills or abilities; and (e) inspiration: they inspire others to strive for excellence and to make a positive impact on the world (Kinsella et al., 2015). In line with this, the real stories of individuals who save lives, fight for justice, or inspire others through their actions can be documented and celebrated accordingly.

It is remarkable that the EAS has taken the initiative to identify women who had been affected by the multifaceted impacts caused by the unabated spread of the COVID-19 virus but had served on the front lines of the response against COVID-19. The accomplishments of these women deserve to be documented and shared with the public as their extraordinary intervention and action have saved the lives of many and reduced the spread of COVID-19 in our country. Hadn't it been for the intervention of such committed citizens, it could not have only affected the health status of our people but also the economic performance of the country at the risk of increased frequency of violence and abuses against women and children.

While the study aimed at identifying and recording the extraordinary accomplishments of women engaged in the fight against Covid-19, it lacked methodological clarity on how to distinguish the extraordinary action from

the regular duties of those involved. In other words, the authors haven't clearly spelt out the selection criteria to identify the women considered as 'heroines'. The works of some of the women considered in the report appear to be more of professional duties rather than extraordinary tasks that merit recognition. Secondly, although the report states that the selection is made using "snowballing and spotting methods [...] to identify the women who meet these [criteria]" (EAS, 2022b: 10), the criteria were not specifically indicated. Besides, in a standard research method, "snowball sampling" is a non-probability sampling method where existing study participants recruit new participants from their social networks. It is often used when researchers are facing difficulties in reaching hard-to-find or hidden populations, and the sample size is determined based on the participants' ability to refer to others, resembling a snowball rolling down a hill (Parker, 2019). In that case, the identification of persons being considered as a 'heroine' tends to reflect a 'networking connection' among respondents. In the absence of a clearly defined network connecting the selected individuals or well-established relationships guiding the use of snowball sampling, the selection process tends to be biased.

xi. Consensus studies not conducted

The Academy planned to conduct a study on the interrelationship between fertility, unemployment, and migration in Ethiopia. The study was planned to be undertaken based on secondary data to be obtained from the ESS. Although validation workshop of the inception report was held and the required data were obtained, the envisaged study was not completed due to gaps in the dataset. The demographic and health survey (DHS) data is rich in fertility-related information. However, there is very little migration-related information. Migration-related information refers to the time of data collection whereas fertility refers to the childbearing experience of a woman during the reproductive life span. It was thus impossible to link the two sets of information to predict the effect of survey time information on actions taken in the life course. Instead, detailed information on migration such as the timing of move and places of move from time to time is

required to assess if that move has any impact on the timing of birth or not. Hence, the gap in the information required is a big problem to examine the relationship between migration and fertility. Given that the data on current working status in the DHS data does not strictly follow the international definition of unemployment, it was not possible to predict the relationship between unemployment and fertility. The other data set that was planned to be used was the 2021 National Migration and Labour Force Survey. Although this data set has very rich information on migration and unemployment, fertility-related information is missing. Hence, the consultants recommended the collection of primary data which helps not only to design the instrument innovatively but also to include all the questions required to understand the interrelationships between the three and the contexts of their interrelationships.

7.1.2. Discussions, Congresses, Dialogues, and Workshops

The generation of evidence on critical population issues require popularising the agenda and bringing it to the attention of policymakers. In this regard, the Academy has organised several the following policy dialogues, consultative meetings, discussion forums, and conferences to create a platform for key stakeholders to discuss population-related issues.

A. Discussions

The main purpose of a round-table discussion is to foster an inclusive and equal environment for participants to engage in a guided conversation, explore a specific topic, and share diverse perspectives. It encourages active participation, collaborative brainstorming, and the generation of collective insights to make it valuable for problem-solving, decision-making, and knowledge sharing. The following round table discussions on population and development were organised by the EAS.

- i. High-level round-table discussion on "the relationship between population and development and its policy implications"***

A high-level round-table discussion was held on “The Relationship between Population and Development and its Policy Implication”. The event was attended by about 65 people, including State Ministers from the Ministries of Health and Women, Children and Youth Affairs, and the Deputy Commissioner of the then PDC (now MoPD). The discussion has given a very good understanding to the participants, specifically the decision makers, and enhanced their critical thinking about the relationship between population and development. It was a wonderful opportunity to recognise that there is a two-way relationship between population and development: population is affecting development, and it is also affected by the development initiatives. The key message delivered during the discussion was the importance of acting accordingly, depending on the prevailing situation to keep the balance between the two.

ii. Panel discussion on population growth and development

The panel discussion on ‘Population Growth and Development’ created a platform for the stakeholders in the population and development areas. The primary goal of the dialogue was to provide a space for stakeholders in the population and development fields to exchange ideas and learn more about the theoretical and empirical aspects of the impact of population size on the country's growth and development. The discussion was aimed to (1) discuss the link between population growth and development; (2) expand knowledge among the public on scientific evidence of population size beyond its instrumentality to politics; and (3) provide lessons and recommendations for policy and decision-making in Ethiopia.

The dialogue was conducted in November 2021, and a total of 88 individuals attended the session (25 conventionally and 63 virtually). Four panellists were invited to talk on different but interrelated topics; namely, the impact of population growth on the demographic transition; how population expansion affects GDP and per capita income, and the living standards, savings, and investment; the link between and influence of population growth on public health issues, specifically maternal and child

health, as well as reproductive health; and the effect of population size on migration and the welfare of the nation with emphasis on measures to be taken to manage it systematically. The dialogue has created an opportunity for the audience to actively participate and reflect their views on what was presented and discussed by the panellists/speakers and obtain a good understanding of the nexus between population and development. The moderator summarised the discussion by extracting relevant evidence and mutually agreed-upon concepts, the way forward for policy considerations and the need for the creation of a conducive environment for different partners working in the related areas. A proceeding of the panel discussion was planned to be compiled, printed, and disseminated to stakeholders to reach those who did not have the chance to participate in the dialogue and those who have interest and immense roles in population and development issues. It was, however, not possible to trace the proceedings to produce an extended summary of the issues discussed and the recommendations made.

B. Congress

The EAS dedicated its 3rd Science Congress to discussing the critical issues of attaining DD in the context of Ethiopia. The Congress titled “Harnessing Demographic Dividend: Ethiopia’s Emerging Challenge” was expected to serve as a platform where the challenges to harnessing the DD are presented, analysed, debated and brought to the forefront of policy-makers’ agenda. The Congress was attended by more than 100 professionals and officials from governmental, non-governmental, regional, and international organisations. It discussed context-specific issues underpinning the DD with a major focus on how the country could harness the DD by utilising the potential of its bulging youth population. The Congress had the following objectives: (a) assessing the status of demographic transition and the prospect of harnessing DD in the country; (b) encouraging and stimulating contextualised discussion on the issues surrounding the demographic transition and DD; (c) bringing the DD issue to

the priority of the policy makers' agenda, and (d) recommending evidence-based and context-specific policy measures for harnessing DD.

Within the major theme of harnessing DD, the Congress was organised in five sub-themes; namely, demographic features of Ethiopia, improved access to reproductive health and other health care services, quality education and skills development, youth employment and empowerment, and empowering girls and women. Under each of the sub-themes, several papers were presented as study findings and topics of panel discussions. To display the comprehensive and contextual features of the demographic transition in the country, the population size and age composition, spatial distribution and the ratio of population to resources, trends of population growth and its projected trends were discussed. Concerning improved access to healthcare services including reproductive health, the major point of discussion was how the country can effectively invest on its healthcare system to accelerate its demographic transition and then harness the dividend. The discussion on the quality of education and skill development emphasised the importance of effective investment to improve the quality of education and skill development and create a favourable environment for entrepreneurship to contribute to the economy and benefit from the DD. Similarly, the discussion on youth employment and empowerment drew attention to measures to be taken to address the current and future unemployment situation of young persons and keep the balance between the supply and demand of employment in the country. The deliberation also included possible ways of promoting inclusive governance of the youth to address their needs and demands. The discussion on empowering girls and women has also focused on the challenges and prospects embedded in empowering women and girls to create equal socioeconomic opportunities, eradicate gender-based violence, and accelerate their benefits.

The Congress discussed each of the sub-themes in depth and put forth resolutions on the measures to be implemented to benefit from the potential population dividend of the country. The dialogue that was

initiated during the Congress has created a more crystallised understanding of the process of demographic transition and the opportunity and challenges to harness DD. This is evident from the fact that the Congress participants issued a Declaration on harnessing the DD by overcoming the challenges that the country could face.

C. Dialogues

The following dialogues were organised on population and development issues by the EAS.

i. National dialogue on "Ethiopia's preparedness towards harnessing the demographic dividend"

The national dialogue on Ethiopia's preparedness towards harnessing the DD was conducted in August 2023 in Addis Ababa. The primary objective was to enhance key actors' awareness on the critical contributions of harnessing DD for accelerating economic growth and to indicate how the country can prepare to harness DD to this end. The dialogue brought together 65 professionals and officials (39 male and 26 female) from all over the country.

The dialogue started with the presentation by a senior population expert, followed by four panelists who reflected on the contemporary issues related to global and national aspects of population and development, especially the DD and the opportunities and challenges to harness it. It was indicated that the adoption of the National Population Policy of Ethiopia in 1993 was one of the fundamental steps to address population issues despite significant challenges in its implementation. The recognised and outstanding challenges are: (i) lack of political will and support for population and development issues, (ii) absence of proper institutional framework to implement, monitor and evaluate the policy, (iii) inadequate resources allocated for population programmes and activities, (iv) poor integration of the population variables into sectors' activities at different

levels, and (iv) weak staff capacity in population and development and high turnover at national, regional, and lower-level of organisational units.

In the dialogue, the significant opportunities that can be tapped to enhance activities on population and development, specifically to harness the envisaged DD, were mentioned because the country has already begun the process of demographic transition and is only a few years away from the opening of the window of demographic opportunity. The window of opportunity for Ethiopia to harness DD is predicted to open in 2040 and close in 2075. Hence, the panelists emphasised the importance of investing in health, education, and skills training; ensuring good governance; and creating a conducive environment and job opportunities for the working-age population to harness the DD. It was also stated that the magnitude and quality of the benefits to the country from the window depend largely on integrated and synergistic actions that involve all major stakeholders, including politicians, policymakers, and development practitioners at various levels of the federal and regional governments. They also warned that if the aforementioned actions are not taken into account on time, a demographic disaster could take place instead of the DD.

ii. Dialogue on "Realising demographic dividend through focusing on human capital development"

As part of the Academy's approach to supporting policies with evidence, a policy dialogue on population issues that are relevant to Ethiopia's socioeconomic and political contexts was organised in July 2021 on the topic of "Realising Demographic Dividend by Focusing on Human Capital Development". The dialogue engaged policy-makers, researchers, academia, experts engaged in implementing organisations, and other key development agencies. The dialogue was organised to bring together researchers and policymakers to discuss how to realise the DD in Ethiopia. The dialogue was organised using a hybrid communication mode (i.e., virtual and conventional) and a total of 73 stakeholders (29 conventional

and 44 virtual participants) participated. The session discussed how human capital development accelerates economic growth potential with a focus on key sectors like health, education, employment, and other economic issues.

During the discussion, the panelists raised the importance of ensuring public health financing through universal health coverage and health insurance, and investing in the health of the workforce to improve productivity and quality of life. According to them, investing in human capital through education should also focus on improving the quality of education and producing graduates that best fit the labour market besides expanding access to education. In addition, building human capital through job creation should increase the labour absorption capacity of the country's economy, maximising the competence of the employees, and enhancing entrepreneurship not only to create job opportunities but also to increase the level of productivity. Successful accomplishments of investment in human capital in the aforementioned three sectors (i.e., health, education and employment) could enable the country to harness the demographic dividend along with the ongoing demographic transition.

The dialogue has contributed to the government's effort to implement the TYDP and the revision of the policy by addressing the existing challenges and gaps that were brought out of the dialogue. By the end of the dialogue session, recommendations were forwarded for consideration by the policy-makers. Furthermore, the dialogue reaffirmed the need for a coordinated effort among the key development sectors for the realisation of an economically active and healthy nation, and accelerated economic growth. The Academy also used the platform to disseminate the evidence generated in the areas of population and development.

D. Consultative workshops

A consultative meeting is a way to gather information, ideas, and feedback from various stakeholders, often leading to more informed decisions and

greater buy-in for the outcome. Accordingly, the following consultative meetings were conducted by the EAS.

i. A National consultative workshop on "The perspectives of Regions and City Administrations on revision of the 1993 National Population Policy of Ethiopia"

The EAS conducted a two-day national consultative workshop on the "Revision of the National Population Policy of Ethiopia: The Perspectives of Regions and City Administrations" in collaboration with the MoPD in November 2023 in Addis Ababa. The two-day event was attended by 56 participants (39 men and 17 women), including officials and professionals from the 12 regional states and the two city administrations (Addis Ababa and Dire Dawa), ministries, NGOs, academia, research institutes, and invited experts. The workshop was an essential platform for gathering inputs and insights from the regions and city administrations on the implementation of the Population Policy and their population- and development-related activities to inform the planned revision of the NPPE.

The main objective of the workshop was to ensure that the policy revision process and its scope and contents are enriched with diverse perspectives and experiences, making it more comprehensive and relevant in addressing the population-related challenges faced by the regions and the country. The event's main activities included a plenary opening session, presentations by representatives of the regions and the city administrations, participants' reflections on the presentations, a breakout session for discussion and brainstorming, presentations of the results of the breakout session, a general discussion, and wrap-up reflections by the moderator. Senior professionals and officials from academia, MoPD, and the EAS actively participated in the discussion, provided input, and shared their knowledge and experiences with the participants.

The participants reviewed the implementation status of the NPPE in each of

their respective regional states and city administrations. They also provided recommendations such as putting clear mandates for institutions that engage in the policy revision process, use of up-to-date census and survey information to show gaps for policy intervention, inclusiveness of the regional states and other stakeholders in the drafting of the population policy, the need to assess international experiences whilst drafting the policy, designing an appropriate policy implementation strategy and governance structure, and allocation of adequate resources for population and related activities. In addition to suggesting measures to be taken during the policy revision and mechanisms to be put in place to enrich the contents of the revised policy, they suggested alternative approaches like setting up the population office as an autonomous entity to enable it to act independently with the support of the top government body or merging it with the MoPD to let it have strong linkage with the planning and monitoring activities of development interventions.

Representatives from the regions and the city administrations presented summaries of their responses to the checklist provided by the MoPD. The purpose of the checklist was to collect information from them to get inputs for rationalising the revision of the policy and use them as a basis for the actual policy revision. It also has detailed questions that enable one to explore the justifications for revising the policy, and suggest new goals and objectives, priority areas, implementation strategies, and the organisational structure to be proposed besides outlining the achievements, challenges, and lessons learned from the previous policy.

ii. Brainstorming meeting to cast future research directions on population and development

The EAS conducted a brainstorming meeting of experts to set its future research directions on population and development in April 2024. The relationship between population and development in Ethiopia requires detailed investigation using robust scientific methods that enable evidence-

based policy decisions and their implementation. The Academy has been implementing a series of projects to bridge population evidence with policies with the support of the David and Lucile Packard Foundation and in close collaboration with the MoPD. Hence, the Academy plans to reorganise and run its population and development activities at a programme level. The primary objective of the meeting was to provide feedback and input to EAS to raise its management of population and development activities to a programme level and to identify priority areas for further research, dialogues, and other activities that contribute towards achieving the goals of the ten-year development plan in population and development. The discussion included 24 senior professionals (20 male and 4 female) from different population- and development-related fields.

The brainstorming discussion was preceded by the background presentation by EAS on its population-related activities and the results so far. The activities included consensus studies, discussions, a congress, dialogues, and workshops, to mention some. It was stated that the relationship between population and development is inconclusive and that it could be negative, positive, or none, depending on the area and time under consideration. As a result, population growth and size can have both progressive and regressive effects on socioeconomic development. However, it was suggested that the impact of population growth on development might be limited or adjusted by enacting policies and strategies appropriate for a specific time and place. Several countries have had population growth rates slow or accelerate in response to their development trajectories.

The moderator highlighted the major points of discussion for the meeting, including the relationship between population and socioeconomic development in Ethiopia, challenges of population growth, the effects of reproduction on women's production, the significance of revising the population policy and EAS plans towards upgrading the population programme. The discussion focused mainly on the relevance and achievements of the past and current activities of the Academy's

engagement in population and development issues in line with its mandate of providing evidence-based policy advice and popularising science, technology, and innovation. The participants also reflected on why and how the Academy should continue its involvement in the national population and development activities. Potential areas for the Academy's intervention have also been suggested, including consensus studies, research, dialogues, consultations, and public lectures. Generous feedback was also forwarded on the EAS's proposal to launch a population and development programme. The participants proposed that EAS continue with its current activities and expand its working relationships with the MoPD. Population-related problems and opportunities were also identified as being closer to regional and local governments operating at the grassroots level. The meeting also emphasised the importance of establishing a functioning National Population Council. Finally, the experts advised the Academy that it should conduct a feasibility assessment on incorporating a population and development programme into its organisational structure to ensure relevance and sustainability.

E. Advocacy

The EAS, in collaboration with DSW Ethiopia, organised a joint high-level ASRH budget advocacy workshop in March 2024 to increase awareness on the current and future costs of inaction and to deliberate on the importance of dedicating a specific budget line and increasing domestic funding for adolescent and youth SRH activities. The importance of budget allocation in other sectors to integrate and implement activities aimed at promoting sexual and reproductive health issues and the rights of adolescents and youth was also underlined. The workshop was attended by several government and non-government organisations such as the representatives of the House of Peoples Representatives (HPR) of the Federal Democratic Republic of Ethiopia, the Ministry of Health, Ministry of Planning and Development, Ministry of Finance, Addis Ababa University, DSW Ethiopia, CORHA, Engender Health, Marie Stops International Ethiopia, Packard Foundation and other development partners. Most of the invited

participants commented on the relevance of generating resources domestically from government and local funding agencies. It was also evident from the relevant comments and feedback obtained from the authorities and appreciation given the need to achieve the DD by putting all policy measures in place for the well-being of the Ethiopian people.

Participants from the HPR commented that achieving the benefits of the DD requires collaborative actions to be undertaken by different ministries. For instance, the Ministry of Health has to provide quality health services; the Ministry of Women and Social Affairs plays significant roles in coordination to mainstream gender equality and empowerment; the Ministry of Education plays extensive roles in improving the quality of training and skill development; the Ministry of Labour and Skill facilitates the conditions under which extensive job opportunities would be created, and the media should engage in strong IEC and advocacy activities. These reflections reveal that there is a very good understanding of the issues under discussion but strengthening coordination of activities remains. The project was successfully accomplished with a very good understanding of the concept of DD. The participants appreciated the necessity of looking for domestic resources to finance ASRH activities by generating resources from local donors and allocation of a budget by the government.

7.1.3. Gender Equality and Women Empowerment in Higher Education and Research Institutions

Since gender inequality costs individual and family well-being, human capital development, and economic growth, ensuring gender equality is a priority for governments and organisations. Achieving gender equality and empowering women is beneficial for the well-being of women and girls, families, communities, and national economic growth at large. It also significantly contributes to the achievement of the 5th sustainable development goal and reduction of fertility and mortality thereby accelerating demographic transition and realising DD. Recognising this, in addition to undertaking consensus studies, the EAS has implemented

several gender-related activities such as establishing a gender learning forum, cultivating gender champions, enhancing the capacity of women to engage in research, and increasing participation in science and technology. These are briefly explained as follows.

i. Establishment of the Ethiopian Gender Learning Forum

The idea of establishing the EGLF was initiated in 2018 when the EAS co-hosted a three-day stakeholder dialogue together with INASP on enabling equitable research systems in Ethiopia. Following the dialogue, a three-page declaration was adopted which lays a foundation for the establishment of a national forum. The declaration emphasised the need for an equitable research and knowledge system in Ethiopia and the importance of stronger cohesion and collaboration across the national research system to attain this objective. Recognising the critical role a national forum can play, the declaration gave the mandate to the EAS to work with participants of the dialogue and other partners to facilitate the establishment of the forum. Accordingly, the EGLF was established in 2020 to promote gender equality in higher education and research institutions. It was a gender network hosted by the Academy in which Fellows of the Academy, Gender Offices of the public universities, and women researchers were members. Its establishment recognised the instrumental role of evidence-based approaches and mutual collaboration in addressing gender inequity in higher education and research institutions to build sustainable and inclusive development.

The establishment of the forum is rooted in the clear recognition of the importance of a cohesive and integrated platform which fosters equitable research and knowledge systems in Ethiopia. The mission of the forum is to promote gender equality and equity in higher education and research institutions. It values collaborative learning, inclusiveness, and accountability in its operations. The objectives of EGLF include:

- Generating and analysing evidence on issues of gender equity;

- Providing evidence-based recommendations to inform policy and programme decisions and practices for advancing gender equity in Ethiopia’s research system;
- Advocating for and contributing to the design and/or implementation of policies, strategies and programmes that advance gender equity in Ethiopia’s higher education and research institutions;
- Capturing best practices from within and outside of Ethiopia in promoting gender equity in research systems and communicating insights;
- Serving as a platform for dialogue, networking, experience sharing, and collaboration within the membership and among other stakeholders; and
- Forging partnerships and collaborating with national, regional, and international stakeholders working toward the common goal of advancing gender equity.

The EGLF was officially launched and introduced to the gender champions workshop participants to increase their participation in and contribute to the efforts made by the forum to promote equitable research and knowledge systems. Then, the Forum’s vision, mission, objectives, values, and guiding principles were prepared and approved during the first annual meeting. The first three years (2020-2022) were the most active in the history of EGLF. During this time, it accomplished several tasks including organising dialogues, discussions, training, and gender champions workshops. This three-year performance was assessed to guide the preparation of its roadmap and five-year strategic plan. Among the major achievements in 2021 were organising two regional gender champion workshops, developing the final draft of the statute, and electing the Forum’s advisory group. Its activities in 2022 emphasised popularising and expanding the forum, electing board members to strengthen the Forum’s

management structures, developing communication materials, promotion and communication workshops, conducting one gender champion workshop, conducting performance assessment for annual reports, preparing a roadmap, and designing a five-year strategic plan. The Forum has also established a partnership with the Society of Ethiopian Women in Science and Technology (SEWiST) to build the capacity of women researchers and academics in science and technology.

However, the envisaged activity of the Forum was constrained by several challenges. First and foremost, there was a commitment problem from the side of the members who served the Forum voluntarily. The activities of the Forum were mainly undertaken by volunteers including the board members. However, all volunteers were not equally committed to delivering the tasks they were assigned for, which was a key internal challenge. As one informant explained, although the activities were demanding, there was no transportation allowance when a volunteer went for a meeting; also, there was no incentive to compensate for some expenses. The board members have regular duties and commitments and are from different regions which hindered meeting physically and regularly for planning. It was an online work. The virtual meetings and other online activities were constrained by interruptions in electricity, internet connection problems, lack of motivation, and interest to look for other options. There is also a lack of office facilities and funds to implement the planned activities. The regular staff employed by the EAS to coordinate the activities of the Forum has already left the organisation and there was no replacement. Although all universities and research institutions were supposed to be members of the Forum, there was no promotion work to engage them. Consequently, the Forum was active only until 2023. Furthermore, most of these activities were associated with establishing the Forum, preparing institutional documents, increasing membership, creating networks, strengthening partnerships, and promoting the Forum. Although these are important to establish a strong institution, the Forum turned out

to be weak before starting the implementation of critical activities aimed at addressing gender inequality in higher education and research institutions.

ii. Preparation of EGLF booklet

The EGLF information booklet was prepared with the purposes of presenting the vision, mission, core values, and objectives of EGLF; identifying the existing gender gap in Ethiopian higher education; introducing gender mainstreaming approaches in higher education and research institutions; promoting gender champions; and encouraging Ethiopian higher education and research institutions to create and practice equitable research and knowledge systems (EGLF, 2022a). The document provides an informative summary of the gender gap in higher education institutions in Ethiopia. Referring to the data from the former Ministry of Science and Higher Education covering 46 public universities, the proportions of female professors, associate professors, and assistant professors were only 3.1%, 5.1%, and 9.7%, respectively. Women also constitute only 16.4% of Ethiopian researchers, which reveals the significant gender gap in research. The share of women in the executive management positions (presidents and vice presidents) of the 46 public universities was only 10.6%. The booklet explained that gender stereotyping, lack of female role models, imbalance between work and family life, and lack of supportive environment and working conditions are the major underlying causes for gender disparities in higher education, research, and leadership. Furthermore, it shows that gender disparity in higher education and research institutions results in unfulfilled potential, gendered occupational segregation, unequal access to economic resources, lack of role models, increased vulnerability to gender-based violence, less return to economic investment in women's and girls' education, and lack of opportunities for advancing academic and research career. The booklet clearly pointed out the importance of gender mainstreaming into higher education to make gender equality and equity their strategic and operational agenda by transforming the existing structures and cultures.

iii. Preparation of a roadmap

The EGLF prepared its roadmap to guide the preparation of the strategic plan and ultimately ensure institutional sustainability. It was a big move towards self-sustainability and independent legal status after the end of financial and technical support from its partners. The road map identified five focus areas which were identified based on SWOT analysis, workshops and meeting reports of EGLF, national and international gender statistics, policies and strategies, and literature (EGLF, 2022b). The first focus area was improving EGLF governance and participation in the national higher education and research system. Its major milestones include EGLF registration by 2023, organising office and human resources, developing policies and guidelines, enhancing the visibility of the Forum, and increasing membership by also engaging men. The second focus area is enhancing gender equity and equality in the Ethiopian higher education and research systems. Addressing gender stereotypes in higher education and research institutions, enhancing leadership commitment to address gender inequality and inequity, generating evidence on gender inequality in the knowledge and research system, and observance of laws and policies pertaining to research grants for women are identified as key activities. The third one is empowering women in higher education and research institutions. This is planned to be achieved by enhancing the academic and research competency of women, establishing mentorship programmes to utilise the available expertise, creating and maintaining a women-friendly environment in higher education and research institutions, and ensuring women's participation in decision-making. Realising strategic partnership and collaboration is the fourth area of focus of the Forum. This involves identifying local and international collaborators and networking. The last one is building financial capacity. Increasing the membership base, identifying diversified sources of funding, providing consultancy services, applying for gender-related research grants, and engaging in relevant income-generation activities are proposed to build financial capacity. These strategic focus areas are not only relevant to the pressing problem of

women's underrepresentation in the knowledge and research system but also lead the Forum in the right direction to bring about lasting impact in addressing the problem. However, the Forum is not currently active in implementing these activities.

iv. Adoption of the five-year strategic plan

EGLF adopted its five-year strategic plan (2023-2027) in 2022 (EGLF, 2022c). It was developed based on the roadmap as well as internal and external environmental analysis, and SWOT analysis of the Forum. According to the strategic plan, the EGLF aspires to be a cohesive and integrated platform for fostering gender equity and equality in Ethiopia's knowledge system by 2032. Its mission is to promote gender equity and equality in Ethiopia's higher education and research institutions. The core values of the Forum constitute collaborative learning, professionalism, inclusiveness, transparency, accountability, and equity. The strategic plan identified four strategic themes and eleven strategic goals (EGLF, 2022c). The themes are enhancing EGLF governance and participation in the national higher education and research institutes; ensuring gender equity and equality; guaranteeing women's empowerment; and strengthening strategic partnership and collaboration. The strategic goals are to strengthen the sustainability of EGLF, uphold institutional and individual membership, raise the visibility of EGLF, enhance participation of women in higher education and research institutions, strengthen commitment to gender equality, ensure equitable access to research resources, ensure quality and integrated gender-centred research services, ensure zero-tolerance to gender-based violence, enhance women's voice in decision-making and leadership, endorse training and professional development for women, and strengthen collaboration and partnership. The plan clearly indicates key performance indicators for each strategic goal and outlines monitoring, reporting and evaluation mechanisms.

v. Training of trainers for EGLF members

A training of trainers was organised for the EGLF members on nurturing gender champions. It was aimed at cultivating gender equality trainers which in turn contributes to producing institutional gender champions. To set the scene, the participants were introduced to the concept of gender and its differences from women. Furthermore, the gender equality training was supposed to achieve three goals: skill/knowledge development goals indicating awareness raising and skill building, empowerment goals involving the support for individuals to become change makers by favourably shaping their attitudes and behaviours, and transformational goals entailing long-term system change. It was emphasised that gender equality can be achieved when there is gender transformative change which aims to address the root causes of gender inequality by challenging gendered norms, power relationships, and social structures.

The gender gap in higher education in Ethiopia and determinants of change for gender equality were extensively discussed during the training. Moreover, tools to diagnose gender gaps were the subject of discussion. One of these was the 'Gender at Work' framework for organisational change. This analytical framework explains the interrelationship between gender equality, organisational change, and institutions. It explores the intersection between formal and informal structures as well as individual and systemic factors to explain power dynamics perpetuating gender inequality within organisations.

Creating gender champions was another critical component of the training. A gender champion is a critical thinker, knowledgeable about existing gender gaps, enthusiastic and committed to achieving gender equality, motivated to bring about change, responsible, decision-maker, persuasive, communicative, believes in humility, and an advocate of equality and equity. These entail that the gender champions are expected to have or develop these skills to be agents of change in their respective organisations. The training of trainers was designed to help the gender champions have

the required knowledge (identifying gender gaps and the underlying causes), skills and abilities, and motivation to be change makers. Exhibiting these qualities needs transformational learning which involves consciously making meaning of their lives by focusing on becoming instead of knowing. A teaching-learning strategy that fits adults such as engagement, experience sharing, life-centred, and task-oriented fosters transformational learning. Since gender inequality is rooted in structural and sociocultural factors, there may be resistance to challenging the existing gender inequality. As noted during the training, this resistance takes different forms including denial of the need for gender change, trivialising gender equity and equality, and refusal to accept responsibility. Institutionalisation, diversity, inclusivity, effective communication and dissemination, networking and collaboration, improving teamwork and methodology, and enhancing the capacity for change were recommended to avoid and overcome resistance. The importance of monitoring and evaluation was also emphasised to know that change is occurring or has occurred.

vi. Gender champions workshops

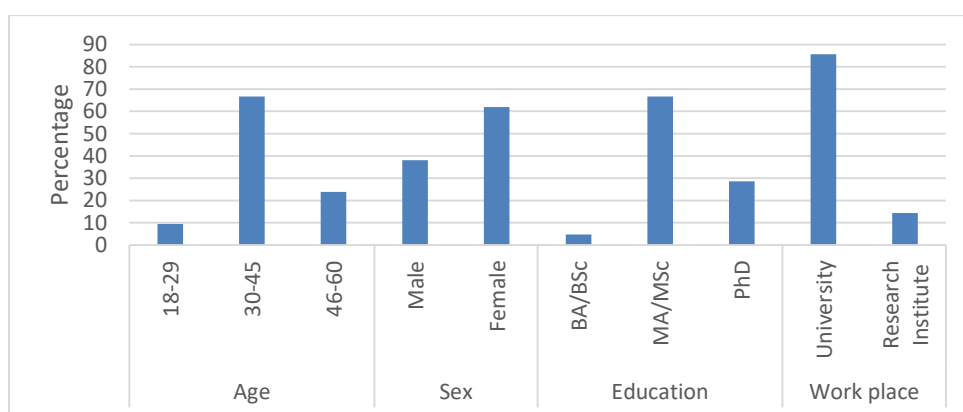
The EGLF organised three gender champions workshops together with the EAS with the support of INASP. The three workshops, organised in three places by clustering the universities based on the proximity of their locations, involved a total of 78 individuals (57 females and 21 males) drawn from 30 public universities and nine national research institutions (EGLF, 2022a). The first gender champions workshop was hosted by Arbaminch University in April 2021. The number of participants in the three-day workshop was 29 (23 females and six males) representing 10 higher education and four research institutes from three regions (Sidama, SNNP, and Gambella). The second workshop was hosted by Arsi University and held in Asella in October 2021. A total of 26 participants (19 females and seven males) were drawn from 11 higher education and two research institutions from Addis Ababa and three regional states (Oromia, Afar, and Somali). The third workshop was held in Gondar in May 2022, being hosted by the University of Gondar. The workshop brought together 23 participants

(15 females and eight males) from nine higher education and three research institutions from the Amhara and Benishangul-Gumuz regions. Two criteria were used to select the workshop participants. The first was an academic/research staff of the university/institute with at least a Master's degree, engaged in research and publication, and demonstrated commitment to engage in gender-related activities aimed at ensuring gender equality. The second criterion was an official delegate from the unit/department promoting gender equality and equity in the respective institutions.

The overriding objectives of the workshops were engaging higher education and research institutions in promoting gender equity institutionally and developing a shared understanding of the dimensions and drivers of gender inequity in higher education and research institutions. They also aimed to introduce to the participants the potential roles of the Gender Forum (i.e., EGLF) in supporting and enhancing institutional efforts and identifying key areas of intervention to begin or continue to promote gender equality and equity in the institutions. The major contents covered during the workshops were the gender gap in higher education and research institutions at global, national and institutional levels; terminologies and meanings of gender concepts; the invisible gender and unconscious gender bias; and gender mainstreaming. Furthermore, the participants were trained on how to promote gender champions and manage resistance in mainstreaming gender. They also discussed in detail how institutions as well as individuals can play constructive roles to strengthen the Forum and how the Forum could be supportive of their aspirations to bring gender equity across higher education and research institutions. It further created an opportunity to introduce the EGLF and create a clear understanding of how to engage with, contribute to, and benefit from the Forum. The delivery mechanisms were interactive lectures, in-depth discussions, reflections, and sharing experiences and practical examples. At the end of the workshops, participants prepared action plans based on gender gaps they identified for their respective institutions.

An online survey was conducted in 2025 to assess the effectiveness and outcomes of the gender champions workshops. A questionnaire comprising structured and semi-structured questions was distributed via email to all workshop participants, yielding 21 responses. Figure 7.1 illustrates that the largest proportion of respondents (66.7%) fell within the 30-45 age range. A significant majority (62%) of the respondents were female. Just over a quarter (28.6%) held PhD degrees, while two-thirds of the workshop participants possessed a master's degree. At the time of the survey, approximately 86% of respondents were employed in universities, with the remaining individuals working in research institutes.

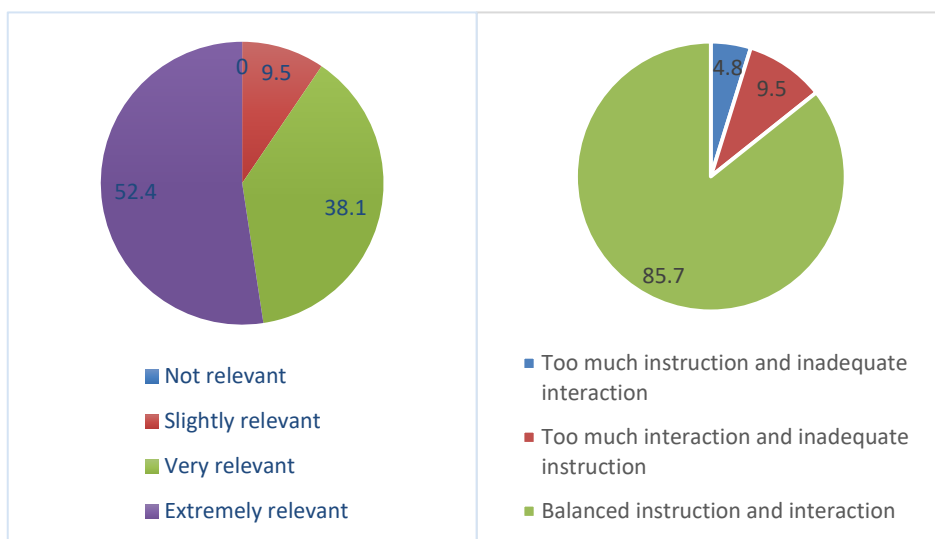
Figure 7.1 Background characteristics of participants of the survey



Source: Online survey (February 2025)

Relevance and characteristics of the training: Overall, the workshop topics are relevant to participants' interests and supportive of improving their role in ensuring gender equity in their respective institutions. As depicted in Figure 7.2, over half of the participants rated the workshop as extremely relevant, and an additional 38.1% found it highly relevant.

Figure 7.2 Percentage distribution of the relevance and characteristics of workshops



Source: Online survey (February 2025)

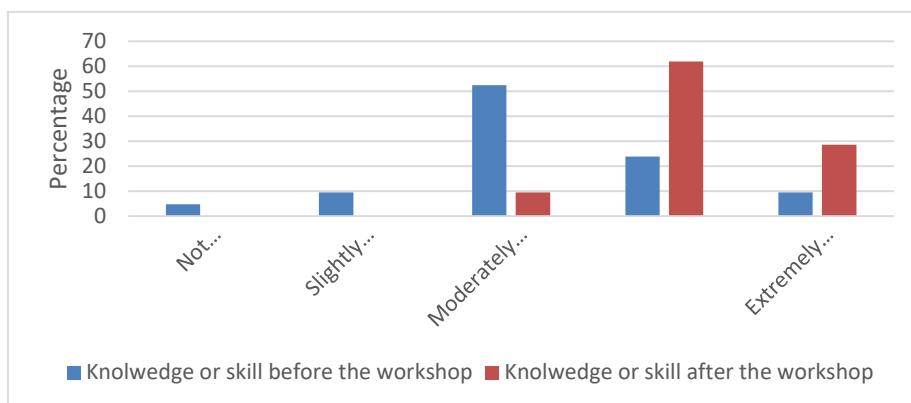
The effective delivery of a workshop focused on a relevant topic is crucial for achieving its objectives and benefiting the participants. Characteristics of the training, such as the balance between facilitator instruction and participant interaction, are key indicators of proper delivery. Figure 7.2 confirms that the workshops effectively employed a balanced approach of instruction and interaction, fostering team cooperation and interactive learning. The workshop environment was lively; the participants shared real-life experiences of both individual participants and different institutions with success stories.

Knowledge/skill gained: One of the objectives of organising the gender champions workshops was to increase participants' awareness of gender issues. The attainment of this objective is the function of the knowledge and skills gained by the trainees. Before the workshop, more than half of the participants were moderately knowledgeable about gender issues and moderately skilled in conducting gender analysis (Figure 7.3). After the

workshop, this number noticeably dropped to 9.5%. On the other hand, the percentage of participants with very good knowledge of or skill in gender issues increased by 38.1 percentage points following participation in the workshop. Likewise, only 9.5% of the participants were extremely knowledgeable before the workshop which substantially increased to 28.6% after the workshop. No one reported a lack of knowledge or being slightly knowledgeable after attending the workshop.

The survey participants were asked about the benefits (knowledge/skills) they obtained from the workshops. The major benefits reported by the participants were increased ability to identify or analyse gender gaps in higher education and research institutions, application of gender issues in practical works, understanding how to engage with the EGLF, increased awareness of the existing gender gaps in higher education and research institutions, understanding the gender gap in Ethiopia, understanding the drivers of gender inequality in higher education and research institutions, and understanding the gender terminology. As noted by the participants, the workshop allowed the participants to learn new concepts such as 'hidden gender'. The most important skill gained by the participants was tools of gender analysis and application of gender issues in practical works. In general, the workshops were useful in raising the awareness of the participants on gender-related concepts and gender gaps. The participants were well-trained on how to promote gender champions and manage resistance to gender mainstreaming. The preparation of the action plan at the end of the workshop was appreciated by the participants to achieve the objectives of EGLF and ensure institutional sustainability. The workshop also created an opportunity to facilitate networking among universities and research institutions that were participating in the workshop.

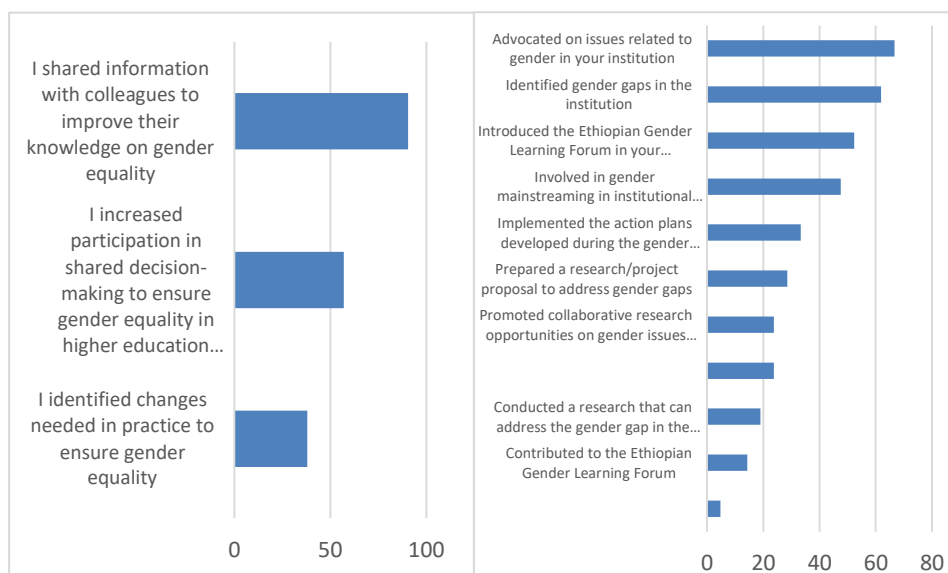
Figure 7.3 Changes in knowledge/skill due to gender champions workshop



Source: Online survey (February 2025)

Use of the knowledge or skill gained from the workshop: All 21 respondents reported that they practically used what they learned from the workshop. Slightly more than half (52%) of the respondents stated that they somewhat used what they learned whereas the remaining 48% of the respondents replied that they used the knowledge/skill gained a lot.

Figure 7.4 Use of knowledge and skill gained from the workshop in workplaces

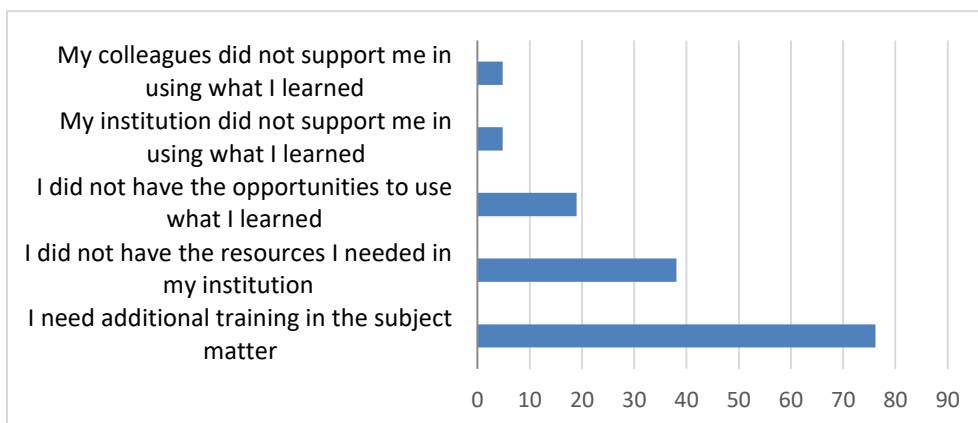


Source: Online Survey (February 2025)

Respondents were further asked how they leveraged the knowledge and skills acquired from the workshop to benefit their colleagues and broader institutions. Figure 7.4 illustrates the reported benefits at both team and institutional levels. Approximately 90% of respondents indicated that they shared information with colleagues to enhance their understanding of gender equality. Participants also reported increased involvement in shared decision-making processes to promote gender equality within their institutions. Furthermore, they were asked about the application of workshop knowledge and skills within their respective institutions. As indicated by over half of the responses, a majority advocated for gender-related issues and identified gender disparities within their institutions. They also introduced the EGLF within their organisations. However, Figure 7.4 reveals that only one-third (33.3%) of respondents implemented the action plans developed during the workshop. Respondents identified individual motivation to champion gender equality and the acquisition of necessary knowledge and skills as key enabling factors for utilising the workshop's outcomes.

Challenges to use the knowledge and skills gained in the workshop: Survey respondents were asked to identify the challenges they encountered in practically applying the knowledge and skills acquired from the workshop. The responses, as presented in Figure 7.5, indicate that obstacles to the application of this knowledge and these skills stem from both personal and institutional factors. The primary personal challenge cited was an insufficient level of knowledge and skill to initiate or contribute to effective measures for addressing gender inequality. Just over three-quarters of the responses (76.2%) indicated a need for further training to effectively utilize the gained knowledge and skills. The main institutional challenges identified were a lack of resources and conducive conditions (opportunities) necessary to translate knowledge into practice and to utilise skills in addressing gender inequality.

Figure 7.5 Challenges faced by workshop participants to use knowledge/skill



Source: Online survey (February 2025)

Future intention to use the knowledge and skills: The participants were asked their intent for future use of the knowledge and skills gained from the workshop. All respondents stated that they would use them in the future. About three-fourths (71.4%) replied that they would definitely use them whereas the remaining ones stated they would possibly use it in the future. Figure 7.6 shows how they will possibly use them. The major use was improving their performances in institutional activities related to enhancing gender equality. This was followed by the future intention to conduct research on gender inequality and develop strategies to ensure gender equality. Indicating their interest in and satisfaction with the workshop, all survey respondents stated that they would recommend the training to others. About 91% of them stated that they would probably recommend it whereas the remaining stated they are somewhat likely to recommend it.

Figure 7.6 Future intent of using the knowledge and skill gained from the workshop



Source: Online survey (February 2025)

However, there were limitations in the workshops. First, there was a gender imbalance in the number of workshop participants. Only less than one-third (26.9%) of the participants were males. Although gender shows power dynamics among males and females and that men can and should play impactful roles to address the root causes of gender inequality, they were underrepresented in the workshops. Second, the workshops did not involve top management of the universities and research institutes. Since gender inequality is partly related to structural problems, institutional measures are required to overcome these problems. The action plan prepared during the workshop can also be effectively implemented when there is institutional support. Hence, the lack of participation of the top management as well as concerned officials from the Ministry of Education is a big constraint to challenging gender inequality and mainstreaming gender to bring about transformational change in universities and research institutes. Third, there was no follow-up both in providing refresher training and monitoring the implementation of the action plans. Fourth, a shortage of time was mentioned as a weakness both in the online survey and the post-workshop feedback collected by the project coordinator.

Understanding conceptual issues and mastering tools for gender analysis and mainstreaming requires sufficient time for deliberation, discussion, practical exercises, and demonstration. Fifth, there was no continuity in the workshop. Lastly, lack of support for the implementation of the action plans and follow-up of progress and challenges at the institutions also affected the effectiveness of the workshops in attaining their intended objectives of cultivating gender champions, institutionalising gender mainstreaming, and raising the presentation and representation of female scholars in the universities and research institutes, and attaining gender equality in the knowledge and research system in Ethiopia.

vii. Training on research communication

EAS organised a five-day training on research communication for emerging researchers in August 2021 with the aim of enhancing their capability to communicate research findings to inform policies. The participants were drawn from different higher education and research institutions. The main objective of the training was to equip emerging researchers working in the areas of population with the knowledge and skills of strategic research communication for policy audiences to bridge the gap between research and policy. A total of eighteen individuals attended the training workshop. The participants were provided with a training manual which was prepared by EAS to support its capacity building initiative of and active engagement in bridging evidence and policy.

The training was instrumental in improving the knowledge and skills of the participants to understand the process and means through which research informs policy, design a research communication strategy and use multiple dissemination media outlets including policy briefs as well as mainstream and social media. Specifically, the training allowed the participants to get a better understanding of the articulation of policy implications of research, identification of policy audiences, tailoring communication messages to the audiences, and utilisation of different platforms for dissemination. The training was provided by a consultancy firm recruited by the Academy. The

post-training feedback and reflections of the participants attest to the relevance of the training, practice-oriented learning, enthusiastic participation, and the successful completion of the training.

viii. Training on research project cycle management and research communication

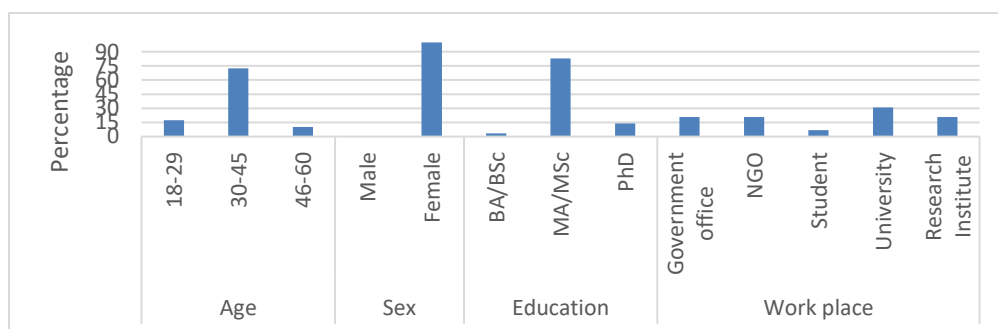
With the support of the Packard Foundation, the Academy organised knowledge-building and skill-enhancing training for emerging young women researchers on project cycle management and research communication. Two rounds of training on the topic were conducted. The first round of training, supported by the David and Lucile Packard Foundation, was conducted for five days in December 2022. Another round of five-day training was organised in August 2024 on the same topic through the support of the Austrian Embassy. The training targeted women researchers working in the areas of gender and social inclusion; they were drawn from higher education, research institutes, and independent women researchers. Individuals under the age of 40 who have Master's or PhD degrees in fields of study related to Gender Studies, have at least five years of research experience in Gender-related areas, are actively engaged in research, and committed to communicating research outputs to inform policy process and decision-making were selected from the applicants for the training. While 29 female participants attended the first training, 22 individuals participated in the second-round training.

The main objective of the training was to enhance the capacity of researchers to effectively and efficiently manage research projects and communicate research outputs. The training topic was selected following a needs assessment which showed gaps in the management of research projects and communication of research findings. The contents covered in the training were scientific research and research projects, research project cycle, research project management, research communication, and networking with international researchers and institutions. The training was provided by a scholar of Public Management with solid experience in

conducting research and facilitating training. Practical exercises, group discussions, and presentations were widely used in the training. Overall, feedbacks from the participants show that the training was useful in enhancing the technical and managerial skills of women in research project management and communication of research findings. A group Telegram channel was created for the training participants which not only helps sharing of materials but also future networking. The channel is active and the members exchange information including publications, training opportunities, and grants.

An online survey was administered to evaluate the training's effectiveness and impact, garnering responses from 29 individuals. The majority of respondents (72.4%) were middle-aged researchers between 30 and 45 years old (Figure 7.7). Young researchers aged 18-29 comprised 17.2% of the respondents, while experienced researchers aged 46-60 accounted for 10.3%. All 29 respondents identified as female. A significant majority (75%) held Master's degrees, followed by 13.8% with Bachelor's degrees. The remaining respondents were either PhD holders or currently pursuing their PhD studies.

Figure 7.7 Summary of characteristics of survey participants

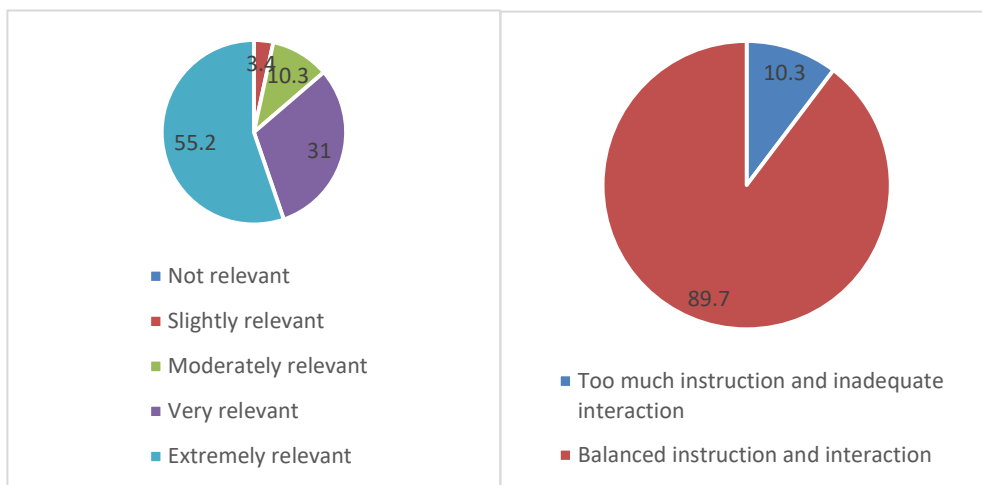


Source: Online survey (February 2025)

Relevance and characteristics of the training: The effectiveness and benefit of a training programme for its participants are contingent upon its

relevance to their interests and career paths. In this context, over half (55%) of the respondents found the training on research project cycle management and communication to be extremely relevant, while an additional 31% rated it as very relevant (Figure 7.8). Only a small fraction, less than 15%, considered it irrelevant or slightly relevant. This evaluation indicates the perceived utility and helpfulness of the training. Regarding the delivery method, approximately 90% of respondents noted a satisfactory balance between instruction and interaction. This approach is beneficial for facilitating a thorough understanding of the theoretical aspects of research project cycle management and communication, as interaction enhances learning and knowledge retention. The interactive sessions and practical exercises help the participants obtain an in-depth understanding of and solid experience in undertaking impactful research and reaching out to the policymakers and other stakeholders to use evidence-based recommendations.

Figure 7.8 Percentage distribution of training relevance and balance of interaction

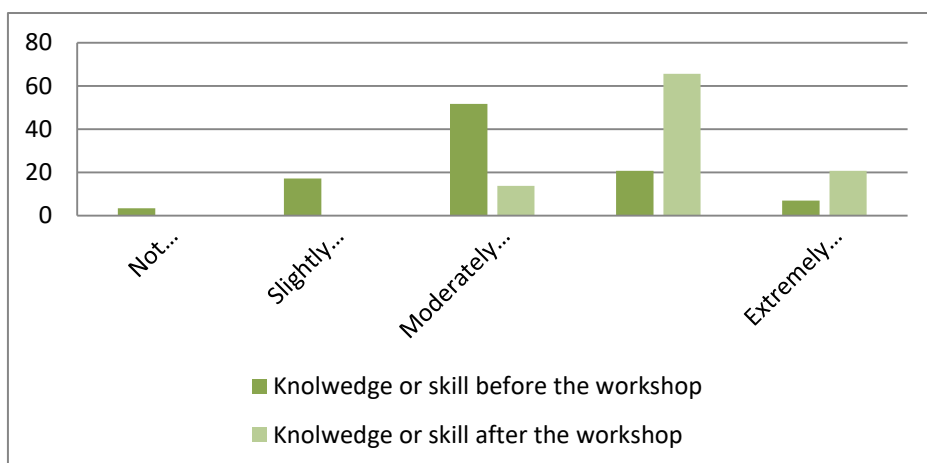


Source: Online survey (February 2025)

Knowledge and skills gained from the training: The training played a crucial role in enhancing the participants' knowledge about project cycle management and research communication and the skill of managing

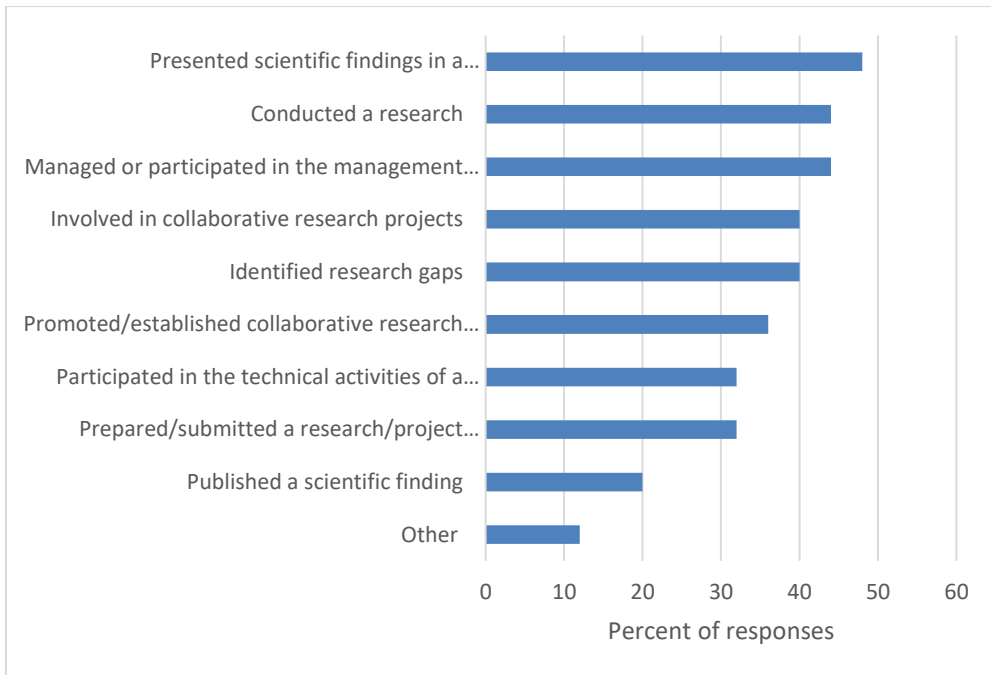
research projects and communicating research findings. As shown in Figure 7.9, participants' understanding of the subject has improved because of the training. The proportion of respondents with moderate knowledge and/or skill substantially declined from 51.7% to 13.8% whereas the proportion of participants who perceived that they were very knowledgeable noticeably increased from 21% before the training to 65.5% after the training. Likewise, the proportion of extremely knowledgeable participants has increased by about 14 percentage points. After the training, no one perceived himself/herself as not knowledgeable or skilled or slightly knowledgeable or skilled. Asked about the benefits they obtained from the training, they listed increased ability to communicate research findings, understood research communication skills, understood research project cycle, increased ability to manage research projects, understood the components of scientific writing, and understood techniques of scientific writing. The training also created networking opportunities by bringing together women researchers from diverse academic backgrounds and different institutions. They created a social media platform to connect and share relevant information on training opportunities, calls for proposals, scholarships, etc.

Figure 7.9 Changes in knowledge and skill gained before and after the training



Source: Online survey (February 2025)

Figure 7.10 Use of knowledge and skill gained



Source: Online survey (February 2025)

Practical use of knowledge and skill: When asked about whether they used the knowledge or skill gained from the training, the majority of them (86.2%) reported that they used it. More than half of the respondents (51.7%) reported they used it somewhat whereas nearly one-third (34.5%) used it a lot. Only 13.8% reported that they did not use the knowledge or skill gained from the training. The users were asked how they used the knowledge (Figure 7.10). The majority of them reported that they presented scientific findings in a seminar, workshop, or conference which entails research communication. A sizeable proportion of the respondents also conducted research and were involved in the management of research projects. The number of individuals involved in collaborative research projects cannot also be underestimated. Given that females are less involved in research activities in Ethiopia, this positive feedback is encouraging to scale up the activities to achieve a significant impact at the

national level. The respondents mentioned the availability of opportunities (e.g., suitable place of work, institutional support in the form of access to resources, and support of supervisors) and the acquisition of the required knowledge and skill as key enabling factors to apply what they learned.

Figure 7.11 Intended use of knowledge and skill gained from the training



Source: Online survey (February 2025)

Intention for future use: All the respondents stated they have an intention to use the knowledge they gained and the skills they acquired from the training. Nearly one-third (31%) of the respondents stated they would possibly use it whereas slightly more than two-thirds (69%) of them mentioned that they would definitely use it in the future. They were also asked how they would use it (Figure 7.11). The majority of the responses indicate the participants' intention to increase their competence in research project management and communication and improve their performance in research project management and scientific communication. All survey participants reported that they would recommend the training to others. About 79% of them stated they are very likely to recommend; the remaining 21% stated that they might recommend. The result shows that the training was effective in meeting the participants' expectations.

The online survey participants noted a shortage of time to do the required exercises to be equipped with the necessary knowledge to conduct research, manage research projects, and communicate research findings. Given the short duration of the training, the contents should have been focused and more engaging rather than shallowly covering a wide range of topics. It was also noted by some participants that the contents of the training were not fully updated to reflect current research practices such as the use of artificial intelligence in data collection, analysis, and scientific writing. Bringing women researchers from diverse disciplines is an opportunity to facilitate joining the EGLF to use their expertise and networks. However, as noted by the participants, this was not done due to a lack of guidance and clear procedures for engaging them in EGLF activities. Although the trainees have diverse professional backgrounds, only one facilitator was involved in the training. Hence, it was not possible to relate the examples and exercises to the needs of the trainees, suggesting the importance of selecting facilitators based on the consideration of the professional composition of the applicants.

On the other hand, there is a concern from stakeholders that training for young researchers was limited to individuals with specific professional backgrounds and those residing in Addis Ababa. The opportunity is not open for all young researchers from all disciplines across the country, which undermines the principle of inclusivity. All regions should have been given equal opportunity. One possible option to overcome the resource problem would be reducing the number of participants and ensuring the participation of others from different parts of the country. Most importantly, the purpose of the training lacks clarity. There is a lack of clarity on whether the training was intended to empower women or produce competent researchers to bridge research and policy in the areas of population and development or both. Although the initial idea was to build the capacity of young researchers to promote evidence-based policymaking and implementation, this is not reflected in the selection process of the training applicants and training delivery. In addition to the

absence of subsequent training, there was no follow-up of the trainees to ensure that they were capable of undertaking policy-oriented research and that their works contributed to bridging research and policy.

ix. Training on writing and evaluating grant, research, thesis, and dissertation proposals

This training workshop, held in February 2025, was conducted as part of EAS's commitment to empowering women in research through knowledge-building and skill-enhancing training on specific topics. The workshop was attended by 23 female participants aged 25 to 40. The majority of the participants (21) held MA/MSc degrees, with one holding a PhD and another being a PhD candidate. The participants came from various higher education and research institutions and represented diverse disciplinary backgrounds, including Natural Sciences, Social Sciences, Medical Sciences, and Agriculture. The purpose of the training was to enhance the capacity of early and middle-level career females in the knowledge and skill of developing proposals for both education and research purposes. Specifically, the training workshop was aimed at equipping the female participants with the tools to write high-quality grant, dissertation, and thesis proposals. The training emphasised developing research questions, designing research methods, structuring proposals, and critically evaluating proposals. Furthermore, it aimed to increase awareness of the training participants on common challenges and pitfalls in proposal writing and evaluation and provide alternative means to overcome them.

The training covered the following topics: proposal writing and grant development and challenges; the structure and components of research project proposals; thesis and dissertation proposal writing; thesis and dissertation proposal evaluation; and funding institutions, missions, interests and characteristics. The training was provided by two senior scholars with extensive years of experience in teaching, research, project design and management, scientific writing, and publication. The training workshop involved interactive lectures and active involvement of the

participants by providing them with the opportunities to perform hands-on practical exercises on reviewing and refining proposals. In addition to doing group exercises, the participants were involved in proposal writing, review, evaluation, and revision. As part of the practical learning strategy, the participants were assigned into four groups to practice proposal writing in response to an active call for proposals advertised by the Vermont Forum's Collaborative Research Action. The groups prepared pre-proposals based on the details given in the call for proposals. In addition, they developed review criteria to review a proposal prepared by another group and made presentations of the proposal and the review report.

An online survey was conducted to get feedback from the training participants. The results are summarised in Table 7.1. A total of 20 participants responded to the survey questions. As stated by 90% of the respondents, the objectives of the workshop were clearly defined and the same proportion of them replied that the workshop was either very good or excellent in meeting their expectations. The duration of the workshop was also positively assessed by the trainees. One-fifth of the trainees mentioned that the relevance of the contents of the workshop was very good but eight out of ten participants assessed its relevance as excellent. The practicality and usefulness of the contents as well as the relevance of the examples and case studies were also assessed positively.

The competence of the trainer is detrimental to the effectiveness of the training. In this regard, the trainees evaluated the trainer's knowledge of the subject matter as very good or excellent. Denoting the trainer's capacity to facilitate the training, 90% of the trainees mentioned the clarity and effectiveness of the communication skills of the facilitator. The trainer also used interaction as a delivery method by engaging and encouraging participation which is a more suitable method of learning for adults. The participants also witnessed the appropriateness of the training materials, the comfortability of the training venue and its facilities, and the proper organisation of the workshop.

The trainees indicated that they obtained useful knowledge in writing and evaluating research proposals. Although the use of the knowledge gained from the training is not yet known, the trainees feel confident that they would apply the knowledge gained for writing grant proposals to secure funding for research. They also indicated that they would use the knowledge to improve the quality of their thesis or dissertation proposals.

Table 7.12 Summary of participants' reflections on the nature of the training

Domains	No.	Questions	Writing grant, research, thesis and dissertation proposals (%)				Scientific writing (%)			
			F	G	VG	E	F	G	VG	E
Objectives	1	The workshop objectives were clearly defined.	--	--	10	90	--	--	8.7	91.3
	2	The workshop met my expectations.	--	10	25	65	--	--	17.4	82.6
	3	The duration of the workshop was appropriate.	10	5	20	65	--	13.1	30.4	56.5
Content	4	The content covered was relevant to my work/studies.	--	--	20	80	--	--	--	100
	5	The quality of the workshop content was high.	--	5	40	55	--	4.4	30.4	65.2
	6	The material presented was practical and useful.	--	--	20	80	--	4.4	13	82.6
	7	The examples and case studies used were relevant and helpful.	--	5	20	75	--	4.4	13	82.6
Trainer evaluation	8	The trainer's expertise in the subject matter was evident.	--	--	20	80	--	4.3	8.7	87
	9	The trainer communicated clearly and effectively.	--	--	10	90	--	4.4	13	82.6
	10	The trainer was engaging and encouraged participation.	--	5	10	85	--	--	13	87
	11	The trainer was responsive to questions.	--	--	--	--	--	4.3	--	95.7
	12	The trainer was knowledgeable about the subject matter.	--	--	15	85	--	--	4.3	95.7
Workshop organisation	13	The training materials (handouts, slides, etc.) were helpful and easy to understand.	--	5	25	70	--	--	17.4	82.6

Table 7.22 *Continued.*

	14	The venue and facilities were comfortable and appropriate for the training.	F 5	G 5	VG 25	E 65	F 8.7	G 4.4	VG 39.1	E 47.8
	15	The workshop was well organised and managed.	--	--	15	85	--	8.7	8.7	82.6
Learning outcomes	16	I gained useful knowledge on writing and evaluating research proposals.	--	5	15	80	--	--	--	--
	17	I now feel more confident in applying for grants and funding.	--	5	55	40	--	--	--	--
	18	I learned new strategies for improving thesis and dissertation proposals.	--	--	50	50	--	--	--	--
	19	I gained useful knowledge on writing scientific reports.	--	--	--	--	--	--	8.7	91.3
	20	I now feel more confident in writing manuscript reports for journals.	--	--	--	--	--	--	21.7	78.3
	21	I have a better understanding of how to develop policy briefs.	--	--	--	--	--	4.4	39.1	56.5
	22	The training increased my knowledge of research communication.	--	--	--	--	--	4.3	8.7	87

Notes: F: Fair; G: Good; VG: Very Good; E: Excellent

Source: Online survey (April 2025)

x. Training on writing scientific reports, manuscript, and policy briefs

The overriding objective of this training was enhancing the capacities of young female researchers to write accurate, clear, and concise scientific reports, manuscripts, and policy briefs to effectively communicate research results as well as policy and practical recommendations to academic and research institutions, policymakers, and other targeted audiences including the general public. The training participants were early-career researchers, policy analysts, individuals involved in writing research-based policy documents, and individuals working in organisations involved in research dissemination. A total of 43 individuals participated in the training. The project coordinator collected feedback from the participants using Google Forms at the end of the training to assess the effectiveness of the training. The assessment questionnaire was filled out by 23 participants, who reported that the objectives were clearly defined and the training met their expectations (Table 7.1).

The five days of training covered the following topics: scientific report writing (key components of scientific reports, scientific writing styles and formats, data presentation, and citation styles), manuscript writing (writing manuscripts for peer-reviewed journals, the structure of a manuscript, review process and addressing reviewers' comments, and ethical considerations in manuscript writing), and policy brief development (purpose and structure of a policy brief, targeting audience, writing with clarity and precision, and using evidence to support policy recommendations). The training participants stated that the contents were relevant to their work or studies; the examples and case studies were helpful; and the training materials were practical and useful (Table 7.1).

The training used diverse sets of methods and techniques to foster learning. These include lectures that introduce theoretical concepts and techniques, interactive discussions, practical exercises, group work, and peer review. The training participants appraised the trainer's approach as excellent in encouraging and engaging participants. The training was facilitated by an

expert with solid experience in writing scientific reports and policy briefs. The trainer was not only knowledgeable about the subject matter but also responsive to the questions of the trainees. As testified by about 83% of the trainees, the clarity and effectiveness of communication of the trainer were excellent. The training was also efficient as evident from a positive assessment of its proper organisation, appropriateness of the training facilities, and clarity of the training materials. The trainees stated that they gained useful knowledge in writing scientific reports. More than three-fourths of the trainees indicated that they feel very confident in preparing scientific reports.

xi. Training on qualitative data analysis using MAXQDA

This training was conducted as part of the initiative to strengthen the capacity of women researchers to undertake qualitative studies to bridge research and policy. The objective of the training was to equip female postgraduate students with the skill of qualitative data analysis through the use of MAXQDA. The training targeted female postgraduate students (of MA/MSc or PhD) enrolled in social sciences programmes and whose project title or research proposal was accepted by their institutions. It was conducted for five days in February 2025. A total of 22 female postgraduate students currently working on their research in public and private higher education institutions in Addis Ababa attended the training.

The contents covered in the training include the application of MAXQDA for qualitative data analysis, key terms in MAXQDA, creating a new project, importing data, viewing and editing data, coding, analysing coded segments, segment retrieval, text search and visual tools, paraphrasing and summarising, comparing cases and groups, Questions-Themes-Theories, analysing videos, analysing focus group and survey data, report and export, and mini-project demonstration. A participatory approach was used in the training. These include interactive lectures, group discussions, demonstrations, practical exercises, and a mini project on qualitative data analysis and visualisation. The workshop was efficiently conducted with

excellent facilitation of the Ethiopian Management Institute, a place where the training was held.

At the end of the training, feedback on the content and methods of training was collected by the project coordinator. The participants reported that the content was highly relevant to their work and the training achieved its intended objectives. They reiterated that the trainer knows the subject matter very well and the delivery method was participatory and mainly involved hands-on practical sessions. Such positive feedback demonstrates the effectiveness of the training and its positive impact on the overall learning experience of the trainees. In addition to enhancing the proficiency to use the software and the skill to analyse qualitative data, the training created networking opportunities for the participants from diverse professional backgrounds for future collaboration and professional engagements. The training was also useful in developing the capacity of female researchers, enhancing their competence to conduct research, increasing their roles in research, and narrowing the gender gap in higher education and research institutions.

xiii. Establishment of Advisory Council for Centre for Women Researchers

As explained above, the EAS has been implementing several activities to promote gender equality in the knowledge and research system in Ethiopia. Recognising the importance of gender-related activities and the need for strengthening and sustaining the current efforts, the Academy planned to establish the Centre for Women Researchers and its advisory council consisting of its Fellows to guide and oversee EAS' programmatic approaches and activities aimed at promoting equality in higher education and research institutes. A draft guideline defining the roles and responsibilities of the advisory council was also prepared to be enriched by the meeting participants. Six regular female Fellows and the staff of the EAS secretariat convened to discuss the issue and decide on the ways forward. The meeting recognised the importance of considering gender as one of the main activities of the Academy. However, the participants reflected on

previous activities that were not as fruitful as planned. For instance, the Academy facilitated the establishment of and hosted the Ethiopian Gender Learning Forum. However, the Forum is not currently active. It was noted that the importance of reorganising the Forum under the Academy as a Centre or Desk. In addition to academic and research institutions, the participants underlined the importance of considering professional associations. Furthermore, it was noted that defining and designing the structure of the Gender Centre within the organisational structure of the Academy should be given priority before establishing the advisory council and ratifying the guideline. The meeting was concluded by making decisions on the importance of preparing a comprehensive working document which serves as a background document to establish the envisaged Centre/Desk. The women Fellows took the responsibility to work with the secretariat to prepare the working document that addresses the meeting's concerns.

xiii. Enhancing women's and girls' participation in STEM

To cultivate the knowledge, competencies, skills, innovation, and creativity essential for sustainable development and the promotion of African core values, the African Union's Agenda 2063 and the Continental Strategy on Science, Technology and Innovation underscore the necessity of reorienting Africa's education and training systems to fully incorporate STEM education programmes. Although the continent has made significant strides in broadening access and improving the quality of STEM education, student enrolment in these critical fields remains low, with less than one in four pursuing STEM disciplines. The challenges are more compounded for girls, who, owing to prevailing social, economic, and harmful traditional practices, encounter substantial impediments to their educational and training pursuits relative to their male counterparts. In Ethiopia, too, there is a significant gender gap in the participation of women and girls in STEM.

In 2015, the UN General Assembly decided to establish an annual International Day to recognise the critical role women and girls play in science and technology. This provides an opportunity to promote full and

equal access to and participation in science for women and girls. The EAS, in collaboration with UNESCO and STEM Power, commemorated the 8th International Day of Women and Girls in Science in 2023. The main objective of the event is to learn more about the roles of Ethiopian women and girls in science, technology and innovation, and their contribution to accelerating the realisation of the country's development priorities linked to SDGs. It also aims to promote the roles of women and girls in STEM, encourage girls to study science and technology, and increase women's representation in scientific research and leadership.

In addition to exhibitions, panel discussions were held on four pertinent topics: the state of women in science in Ethiopia; the opportunities and challenges for women in scientific leadership; the examples of women's contribution to using science to drive SDGs 6, 7, 9, and 11; and current initiatives to promote gender-transformative STEM education in Ethiopia. The panellists noted that although the number of girls going to schools is increasing, they are underrepresented in STEM fields and there are very few female scientists in the country. They further reiterated the importance of increasing the representation of women in science stating that "women need science and science needs women". Scholars from all working groups of the EAS, UN agencies, ministerial offices, universities, CSOs, and high schools attended the event. The event was useful in terms of enhancing understanding of the roles of women and girls in STEM, recognising the contribution of women to the achievement of SDGs, and inspiring young females to join STEM fields and make significant contributions to individual empowerment, gender equality, social transformation, and economic growth.

The STEM agenda is highly relevant to Ethiopia. Given the underrepresentation of women in science and research, prioritising women and girls, closing the gender gap in science, promoting women to carry out research, and addressing barriers to women's participation in science are key development agendas. There is a need to push the empowerment of

women in science, publish, and promote their careers in research. The commemoration activity was also effective in terms of raising the feasibility of the role of women in science; celebrating women who have achieved in science; and encouraging policymakers and institutions to take concrete steps to promote women's participation in science and research. In terms of impact and sustainability, there has been a change. The event contributed to ongoing activities such as the introduction of STEM education; strengthening of the STEM desk under the Ministry of Education; demonstrating what STEM is all about; and ensuring infrastructural facilities to strengthen STEM education in Ethiopia. However, there was no continuity in organising the event. Although the International Day of Women in Science is supposed to be commemorated annually, it was not held in the subsequent years. Addressing the deep-rooted problems of women's underrepresentation in STEM requires persistent actions to challenge the underlying causes, recognising the national contribution of the few female scientists, and showcasing the success stories of females in STEM fields.

7.1.4. Partnerships, Operational Setting, and Organisational Capacity Development

This section briefly explains the partners and operational setting of EAS concerning the implementation of population and development projects. It also discusses the benefits gained from implementing organisational capacity development projects.

A. Partnerships

Partnership involves a collaboration between two or more organisations to achieve common objectives. Partnership is vital to share resources (funding, expertise, technology, networks, etc.) to achieve a shared goal. Effective partnership involves clearly defined roles and responsibilities, trust and commitment, regular communication, and a framework for decision-making

and accountability. Partnership ranges from informal collaborations to formalised and legalised structures such as the signing of a memorandum of understanding.

The EAS has established partnerships with various institutions to implement population and development activities as a means to achieve its mandate of bridging research and policy. The partnerships involve national, regional, and international institutions. The Academy's national partners mainly include ministerial offices, universities and research institutions, and CSOs. The key government ministries that have been working with the Academy on population issues are ministries of planning and development, education, health, innovation and technology, and labour and skills. The partnership involves seeking expert advice and participation in the events organised by the Academy. This was useful to align the research agenda of the Academy with the goals and priorities of the ministerial offices. However, the partnerships were not strong enough to tap the potential of the Academy to provide evidence-based advice. Furthermore, as noted by one informant, institutional instability and staff turnover affected institution-based collaboration giving ways to personalised contacts.

The Academy closely collaborates with public universities and research institutions in the country to promote scientific research. Fellows are also drawn from these higher education and research institutions. Specifically, the Academy closely works with Addis Ababa University and experts from the Centre for Population Studies actively involved in most of the population and development activities of the Academy. The University of Gondar also took part in undertaking one consensus study. Reducing gender inequality in higher education and research institutions in Ethiopia was the activity the Academy has been extensively working on in the past years. Cultivating gender champions was one of the key activities undertaken in this regard. Many universities and research institutions from all parts of the country are involved in this activity by delegating senior academic staff and gender offices of their respective institutions.

The Academy partners with CSOs in its implementation of population and development activities. The major ones include CORHA, PHE Ethiopia, Population Media Centre, Engender Health, and DSW. In addition to their involvement as panellists in the discussion forums, they participated in the validation workshops to reflect on the study reports produced by the Academy. Their participation in dissemination workshops was also crucial to reaching a wider population through their networks. Some of the CSOs also commissioned the implementation of activities related to their priority areas. For instance, DSW supported the workshop organised to increase the awareness of decision-makers on the importance of dedicating a budget line and allocating a budget for adolescent and youth sexual and reproductive health (AYSRH) activities.

The Academy has also established partnerships with regional and international organisations as well as donor agencies. The African Academy of Sciences, Network of African Science Academies, and Academy of Science of South Africa are among the regional partnerships initiated by the EAS. At the international level, it made efforts to establish partnerships with the InterAcademy Partnerships and the US National Academy of Sciences. INASP, UNFPA, UNESCO, the Austrian Embassy in Addis Ababa, the Population Reference Bureau, and the Gates Foundation are among the international partners of the Academy while implementing population and development activities. Most importantly, the David and Lucile Packard Foundation was the main source of funding for the activities.

As noted before, the Academy has conducted several consensus studies, including Harnessing Demographic Dividend, Assessing Implementation of the 1993 National Population Policy of Ethiopia, and Mapping of Population and Development Stakeholders. In addition, it has organised workshops and dialogue forums involving different stakeholders. These studies and discussion forums emphasised the importance of revising the country's population policy. Currently, the government has started the process of developing a new policy by establishing technical and steering committees.

The EAS has prepared and submitted a project proposal to formulate the new national population policy of Ethiopia. The Academy established a team comprising scholars with diverse and relevant disciplines and extensive experience in the areas of population and development to prepare the draft policy. The proposal was prepared in response to the advertisement by UNFPA for consultancy service to prepare a draft policy. The preparation of the policy was envisaged to be undertaken by scholars, both Fellows and non-Fellows of the Academy, under the guidance and coordination of the Social Sciences and Humanities Working Group.

Yonsei Global Health Centre, together with St. Paul Institute for Reproductive Health and Rights and St. Paul's Hospital Millennium Medical College, organised the 6th International Reproductive Health Conference in November 2024 in Addis Ababa under the theme of "Thirty Years Post-ICPD: Progress, Challenges, and Opportunities". The EAS provided technical support as a member of the steering committee to successfully organise the event. The conference created an opportunity for researchers, practitioners, policymakers, and advocates from around the globe to convene not only to share the latest knowledge and best practices in the areas of reproductive health but also to develop actionable approaches, strategies, and recommendations to achieve universal health coverage in family planning and sexual and reproductive health in Ethiopia and beyond. Furthermore, it fostered multi-sectoral collaboration in the areas of SRH and created a platform to advocate for policy changes and implementation of effective interventions. More than 190 participants from 10 countries attended the conference. Totally, in addition to panel discussions, 19 oral presentations were made and 18 poster sessions were organised covering a wide range of critical SRH issues, including family planning, abortion, infertility, gender equality, and gender-based violence.

These partnerships are typically characterised by the mutual exchange of expertise and knowledge, the collaborative organisation of events such as conferences and workshops, joint undertakings in research projects and

consensus studies, the development and dissemination of policy recommendations, the implementation of capacity-building initiatives with a particular focus on young researchers, the sharing of best practices in science promotion and academy management, and the promotion of science and evidence-based decision-making.

B. Operational setting

The operational setting involves the conditions under which an organisation functions and projects are implemented. In the context of this study, it shows how the Academy has been implementing population and development activities. The EAS is a relatively young national academy officially launched in 2010 and re-established as an autonomous institution under Proclamation No. 783/2013 by the House of Peoples' Representatives, the highest legislative organ in Ethiopia. Although it is a not-for-profit, non-partisan, non-governmental organisation, it closely works with the government. The mission of the Academy is to promote the development and application of science, technology, and innovation. Furthermore, it provides evidence-based advice to the government and other stakeholders on issues of national interest. In this regard, population-related projects have been implemented to advise the government and other stakeholders working in the areas of population and development. To this end, it has conducted consensus studies and organised discussion forums to deliberate on the study findings.

The governance structure of the Academy: The EAS operates under a structured governance and administrative framework. The General Assembly, consisting of all regular Fellows, is the highest governing body of the Academy. The overall policy directions and priorities of the Academy are set by the Assembly. It also elects the Executive Committee, led by the President, that is responsible for overseeing the Academy's activities and management issues. The day-to-day activities of the Academy are managed by the Secretariat which is led by the Executive Director. The director is responsible for managing financial issues and overseeing the

implementation of population and development activities. The scientific activities of the Academy are organised into six working groups which are also tasked with facilitating collaboration and network building. These are agriculture, engineering and technology, health sciences, natural sciences, social sciences and humanities, and arts working groups. Population and development activities are associated with the social sciences and humanities working group. This working group was responsible for ensuring the relevance of the activities and their alignment with the strategic priorities of the Academy.

Fellows' engagement: The Academy has no permanent research staff to conduct consensus studies on selected topics. Like any other academy of science, the EAS heavily relies on its Fellows to undertake these activities. Currently, the Academy has 209 Fellows. The Fellows are expected to initiate partnerships, develop research proposals, evaluate proposals, serve as panellists, and conduct studies. Fellows are elected through a rigorous peer-review process based on their scientific excellence and significant contributions to knowledge. The Fellows have diverse professional expertise drawn from natural sciences, social sciences, humanities, engineering, health sciences, and agricultural sciences disciplines. They are expected to serve the Academy voluntarily in working groups and standing committees.

The Fellows participate in demand-driven and internally initiated projects. EAS first invites and encourages its Fellows to participate in consensus studies and other related activities. The review of the list of regular Fellows of the Academy shows that it has a very limited number of scholars whose profession is directly related to the field of Population Studies. In the absence of Fellows with the necessary expertise, other experts are identified, mostly by the working groups, to undertake the activities. This partly explains the reason why most of the consensus studies are outsourced to be undertaken by non-Fellow scholars. A couple of the studies were also undertaken by consultancy firms. Although the Academy

uses several quality assurance mechanisms such as peer-review of the inception and study reports, consultative meetings, and validation workshops, these studies (i.e., the one on heroines and the other on Awra Amba Community) lacked methodological rigour, which has undermined the quality of these studies. In future, EAS should ensure the feasibility and methodological rigor of planned research activities prior to launching projects. It should also critically examine the quality of the study outcomes before considering publication of the outputs.

Funding: The Academy receives core funding from the government to cover the salary of permanent staff and other administrative running costs. However, the budget to conduct studies and organise discussion forums is mainly obtained from national and international funding agencies as well as development partners. Although Fellows also contribute membership fees annually, the amount is too small to serve as an important source of funding for the Academy's activities. Hence, securing sustainable funding remains a key operational challenge for the Academy. This problem is reflected in the shortage of funding to enable the working groups to launch their own research projects without external funding. The annual budget allocated to each working group is too small to cover the full cost of research projects. Although the Academy's activities are in principle undertaken by volunteers, the Academy has yet to devise a mechanism for encouraging Fellows to engage in project development and mobilization of funding. Consequently, projects initiated by the Fellows of the Academy to generate funds from external sources are quite limited.

Project staff: Senior project officers were employed at different times to implement the day-to-day activities of the project. A gender expert was also employed to coordinate the gender-related activities of the Academy, including facilitation of the gender champions workshop and serving as a focal person for the EGLF activities. However, there has been no replacement after the officer resigned from the post. Project implementation activities are managed by the relevant senior project

officer/s of the Academy, but also benefit from the regular support of the finance, procurement, and ICT departments. The main challenge for the Academy to attract and maintain competent project staff is the relatively less competitive salary and lower benefit packages.

C. Organisational capacity development

The EAS organisational capacity building project was aimed at strengthening the Academy's capacity to sustain its work by enhancing its efficiency in the operational system and increasing its impact by effectively implementing its priorities. To this end, the Academy has undertaken capacity-building training and development of institutional strategies and procedures which have substantially contributed to strengthening the organisational capacity of the Academy as briefly described below.

Revision of strategic plan: The new strategic plan of the Academy (2023-2027) was prepared after passing through a series of steps of critical reflection, including a review of the past performance and experience of the Academy, consultation of the key internal and external stakeholders, and benchmarking of selected academies, networks and local organisations with similar mission and mandates. The newly adopted strategic plan was endorsed by the General Assembly of the Academy in November 2022. In addition to redefining the strategic priorities, it has introduced initiation and diversification of income-generating activities to ensure financial sustainability. This strategic document serves as a basis to define priority areas for research and policy advice to make meaningful contributions to national needs.

Revision and development of policies and manuals: The gaps in the existing policy and procedure manuals of the Academy have been identified and the documents are updated. These are ICT policy, organisational chart, salary scale review, finance and accounting policy and procedures manual, human resource policy, and procurement policy and procedures manual. In addition, five draft new policy and procedure manuals as well as systems

have been prepared. These are media and communication policy, grant management policy and procedures manual, safeguarding policy and procedures, knowledge management policy, management information system (inventory management, human resource management, and project management), knowledge management system, and database of experts and professional societies. The EAS staff either participated in the development of the systems or received orientation on the policies, manuals, and guidelines.

Introduction of an efficient system of financial management: Intending to modernise its financial management system, the Academy introduced the International Public Sector Accounting System (IPSAS) and staff were trained on its application. Consequently, the financial statements of the Academy, which are also verified by external auditors, have been produced using the system since the 2020/21 Ethiopian fiscal year.

Improvements in the IT infrastructure and system: The capacity of the EAS server has been upgraded to handle management information system (MIS) and databases developed. The website of the Academy was redesigned to make it more dynamic, informative and attractive. The new website allows the collection of inputs and feedback from stakeholders. The Academy's Zoom account was created with a local service provider to facilitate virtual meetings of the Academy. The Academy also opened a foreign currency bank account at the Commercial Bank of Ethiopia to effect payments in foreign currency including Zoom account fees and contributions for the Academy's membership in regional and international networks. MIS and Knowledge Management System were established. Specifically, inventory management, human resource management and project management systems and user manuals were developed. A database was also developed to handle information related to professional societies and experts who can serve as resource persons for studies and training conducted by the Academy.

Enhancing the capacity of EAS staff: The staff of the Academy were trained on leadership and management skills, project cycle management, gender equality and diversity inclusion, safeguarding policy and procedures, and monitoring, evaluation, reporting and learning. These trainings equipped the staff with tools and skills to initiate, develop, implement, and monitor and evaluate projects. The staff also received training on audio-visual and graphic design product development and use to enhance the capability of the Academy to produce communication materials to be used for promotion of the Academy and its activities as well as documentation and dissemination of its products. EAS staff members also attended training on data quality assessment, situation analysis/environmental scanning, resource mobilisation, and facilitation skills. However, pre- and post-training assessments were not undertaken to evaluate the effectiveness of the trainings.

Formulating strategic approaches for income generation: Recognising the importance of income generation, a needs assessment of potential clients, exploration of the legal opportunities available and/or the challenges to EAS to adopt client-driven training programmes as a strategy for income generation was conducted. An assessment of the experiences of not-for-profit local organisations that succeeded in establishing and running income-generating activities to support their core activities was also made. The document serves as a working document for the EAS to take appropriate action.

To contribute towards ensuring the sustainability of the Academy through diversification of sources of grants for conducting activities aimed at promoting the sciences and providing evidence-based advice, a senior Partnership and Project Development Officer was employed. The officer was responsible for identifying potential partners, grant sources, and opportunities; developing fundable project proposals; mobilising grants and other project resources; and fostering collaborations and partnerships. However, this did not work as the recruited senior project officers left EAS

shortly after employment. They did not also deliver anything expected of them. This underscores the need for recruiting highly experienced scholars with solid knowledge and experience in grant writing, proposal development, and project management.

Gender equality and diversity inclusion guideline: The Gender Equality and Diversity Inclusion Guideline (GEDI) was developed to ensure gender equality and diversity within the organisational leadership of the Academy and address gender inequality and diversity problems in its projects and programmes (EAS, 2022c). The guideline was developed based on a desk review of general gender-related literature and EAS documents (strategic plan, human resource policy, gender policy, annual plans and performance reports) and key informant interviews of the EAS staff. Following the gender and diversity inclusion diagnostic, it identifies strategic approaches and directions for gender mainstreaming in EAS's research and advocacy activities as well as capacity-building programmes. The guideline further shows that the achievement of gender equality and diversity in the EAS requires adhering to the following guiding principles: consideration of gender as a strategic and cross-cutting issue, institutionalisation of gender equality issue, sharing of responsibilities, accountability, and awareness raising on gender issues. Implementation status of the gender guideline, improvement in women's status in making decisions at the organisational level, use of gender-disaggregated data in the EAS activities, and documentation and sharing of experience in the implementation of the guideline are identified as indicators to track the progress of implementation of the guideline. It further defines the roles and responsibilities of different entities of the Academy for the implementation of the guideline. The document identifies internal strengths and weaknesses and external challenges and risks of implementation of the guideline. Despite providing valuable information on the measures to be taken to ensure gender equality and diversity in the EAS, the document lacks coherence in presenting ideas, specificity in outlining guidelines and

checklists for gender mainstreaming, and clarity in the written communication.

7.1.5. Overall Effects of Consensus Studies and Discussion Forums

The immediate outputs of the consensus studies and discussion forums are the generation of evidence to revitalise the process of revising the population policy of Ethiopia, the creation of a sense of urgency in considering population issues in the development plans of the country, the formation of networks and platforms for stakeholder engagement, and the building of the capacity of the Academy and women's research groups.

Evidence generation and contextualised understanding of concepts in population: Availability of evidence is one of the key steps to promoting evidence-based policy making and implementation. In this regard, all the respondents pointed out that the EAS has produced scientific evidence to inform the government and other stakeholders to make decisions on pertinent population and development issues. Although it may not respond to the needs of policymakers and is less likely to be translated into practice, research outputs produced by higher education institutions have also provided high scientific relevance in terms of the generation of knowledge. To this effect, the EAS has prepared several documents based on the request of the MoPD and the demand-driven research is well-positioned to meet the practical needs of knowledge users. For instance, the background report on key population issues was prepared by the Academy upon the request of the PDC (now MoPD). The stakeholders' mapping and analysis study was also undertaken in response to the demand from the Ministry. The dictionary of population issues is of paramount importance in terms of improving understanding of key population-related terminologies in policy discourse, mass media communications, and public discussions.

Increased attention on population and initiation of policy revision: The EAS has played significant roles in bringing population issues to the fore compared to the previous years when population-related activities were

almost neglected and absent from discussions. As the government was hesitant about population issues for a longer period, this has not only resulted in the shrinking of the institutional structure over time but also in a decline in the budget allocated to run population activities. To revitalise the population issues, the Academy organised several forums to openly discuss pertinent population issues including DD. Since the engagement of the EAS, there has been a tendency to discuss population issues and embrace the idea of DD and acknowledge the importance of considering it as a strategic objective. The contribution of the Academy is immense in making population an issue of development and scientific relevance.

One of the immediate positive outcomes of the intervention of the EAS on population issues is Stakeholders' consensus on the need for revising the 1993 NPPE based on the recommendations of its review. As noted by many stakeholders, the review report has contributed significantly to a renewed interest of the government to revise the policy. There is a shared understanding among all stakeholders on the importance of revising the policy to address persistent problems and incorporate emerging issues into the new policy document. In addition, the Academy has prepared a stakeholders mapping document which helped the MoPD to identify pertinent stakeholders to be engaged in the process of policy revision and mobilise resources to engage in similar activities. The mapping document is also a valuable document for developing a national strategy for stakeholder engagement in population and development activities. This signals a promising move towards an evidence-based policy-making process.

Creation of a sense of urgency to pay attention to the human capital development of the country: The studies, dialogues, and discussion forums brought together various ministerial offices, CSOs, academics, and donor agencies to discuss population issues from different perspectives. The enlightening discussions created, as espoused by the respondents, a good understanding of the opportunities and challenges of human capital development (i.e., investments in education to produce knowledgeable, effective and competent graduates to enter into the labour market, as well

as in health to improve the quality of life) to harness DD. They also underlined a proactive approach to consider the recommendations outlined in the studies and discussions to overcome the development challenges associated with the change in the age structure of the country's population.

Improvements in the organisational capacity of the Academy and competence of women researchers: The activities undertaken by the Academy have contributed to building its capacity in managing population and development activities including but not limited to developing proposals, organising events, managing administrative activities, and coordinating stakeholders' activities. As population is a cross-cutting issue that is always raises concern, the Academy has organised a series of training for women researchers to equip them with the skills to undertake action research and strategically communicate the research findings to decision-makers in a convincing manner. The training was useful in improving research quality, increasing the roles of women and girls in research, addressing gender bias in higher education institutions, creating an inclusive and equitable research system, and creating role models and mentors for the youth. In addition to addressing skill gaps, the series of training organised by the Academy created an opportunity for the Academy to increase the pool of young researchers to be engaged in its population activities.

Creation of a platform for stakeholders' engagement and networks for collaboration of women researchers: The platforms created so far by the EAS have increased policymakers' initiatives to collaborate with the Academy to increase evidence-based decision-making. In the interviews made with the government officers as well as representatives of CSOs, it was noted that there is strong interest in working with the Academy in generating policy-oriented evidence and using it for policymaking, planning, and monitoring and evaluation. In addition, participants of the different trainings have created a social media platform to establish networks and exchange information on scholarships, training opportunities, research grants, and other professional notices including vacancy announcements.

While reviewing the social media platform, it was noted that there is active participation in the exchange of information aimed at improving career development and competitiveness. Some of the training participants were also able to publish research findings, secure training opportunities, etc. Sustainability of the created networks and platforms, however, requires follow-up and support to let them continue in the prevailing spirit.

7.2. Strengths and Weaknesses of EAS in Population and Development Activities

Strengths: According to the assessment of its stakeholders, the EAS has the following strengths which can help it to advance population and development agenda:

Trusted by the government: The EAS is an apolitical and non-partisan organisation trusted by almost all government and non-government partners. The policy recommendations made by the EAS, as viewed by the respondents, are based on systematic collection of data and objective analysis of data following a transparent methodology rather than being influenced by or promoting the agenda of a particular political party or interest group. In line with this, the view of the respondents from the Ministry of Health states “EAS is an organisation that comprises highly educated and experienced professionals from diverse backgrounds and origin who can suggest policy alternatives not influenced by political outlooks and perspectives”; the comments made by the respondent from the Pathfinders International Ethiopia Office “EAS is the only institution that could handle the complex interrelationship between population and development with its multidisciplinary members to address such an issue” could best explain the trust put on it. Consequently, the EAS has undertaken several demand-driven studies that are the outcome of the issues prioritised by the government. As noted above, the background study on key priority population issues as well as stakeholder mapping documents were prepared upon the request of the MoPD, a key government office, to

inform the preparation of the country's development plan. Since such studies are responsive to the needs of the potential users of the study findings, they are more likely to address knowledge needs, increase a sense of ownership, raise uptake of the recommendations for action, and increase the impact of knowledge on policy and practice.

Engagement of experts in the field: The Academy has made tremendous efforts in terms of engaging scholars in the field of population and development who have relevant academic backgrounds, research experience, and personal profiles. This is important to pursue innovative approaches to investigate the complex relationship between population and development, ensure the quality and accuracy of the consensus studies and policy dialogues, and increase the credibility of the policy recommendations. In addition, EAS has a lot of networks with diverse expertise who can make significant scientific contributions. Its capability to mobilise various scholars in the fields of population and development is well recognised. This is also crucial to generate breakthrough solutions by interweaving the ideas and perspectives of diverse expertise to solve complex problems.

Involvement of a diverse set of stakeholders: Involvement of key sectors is key to reaching out to as many relevant stakeholders as possible. The discussion forums organised by the Academy involved diversified participants. It has created a platform for authorities and experts working in government offices, non-governmental organisations, higher education and research institutions, media personnel, and UN agencies to meet together for evidence-based policy dialogue. The Academy has a good practice of consulting relevant stakeholders to get their views on the inception and draft reports. These are helpful to review the study design, data collection methods, data analysis, and the draft reports and improve the quality of the final report, the validity of the conclusions, and the soundness of the policy recommendations. This is one of the mechanisms through which the policy-making process can be made transparent; legitimacy and ownership can be enhanced; quality and effectiveness can be improved; conflict of interest

can be reduced, cooperation can be strengthened; and sustainability can be ensured.

Printing and dissemination of the study findings: The study reports and other documents produced by the Academy are proofread, edited, structured, and printed with high quality. The documents are disseminated both in hard and soft copies to stakeholders. This ensures that the documents are accessible to, understandable, and usable for all stakeholders including policymakers, practitioners, researchers, and the public at large. Effective dissemination promotes knowledge exchange and supports informed decision-making.

Use of multiple media outlets to communicate research findings: As known to everyone, the media plays a fundamental role in disseminating policy recommendations for public use. As indicated in the workshop reports, the Academy reached as many scholars and practitioners as possible in its discussion forums, consultative meetings, and policy dialogues through the use of multiple media outlets. These include live streaming of events, publications of study reports, policy briefs, infographics, factsheets, videos, etc. This increases public awareness of specific policy issues, significantly influences public perception in line with policy goals, and makes an issue a priority for discussion and policy action. The media also contributed to the framing of narratives on interrelationships of population and development, stimulating public and stakeholder interest in the revision of the policy.

Weaknesses: Despite its very good reputation and strengths, the Academy is observed to have the following intervention gaps which are related to planning and quality control, stakeholder engagement, communication and visibility, and partnerships and collaboration.

A. Planning and quality control

Lack of consistency in the definition of processes and desired outcomes of activities: The weaknesses of the two case studies on women against Covid-

19 and the Awra Amba Community suggest that the EAS needs to consistently apply its quality assurance mechanisms right from the inception of projects through to their conclusions to ensure that all its research engagements maintain a high standard of excellence.

Efficiency problems: Efficiency problems were noted by stakeholders in a few of the population and development projects implemented by the Academy. These are evident in the repeated no-cost extensions (although some were due to disruptions caused either by restrictions because of Covid-19 or instability in some regions, or even lack of timely response from partner government offices), unrealistic budget and timeline for implementation of some activities, and occasional lapses in quality control enforcement. There were also limitations associated with the documentation of some project activities. Staff turnover at the Academy has made knowledge preservation and sharing challenging. Where proper documentation is missing, it affects options for future referencing, monitoring and evaluation of project activities, use of stakeholders' inputs for future project planning, and comprehensive understanding of the achievements and challenges encountered during project implementation.

Absence of monitoring and evaluation frameworks for project outcomes: Although several population and development projects were implemented, there were no corresponding monitoring and evaluation frameworks for the projects to assess their effectiveness in meeting their objectives. The Academy uses its monitoring and evaluation to oversee the overall progress and performance of the project implementation, but this is not adequate to evaluate the outcomes. The monitoring and evaluation of project outcomes requires post-project M&E activities, which may not be undertaken for lack of a budget provision specifically for this purpose in the project grant. This forces the Academy to focus on project implementation processes.

Delayed and low-quality delivery of a couple of project outputs: Where the Academy lacks expertise within the Secretariat or among its Fellows, it is obliged to outsource a few of its activities to consulting firms. Such

outsourced activities were not delivered as planned. For instance, the research on “The roles of women in the fight against COVID-19” was not up to standard. It mainly focuses on the normal professional responsibilities of the identified respondents rather than on what makes their contributions outstanding. In addition, only the Amharic version of the report was released after a series of revisions while the English version awaits addressing the quality issues. The study on the Awra Amba community did not also make a specific linkage to the issues of gender dividend as planned nor did it show how the findings can be used to scale up to other communities and regions. Despite this, it should be noted here that these two projects were very minor engagements of the EAS. Besides, they have a marginal significance for the two most important targets of the diverse Bridge projects, namely, the revision of the National Population Policy of Ethiopia and the reaping of the demographic dividends.

B. Stakeholder engagement

Sub-optimal engagement of key stakeholders in the process of evidence generation and policy dialogue: There was limited engagement of some pertinent offices in agenda setting except for their attendance of the inception and validation workshops. Ideally, the roles of the stakeholders should have been extended to defining the problem/activity, determining the process, and actively engaging in the overall process of implementation. Some practical considerations, including time and funding, may have precluded this, and restricted their participation to offering feedback on proposed and/or emerging outputs. While state ministers, directors, HoPR members and other government officers have actively participated in some of the Bridge project activities, there have also been cases when higher-level decision-makers have often delivered an opening speech and gone without attending the full event where the key study findings are presented and debated. They sometimes send the relevant person in their organisation to attend the full events. As observed during the process of data collection for this study, the working relationship has been interrupted

by the time some of these individuals leave the organisation. Invitations have also been made personally to independent experts to get their inputs. But several absentees have also been noted as attendance depends on convenience to personal schedules rather than institutional responsibility for collaboration. However, not all of these challenges are within the control of EAS.

Limited involvement of some of the regional governments: Although officers from regional states have been invited to participate in some of the discussions held at the national level, no effort was made by the Academy to organise similar events at the regional level. Given that there is a disparity in population outcomes and development indicators between regions and that the regions are autonomous in making significant policy decisions specific to their contexts, conducting region-specific studies on pertinent topics and organising dialogues/discussions in the regions would have enriched the project outputs. However, extending the scope of engagement to the regional level was not possible due to shortage of funding.

C. Communication and visibility

Lack of continuity in policy dialogues and discussions: Issues demanding policy attention may not be easily accepted by decision-makers. These could be due to a lack of understanding of the problem, failure to know the solutions, giving priorities to other competing issues, and the influence of several actors with competing interests. This challenge is more serious in population and development due to ideological differences, complexities of relationships, and multi-sectoral engagements. Thus, getting policy attention requires conducting a series of discussions and dialogues to bring the issues to the attention of the public and policymakers. However, funding shortages have inevitably led to gaps in ensuring the continuity of the Academy's policy dialogues.

Failure to communicate the findings of some studies: The Academy has undertaken several studies. However, the findings and recommendations of some of the studies were not taken further. For instance, the Academy conducted consensus studies on labour productivity, best practices of the Awra Amba community in ensuring gender equality, and progress in the DD effort index. The results of these studies were not widely availed to inform the government and other stakeholders.

Limited dissemination and accessibility of research reports: Most of the participant respondents stated that they did not see any research report or material produced by the Academy. This might be related to the fact that only a limited number of the study findings were printed and a few copies disseminated during the events organised by the Academy. The website of the Academy has not been periodically updated and not all the population-related studies were uploaded to the website to increase accessibility of the materials and use them as input for decision-making.

Visibility problem: Even though the EAS is a trustworthy institution generating scientific knowledge for policy recommendation, some respondents noted that EAS is not widely known as an 'institution'. This is partly related to (i) inadequate promotion of the Academy as a non-partisan organisation supporting evidence-based policy-making, (ii) limited accessibility of its products, including research reports, and (iii) the inability to meet the huge expectations of its stakeholders in generating evidence pertinent to their needs and priorities. Most of the respondents working in the interviewed organisations unrealistically expect the Academy to address some of the difficulties that they are facing whilst dealing with population and development activities.

D. Partnerships and collaboration

Reliance on a few donors: The Academy has yet to devise a mechanism to diversify its partners. It has a working relationship with a few donor agencies, and the reliance on a limited number of donors carries significant

risks for not-for-profit organisations like the EAS. These include financial instability, vulnerability to undue influence of donors, and lack of operational sustainability and long-term planning.

Weak linkage with other academies of sciences: During its short life span, the EAS had some short-term partnerships with other academies of sciences (e.g., the National Academy of Sciences of the United States of America, the Academy of Science of South Africa, the British Academy of Sciences, the Inter-Academy Partnership, Network of African Academies of Science, etc.). However, the EAS needs to forge longer-term partnership with these and other academies to facilitate experience sharing and strengthen collaborative engagements in the generation of policy-oriented scientific evidence in population and development issues.

7.3. Challenges and Lessons Learned

This sub-section presents the challenges faced and the lessons learned during the past eight years of engagement in population and development activities.

7.3.1. Challenges

Despite making several efforts to work towards generating evidence and providing advisory services to implement the population and development activities, the EAS has faced the following internal and external challenges.

A. Internal challenges

High staff turnover and reshuffling in partner organisations: As the Academy mainly works with the government offices, staff turnover and reshuffling in the government offices has affected the continuity of the project implementation activities as well as the sustainability of the gains achieved so far in terms of understanding the problem and recognising the importance of considering population issues in decision-making. There was

also a high migration of EAS professional staff to international organisations mainly due to uncompetitive salary and benefit packages. This has not only impacted project implementation and management processes as well as documentation of project activities, but also created a burden on some staff members and affected the smooth implementation of project activities. In addition, it has resulted in the lack of continuity of the momentum of the implementation of project activities. The turnover and reorganisation of staff within government decision-making positions is also a challenge to ensuring the continuity of gains achieved so far.

Budget limitations: The budget allocated by partners for many of the project activities is insufficient, especially due to the ever increasing inflation. The inflation also negatively impacts on project planning during budget breakdown preparation by making it difficult to reliably predict costs. Consequently, there is a significant rise in the costs of implementation of the project activities (including costs of data collection and consultant fees). These led to the difficulty of getting qualified and competent expertise for outsourced assignments, reduced the quality of some of the activities, and delayed the completion of the project activities.

B. External challenges

National contextual factors: Ethiopia has been challenged by the impacts of COVID-19 and conflict in the past few years which adversely affected the smooth implementation of project activities. In particular, it resulted in the contraction of resources available to implement population and development activities. It also caused the diversion of global and local resources from regular development activities to address these pressing problems. Consequently, it was not possible to keep on the pre-COVID and pre-conflict momentum of discussing population issues. The pandemic also impacted face-to-face communications (albeit to the expansion of virtual meetings alternatively), the free movement of the consulting team to collect data, and the movement of project staff to coordinate project activities.

Difficulties to maintain partnerships: The Academy has initiated partnerships with many governmental and non-governmental organisations. Some of these institutions serve to generate financial resources and obtain technical support. However, some of these partnerships are not maintained throughout the project life cycle. This has contributed to reliance on a few institutions and limited financial resources, ultimately compromising staff motivation, commitment of Fellows, and the quality of work.

Project mentality: Some stakeholders assume that the Academy's activities are project-based and that the envisaged activities are considered as an NGO or consulting business. The project-based activities are also based on the assumption that the activities are implemented with defined resources over a defined period. At the end of the project period, it will phase out and then be forgotten while the implementers continue implementing similar or other projects. This underlines the notion that project implementations fail to address sustainability issues.

Weak tradition of evidence-based decision-making: Even though empirical evidence is growing on various population issues, the tradition of using scientific evidence to inform decision-making is quite limited. Instead, there is a strong practice of focusing on personal opinion, intuition, common sense, anecdotal evidence, past experiences, and empirically unfounded pieces of evidence as input for planning. The costs of uninformed decision-making such as ineffective policies and strategies, wastage of resources, and unforeseen negative consequences are not well-recognised by decision-makers.

7.3.2. Lessons Learned: Foundations for Effective Policy Influence

Flexibility of project implementation: The funding condition of the Packard Foundation was often flexible enough to allow the EAS to use the money to implement activities in such a way as to best address the needs and priorities of its stakeholders. The project document provides very broad

issues and general directions. Although total budget and deliverables expected at the end of the project were specified, the Academy was allowed to reprogram both the budget breakdown and activities. This allowed the replacement of the topics of consensus studies and discussion forums to respond to the most pressing issues and evolving needs of the stakeholders. The Academy benefited from redefining thematic areas of some of the project activities through a preliminary review of literature, consultation with Fellows, and engagement of the stakeholders to inform the policy process. Owing to project flexibility, the Academy can follow the same approach to modify its activities by identifying emerging issues for research and policy advice with maximum impact.

Persistence for successful policy advice: Persistence is one of the critical components of successful policy advice. It has lasting positive impacts on the attitudes of decision-makers and the contents of policies and strategies. Population is a multifarious issue, the understanding of which is diverse and the policy solutions for the problems are contested. Hence, persistence allows the issue of interest to obtain the required attention by the government and bring the sectoral government officials on board to actively engage in population and development activities. As mentioned before, the contribution of EAS in advancing the issue of DD was immense. The inclusion of the concept as one of the pillars of the ten-year development plan is mainly due to the sustained efforts of the Academy by producing several reports and organising discussion forums on the concept of DD.

Government ownership of the process: Engaging government offices and other stakeholders in all activities is of paramount importance in linking research and policy. The government should have a critical role in the process of initiating and implementing consensus studies. This includes active involvement in setting the research agenda, selecting priority areas, defining the research questions, designing the research methods, developing data collection protocols, and shaping data analysis and interpretation. The role of EAS is to facilitate the process. This government ownership increases the relevance of the study, trust in the research

process, contextual understanding of the findings, uptake of the recommendations, and sustainability of the solutions.

Stakeholder engagement: Although the participation of most stakeholders is limited to giving feedback on inception reports as well as main study findings, the Academy involves as many stakeholders as possible from government offices, non-governmental organisations, higher education and research institutions, and donors. This allows validation of the steps followed to undertake the study, ensure that the contents of the report reflect the views of the stakeholders, increase ownership of the process, and improve the uptake of recommendations. For instance, the Academy engaged the MoPD to identify priority issues for research, build consensus on the process, and get feedback on the draft reports which made the documents useful for the Ministry. This consultative approach is useful if followed by the other ministerial offices. It also helps the Academy to make contributions in areas that are most needed and impactful.

Collaboration that responds to local needs and priorities as a key to bridging the gap between evidence and decision-making: The Academy has demonstrated that a fragmented approach, which is often used by academic and research institutions, is not effective in meeting the demands for evidence-based decision-making. Instead, collaboration which responds to local needs and priorities allows for the generation of tailored evidence to respond to specific needs and address specific challenges. When the scientific evidence and recommendations generated by the Academy in response to local contexts and demands are proven to be highly relevant to the government, its likelihood of being taken up by the government is high and the outcome is worthwhile.

Capacity building ensures continuity of the linkage between research and policy: Although the nature of the relationship between population and development could vary across time and based on the dimension being investigated, this continues to be an issue of concern. Hence, the generation of policy-oriented evidence on the linkage and informing policies

to address pertinent problems is a continuous process. This entails the need for continuous engagement of researchers in undertaking consensus studies and informing policies. In this regard, the Academy's effort in building the capacity of emerging researchers on the skills for engaging in policy-oriented research and scientific communication contributes to ensuring the continuity of producing up-to-date evidence on contemporary population and development issues and the realisation of the intersection between research and policy.

Continuous learning is the basis for improvements: Through engagement of stakeholders, Fellows, and working groups and identifying issues of most significance to policy making, the Academy has fostered a culture of continuous learning and improvement. This has also ensured the relevance of the project activities implemented by the Academy to effectively bridge research and policy by increasing the likelihood of using policy recommendations. Policy influence is not a one-off event but a sustained effort and process that require continuous learning and engagement, reinforcement of messages, and building partnerships.

8. Review of Experiences of Selected Academies of Sciences

8.1. National Academy of Science of the United States of America

The US National Academy of Sciences (NAS) is a private, non-profit organisation that recognises and promotes outstanding science. It also provides objective, science-based advice on critical issues affecting the nation, encompassing the fields of science, engineering, and medicine. It was established in 1863. Initially, NAS was focusing on science but later on, expanded to the establishment of the National Academy of Engineering in 1964 and the Institute of Medicine in 1970, which later became the

National Academy of Medicine. At the moment, all are operating under the NAS charter. Membership to the NAS is a highly selective process, and it is based on distinguished and continuing achievements in original research. Membership in the NAS is highly prestigious, and it is considered one of the highest honours that a scientist can receive. Currently, NAS has about 2,700 members of which 500 of them are international. About 200 members of the NAS have received Nobel prizes. NAS oversees the National Research Council, which conducts studies and provides advice on a wide range of scientific and technological issues.

The US National Academies of Science, Engineering and Medicine (NAS) is an institution in which thousands of the world's leading experts participate in different projects, studies, and other advisory and convening activities to examine and assemble evidence-based findings to address some of society's toughest challenges. It also pursues a wide range of activities to strengthen the scientific, engineering, and medical fields and their capacity to contribute to human welfare. Its rigorous process for producing independent and objective reports that present evidence-based consensus is considered by many as the gold standard.

NAS members are affiliated to one of the following six scientific disciplines: Physical and Mathematical Sciences, Biological Sciences, Engineering and Applied Sciences, Biomedical Sciences, Applied Biological, Agricultural, and Environmental Sciences, and Behavioural and Social Sciences. The Committee on Population is categorised under the Behavioural and Social Sciences as the issue mainly deals with behavioural changes and service provision to improve the well-being of the population.

Description of the Committee on Population

The Committee on Population was established by NAS in 1983 to bring the knowledge and methods of the population sciences to bear on major issues of science and public policy. Through its syntheses and assessments, the Committee on Population seeks to contribute to the advancement of

population studies and the informed development of population-related policies. The Committee also works to improve communication and collaboration among social scientists and policymakers in both developed and developing countries. Currently, the Committee on Population has 15 members including the Chairperson. Members are distinguished professors of demography/population studies, sociology, economics, geography, public health, epidemiology, geography, public policy and the like whose research work and specialisations focus on population issues.

The selection of appropriate committee members, individually and collectively, is essential for the success of a study. All committee members serve as individual experts, not as representatives of organisations or interest groups. Members are expected to contribute to the project based on their expertise and good judgment. Whilst selecting committee members their composition and balance between different fields of specialisation, conflicts of interest, and independence from project sponsors will be assessed according to the existing policies and procedures developed for these purposes. The assessment of the composition and balance of the Committee members is held by considering the level of expertise (range of knowledge and expertise), perspective (a way of thinking about and understanding something), objectivity (objective and open-mindedness in addressing the issues), background (age, employment, sector, experience, and geographic location) and academy membership (to ensure the involvement of Academy members in the programme work) of the nominee.

The duties and responsibilities of the Committee members also include planning workshops, symposia, and similar other activities, as well as overseeing the activities of the institution. These activities address a wide range of national and international problems, needs, and opportunities. The quality and integrity of the work of this committee are essential to the reputation of the National Academy and to the continuation of the

institution's role as an advisor to the government and the nation on matters involving population and related development activities.

Members of the Committee and the panels to be organised by the Committee provide the service voluntarily. The Committee's work is supported by staff members of the Division of Behavioural and Social Sciences and Education who serve as the Director of the Office, Administrative Coordinator and Programme Associate. Their activities are made possible by the support of government agencies and private foundations. The major goal of the Division of Behavioural and Social Sciences and Education is to advance the behavioural and social sciences and education and their application to improve policies and practices. Population issues are classified under the panel of behavioural and social sciences and education.

To have a better understanding of the operational system of the NAS, a brief review of its agenda-setting mechanisms, stakeholder engagement, strategies used to translate research into practice, engagement of Fellows in the activities of the NAS, advocacy strategies and ensuring financial sustainability are presented as follows.

Agenda setting process

The NAS agenda-setting process involves identifying and prioritising important scientific issues for research and policy recommendations. This process is not a formal, publicly documented procedure, but rather a dynamic interaction between various NAS members, committees, and external stakeholders. The process of agenda setting involves: identifying key issues, prioritisation, and study or policy development. NAS members, committees, and external stakeholders suggest and discuss potential research topics and policy areas that are scientifically important and relevant to society. NAS leadership and relevant committees evaluate the suggested issues based on factors like scientific significance, policy relevance, and potential societal impact. Based on prioritisation, the NAS

may initiate studies, conduct research, develop policy recommendations, or provide advice to policymakers on identified issues.

Key aspects of the NAS agenda-setting process also include: (a) *expert consultation*: it relies on the expertise of its members and other scientific experts to identify and assess the importance of various issues; (b) *collaboration*: this calls for collaboration with other organisations, government agencies, and international bodies to address complex scientific and policy challenges; (c) *data-driven approach*: this demands the use of scientific evidence and data analysis to inform its agenda-setting decisions and policy recommendations; and (d) *public engagement*: it actively engages with the public and stakeholders to ensure its work is relevant and impactful.

The specific mechanisms and timelines for the agenda-setting process of the NAS vary depending on the nature of the issues and the type of activities. For instance, agenda-setting to conduct a study and produce a policy report or an educational programme takes different time and procedure depending on their specific needs. The final research agenda is, however, established through a structured process that involves various stakeholders, including staff of the academy, committee members, and external experts. This process may involve workshops, consultations, and data analysis to ensure that the agenda reflects the needs and priorities of the relevant communities.

Stakeholder engagement

NAS engages stakeholders through various initiatives such as science communication, policy recommendations, and collaborative research projects.

- *Science communication*: NAS actively communicates its research findings to the public through various channels, including online publications, press releases, and public lectures. Accordingly, *scientists*

and researchers often engage in research activities through funding opportunities, research grants, and collaborations on various scientific projects;

- *Policy recommendations:* It provides scientific advice to policymakers on various issues, such as climate change, food safety, and public health. It also gives expert advice and recommendations to policymakers on science and technology issues to influence policy development and implementation;
- *Collaborative research:* It facilitates collaborative research projects by involving scientists, policymakers, and community members to work together towards a common goal;
- *Public forums and workshops:* It organises public forums and workshops to engage the public in scientific discussions and address public concerns about scientific issues. This helps to engage the public through public forums, outreach programmes, and online platforms to promote scientific literacy and understanding; and
- *Educational initiatives:* It develops educational resources for students and the public to enhance scientific literacy and understanding. The main purpose of such engagement is to improve science education at all levels, from primary to higher education.

Stakeholder engagement in NAS generally involves informing, consulting, and potentially participating with a diverse range of individuals and groups. NAS aims to inform stakeholders about its work, seek their input through consultation, and sometimes involves them directly in project activities.

Strategies to translate research into practice

NAS plays a key role in translating research into practice through its advisory role and promotion of knowledge dissemination including

support for cross-cutting policy research and technology transfer. The impact of NAS is enhanced by its collaborations with other national academies and its capacity to synthesise data and promote transparency in research. The following are key roles of the NAS to translate research into practice.

- *Advisory role and policy outreach:* The NAS, as an advisory body to the nation, provides independent and objective advice on science and technology to the government, aiding in policy development and implementation. It makes policy outreach efforts to ensure that research findings are incorporated into relevant policy decisions, leading to practical applications.
- *Dissemination and knowledge sharing:* The NAS promotes the dissemination of research findings through various platforms, including publications, reports, and meetings, making research accessible to a wider audience. Data transparency and sharing are encouraged to facilitate collaboration and the rapid adoption of new knowledge.
- *Collaboration and cross-cutting research:* The NAS collaborates with other national academies such as engineering and medicine as well as international organisations to address complex challenges and promote research translation across diverse fields. It undertakes cross-cutting policy research to identify common ground for research that can be applied across different sectors.
- *Technology transfer and intellectual property management:* NAS facilitates the technology transfer which is crucial for taking research from the laboratory to practical application. It also facilitates intellectual property management ensuring that discoveries are protected and can be used effectively in practice.

- *Understanding and cognitive practices:* NAS works towards a clear understanding of the research itself, including the context and limitations. Cognitive practices, such as data synthesis and critical evaluation, help researchers and policymakers effectively interpret and apply research findings.

In general, NAS's strategies for translating research into practice revolve around providing expert advice, promoting knowledge dissemination, fostering collaboration, and supporting the transfer of research findings into practical applications.

Engagement of Fellows

Fellows of the National Academy of Sciences are typically not paid regular remuneration for their service. Although they may receive honoraria for specific projects or project panels, they participate in the works of the Academy generally voluntarily. Their engagement is based on the following principles. These are: (a) voluntary service: Fellows contribute to the Academy's vision through working groups, publication committees, and award committees, all voluntarily; (b) honoraria: Fellows may receive honoraria for their participation in specific project panels or other activities related to the Academy's work; and (c) privileges: Fellows have various privileges such as the right to identify themselves as Fellows, attend meetings, nominate new members, and serve on committees.

Fellows of NAS engage in various activities including contributing to its journal PNAS, advising government and national organisations on scientific matters, and participating in special activities and programmes. They also contribute to research, teaching, and public communication of science. To be more specific, the engagement of the Fellows of the NAS is recognised in the following manner: publication (Fellows are encouraged to publish their research in PNAS, the Academy's multidisciplinary scientific journal); advisory roles (they are identified to provide expert advice to government agencies and other national organisations on matters related to science,

research, and policy); commitment to ethics (new Fellows sign a commitment to uphold scientific ethics and contribute to science research); participation in activities (Fellows participate in various special activities and programmes, including working groups and symposia, to foster collaboration and share expertise); awards and recognition (NAS recognises outstanding contributions of its members through various awards and programmes); and access to information (Fellows have access to a wealth of information about current and completed studies, including over 5,000 publications available online).

Advocacy strategies

NAS uses a multi-faceted advocacy approach primarily focusing on providing expert, and unbiased advice to policymakers on science and technology issues. This includes issuing reports, conducting studies, and engaging with the public and media to promote scientific understanding and informed decision-making. It also leverages its network of highly respected scientists to advocate for science funding and policies. Even though different strategies are put in place, the following are used very commonly.

- *Providing independent expert advice:* One of the major activities of NAS is to offer objective, evidence-based advice to policymakers, government agencies, and the public on complex scientific and technological matters. This is done through the creation of reports and studies, often commissioned by federal agencies or the private sector. Here NAS emphasises the importance of sound science in shaping public policy.
- *Engaging with the public and media:* The NAS actively engages with the public to foster scientific literacy and understanding. It utilises various communication channels, including press releases, media interviews, and public lectures, to disseminate its findings. This helps

to build public support for science and its role in addressing societal challenges.

- *Leveraging the network of scientists:* Members of NAS are leading scientists from various fields, recognised for their research contributions. They use their expertise and influence to advocate for science funding and policies. They also engage with other scientific organisations and professional societies to coordinate advocacy efforts.
- *Addressing specific issues:* The NAS focuses on a range of issues, including climate change, health, education, and infrastructure. They conduct studies and publish reports on these topics, providing evidence-based recommendations to policymakers. For example, the NAS has played a significant role in informing policy on climate change and providing data and insights on the impacts of greenhouse gas emissions.
- *Fostering collaboration:* The NAS collaborates with other organisations, including government agencies, academic institutions, and non-profit groups, to amplify its advocacy efforts. This allows them to reach a wider audience and mobilise support for science-related issues. It also works with international organisations to promote scientific cooperation and address global challenges.

Financial sustainability

The NAS relies on a diversified funding model to ensure financial sustainability. These include grants, contracts, membership dues, endowments, and earned income. Grants and contracts are often received from various sources such as government agencies, foundations, and private organisations to support specific research projects and initiatives. NAS members contribute dues to support the academy's operations and

activities. It also receives endowments from a stable source of funding through investments to ensure long-term financial stability. Far beyond this, NAS generates revenue through various activities such as publishing reports, offering workshops, and providing consulting services.

NAS also uses different financial sustainability indicators to operate its activities and remain financially viable in the long term. These are (1) core funding: NAS needs to ensure a consistent level of funding to support its ongoing operations and activities; (2) liquidity: The NAS should have sufficient liquid assets to meet its short-term financial obligations and ensure its ability to operate effectively; and (3) D-day calculation: The NAS needs to assess how long it can continue operating with its current resources in case of unexpected funding shortfalls. The financial strategy of the NAS, in general, includes prioritisation of building a diverse and stable funding base to ensure its long-term financial health and ability to fulfil its mission. It also carefully manages its finances and resources to ensure that they are used effectively to achieve its objectives. Above all, NAS regularly assesses its financial performance and adapts the above-mentioned strategies to ensure ongoing financial sustainability.

8.2. Academy of Science of South Africa

The Academy of Science of South Africa (ASSAf) was established in 1996 in response to the need for using science for the benefit of society. Its Act of Establishment, which marks the official recognition of the Academy by the South African government, was endorsed in 2001 and it came into operation in 2002. In the past two decades, it has demonstrated institutional growth from a small emergent organisation to a well-established academy. It aspires to be the apex organisation for science and scholarship in South Africa, recognised and connected both nationally and internationally. ASSAf is an independent, non-biased and credible source of scientific advice on issues of public interest to the South African government and other stakeholders. Its science advisory activities are

authoritative, independent, objective, free of vested interests, trusted, based on volunteerism, based on rigorous analysis of evidence and peer review, transparent, locally based, and multi-disciplinary and able to address complex issues that transcend disciplinary boundaries.

The mission of the Academy is to recognise scholarly achievement and excellence in the application of scientific thinking for the benefit of society; mobilise members to ensure that they are available to contribute their expertise in the service of society; conduct systematic and evidence-based studies on issues of national importance, producing authoritative reports that have a significant impact on policy-making; publish science-focused periodicals that will showcase the best of southern African research to a wide national and international audience; develop productive partnerships with national, regional and international organisations to build the capacity in science and its application within the national system of innovation; create diversified sources of funding for sustainable functioning and growth of a national academy; and communicate effectively with relevant stakeholders through various media and fora. Overall, the Academy mobilises the best intellect, expertise and experience to investigate and provide evidence-based solutions to national problems. The five-year strategic plan indicates that the Academy aspires to advance four thematic priority areas: (i) advancing the food, water, land, energy and climate change nexus; (ii) the future of society; (iii) service to society; and (iv) digital transformation (Academy of Science of South Africa, 2025). As noted by the interviewed respondents from the Academy, population issues are integrated into all thematic areas. The thematic areas have standing committees.

Agenda setting process

ASSAf's research agenda is determined by the 5-year Strategic Plan which itself is grounded on national strategic issues; implementation of short-term milestones is outlined in the Annual Performance Plans. The research

agenda of the Academy is often aligned with national priorities, for instance, the 2024-2029 Medium-Term Development Plan, National Development Plan (2012), White Paper on Science, Technology and Innovation (2019), Science, Technology and Innovation Decadal Plan (2022), Science Engagement Strategy (2015), Agenda 2063, Science, Technology and Innovation Strategy for Africa (2024) and alignment with the SDGs. The research agenda for consensus studies is established through a collaborative and inclusive process. This typically involves consultation with a variety of stakeholders, including academics, researchers, policymakers, and practitioners across different fields. The determination of priority areas often reflects current societal challenges, scientific advancements, and strategic national interests. Expert panels for the consensus study are appointed for up to 3 years, and the process may incorporate public consultations or feedback mechanisms to ensure a broad representation of perspectives.

In this vein, the agenda-setting process involves identifying the most critical issues where scientific evidence is required to make a difference. The agenda-setting process is driven by the consideration of several factors that determine the identification and prioritisation of issues. First and foremost, the mandate of the Academy, using science for the benefit of society, is the overarching guiding framework in the process of agenda setting. The Academy has also adopted a strategic plan which outlines key thematic areas and priorities. All proposed issues are evaluated against the strategic goals and priorities to determine their relevance. Priority issues also emanate from or are aligned with the goals, objectives, challenges, and activities charted in the National Development Plan. The agenda of the Academy could also come from the government offices when they request studies or policy advice on specific challenges or emerging issues. Societal needs and public interest could also be drivers of agenda-setting. The Academy carefully scrutinises and proactively identifies societal challenges and issues of significant public concern to define its research agenda. Members of the Academy and standing committees may propose topics for

study or policy advice based on their expertise and scientific scrutiny of societal problems. Furthermore, the Academy monitors global initiatives and challenges and defines them as an agenda in ways that are relevant to South Africa. It also collaborates with national, regional, and international science academies and these collaborations could lead to setting new agenda items.

Stakeholder engagement

ASSAf has a Science Engagement Strategy which outlines the spread of stakeholders that the Academy seeks to engage, as well as the rationale for each stakeholder within the Academy mandate. Stakeholders are identified in alignment with the Quadruple Helix Model of academia, industry, government, and civil society to tackle societal challenges. Additionally, the Academy engages through multilateral partnerships, including initiatives within the Network of African Science Academies, IAP, BRICS, G20, etc. In its efforts to provide evidence-based policy advice to the government and other stakeholders, ASSAf works with a wide range of actors. These include the government (national, provincial, and local), the scientific community (universities, researchers, and scientific societies), civil society organisations, the international scientific community, and the public. The government is an important partner because it is the main source of the research agenda (owner of the National Development Plan), recipient of the policy advice to address national challenges, and also a potential source of funding. The government is involved in ASSAf's activities through the initiation of consensus studies, consultations, workshops, direct meetings, and parliamentary engagement. The scientific community is the source of expertise to advance knowledge and innovation to address societal problems. They are involved in the Academy's activities through membership, panels of consensus studies, panellists, publications, and collaboration. The international scientific community fosters international collaboration and participates in science-policy initiatives. They are engaged through bilateral agreements, joint projects, and membership in scientific

networks. Civil society organisations also play crucial roles in that they represent specific public interests, provide ground-level perspectives, play key roles in addressing societal challenges, and disseminate pertinent information to the community. They are engaged through consultations, participation in discussion forums, dialogues, and workshops, and dissemination of research findings and policy recommendations through their networks. The wider public is the ultimate beneficiary of evidence-based policies and strategies. They are engaged through participation in events organised to communicate scientific findings, media engagement, and dissemination of scientific information through accessible publications, websites, and social media platforms. Stakeholder engagement is guided by the principles of independence, transparency, inclusivity, relevance, and responsiveness.

Advocacy strategies

The development of advocacy messages at ASSAf involves a collaborative approach that emphasises clarity and evidence. Once a topic is selected, the process includes consulting experts and stakeholders to ensure the messages are grounded in current research and reflect various perspectives. ASSAf prioritises the use of data and case studies to substantiate their arguments, making the messages not only persuasive but also informative. To translate research into policy, ASSAf uses various sophisticated advocacy strategies. First and foremost, it focuses on informing policies by providing evidence-based and non-partisan advice rather than dictating policymakers. The major advocacy tool is its reputation for providing objective, scientifically rigorous, politically independent, and commercially unbiased advice. This allows policy-makers to listen to its advice, which is largely perceived as credible. It takes various measures such as critical peer review and balanced panels to maintain its reputation. Second, it uses tailored messages for targeted dissemination. They prepare and disseminate different products such as comprehensive study reports, executive summaries, policy briefs, and infographics to reach different audiences. In

all cases, the messages focus on relevance and urgency. Face-to-face advocacy strategy is also used in which the leadership of the Academy directly meets and briefs ministers, directors, parliamentary committees, and other senior government officials. The Academy also creates a neutral space by organising workshops where policy-makers and scientists deliberate on study findings and their policy implications. Media releases, press conferences, and expert interviews are used to disseminate scientific information to increase public awareness and shape media narratives on a particular agenda. Recognising that advocacy requires sustained engagement, ASSAf organises follow-up meetings and monitoring of policy developments to re-engage the stakeholders.

Strategies to translate research into policy

The Academy uses a wide range of approaches to ensure that scientific evidence effectively informs policy development and implementation. These include consensus studies and reports, policy briefs, non-technical summaries, media engagement, discussion forums (e.g., policy dialogue, workshops, and roundtable discussions), direct engagement with policymakers, and international linkages. Reports of consensus studies are the most prominent strategy in which panels of leading experts conduct a study on a particular topic, rigorously review the available evidence, reach a consensus, and produce a comprehensive study report. Policy briefs and non-technical notes summarising key findings and forwarding clear recommendations are prepared for policymakers who are often too busy to review the study reports. The media are engaged through press releases, media briefings, and expert interviews to raise public awareness and also indirectly influence policy development and implementation. Discussion forums are organised to bring together policymakers, researchers, and other stakeholders to deliberate on a particular issue with the ultimate objectives of building relationships, clarifying scientific concepts, and discussing key findings and their policy implications. In its direct engagement with policymakers, representatives of ASSAf present scientific

findings directly to parliamentary committees and other relevant government offices. International linkages are used to share best practices and learn from the experiences of others to advance evidence-based policymaking. The uptake of ASSAf's policy recommendations depends on several factors. Credibility and independence are crucial, as policymakers are more likely to trust recommendations that are objective and not prescriptive. Recommendations that align with South Africa's national priorities, such as those outlined in the Medium-Term Strategic Framework (MTSF), have a higher likelihood of adoption.

Engagement of Fellows

ASSAf Fellows are voted into the Academy and volunteer their expertise in service of society. The Secretariat approaches members for contribution as the need arises. Effective functioning and positive impact of the Academy are understood to be the function of the engagement of its Fellows. ASSAf utilises different modalities to engage its Fellows. These include participation in consensus studies and discussion forums, serving on governance structures as well as standing and advisory committees, peer review activities, nomination and election of new Fellows, mentorship and support for young scientists, representation in national and international forums, and leveraging expertise to set agenda for consensus studies and discussions. Fellows play crucial roles in serving as chairs or members of expert panels to conduct consensus studies and participating in discussion forums including policy dialogues. Their engagement in ASSAf's activities is made voluntarily, driven by responsibility and commitment to science and society. ASSAf covers travel and subsistence costs. Membership of the Academy is considered a prestige and an honour recognising the scientific achievements of Fellows and a responsibility to serve the Academy and the country. Members are communicated through newsletters, emails, and website information to keep them informed about the activities and achievements of the Academy and invite participation in the Academy's activities.

Table 8.1: Comparative summary of the experiences of NAS and ASSAf

Feature	NAS (USA)	ASSAf (South Africa)
Founded	<ul style="list-style-type: none"> Established 1863 as a private, non-profit academy 	<ul style="list-style-type: none"> Established in 1996; recognised in 2001, operational in 2002
Mission and Scope	<ul style="list-style-type: none"> Recognise outstanding science; provide objective, science-based advice Oversee the National Research Council; gold-standard reports 	<ul style="list-style-type: none"> Apex body for science and scholarship in South Africa Independent, multi-disciplinary, evidence-based advice on public-interest issues Mobilises experts for national studies; publishes peer-reviewed periodicals
Membership	<ul style="list-style-type: none"> Election on distinguished, continuing research achievements. ~200 Nobel laureates among its 2700 members (500 int'l). 	<ul style="list-style-type: none"> Election on scholarly excellence and service to society Fellows contribute voluntarily; travel-costs covered Prestige tied to national development
Organisational structure	<p>Six disciplinary sections:</p> <ul style="list-style-type: none"> Physical and Mathematical; Biological; Engineering; Biomedical; Applied Biological/ Agricultural/ Environmental; Behavioural and Social Sciences 	<ul style="list-style-type: none"> Governed by Council Thematic priority areas (food-water-energy-climate; future of society; service to society; digital transformation) Standing committees propose studies
Population-related activities	<ul style="list-style-type: none"> Committee on Population was independently established in 1983 under the Behavioural and Social Sciences Comprises 15 experts in fields such as demography, sociology, economics, and public health 	<ul style="list-style-type: none"> Population is integrated into other thematic areas

Table 8.2: *Continued*

Feature	NAS (USA)	ASSAf (South Africa)
Agenda-setting	<ul style="list-style-type: none"> • Dynamic, expert-driven via members and external stakeholders • Prioritisation by leadership and committees based on scientific significance, policy relevance, and impact 	<ul style="list-style-type: none"> • Aligned to national priorities (National Development Plan) and the Academy’s strategic plan • Driven by government requests, societal needs, and global trends
Stakeholder engagement	<ul style="list-style-type: none"> • Science communication (publications, lectures) • Policy advice to government agencies • Collaborative research projects by involving stakeholders • Public forums and workshops 	<ul style="list-style-type: none"> • Partnerships with government, academia, civil society, and international bodies • Workshops, parliamentary briefings, media outreach, online platforms
Fellow engagement	<ul style="list-style-type: none"> • Voluntary service on panels, journals (PNAS), working groups • Honoraria for specific projects • Identify themselves as Fellows • The right to publish in the highly prestigious journal of the Academy 	<ul style="list-style-type: none"> • Voluntary participation in consensus panels, governance, and peer review; • Mentorship • Covered travel costs • Communicated via newsletters and website
Advocacy	<ul style="list-style-type: none"> • Independent expert advice • Public and media engagement • Leveraging member network • Issue-focused reports • Fostering international collaboration 	<ul style="list-style-type: none"> • Credibility via rigorous peer-review of consensus studies; • Tailored messaging (policy briefs, infographics); • Non-technical summaries, direct ministerial briefings; • Workshops, roundtable discussions, media engagement

Table 8.3: *Continued*

Feature	NAS (USA)	ASSAf (South Africa)
Financial Sustainability	<ul style="list-style-type: none"> • Diversified and stable funding base • Grants and contracts, member dues, endowments, income from publications, workshops, consulting • Monitored via core funding needs, liquidity and D-day calculation 	<ul style="list-style-type: none"> • Multi-pronged: core government grant, project funds, international grants, journal subscriptions, workshop fees • Emphasis on transparent controls, reserves and endowments

Financial sustainability

Financial sustainability is at the core of institutional independence, effectiveness of operational activities, and long-term planning. ASSAf utilises a multi-pronged strategy to ensure its financial sustainability. This includes core government funding, project-based funding, grants from international collaborations, cost recovery and revenue generation. The Academy receives a significant amount of operational budget from the government through a parliamentary grant. This grant covers costs related to essential infrastructure, salaries for permanent staff, and basic operational activities. Project-based funding is obtained from the government when it requests the Academy to undertake consensus studies or policy advice and from other public entities for collaborative projects. ASSAf established partnerships with international organisations such as the InterAcademy Partnership and the Network of African Science Academies. Joint projects with these institutions and other philanthropic foundations and foreign governments are other sources of funding. The Academy also generates a limited amount of money from subscriptions and article processing charges for its flagship knowledge dissemination platform, the South African Journal of Science. Limited revenue is also generated from fees charged for participation in workshops and conferences. It also follows

an efficient financial management strategy. It puts in place strong internal financial controls and regular audits of effective and transparent use of funds. It leverages resources by maximising the voluntary contributions of its Fellows and minimising direct costs for unnecessary core activities. Its long-term plan is to build financial reserves and establish endowment funds. ASSAf's core strategy to maintain strong relationships and secure adequate funding for its activities demonstrates the value of money and the relevance and impact of its activities to its funders and stakeholders.

8.3. Lessons Learned from NAS and ASSAf

The National Academy of Sciences and the Academy of Sciences of South Africa provide several valuable lessons for other national science academies, particularly for those in developing countries like the Ethiopian Academy of Sciences. These include the importance of independent advice, multidisciplinary approaches, ethical standards, and a focus on development issues. They also demonstrate the value of promoting science education and fostering a culture of science in the population. Some of the key issues are discussed as follows.

The Academies are the most trusted and respected think-thank groups: Both NAS and ASSAf are greatly acknowledged and accredited institutions among the public and the respective governments. They provide valuable lessons about the importance of independent, expert-led scientific inquiry. They demonstrate how scientific consensus can guide policy and decision-making, and how recognising and advancing outstanding science benefits both the nation and the world. They highlight the significance of honouring and recognising excellence in research, inspiring future generations of scientists.

They provide independent and evidence-based advice: Both NAS and ASSAf provide independent advice for the government and special interest groups, relying on scientific evidence on national problems. This independence is

crucial for ensuring the advice is objective and reliable. Whenever funding opportunities are easily available, EAS may need to be selective in the type of research assignments it takes up to ensure that the expertise required for the task is available either within the Secretariat or among its Fellows, thus assuring its own independence and the quality of the final output.

They use science as a guide for policy and decision-making: Both NAS and ASSAf are based on the guiding principle that scientific evidence obtained through the application of scientific procedures is the basis for providing advice on a range of complex challenges, informing policy decisions, and guiding actions. They believe that the application of scientific procedures demonstrates the vital role of science in addressing societal problems. Likewise, EAS should continue using objective approaches to address the political and religious biases surrounding population issues in Ethiopia. The population issues in Ethiopia can only be addressed successfully if they are depoliticized and detached from ethno-religious sentiments.

Consensus studies are conducted by recognised and outstanding Fellow scientists: Membership of NAS and ASSAf is highly prestigious, recognizing excellence in research and inspiring scientists worldwide. This recognition fosters scientific excellence and attracts government offices and other groups to seek advice from the Academies. As much as possible, EAS should limit the leadership of any research work under its auspices to the Academy's Fellows to assure quality control and its credibility among the client and the public. While NAS and ASSAf Fellows are engaged in such type of research with no or modest remuneration, the EAS should seek alternative ways of compensating its comparatively low-paid professional experts to foster their active engagement.

They use a multidisciplinary approach to arrive at a consensus: Both NAS and ASSAf promote a multidisciplinary approach to bring experts from various fields together to tackle complex issues. The multidisciplinary approach ensures that solutions are comprehensive enough to take different perspectives into account. If a large number of experts are

involved in studies and the production of reports, there would be a high level of consensus and reliability. As this consensus provides a strong foundation for policy and decision-making, EAS should make efforts to widen its pool of experts to address societal issues of concern. To maintain credibility and acceptance, it is better to avoid projects for which an adequate number of qualified experts are not easily available.

They promote scientific research with high ethical and moral standards: NAS and ASSAf work to promote the development of strong scientific research and have publication systems taken as gold standard in their countries and beyond to increase the quality, visibility, and impact of research. They also adhere to the highest ethical and moral standards in their research and advice, ensuring that their work is trustworthy and responsible. Launching a journal could be a valuable initiative for EAS to publish scientific discoveries that can influence policy and decision-making.

They enhance the contributions of research universities to knowledge creation and innovation for greater societal impact: NAS and ASSAf recognise the significant role that research universities play in advancing scientific knowledge and fostering innovation. Hence, the EAS should strengthen its working relationship with different universities in the country not only to recruit Fellows who are competent and qualified but also to recognise young scientists who have the potential to engage in scientific research and produce policy-relevant evidence-based reports.

They focus on development issues: NAS and ASSAf are committed to promoting development in their respective countries and prioritise research and policy advice relevant to national development goals. They also engage in the development of indigenous knowledge as it is crucial for sustainable development since it provides a wealth of information about local ecosystems, biodiversity, and sustainable resource management practices. It also plays a vital role in community resilience and adaptation to environmental changes, and is essential for ensuring that the rights and voices of marginalised people are heard in decision-making processes.

They vigorously engage the scientific community: NAS and ASSAf actively engage the scientific community through webinars and other events to discuss important development issues in their respective countries and in open science. EAS' initiatives in this regard should continue in such a way as to reach those outside the academic community to enhance its visibility.

They collaborate with other organisations: NAS and ASSAf collaborate with national, regional, and international organisations to build capacity in science and its application. EAS should search for partner organisations very carefully as the support to be obtained from such groups is very crucial for the success of its activities. It has to mobilise its Fellows to help in reaching out to different organisations that can become reliable partners.

They follow different approaches in dealing with population and development issues: NAS deals with population and development issues in the US by providing objective, science-based advice to policymakers and the public, primarily through the work of the Committee on Population. This involves conducting studies, preparing reports, and offering recommendations on issues related to population size, growth, and demographic trends, and how these impact various aspects of society, including the economy, health, and the environment. NAS also forges collaborations with other organisations and international bodies to address these issues globally. On the other hand, ASSAf deals with population and development issues in South Africa by providing evidence-based scientific advice to the government and other stakeholders without necessarily having a special unit to deal with the population and development issues. ASSAf promotes and applies scientific approaches to address national problems, including those related to population and development issues through its Fellows and research undertakings.

In general, NAS and ASSAf demonstrate that a national science academy plays a vital role in promoting scientific excellence, providing evidence-based advice, fostering a culture of science, and contributing to national

development. Likewise, EAS should continue to strengthen similar initiatives that it has embarked on hitherto.

What is the best approach for the EAS?

Ethiopia stands at a pivotal moment in its population and development trajectory. Given its current population dynamics, it has an immense potential to harness DD. To fully realise this potential, Ethiopia needs not only robust, evidence-based population and development policies but also effective implementation of the policies. The EAS can play a critical role in this national endeavour by establishing an independent unit dedicated to population, an approach similar to that of the NAS. This unit would facilitate the sustained engagement of the EAS in crucial population and development activities across the country.

Harnessing the DD requires a multi-pronged strategy encompassing significant investments and strategic interventions in human capital and economic growth. Investment in education and skills development creates a highly capable workforce. Human capital investment also promotes population health and well-being, and improves nutrition and child health to ensure a healthy and productive population. Creating a favourable environment for economic growth is essential to absorb the growing labour force. This includes creating jobs to reduce unemployment, and making strategic investments in infrastructure development. Furthermore, proactive measures are needed to mitigate potential social challenges that can arise with population shifts. This includes ensuring societal safety and achieving good governance and political stability, which are fundamental for sustainable development. Underpinning all these efforts is the crucial need for accurate and reliable demographic data which are useful to understand the nuances of the DD and for designing effective policies and programmes tailored to Ethiopia's context. Furthermore, realising the DD demands coordinated policy efforts across different sectors and a well-

developed monitoring and evaluation system to track progress, identify gaps, and allow for timely adjustments to policies and programmes.

The EAS can play a pivotal role by continuing to engage in rigorous scientific work aimed at fostering evidence-based decision-making. By conducting more consensus studies, the Academy can provide the foundational knowledge for sound population and development policies. The scientific insights from the EAS can also directly inform and guide the formulation of effective national policies and programmes. The EAS can also continue to provide objective data and analytical results to enable policy and decision-makers to make informed choices that accelerate the realisation of the DD. Moreover, the independent population programme to be established by EAS can provide crucial support to the Population and Development Unit within the Ministry of Planning and Development, fostering a collaborative approach to national development. By establishing a dedicated population unit and actively engaging in these areas, the EAS can become an influential organisation helping Ethiopia to unlock the full potential of its demographic dividend, paving the way for a more prosperous future.

9. Opportunities and Challenges of Establishing an EAS Population Programme

Establishing a Population Programme at the EAS has both opportunities and challenges. However, it is possible to keep the balance between the two and work towards maximising the benefits of having the programme. The following are the opportunities to be explored and the challenges to be tackled whilst establishing the Population Programme.

9.1. Opportunities to Establish a Population Programme

Institutional credibility: The EAS was established as a non-partisan think-tank institution engaged in advancing scientific knowledge and generating

evidence to inform policies, strategies, programmes, and practices. This feature allows the Academy to be perceived as a reputable institution providing credible policy advice. This is highly beneficial for the Academy to build strong relationships with diverse stakeholders, attract support and mobilise resources from a wide range of sources, withstand challenges, perform its activities with greater legitimacy, and ultimately attain its objective of bridging research and policy.

Multidisciplinarity: EAS is a multidisciplinary institution by its nature as it encompasses a wide range of disciplines spanning natural and social sciences. Population Studies is a multidisciplinary field of study linking both natural and social sciences. Population issues are also crosscutting, being related, either directly or indirectly, to almost all development sectors. This linkage implies that the population affects and is being affected by all development sectors. Hence, there is a potential to integrate population issues into all other activities of the Academy. Hence, it is ideal for the Academy to undertake multidisciplinary research uncovering the multiple dimensions of population issues and generating comprehensive evidence on the multifaceted relationships between population and development.

Pool of experts at the EAS: The EAS has a pool of experts in diverse disciplines. This allows for cultivating partnerships between the scholars and undertaking population and development research from different perspectives to comprehensively understand the complex relationship between population and development. Since EAS Fellows have diverse academic backgrounds and professional expertise, this has multiple advantages. Firstly, it facilitates deploying different disciplines to undertake multidisciplinary population research. Secondly, it provides flexibility in selecting thematic areas of research and policy advice by linking multiple dimensions of population and development issues. Thirdly, population issues can be integrated into other consensus studies and discussions to show their linkages (both as influencing factors and outcomes).

Continuity of concern about population: Although policymakers' understanding of population issues is diverse, population continues to be a critical concern. It is a concern not only when it is growing but also when it is declining or static. There are also emerging population issues that need to be carefully investigated and their policy implications to be defined and communicated to policymakers for proactive policy and programmatic responses.

Pressing population-related issues: Ethiopia is undergoing massive demographic change which needs research and policy attention. The age structure of the population is changing; internal and international migration is on the rise; the proportion of the urban population is increasing; and life expectancy is increasing. On the other hand, there are areas where limited improvement has been observed in the past decades. For instance, early marriage is still prevalent; cultural norms favouring high fertility are predominant; and gender inequality is pervasive, to mention some. These and many other problems warrant scientific research to uncover underlying causes and identify practical recommendations.

9.2. Challenges of Establishing a Population Programme

Inadequate political support: Establishing and smoothly running population programme requires strong political goodwill and support. Owing to diverse ideological orientations, inadequate attention is given to population issues in Ethiopia at the moment. This can undermine the potential to generate resources and efforts to provide scientific inputs to policy-making.

Weak institutional structure: Being partly related to the above-mentioned reason, the institutional structure at the federal level is not strong enough to coordinate population and development activities in the country. Similarly, regional states put in place quite different institutional structures which altogether challenge the mobilisation of population stakeholders to bring about lasting impact in the areas of population and development.

Lack of a policy framework: The current population policy of Ethiopia is outdated. It not only lacks comprehensiveness but also fails to address emerging population and development issues. In the absence of a vibrant policy framework, there are uncertainties about clear directions on the roles of the population in development. This challenges the initiative to design and implement a population and development research agenda.

Insufficient commitment of Fellows: The Academy mainly relies on and engages its Fellows to get the technical expertise required for project proposal development, evaluation of inception and draft reports, conducting consensus studies, serving as panellists in the policy dialogues and discussion forums, and other technical inputs. The implementation of these activities is volunteer-based. Since many studies are conducted through project-based collaboration with national and international partners, producing a high-quality proposal on various topics of national relevance is expected of the Academy and its Fellows. However, the Academy may face a challenge as Fellows might not be able to dedicate sufficient time to its activities. This is largely due to their economic realities, which challenge volunteerism. Fellows have regular commitments that compete with their engagement in the Academy's assignments requiring resources (time, finance, logistics, etc.), which they hardly afford. Furthermore, they are involved in many other similar professional networks which could reduce their participation in the EAS's activities. This may affect not only the quality of deliverables and limit its operational activities but also constrain the achievement of the goals of the Academy. In addition, inadequate engagement of the Fellows may force the Academy to outsource some critical tasks. This entails the risk of producing low-quality reports that can undermine its reputation and effectiveness.

Misconceptions: There are misconceptions among policymakers and the general public as well on the basic concepts of population itself, the roles of population in development, and the measures to be taken to address population-related problems. This reduces the attention to be given to population as an issue of concern for research, policy, and action.

Complexity of the relationship between population and development: The linkage between the two is not only complex and manifold but also varies across space and time. Population affects development and development affects population in multifaceted ways. These effects are also both positive and negative. Although this demands the establishment of a programme to understand its complexity, it also makes defining the scope of the programme very difficult, leading to the challenges of monitoring and evaluating programme outcomes and impacts.

Competing priorities: Different stakeholders may have competing priorities regarding population issues. They also have different views on the roles of the population in development. Some argue that rapid population growth fosters development whilst others emphasise its impeding role. A national population policy to be adopted may not also fully align with the priorities of the regional states and city administrations. Furthermore, population-related strategic priority areas and funding agendas of donors could be different from national needs and interests, potentially leading to ineffective population programmes.

Budget shortage: Establishing a functional population programme requires the recruitment of senior scholars in the field, well-developed infrastructure, and adequate funding to conduct consensus studies and organise policy dialogues. These necessitate the mobilisation of a huge amount of resources which could be challenging in the context of limited availability of funding, competing priorities of donors, and uncertainty in the long-term sustainability of external sources of finance.

10. Navigating Complexities: Emerging and Priority Areas for Research and Policy Dialogue

The interplay between population and development in Ethiopia is very complex. This relationship is both dynamic and context-specific, which leads

to the emergence of new areas of concern. Owing to spatio-temporal dynamics, there are also changes in the priority areas for the government and other stakeholders. Effective policy responses to these emerging issues and priority areas require a clear understanding of the specific challenges, recognition of the need for action, and a commitment to formulating and implementing evidence-based policy responses. These critical areas where research and policy dialogue are most needed are briefly explained below. The EAS can play crucial roles in these areas by fostering research and collaboration to generate scientific evidence, organising cross-disciplinary dialogue, providing scientific policy advice, and facilitating public engagement and understanding.

Politicisation of population issues: The politicisation of population issues has been identified by the stakeholders as a critical challenge for development planning and interventions in Ethiopia. Population issues – size, growth rate, ethnic composition, distribution, migration, and the data collection processes surrounding them (like the census) – are heavily politicised in Ethiopia. Although the establishment of regional states along ethnolinguistic lines was intended to address historical grievances and promote self-administration, the population becomes intrinsically linked to political identity, power, and resources within the framework of ethnic federalism in the country. This deep politicisation of population issues affects development processes such as the national census, family planning programmes, responses to migration, and implementation of population-related programmes. Addressing Ethiopia's development and governance challenges requires navigating these sensitive population politics with transparency, inclusivity, and a focus on building trust.

Pressing demand for up-to-date population data: The availability of up-to-date census and survey data is very important for policy decisions as well as socioeconomic development planning. However, Ethiopia has no up-to-date census and survey data as, for instance, the last census was conducted almost eighteen years ago. It was not undertaken due to the effects of war and conflict in some parts of the country, COVID-19, and internal

displacements. Effective planning for crucial sectors like health, education, infrastructure, and job creation relies fundamentally on knowing the size, distribution, age and sex structure, and characteristics of the population. Without having accurate and up-to-date data, planning is no better than undertaking a conjecture. Tracking progress toward SDGs and national development plans (like the TYDP) requires reliable information (population figures to serve as denominator) to calculate key indicators (e.g., literacy rates, poverty rates, and access to services and per capita gains). The absence of a recent census creates significant challenges across virtually all sectors in the country. It hampers effective governance, equitable resource distribution, development planning, humanitarian response, and political representation. Though conducting a census has significant hurdles (cost, security, logistics), the cost of not having reliable data is even higher. Hence, it is crucial to organise a series of discussions on the importance of census data for decision-making and exploring alternative mechanisms of generating quality statistical data.

Use of modern technologies for data collection: Ethiopia, like many developing nations, is increasingly adopting the use of modern technologies to overcome traditional challenges in data collection. These technologies include the use of mobile phones for surveys, remote sensing (satellite data collection) and geographic information systems, internet and cloud computing for storing and processing massive datasets, biometrics, and digital financial services data. These technologies offer transformative potential for data collection in Ethiopia, enabling researchers to gather timely, accurate, and diverse data, often with greater efficiency and scope. They facilitate new types of research questions, particularly those involving spatial dimensions or high-frequency monitoring. However, realising this potential requires addressing significant challenges related to the digital divide, infrastructure limitations, costs, technical capacity, and crucially data security and ethical considerations. The continued expansion of mobile networks and digital services like Telebirr suggests these technologies are playing an increasingly vital role in the Ethiopian research landscape.

Further evidence is required to enhance the use of such opportunities and address the challenges.

Demographic trends and their implications for a country's development: Owing to declining fertility and mortality, the demographic profile of Ethiopia's population is changing. In particular, the age structure of the population is changing with the gradual increase in the working-age population. Although the proportion is relatively small at the moment, the size of old-age people is gradually increasing and is expected to increase in the coming decades due to the combined effects of declining fertility and mortality and increasing life expectancy. These changes in population age structure have implications for policy engagement to harness the DD and ensure social protection, for which robust scientific evidence is needed.

Demographic impacts of mega projects: Ethiopia is undertaking mega-projects, including large-scale infrastructure and industrial initiatives (like hydro-power dams, industrial parks, railways, large agricultural schemes, major highways, and urban renewal), in different parts of the country; these have profound and often complex effects on population dynamics. They are powerful engines of demographic change. While potentially bringing economic benefits and facilitating urbanisation, they invariably cause significant population displacement, attract massive in-migration, and alter the age, sex, and ethnic composition of the involved population. These shifts place immense pressure on resources and services and carry substantial risks of social disruption, increased vulnerability, and conflict if not managed proactively, inclusively, and equitably. Evidence-based planning, robust mitigation strategies, fair benefit-sharing, and conflict sensitivity are crucial for harnessing the potential benefits of these projects while minimising their adverse demographic and social consequences and promoting human well-being.

Migration and remittance: In Ethiopia, both internal and international migration is increasing. Ethiopia is becoming a country of origin, transit, and, to a lesser extent, destination for migrants in the Horn of Africa. As

migration patterns are complex, and driven by a combination of economic, social, political, and environmental factors, their underlying causes and effects need further investigation. For instance, although remittances sent by Ethiopians living abroad are a crucial source of foreign exchange and household income, reliance on remittance has underlying economic vulnerabilities for those relying on it. Challenges associated with irregular migration and the difficulties of fully leveraging remittances for sustainable development remain key policy concerns. Effective strategies are required to address, based on scientific evidence, the root causes of distress migration while simultaneously working to make remittances cheaper, safer, and more productive.

Urbanisation: Although the proportion of the population currently living in urban Ethiopia is relatively low, it is projected to increase in the coming decades. This increase in urbanisation rate, which is strongly related to rural-urban migration, shapes population distribution patterns, and redefines the demographic behaviour and socioeconomic setup of the country's population. These require empirical evidence to inform proactive policy responses and planning to maximise opportunities and minimise potential risks and challenges.

Population and climate change: Climate change is a global threat and Ethiopia is no exception. Owing to heavy reliance on nature-based economic activities and lower adaptive capacity, the country's economy and the livelihoods of its population are vulnerable to the impacts of climate change. Ethiopia is a demographically giant country with a population estimated to be about 130 million. However, the roles of the population in contributing to climate change and the effect of climate change on demographic behaviour are not clear. The relationship between population and climate change in Ethiopia is a complex cycle of cause and effect, primarily centred on vulnerability, resilience, and adaptive capacity. The complexity has implications for research involving impact assessment, vulnerability mapping, effectiveness and sustainability of adaptation strategies tailored to population contexts, climate-migration nexus, social

dimensions of vulnerability and adaptation, and evaluation of the effectiveness of policies and strategies such as the Climate Resilient Green Economy strategy and National Adaptation Plan, integrated modelling of climate change scenarios and demographic projections using interdisciplinary, participatory, and innovative research approaches.

Adolescent and youth sexual and reproductive health: Ethiopia has one of the largest youth populations globally, making AYSRH a critical public health and development issue. The situation is complex and characterised by both progress and persistent challenges. While contraceptive use has increased overall, a significant gap remains, particularly among unmarried, sexually active adolescents and youth. Early pregnancy carries significant health risks for both mother and child (e.g., obstetric fistula, low birth weight, neonatal mortality) and often leads to school dropout, limiting girls' future opportunities. Although Ethiopia allows abortion under certain circumstances like rape and endangerment to the mother's life, access to safe abortion services remains limited. Stigma, lack of awareness about the law, provider reluctance, and geographical barriers are still forcing many adolescents to resort to unsafe abortion services. Young people are still vulnerable to STIs, including HIV, due to the limited availability of and access to user-friendly SRH services. Child marriage is also persisting particularly in rural areas and specific regions (e.g., Amhara, Afar). Child brides are more likely to experience early pregnancy, drop out of school, face domestic violence, and have limited autonomy over their SRH decisions. Although the prevalence of female genital mutilation has declined significantly due to government commitment and community interventions, it is still affecting a large number of girls, often performed during infancy or childhood leading to long-term SRH consequences. These complex AYSRH situations in Ethiopia necessitate targeted, context-specific research to inform effective policies and programmes.

Policy implementation challenges: Policy implementation is a critical stage where government intentions translate into tangible actions and outcomes. As noted by some informants, Ethiopia has several policies and strategies.

However, the major problem is effectively implementing these policies and strategies. These challenges are often interconnected and stem from a complex mix of political, administrative, socio-economic, and contextual factors. There is a need for robust evidence of the underlying causes, the magnitude of the problems, and mechanisms of addressing the implementation challenges. Evaluation of the impact of policies and strategies is also helpful in identifying challenges requiring further attention and success stories necessitating scale-up activities.

Gender equality and women empowerment: This has been an issue of concern in the past years. Despite concerted efforts being made in mobilising resources and implementing several activities, the problem remains persistent. Women are less involved in leadership, particularly at the middle and higher levels of leadership. In addition to inequality in access to secondary education due to the progression of a limited number of girls to secondary schools, women and girls are less represented in higher education and research institutions in general and in STEM in particular. It is thus important to identify barriers to school progression, involvement in STEM education, and enrollment in higher education. Furthermore, there is a notable gender disparity in access to healthcare services as well as employment opportunities and earnings. This has huge implications for population dynamics (fertility, mortality, and migration) and development outcomes as human reproduction is mainly affected by the role and status of women in the community. Addressing this inequality necessitates an in-depth investigation of the root causes and consequences as well as their policy implications.

Use and impact of research on decision-making: Several studies have been undertaken and many articles and research reports published by higher education and research institutions, government offices, non-governmental organisations, and international organisations on different dimensions of population and development interrelationships. However, the extent of use of these findings and their implications as well as the impact of those studies on policies and practices are not clear, warranting further inquiry.

The resultant outcomes are very crucial to promote a culture of evidence-based decision-making.

11. Conclusion and Recommendations

11.1. Conclusion

The EAS has established itself as a pivotal institution in shaping the discourse on population and development in Ethiopia through consensus studies and high-level forums on population and development interrelationships. The Academy has demonstrably made significant contributions to knowledge generation and policy formulation through its extensive engagement in consensus studies on crucial issues of national interest. The efforts of the Academy have brought two central issues to the forefront: the urgency of harnessing the DD and the critical need for revising the national population policy. A significant portion of the Academy's research has been dedicated to the DD. It projected Ethiopia's window of opportunity to be between 2040 and 2075, strongly recommending sustained government investment in quality education, population health, youth employment, and governance to benefit from this demographic shift. It also warned that there is a possibility for socio-economic crisis and political unrest if these actions are neglected. The demographic dividend effort index tracked progress across key sectors, indicating moderate effort overall but less than moderate effort in women empowerment, underscoring the urgent need for maximum effort across all sectors. A comprehensive assessment of the national population policy revealed both notable successes in fertility and mortality reduction and critical areas of insufficient progress. These include a high unemployment rate, persistent gender gaps, limited educational advancement, and prevalent gender-based violence. Its work has provided the impetus and foundational evidence for the revision of the national population policy. Generally, the Academy's rigorous consensus studies have been instrumental in generating evidence-based knowledge, directly informing

critical policy discussions, and highlighting essential areas for intervention. The evidence derived from these studies has been instrumental in elevating decision-maker's awareness regarding Ethiopia's population dynamics and its multifaceted impact on development.

The Academy utilised a series of policy dialogues and discussion forums to significantly raise awareness among stakeholders and bring critical population and development issues to the forefront for policymaking. These comprehensive engagements spanned a wide range of vital topics ranging from discussions on the general relationship between population and development to deliberation on the DD. These forums fostered a clearer understanding of the demographic transition process and the opportunities and challenges in harnessing this dividend. The forums consistently urged the government to prioritise actions such as improving access to quality education, fostering sustainable job creation, and ensuring inclusive political processes. The emphasis was consistently on the need for coordinated efforts among key development sectors, stressing the importance of investing in health, education, and skills training, ensuring good governance, and creating a conducive environment for the working-age population. Overall, these discussion forums were instrumental in building a shared understanding and advocating for integrated and synergistic actions among all key stakeholders, which are crucial for Ethiopia to effectively realise its DD and address broader development challenges. Beyond policy influence, the discussion forums have fostered a collaborative environment, enabling stakeholders to actively participate in the Academy's evidence generation and dissemination processes.

The EAS has made a remarkable stride in addressing the critical gender gap within the knowledge and research system. Recognising that gender equality and equity are fundamental to socio-economic development, the Academy facilitated the establishment of the Ethiopian Gender Learning Forum. This Forum was designed to champion gender equality through evidence-based policy recommendations and engagement with relevant

institutions and individuals. The gender champion workshops aimed to equip individuals with the knowledge and skills to drive change within their institutions. In parallel with the Forum's efforts, the Academy also delivered crucial capacity-building trainings for women researchers. The trainings were instrumental in enhancing women researchers' abilities in conducting and publishing scientific studies, as well as boosting their overall competence and representation within Ethiopia's knowledge and research landscape. Despite these significant initial efforts and evident successes, the Ethiopian Gender Learning Forum is currently inactive due to operational challenges, including funding constraints. This highlights a critical need for renewed commitment to address these systemic issues to ensure the sustainability and continued impact of such vital initiatives in terms of contributing to an inclusive academic and research environment in Ethiopia.

The success of the Academy in terms of advancing its population and development agenda underscores the critical importance of flexibility in project implementation, persistent policy advice through multi-pronged discussion forums, government ownership, stakeholder collaboration, and responsiveness to local needs and priorities. These elements have proved essential for impactful outcomes in terms of building momentum and capturing the sustained attention of policymakers. The Academy leveraged its key strengths such as non-partisan status and engagement of experts in the field to make its evidence usable and relevant. These implementation approaches and strengths transformed the Academy's work from a simple act of evidence generation into a dynamic process of engagement, partnership, and policy advice to bridge the gap between research and policy action. The experiences of NAS and ASSAf show that research activities by highly experienced and qualified staff yield superior quality evidence and authoritative study reports to inform policies and practices.

However, the Academy has not fully utilised its potential, being hampered by several internal and external factors. These include a lack of continuity in policy dialogues, due to budgetary constraints, and limited engagement of

key stakeholders in evidence generation. The absence of a robust monitoring and evaluation system constrained further follow up of outcome impact. Despite being reputable, it is not as much visible as it should be because of inadequate promotional activities, limiting itself to the domain of academic circles. Still, the Academy has navigated significant external challenges. The impact of COVID-19 and conflicts in the country, coupled with high staff turnover within partner organisations and a weak national tradition of evidence-based decision-making, have posed considerable hurdles. To conclude, the Academy must strategically address its internal systemic hurdles while adapting to external challenges to fully realise its potential and to maximise its impacts in the areas of population and development. Specifically, its continued relevance hinges on securing sustainable support, and ensuring its vital research and recommendations translate into concrete and lasting national progress. By doing so, it can solidify its role as a critical force in Ethiopia's population and development landscape. Ethiopia's evolving population dynamics present both untapped opportunities and significant challenges. The EAS can play a leading role in evidence generation and policy actions needed to realise the opportunities and mitigate the challenges to support the country's effort to achieve global, regional, and national population and development goals.

11.2. Recommendations

The following recommendations are made to redefine the engagement of EAS in population and development activities and increase its impact by focusing on operational effectiveness and efficiency, sustained initiatives of advancing population and development agenda, stakeholder engagement, and financial sustainability.

A. Operational effectiveness and efficiency

Organisational reflection: The EAS has been implementing several projects in different areas of expertise in the past years. During this time, it has built

strengths, faced challenges, and learned from experiences. These projects have yielded their own footprints in terms of contributing to evidence-based policy-making and challenges that hinder its delivery. Regardless of the outcomes of the activity, the ultimate goal of the projects is bridging research and policy. Hence, the Academy should reflect, in the short term, on its operational strengths, weaknesses, and lessons learned from its past engagements. Lessons learned from these reflections can be used as input to design future implementation strategies. This helps the Academy to create an opportunity to use its untapped potential in fostering evidence-based policy-making and policy implementation.

Raising the visibility of the Academy: The current level of visibility of the Academy is not congruent with its achievements so far and its potential to play a critical role in the country's development. It should design strategies and take measures to continuously promote the purposes of its establishment, its contributions, and its modalities of operation. The Academy should also move forward to get recognition and acceptance by the majority of the public institutions and the general public through media and other communication channels. Among the potential strategies to be used by the Academy are developing a robust digital media (e.g., use of up-to-date institutional website and active social media engagement), establishing proactive relations with mainstream media (e.g., issuing press releases and organising media briefings on its major activities and significant outputs), humanising science (e.g., featuring the profiles of its distinguished Fellows, their life experiences, contributions, and passion for science), engaging with policymakers through regular briefings and assuming formal advisory roles, collaborating with universities and research institutions, engaging with CSOs and the private sector to address critical societal issues, and actively participating in regional and international networks.

Clear definition of the modality of engagement of the EAS Fellows: The Academy's contribution to evidence-based policy-making heavily depends on its success in the mobilisation of its Fellows and maximisation of their

collective expertise for the benefit of society. The challenge in this regard is related to their voluntary engagement in the Academy's activities. Unless the Fellows are fully committed and engaged in such activities, the Academy can't mobilise enough resources, generate scientific evidence, and play magnificent roles in influencing policy formulation or revision and implementation. Although the Academy's work, in principle, requires volunteerism, the combined effects of financial pressure, time constraints, and demanding professional schedules do not allow the Fellows to dedicate a considerable part of their time. This calls for an immediate action of redefining the modality of engagement of Fellows and their benefits from engaging in the Academy's activities, including project proposal development, conducting consensus studies, evaluating or reviewing study reports, and participating in advocacy works. The strategies to enhance Fellows' engagement include, but are not limited to, continuous professional development and training, effective recognition and clear reinforcement of impacts (e.g., personal or public recognition programmes for Fellows' contributions), providing professional incentives, and creating network and publication opportunities.

Since technical excellence alone is not sufficient to advance the population and development agenda, the Academy should navigate population-related political risks through robust data collection and dissemination, prioritisation of evidence-based policymaking, promoting data literacy to reduce reliance of decision-making on anecdotal evidence and politically motivated interpretation of data, and fostering inclusive dialogue. These strategies can also constitute an agenda for policy dialogue and discussion aimed at depoliticising the population through scientific consensus.

Reconstituting and strengthening EGLF: Ensuring gender equality in higher education institutions plays a detrimental role in terms of challenging systemic and sociocultural causes of gender inequality. In this regard, the EGLF, if actively engaged in the activities expected of it, can make significant contributions to the attainment of gender parity in the knowledge and research system in Ethiopia. However, the promising works of the Academy

in ensuring gender equality in higher education and research institutions did not keep momentum due to the weakening of the EGLF. Since the plan to establish the Centre for Women Researchers could duplicate the previous efforts and nullify the efforts being made in the past in preparing valuable strategic documents for EGLF, the Academy should reconsider the reconstitution and legalisation of the Forum to address its current operational challenges instead of launching another initiative.

This also helps the Academy to advance the STEM agenda by strengthening the STEM centre at the EAS, facilitating women researchers' research week, exhibitions of the academic and research outputs of women in the academic and research institutions, awards for best researchers, and strong linkages with similar initiatives such as the Women Researchers Work Group at Addis Ababa University and SEWiST. These are important to improve the professional competence of women and the quality of research as well as their representation in higher education and research institutions. Furthermore, ensuring gender equality in universities and research institutes requires understanding gender gaps and the underlying causes, revisiting institutional policies and strategies, mainstreaming gender issues into institutional plans, allocating resources, and closely monitoring progress and outcomes. All these necessitate the engagement of top management of the institutions in gender-related deliberations and other activities implemented by EGLF.

B. Sustained initiatives to advance population and development agenda

Assessment of organisational agenda: The Academy should consult institutions to identify the research and advocacy agenda of different sectors, donors, and CSOs. This helps to develop research projects and agenda for dialogues and discussions that are aligned with its mission and activities. As an organisation established to support the government's policy-making processes, the Academy should closely work with government offices at all levels. These government offices may have resources allocated for a particular research-based activity but may not

know how to make use of it and address the issues. The Academy can be involved in the preparation of various documents such as guidelines and manuals required by government offices to smoothly implement their activities. The Academy can assist them by conducting baseline assessments and impact evaluations. Its active participation in these activities does not only increase the use of scientific evidence for decision-making but also the feasibility of the Academy and its national contribution to development.

EAS should redefine its role in population: The past eight years gave the EAS a golden opportunity to learn from strengths and weaknesses in its engagement in population and development activities. The Academy has to redefine its roles and responsibilities in its engagement in the population and development arena to improve its efficiency and effectiveness as it can't do everything that is expected by stakeholders. This includes a reassessment of organisational capacity, an understanding of the evolving concepts in population and development, and alignment with its missions and goals.

Persistence in population and development studies and advocacy activities: The interplay between population and development is not only complex but also contextually variable. Furthermore, policymakers' understanding of the relationship between the two is influenced by political ideologies, leading to a diverse understanding of the policy implications of population dynamics in Ethiopia. Overcoming these barriers requires persistent work in undertaking consensus studies regularly and organising dialogue and discussion forums on pertinent topics both at the federal and regional levels. As noted in the stakeholders' mapping document, several organisations are working in the areas of population and development. These include government, higher education and research institutions, and CSOs. EAS must regularly engage these stakeholders to increase awareness of pertinent population issues and advance policy agenda. Persistence has triple benefits: keep the momentum of attention given to population issues; put pressure on decision-makers to give the issues a policy agenda; and accommodate

emerging issues and create awareness of their linkage with and implications for demographic dynamics.

Linking advocacy strategies and tools to consensus studies: The Academy conducted several studies. However, the findings and recommendations of many studies were not communicated as policy advice. This negates the objective of conducting consensus studies to inform policy formulation and implementation. Hence, a specific advocacy strategy should be developed and implemented for each of the consensus studies to take the findings and their recommendations forward to influence policies and strategies.

Using differential advocacy approach: Challenges related to donor engagement can be addressed by using a tailored approach aimed at enabling potential donors to know the contributions of the Academy. Different approaches should be followed to engage policymakers and donors. For policymakers, the most important action is policy change, revision, and implementation while for donors the advocacy works should primarily involve selling ideas for financial mobilisation. Since higher authorities from government offices and funding agencies could not attend the policy dialogue events (i.e., their roles are limited to giving opening remarks), it is good to follow innovative and tailored advocacy approaches to reach politicians, decision-makers, and donors.

Initiating regional-level consensus studies and policy dialogues: The discussion forums and dissemination activities mainly focus on convening federal-level stakeholders with limited participation of regional states. Since the regional governments have semi-autonomous power to make policy decisions on population and development issues relevant to their contexts, the Academy should, in the long term, involve regional states and city administrations and conduct region-based consensus studies and policy dialogues (including meetings with members of the regional council) to address regional disparities in population and development achievements. It is also crucial to design pertinent strategies to cascade the

recommendations of national-level studies and discussion forums to regional and lower administrative structures.

Establishing networks of scholars to influence policy-making and implementation: The existence of strong networks of scholars is important to significantly influence policy-making. The networks to be organised around different areas of expertise are influential as they can leverage the technical expertise and financial resources of different scholars and institutions to generate up-to-date evidence to provide policy advice, facilitate knowledge exchange between stakeholders, and overcome bureaucratic barriers to the uptake of policy recommendations.

C. Stakeholder engagement

Fostering institution-based collaboration for co-creation of knowledge: This includes, but is not limited to, joint priority setting, signing of a memorandum of understanding, identification of responsible departments or individuals, and joint engagement in planning for consensus studies and policy dialogues, etc. If the collaboration is not institution-based, it is very likely that the recommendations of policy dialogues are not owned by the relevant government offices and that the recommendations are not used as input for decision-making. Stakeholders' active engagement in the evidence-generation process is also useful to reduce project mentality.

Engagement of high-level individuals to reduce the impact of staff turnover on institutional collaboration: The Academy mainly works with experts in respective ministerial offices. The high staff turnover rate among these scholars challenges the continuity of engagements and the sustainability of collaborations. Hence, it is important to work with state ministers and directors to reduce the effect of staff turnover. This may help to reduce the hallmarks created by the departure of staff on the collaboration and joint implementation of the activities.

Use of research departments of government offices as intermediaries: Building the capacities of and collaborating with research departments of

the sector ministries can increase the chances of translating evidence into practice. The EAS can inform them, engage them, establish strategic partnerships with them, and build their capacities to increase the utilisation of evidence to inform decision-making.

D. Financial sustainability

Diversification of resources and donors: As a cross-cutting issue, implementation of the population and development activities and sustaining population programmes require financial sustainability. This can only be achieved through diversification of donors and resources. The Academy should undertake donor mapping to identify priority areas and continuously engage in budget advocacy to the government and donor agencies, emphasising its societal impact and strategic value in generating scientific evidence to inform decision-making. Although it is strongly related to Fellows' engagement, actively pursuing competitive grants from government offices, non-government organisations, and other donors is useful. Sector ministries may have a budget and networks with other institutions, including UN agencies, which can be used as an entry point to collaborate on initiatives where the expertise of the Academy can directly support the government offices. Establishing research collaborations with national, regional, and international organisations as well as building relationships with philanthropic foundations can help the Academy to generate resources. It can consider engaging in fee-for-service activities such as consultancy works and professional training on specialised courses to earn income. The Academy should also explore options to establish a research endowment fund. These strategies are useful to overcome the scarcity of resources and continue working on advancing scientific knowledge and serving society. In the long term, demonstrating impact, strengthening reputation, and forging strategic partnerships can build a more resilient and sustainable financial future.

Exploring income-generation opportunities: The importance of income-generation is recognised in the newly adopted strategic plan of the

Academy. A study was also conducted to explore opportunities. The Academy should take concrete steps towards making use of the feasible opportunities to reduce heavy reliance on a few partners and diversify external sources of funding for policy-related projects.

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Annex I: List of Stakeholders Consulted

I. Government offices

1. Ministry of Planning and Development
2. Ministry of Health
3. Ministry of Women and Social Affairs
4. Ministry of Labour and Skills
5. Ministry of Innovation and Technology
6. Ministry of Education

II Donors

7. The David and Lucile Packard Foundation
8. Austrian Embassy

III. UN agencies

9. UNFPA
10. UNESCO

IV. CSOs

11. DSW
12. CORHA
13. PHE Ethiopia Consortium
14. Engender Health - EH
15. Population Media Center
16. Pathfinder International
17. African Women Research Center for Adolescent Girls Health
18. Yonsei Global Health Center
19. Society of Ethiopian Women in Science and Technology (SEWiST)
20. Ethiopian Gender Learning Forum (EGLF)

V. Universities and Research Institutions

21. Addis Ababa University
22. Policy Studies Institute
23. Women Research Working Group at College of Natural and Computational Sciences

Annex II: Questionnaire for Survey of Gender Champions

It is to be recalled that you have participated in the Gender Champions Workshop organised by the Ethiopian Academy of Sciences. This survey questionnaire is prepared to get your feedback on the workshop to capitalise on past strengths, address weaknesses, and improve future engagements. Ensuring you that the information is kept strictly confidential and used only for the study purpose, we kindly request you to fill out the questionnaire. Responding to the questions requires about 15 minutes. Thank you in advance for your understanding and support.

1. Age:

- 18-29
- 30-45
- 46-60
- >60

2. Sex

- Male
- Female

3. Educational level

- BA/BSc
- MA/MSc
- PhD
- Other (specify): _____

4. What is your primary profession? _____

5. Where are you working currently?

- Research Institute
- University
- Student
- Other (*Please specify*): _____

6. How relevant was the gender champions workshop to your current work?

- Not at all relevant

- Slightly relevant
 - Moderately relevant
 - Very relevant
 - Extremely relevant
7. What is your opinion of the balance of instruction and interactive learning in the workshop? (*Interactive learning includes knowledge checks, question and answer sessions, exercises, etc.*)
- Too much instruction and not enough interactive learning
 - Too much interactive learning and not enough instruction
 - Right amount of both instruction and interactive learning
8. Rate your knowledge of (or skill in) gender equality and social inclusion before the training.
- Not at all knowledgeable or skilled
 - Slightly knowledgeable or skilled
 - Moderately knowledgeable or skilled
 - Very knowledgeable or skilled
 - Extremely knowledgeable or skilled
9. Rate your knowledge of (or skill in) gender equality and social inclusion after the training.
- Not at all knowledgeable or skilled
 - Slightly knowledgeable or skilled
 - Moderately knowledgeable or skilled
 - Very knowledgeable or skilled
 - Extremely knowledgeable or skilled
10. What benefits have you obtained from your participation in the gender champions workshop?
- I did not get any benefit
 - Understood the gender terminology
 - Understood the gender gap in Ethiopia
 - Increased awareness on the existing gender gaps in higher education and research institutions
 - Understood the drivers of gender inequity in higher education and research institutions

- Increased ability to identify/analyse gender gaps in higher education and research institutions
 - Understood how to engage with the Ethiopian Gender Learning Forum
 - Other (*Please specify*): _____
11. To what extent have you used what you learned in the workshop in your work/institution?
- Not at all
 - Some
 - A lot
12. Which one of the following activities have you undertaken in your institution since you attended the gender champions workshop?
- Advocated on issues related to gender in your institution
 - Identified gender gaps in the institution
 - Prepared a research/project proposal to address gender gaps
 - Conducted a research that can address the gender gap in the institution
 - Introduced the Ethiopian Gender Learning Forum in your institution
 - Contributed to the Ethiopian Gender Learning Forum
 - Worked with the Ethiopian Gender Learning Forum to promote gender champions
 - Involved in gender mainstreaming in institutional activities
 - Promoted collaborative research opportunities on gender issues within and outside Ethiopia
 - Implemented the action plans developed during the gender champions workshop
 - Other (*Please specify*) _____
13. What factors helped you use the lessons learned from the gender champions workshop in your work/institution? [*Please select all that apply*].
- I am equipped with the required knowledge and skill.
 - I am motivated to be a gender champion.

- I had the resources I needed in my institution.
 - I had opportunities to apply what I learned.
 - My institution supported me in using what I learned.
 - My colleagues supported me in using what I learned.
 - Other (*Please specify*): _____
14. How did you benefit your team at the work place/institution because of what you learned?
[*Please select all that apply*]
- I shared information with colleagues to improve their knowledge on gender equality
 - I identified changes needed in practice to ensure gender equality
 - I increased participation in shared decision-making to ensure gender equality in higher education and research institutes
 - Other (*Please specify*): _____
15. What factors kept you from using the lessons learned from the gender champions workshop in your work? [*Please select all that apply*].
- I used the knowledge I learned from the training
 - I need additional training in the subject matter
 - I did not remember the training content well enough to use it
 - I did not have the resources I needed in my institution
 - I did not have the opportunities to use what I learned
 - I did not have the time to use what I learned
 - My institution did not support me in using what I learned
 - My colleagues did not support me in using what I learned
 - The workshop content was not relevant to my work
 - Other (*Please specify*): _____
16. Will you use what you learned in the workshop in your work in the future?
- Definitely not
 - Probably not

- Possibly
- Probably will
- Definitely will

17. How will you use what you learned from the workshop? I will: [*Select all that apply*]

- Increase my competence on analysis of gender issues
- Improve my performance on activities of my institution related to improving gender equality
- Conduct research on gender inequality in higher education and research institutions
- Develop strategies I can use in practice to ensure gender equality
- Provide interventions in practice to improve gender equality
- Other (*Please specify*): _____

18. What factors will keep you from using the content of the workshop in your work?

[*Please select all that apply*].

- I have planned to use what I learned from the workshop
- I do not have a plan to use anything from this workshop
- I need additional training in the subject matter
- I will not have the resources I need in my workplace
- I will not be provided opportunities to use what I learned
- I will not have the time to use what I learned
- My institution will not support me in using what I learned
- My colleagues will not support me in using what I learned
- The training content is not relevant to my current work
- Other (*Please specify*): _____

19. How likely are you to recommend this workshop/the notion of gender champions to someone else?

- Not at all likely
- Somewhat likely
- Very likely

20. What part of the gender champions workshop was most helpful to your learning (strengths)? [*Short answer*]
21. What was the weakness of the gender champions workshop which needs to be improved to make it more effective? [*Short answer*]
22. What other topic(s) would you like to learn more about in the future to promote gender champions and ensure gender equality?

Annex III: Questionnaire for Survey of Training Effectiveness

It is to be recalled that you have participated in the training on research project cycle management and communication organised by the Ethiopian Academy of Sciences. This survey questionnaire is prepared to get your feedback on the training to capitalise on the strengths of past trainings, address weaknesses, and improve future engagements. Ensuring you that the information will be kept strictly confidential and used only for the purposes of the study, we kindly request you to fill out the questionnaire. Responding to the questions requires a maximum of 15 minutes. Thank you in advance for your understanding and support.

1. Age
 - 18-29
 - 30-45
 - 46-60
 - >60
2. Sex
 - Male
 - Female
3. Educational level
 - BA/BSc
 - MA/MSc
 - PhD
 - Other (*Please specify*): _____
4. What is your primary profession? _____
5. Where are you working currently?
 - Government office
 - Local NGO
 - International NGO
 - Research Institution
 - University
 - Student

- Other (*Please specify*): _____
6. How relevant is this training to your current work?
- Not at all relevant
 - Slightly relevant
 - Moderately relevant
 - Very relevant
 - Extremely relevant
7. What is your opinion of the balance of instruction and interactive learning in this training? (*Interactive learning includes knowledge checks, question and answer sessions, exercises, etc.*)
- Too much instruction and not enough interactive learning
 - Too much interactive learning and not enough instruction
 - Right amount of both instruction and interactive learning
8. Rate your knowledge of (or skill in) research project cycle management and communication before the training.
- Not at all knowledgeable or skilled
 - Slightly knowledgeable or skilled
 - Moderately knowledgeable or skilled
 - Very knowledgeable or skilled
 - Extremely knowledgeable or skilled
9. Rate your knowledge of (or skill in) research project cycle management and communication now after the training.
- Not at all knowledgeable or skilled
 - Slightly knowledgeable or skilled
 - Moderately knowledgeable or skilled
 - Very knowledgeable or skilled
 - Extremely knowledgeable or skilled
10. What benefits have you obtained from your participation in the training?
- I did not get any benefit
 - Understood research project cycle
 - Understood research communication skills
 - Understood the components of scientific writings

- Understood techniques of scientific writings
 - Increased ability to manage research projects
 - Increased ability to communicate research findings
 - Other, please specify: _____
11. To what extent have you used what you learned in this training in your work?
- Not at all
 - Some
 - A lot
12. What factors kept you from using the content of this training in your work?
- [Please select all that apply].*
- I need additional training in the subject matter.
 - I did not remember the training content well enough to use it.
 - I did not have the resources I needed in my workplace.
 - I did not have the opportunities to use what I learned.
 - I did not have the time to use what I learned.
 - My supervisor did not support me in using what I learned.
 - My institution did not support me in using what I learned.
 - The training content was not relevant to my work.
 - Other (*Please specify*): _____
13. How did you use what you have learned in this training?
- Identified research gaps
 - Prepared/submitted a research/project proposal
 - Managed or participated in the management of a research project
 - Participated in the technical activities of a research project
 - Conducted a research
 - Presented scientific findings in a seminar/workshop/conference
 - Published a scientific finding
 - Promoted/established collaborative research networks within or outside Ethiopia

- Involved in collaborative research projects
- Other (*Please specify*)_____

14. What factors helped you use the content of this training in your work?

[Please select all that apply].

- I am equipped with the required knowledge or skills.
- I had the resources I needed in my workplace.
- I had opportunities to apply what I learned.
- My supervisor supported me in using what I learned.
- My institution supported me in using what I learned.
- Other, please specify:_____

15. How did you benefit your team at the work place because of what you learned?

[Please select all that apply]

- I shared information with colleagues to improve their knowledge
- I identified changes needed in practice in research project cycle management and communication
- I increased participation in research project cycle management and communication
- Other (*Please specify*):_____

16. Will you use what you learned in this training in your work?

- Definitely not
- Probably not
- Possibly
- Probably will
- Definitely will

17. What factors will keep you from using the content of the training in your work?

[Please select all that apply].

- I need additional training in the subject matter.
- I will not have the resources I need in my workplace.

- I will not be provided opportunities to use what I learned.
 - I will not have the time to use what I learned.
 - My supervisor will not support me in using what I learned.
 - My institution will not support me in using what I learned.
 - The training content is not relevant to my current work.
 - Other, please specify: _____
18. How will you use what you learned from this training? I will: [*Select all that apply*]
- Increase my competence on research project management and communication
 - Improve my performance on research project management and scientific communication
 - Provide interventions in practice
 - Develop strategies I can use in practice
 - Other (*Please specify*): _____
19. How likely are you to recommend this training to someone else?
- Not at all likely
 - Somewhat likely
 - Very likely
20. What part of this training was most helpful to your learning (strengths)? [*Short answer*]
21. What was the weakness of this training which needs to be improved to make it a more effective? [*Short answer*]
22. What other topic(s) would you like to learn more about in the future?

Annex IV: Interview Guide for Stakeholders

Stakeholder's engagement

- What activities have you undertaken with EAS in dealing with population and development issues?
- What roles does your institution play in implementing these population and development issues?

Consensus studies

- Has your institution participated in the P&D-related research activities supported by the EAS? If YES: What was the focus of the research? What was your institution's role in the undertaken research?
- How do you assess the relevance of the research in supporting the activities of your institution?
- How did your institution use the findings of the study?
- What were the strengths of the undertaken research?
- What were the weaknesses of the research?
- What challenges have you encountered in conducting research-related activities to address population and development issues?
- What challenges have you faced in making use of the research findings?
- Do you have any plan to engage in the research activities to be supported or guided by the EAS or others? If YES: could you please indicate the focus areas of the research to be engaged in? If NO: why?
- What are the emerging/new issues in the areas of population and development that have to be explored?

Policy advice

- Has your organisation participated in the policy dialogues/consultative meetings/ discussion forums organised by the EAS?

- What was your institution's role (your role) in the policy dialogues/consultative meetings/discussion forums?
- How do you assess the relevance of the policy dialogues/consultative meetings/discussion forums for the institution's work?
- How did you use the knowledge gained/lessons learned/experience shared during the policy dialogues/consultative meetings/discussion forums?
- How effective is the advisory efforts in reframing policies/strategies/plans?
- What were the strengths of the policy dialogues/consultative meetings/discussion forums?
- What were the weaknesses of the policy dialogues/consultative meetings/discussion forums?
- Does your institution often use the knowledge gained from the policy dialogues/consultative meetings/discussion forums to inform its decision-making and planning?
- What challenges have you encountered in translating recommendations of the policy dialogue/consultative meetings/discussion forums into action?
- Which areas (current and emerging issues of population and development) do you think require policy debate and round-table discussion?

Annex V: Interview Guide for Donors

1. Why are the population and development issues important to you?
2. What specific population-related activities do you support?
3. What inspired you to support the BRIDGE project? What did you set out to achieve?
4. How do you think your support in this project is making an impact?
5. Which impact is of most interest to you? Why?
6. Given the multi-sectoral nature of population-related interventions and the complex interrelationships between population and development as well as the longer period required to set policy agenda and observe policy changes/adjustments, how much project-related interventions can yield sustainable outcomes?
7. In the context of limited funding on the one hand and the crosscutting nature of population activities on the other hand, how can positive policy changes be achieved?
8. What were the best experiences of your organisation in supporting population and development activities? What works best and what not? Which strategy can pay-off in promoting evidence-based policy changes?
9. What are the challenges (related to research and policy advisement) of supporting population and development activities?
10. What are the priority areas of population-related activities for your organisation?

Annex VI: Interview Guide for Academies of Sciences

1. Research agenda setting processes
 - a. How do you set research agenda for consensus studies? Who determines priority areas?
 - b. How are the research agenda of the Academy aligned with the government's priorities?
2. Selection of advocacy issues and development of advocacy messages
 - a. How are topics selected for policy dialogue?
 - b. How are the advocacy messages developed?
3. Strategies to inform policymakers and influence policymaking
 - a. What strategies are used to reach policymakers?
 - b. What determines, from your experience, the uptake of policy recommendations?
4. Stakeholder engagement - linkage with governmental and non-governmental organisations
 - a. How are stakeholders identified?
 - b. What are their roles in agenda setting, policy dialogue, uptake of policy recommendations?
 - c. What strategies are used to actively engage them in the ASSAF's/NAS's activities?
5. Resource mobilisation - finance and logistics
 - a. What strategies are used to mobilise financial resources?
 - b. How do you ensure financial sustainability for the continuous activities of the Academy?
6. Staff engagement - human resource deployment for research and advocacy works
 - a. What modalities do you use to engage researchers?
 - b. Are the researchers permanent employees of the Academy? If not, what are the terms of their engagement?
7. Challenges of evidence-based policy advocacy activities

- a. What challenges have you encountered concerning agenda setting, consensus studies, policy dialogue/communication, uptake of recommendations, and administrative issues?
8. Given that population dynamics is integrated into almost all development outcomes, how do you manage that all relevant stakeholders equally recognise the problem and commit to address the problem?

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