



Research Agenda

Overview

Knowledge is power – and this includes the power to advance a country's development. On some of the topics that information is needed for successful development, insights from rigorous research are still outstanding. In order to help the research community address these, the National Planning Commission has identified a research agenda for Malawi. The aim of this research agenda is twofold: to identify research gaps and challenges in already existing research activities, and to suggest priority areas for new research.

As the development challenges are broad and encompass many sectors, any research agenda must be comprehensive. To this end, the Commission has consulted stakeholders in academia, government, the private sector, industry, and think tanks. Examples of consultative processes include holding a research symposium to learn about the latest developments and which frontiers remain unexplored, thought pieces written by experts, government studies, and engagement with universities in all three regions of the country.

A first step for interested researchers should be to investigate if studies on the topics have been done, but failed to be widely circulated, hence their policy recommendations were not adopted.

The research agenda is structured around six thematic areas, many of which are cross-cutting:

- 1) Sustainable Agriculture
- 2) Sustainable Economic Development
- 3) Human Capital and Social Development
- 4) Sustainable Environment
- 5) Demography
- 6) Governance, Peace, and Security

The research topics outlined in the subsequent sections are expected to inform improvements in implementation of policies, mitigating the impact of climate change and support wealth creation and enterprise development amongst the youth and other vulnerable groups. Any research findings need to be effectively disseminated to the relevant stakeholders for implementation. In addition to generating new evidence, it also matters to increase the adoption of existing evidence into policy.

1) Sustainable Agriculture

Although the MGDS III aims to end hunger, achieve food security and improved nutrition and promote sustainable agriculture, it is apparent that Malawi continues to be substantially dependent on food imports. This dependency can only be possible if economic development is enough to afford such imports. However, the best route to economic development in Malawi is through strong agricultural development. However, like many countries in Africa, agricultural productivity in Malawi remains relatively low, due to limited adoption of modern technologies, exacerbated by heavy dependence on rain-fed agriculture, low soil fertility, weak links to markets, and poor research and extension services.

- The major challenge of Malawi agriculture is that the increases in crop yield (especially maize) are very slow and agricultural area expansion is still an important means to keep up with the growing demand. This causes losses of forests or grasslands, thereby pushing farmers farther into marginal lands and reduces carbon stocks by increasing emissions from agriculture-led deforestation. Therefore, more research should focus on reducing yield-gap (i.e. getting farmers to attain yields that are closer to the potential; currently farmers only get $\leq 20\%$ of the yield potential) and developing climate-smart (as below). Research priorities should, therefore, focus on (i) intensification strategies, including site-specific nutrient/fertiliser loads – NPK etc., that maintain soil health, (ii) irrigation; and (iii) agronomical practices.
- In the adoption and sustainability of climate-smart agriculture, problems are low adoption and discontinuous use of the methods. What are the determinants of uptake and (dis)continuity of climate-smart agriculture?
- While we show that some increase of GHG emissions to feed a greatly expanding population is probably unavoidable, this increase can clearly be mitigated by intensifying agriculture in a responsible manner.
- The agricultural sector faces market challenges. Commodity markets can be one way to give farmers access to commodity markets. To what extent can other commodities be modelled on tobacco? What are the best practices in establishing and operating agricultural commodity exchanges? How to create access to formal markets for smallholder farmers? As particularly the rural population continues to grow at high rates, the future of small-holder farmers is crucial in ensuring improved livelihoods for Malawians. What is the role of smallholders in agricultural transformation?
- Investment priorities in agriculture should not only aim at increasing private investment in agriculture but also at ensuring that investments are sustainable. Policy should be put in place to enhance smallholder farmers' investment in primary agriculture and large-

scale (both local and international) investors help to foster the accumulation of agricultural capital stocks. Investments in agriculture should aim to (i) create employment; (ii) bring expertise and new skills to Malawi, (iii) enhance financing capacities and (iv) marketing networks to enhance the competitiveness of agricultural production and value chains in Malawi. In this regard, MwAPATA Institute will focus on policy research to ensure that large-scale investments in agriculture (are equitable) do not have detrimental impacts on the society (especially women and smallholder farmers/fishers). MwAPATA will also help generate evidence to inform policies and regulatory frameworks (and guide their implementation) to ensure that private sector investments in the agriculture sector bring both economic and social benefits to Malawi while guaranteeing sustainable use of natural resources (including water, fisheries, land, forests etc).

- Which higher-value crops are suitable to be grown in Malawi and are demanded by countries that have relatively low-cost transport links?
- What are the trends in food systems and dietary patterns? Knowing about future food demands should help demand-driven production. Therefore, fore-sighting studies are necessary in order to come up with scenario analysis of future patterns and trends of food supply and demand for enhanced food and nutrition security and sustainable production in Malawi.
- A concept note will identify ways to unlock implementation challenges in agriculture, which are 1) unfavourable enabling environment, 2) lack of streamlined systems for processing business-related documents, 3) lack of deliberate inbuilt mechanisms to constantly check and adjust projects, 4) predominantly thin and informal markets, and 5) lack of effective coordination among stakeholders.
- Can Malawi's Agrarian-Driven Industrialisation Strategy be revived? If yes, how? There will be another thought piece commissioned by MwAPATA on this issue.
- A further topic that will constitute a thought piece is 'Understanding the Megatrends that will define a smallholder agriculture in the coming decades.' While farms will grow and release parts of the rural population into manufacturing and services work in urban centres, small-holder agriculture will continue to play a significant role in Malawi's economy in the foreseeable future.
- Linked to the foregoing on the future of stallholder farmers is the need to understand which inclusive agribusiness models work; for what kind of value chains; under which conditions; for which types of smallholder farmers?

- It is important to also understand the form that the smallholder took in 1964 at independence, what form he/she is now, and the form that is likely to characterise him/her (by design or default scenarios) 40 years from now looking at the various mega-trends that will be defining a smallholder agriculture in the coming decades. Land distribution across gender: Landholding size is diminishing due to population growth. At the same time, access to land across gender lines continues to be unequal with men enjoying more access to land than women, even though women provide the bulk of labour supply in the agricultural sector. How to ensure people who want to go into farming have access to farmable land? And how can we make sure that women and men have equal opportunities in farming?
- Agricultural technologies help fight hunger and malnutrition. However, Malawi is among the countries that least use new agricultural technologies. For example, the adoption of improved seed in Malawi is estimated to be at 45%. Reasons for low adoption are low incomes and education as well as a lack of extension services. Do most farmers appreciate the benefits of improved seeds, and cannot overcome the obstacles to adoption, or do most of them prefer to stick to the known varieties? How could more be convinced and enabled to adopt higher-yield and more resistant seeds?
- Research should focus on nutrient-dense commodities (fish and livestock, especially small ruminants and poultry) and across the key research domains of breeding and genetics, disease detection and control, nutrition and feeds, and enhanced production systems that will contribute to sustainable growth, while ensuring that resource-poor farmers and communities in Malawi have access to the nutritional and economic benefits from a sustainably growing poultry and fish farming sector.
- Why has irrigation not taken widespread hold in areas that have abundant water supply, for example on the shores of Lake Malawi or along the Shire River?

2) Sustainable Economic Development

While all research areas considered have the potential to positively affect economic development, sustainable economic development merits its own topic, not least because creating wealth for all Malawians and working towards the country's self-reliance are the corner stones of the NPC's *raison d'être*.

How can economic growth be inclusive and promote income growth among the poorer? What role can initial inequality of endowments, government interventions, or the sectoral growth pattern play?

- Malawi ranks 111 out of 190 countries on the World Bank's Ease of Doing Business Index, a score that aims to measure the burden of regulation on firms. How can regulation be simplified, and in addition the provision of utilities made more reliable to enhance Malawi's business-friendliness?
- What are the root causes of youth unemployment and underemployment, and which policies can address these?
- How does inequality affect Malawi's economic growth?
- The skills that many people possess often do not correspond well to the professional skills demanded in the workplace. There is a lack of statistics on skills (which skills are available and where). This data gap could be filled through a skills and employment mapping (as the mapping of opportunity zones across the country).
- On industrialisation, there are a number of research questions that need to be answered:
 - What could have gone wrong in Malawi's industrialization, especially after the privatization that happened mostly from 1994 onwards?
 - To enhance the understanding of the strategic roles of industrialization on economic growth and structural change, and how the two relate to socioeconomic transformation, both in theory and in the practical context of Malawi.
 - What was Malawi's industrialization strategy in the period between independence and 1993? And what changed in the strategy after 1993/4?
 - What was the link of the strategy to the agriculture sector and how can it be used to propel industrialization moving forward?
 - What were the main enablers of a vibrant industry/manufacturing and what hindered its growth afterwards?
 - Is public sector active involvement still important for revamping a strong manufacturing base? If so, what level of involvement and modality should it take?
 - What lessons can be drawn from other countries with regard to successful industrialization strategies that can be adapted to Malawi?

3) Human Capital and Social Development

Health:

- Biomedical and clinical research on neglected tropical diseases and infections

- Health systems: Conduct both health policy and operational research in neo-natal health: Even though infant and under-five mortality have declined, neo-natal mortality is still high and the cause of 34% of under-five deaths.
- Socio-cultural determinants: Substance abuse: Policy guidelines on tobacco smoking and excessive alcohol consumption are absent. How can the Government come up with policy guidelines on smoking and excessive drinking in view of the health hazards associated with these practices?
- Stigma and discrimination: Disability is a human rights as well as development issue. What are the biggest challenges and barriers that persons with disabilities face in accessing public services? How can service delivery accommodate for special needs?
- Disease surveillance and control: Claims by traditional and faith healers to be able to cure HIV and other serious health conditions pose hazards to unknowing patients. Moreover, unsanitary conditions within their work places pose a risk to health. How can the government regulate and control faith healing practices in view of the established health service provision mechanisms, without disavowing the potential benefits that traditional carers have in places that are not provided with modern medical facilities?
- Pre exposure prophylaxis for HIV negative persons is not being practiced in Malawi. How can we control HIV infection in HIV negative persons whose professions pose a greater risk of HIV infection?

Education

In particular for a country that has a large youthful population, human capital in the form of education decides whether it will be able to reap a demographic dividend. But, in spite of the sector's importance for development, it is not a research priority as the main obstacle to be overcome is implementation, not a lack of knowledge on good practices.

- A critical skills audit that assesses the relevant skills required for the labour market in Malawi now and in the wealth creation and self-reliant agenda vision.
- An assessment of the education policies and strategies as they relate to the long-term vision of a wealth creating and self-reliant nation.

4) Sustainable Environment

Most of Malawians live in rural areas and make their living largely through the land on which they live and fisheries resources adjacent to their land. Rural people's enterprises and households

collectively account for much of the uses of land, water and labour in agricultural production. Therefore, prudent management and conservation of the country's natural resources is critical, because degraded land and water/fisheries will constrain rural people's ability to meet their needs, and they will be perpetually be trapped in the cycle of poverty-environmental degradation.

- Research should focus on options for increasing farmers/fishers participation in developing and sharing environmentally friendly technologies,
- Policy research (MwAPATA Institute) should focus on fostering environmental policies and promoting rural finance to encourage off-farm (or off-lake for fishers) income-generating activities and microenterprise to help take the pressure off natural resources such as fisheries.
- The growing scarcity of arable land, fuel wood, and rising demand for groundwater (through unregulated sinking of borehole) is resulting in depletion of forests. Therefore, research should focus on sustainable approaches to agricultural intensification, appropriate fuel-saving technologies and community empowerment. Focus should also be on mapping groundwater to provide evidence for water tenure/rights regulatory framework.
- Soils studies should (i) provide an overview of the characteristics of soils or groups of soils and their influence on agricultural productivity; (ii) practical recommendations concerned ploughing and cultivation methods that will promote soil and water conservation, and (iii) guidelines to extension staff on how to assist farmers in good husbandry practices.
- Overfishing by both artisanal and industrial fishers and destructive fishing practices have seriously depleted fish stocks and damaged the aquatic environment in Malawi's lakes, rivers and floodplains. Therefore, research should focus on (i) recovering and conserving fisheries resources and conserving aquatic biodiversity, (ii) new fishing techniques that promote conservation of fish stocks, (iii) processing and preservation, such as smoking kilns and salt and drying racks in order to consumption of safe and nutritious fish.
- MwAPATA Institute should focus on policy research aimed at promote policy reforms on (i) co-management; (ii) secure fishing rights, (iii) wealth-based fisheries management, and (iv) rebuilding the fish stocks.
- How can people be taught to increase their own resilience to disaster? Would there be benefit from having extension workers in disaster risk management? In addition, a cost-benefit analysis of disaster response and resilience research would be helpful in assessing the most cost-effective measures.
- What are the priorities in mitigating the effects of climate change?

5) Demography

- How can people of all demographic groups be inspired to adopt a positive mindset that enables them to be more productive citizens?
- Rapid population growth presents a challenge. Fertility rates have declined, but are still high and it is unclear which factors exactly have led to a drop in family size. Knowing this can guide policy direction on how to maintain small family sizes and move fertility rates in rural areas in line with those in urban ones. An expanding population makes resources scarcer, and also advances environmental degradation.
- Industrialising the country will require more people to move to cities. What are the best pull-factors that can motivate people to migrate towards urban centres?
- In order to adequately support the next generations, it would be helpful to have an inventory of youth organizations in Malawi (mapping of public institutions, non-governmental organizations targeting youth).
- An assessment of the impact of the National Youth Policy, Strategic Plan and the Youth SITAN (through the Youth TWG) will allow to evaluate how well current policies are working, and where they might need to be adjusted to fully benefit the youth.
- The youth are the country's future and their well-being is a priority, but they are not the only group that deserves special support: Longer life-expectancy increases the number of people who live into old age, when they need support. Urbanisation and shrinking family sizes call for this to be outsourced from families towards the state. How to design a fiscally sustainable social safety net for the elderly?
- How to balance between harnessing the existing demographic dividend and having a quality future population that is well planned by an informed, educated population that has full access to SRH services.

6) Governance, Peace, and Security

- How can the public sector be reformed to improve service delivery? How can technocratic and political incentives be aligned?
- A lot of publicly funded projects such as infrastructure are not completed on time, which increases their cost to the public. What are the main challenges to completing publicly funded projects on time?
- What are the context-relevant good practices in instituting and sustaining accountability mechanisms for implementation of development plans and policies?

- Sustainable fiscal deficit; how to create fiscal space?
- Impact evaluation of Public Private Partnerships since their inception
- The real thing we need to do: implement – research why this implementation is not taking place (governance structure, leadership, etc.). Why is existing knowledge not being used?