NATIONAL TRANSFER ACCOUNTS

Generational Economy of Population Ageing

INTRODUCTION

National Transfer Accounts (NTA) are a tool to generate a national economic analysis concerning population change. Effectively communicating how NTA analysis can be used to policy planners is challenging. This e-booklet offers simple communication materials focusing on what NTA are, how they are calculated and how they have been used for policy development. It uses existing evidence and analysis that includes country case studies. The e-booklet covers 12 topics and key issues as outlined below.

CONTENTS

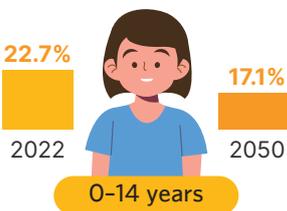## Demographic shift is a global issue

By 2050, 1 in 4 people in the Asia-Pacific region will be aged 60 years or above

14.3% 2022
25.9% 2050
60 years and above
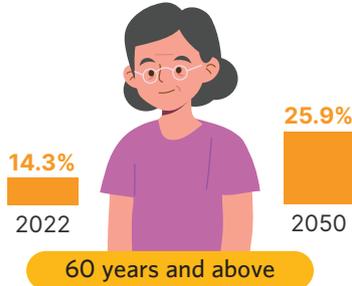
The proportion of older persons aged 60 years and older in the Asia-Pacific region is projected to increase from **14.3 per cent** in 2022 to **25.9 per cent** in 2050.

22.7% 2022
17.1% 2050
0–14 years

The proportion of children aged 0-14 will decline from **22.7 per cent** in 2022 to **17.1 per cent** in 2050.

This shift can create challenges for governments and societies that requires adaptation to a more aged society as it impacts economic development.

Source: (1) UNESCAP (2022a)
(2) UNESCAP (2022b)

Preparing for changes in the population age structure is important

Countries with an increasing proportion of older people should focus on developing public programmes to support their growing older populations. Programmes could include social security, pension systems, universal healthcare, and long-term care. Meanwhile, countries that have large numbers of young people should prioritize enhancing workforce capabilities, labour productivity, and investments in education, healthcare, and pension schemes that young people contribute to starting when they are young, including financial literacy.

NTA are a tool for projecting impacts

As working-age adults produce more than they consume, and children and older persons consume more than they produce, it is crucial to assess the economic impacts of the decrease of working-age people and the proportional increase of older people, as there will be less taxpayers contributing to the cost of the above-mentioned social services.

Children and the older persons consume more than they produce


Labour income
Consumption
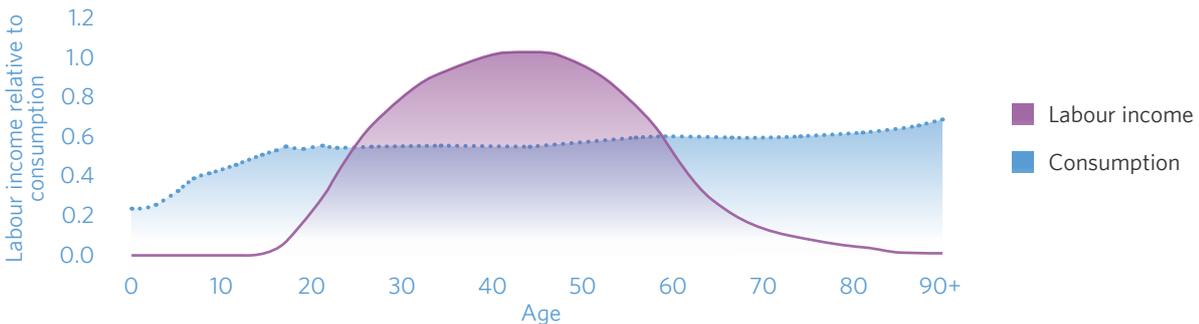
Note: (1) Economic Life-cycle Model (Age profile of labour income and consumption);
(2) Values are normalized on the per capita labour income of individuals aged 30-49 years old
Source: Lee, R., & Mason, A. (2013)

National Transfer Accounts or NTA provide a way to assess these changes in population age structures on various economic aspects. They offer insights into generational economic issues (defined as: the economic interplays among three population groups – children, working-age population, and older persons).[1] This includes the impacts of changing age structures on the amount of taxes being paid, national income, public spending, savings, and investment. NTA analysis helps policymakers plan, develop and address important policy questions related to economic growth considering the impacts of an ageing population.

NTA can be used to plan and develop policies that better prepare a country for an ageing population in areas like education, healthcare, gender, economic contributions of women, family support systems/payment schemes, labour policies, and fiscal policies (defined as: the spending programmes and tax policies that the government uses to guide the economy). Another important process for a number of countries in the Asia-Pacific region is to look at other countries that have a larger proportion of older people, and the policies and programmes each designed to better prepare for the future.

The UN National Transfer Accounts Manual, 2013
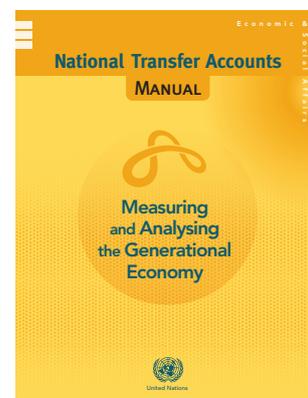
To view the NTA manual, click here

NTA can inform policy in many areas

How do young and old people, who consume more than they produce, support themselves?

What are the likely impacts of population ageing on generational equity?

Will the rapid growth of elderly populations slow economic growth?

What are the policy implications of demographic change for education and healthcare?

Given the growing number of old people, are public pensions and healthcare programmes sustainable?

How can countries best take full advantage of the demographic dividend?

What are the potential impacts of policy changes, such as delays in retirement age?

Source: Definition of generational economy in the National Transfer Accounts Manual (2013)

[1] See Definition of Generational economy, in Mason and Lee, 2011 in United Nations (2013)

## A system for measuring intergenerational flows

National Transfer Accounts are a process that can estimate the impacts of increasing numbers of certain population groups, younger persons or older people in society, so that governments can design programmes and develop policies to better handle this change in age structures and the decreasing number of future taxpayers.

The flow of money and assets from grandparents, to parents, to children is known as the Economic Life-cycle Model. It offers insights into income and consumption each year by age group and highlights how different age groups share or transfer, save, generate income or assets to support themselves over time.

Key features of NTA

1. National disaggregate economic data **by age.**
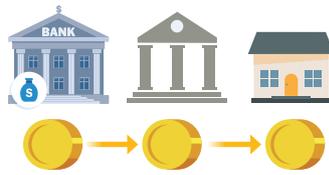
2. Measure **inter-age flow of resources** through institutions (market, state, and family).

3. Add **family transfers** (within and between households). These are large and not measured in National Accounts.

Countries are at different stages of change in their age structures and economic development. Middle-income and high-income countries face different Economic Life-cycle Models and need different policies to suit their situations. NTA contributes by offering evidence for policy development and decision-making to address these differences.

Economic life-cycle surplus/deficit

Young and aged societies have different generational economic structures

Per capita labour income and consumption by age

Philippines

Japan

Labour income
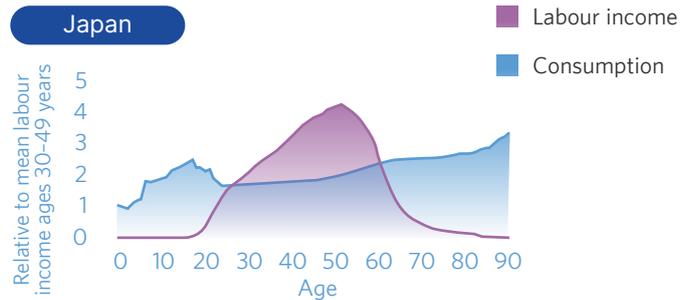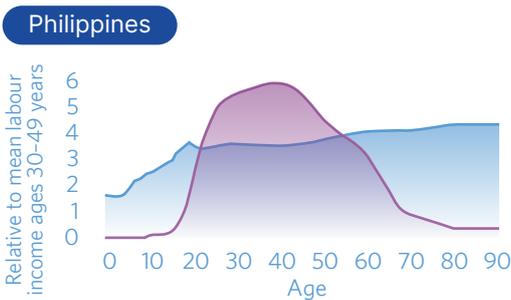
Consumption

Aggregate labour income and consumption by age
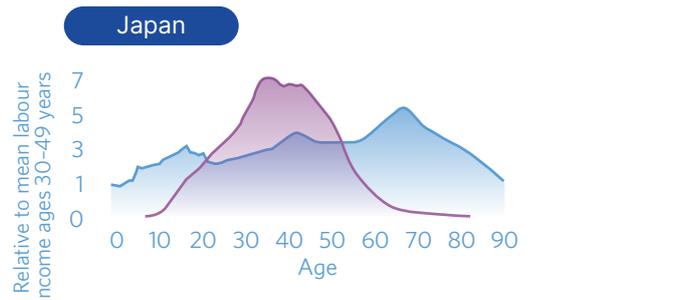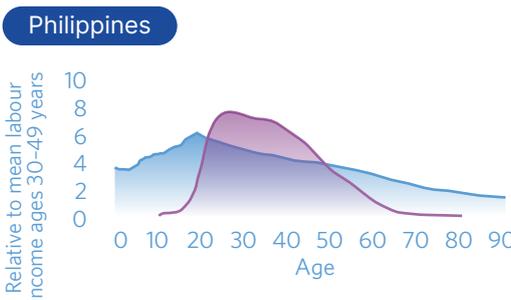
Philippines

Japan

Note: (1) Economic Life-cycle of the Philippines (young society) and Japan (aged society);
(2) Values are normalized on the per capita labour income of individuals aged 30-49 years old;
(3) The aggregate values are the result of multiplying the age-specific per capita value by the population age distribution.
Source: Miller, T., & Lai, N. M. S. (2022)

The flow Identity

Inflow = Outflow

Inflow
- Labour income
- +
- Asset income
- +
- Transfer inflows

Outflow
- Consumption
- +
- Saving
- +
- Transfer outflows

Life-cycle deficit

Consumption - Labour income

=

Age-reallocation
Asset-based reallocation
(Asset income - Saving)

+

Net transfer
(Transfer inflows - Transfer outflows)

Source: UNESCAP (2022)
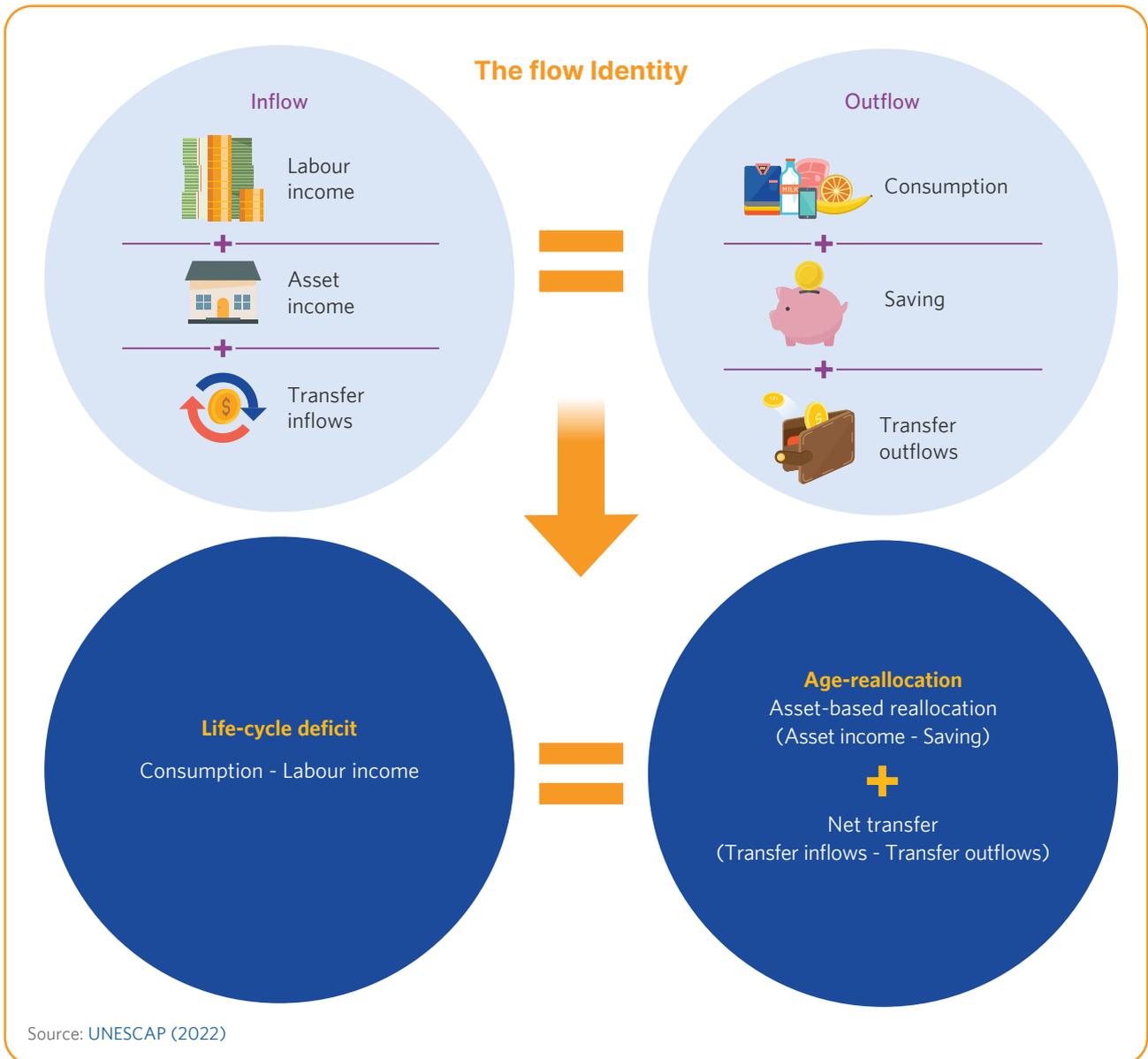
The NTA Network

The NTA project, initiated in 2004 by co-leaders Ronald Lee and Andrew Mason, has grown substantially over 20 years. As of mid-2023, it has expanded to include more than 80 countries, with more than 20 of these teams led or co-led by national governments.[2]

NTA introductory videos

The following videos give a brief introduction of NTA:

National Transfer Accounts
UNFPA Eastern Europe & Central Asia

What is National Transfer Accounts?
UNFPA Asia Pacific

[2] See NTA Global Network in 2023, Tim Miller & Lai, N.M.S. (2022)

NTA methodology

Data requirements

NTA relies on three types of data. These include: first; national population age distribution data: second; national account data (taken from the System of National Accounts[3]): and third; data necessary for estimating various economic flows by year and age. Examples of economic flow data include public and private consumption, labour or employment income, tax revenues and public spending, asset income, savings, and household or private transfers data.[4,5] To calculate these data by age, data could be sourced from administrative records and nationally representative surveys.

Three key groups of data needed to construct the NTA

Population data

Population counts given by single year of age to a desired maximum age of 90+ or older

National Accounts data

Key data required: GDP by expenditure and income approaches, allocation of income, final consumption expenditures of households; simplified accounts for general government (i.e. various types of tax revenues and public spendings), households, and corporations, and saving and net lending/borrowing

Data on economic flows by age

Example of data: Household income and (consumption) expenditure survey; Labour force survey; Health survey and other similar surveys; Age information provided by administrative sources, such as government agencies – e.g. on education and health expenditure, pension expenditure, public benefits received or taxes paid, etc.

Estimation process

The estimation process can be broadly outlined in three steps. First, initial estimates by age, usually from administrative records or surveys, are obtained. Second, the national population age distribution is used to calculate an implied aggregate value based on age. Third, multiplicatively adjust the age profile so that the implied aggregate value exactly equals the national aggregates or "macro controls" as reported in the National Accounts.[6]

Three steps of the NTA estimations

03 Multiplicatively adjust the level of the age profile so that the implied aggregate value exactly equals the national aggregate 'control total' obtained from System of National Accounts (SNA)

02 Use the national population age distribution to calculate an implied aggregate value based on that per capita age profile

01 Obtain initial estimates of the per capita age profile, perhaps from a survey

NTA estimates and outputs

NTA primarily estimates two key components. The first is "life-cycle deficit or surplus", including consumption and labour income. The second component is "Age reallocation", which includes public and private transfers, as well as public and private saving and income from assets. Initially, per capita estimates are derived, and subsequently combined with the country's population age distribution data to calculate aggregated estimates. While per-capita estimates might exhibit quite similar patterns across countries, significant variations arise when considering differences in population age structures, particularly between young and aged societies.

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[3] The System of National Accounts (SNA) is the internally agreed standard set of recommendations on how to compile measures of economic activity.
[4] See Glossary of Terms in NTA, in Lee, R., & Mason, A. (2013)
[5] Public transfer outflows consist of taxes, social contributions, and other revenues paid to the government. In the NTA, public transfer outflows are distinguished by their source; i.e., the activity that is being taxed. Private transfers, within the NTA framework, typically refer to the non-governmental transfers of resources between individuals or families. These transfers can include things like gifts, inheritances, or direct financial assistance between family members.
[6] See explanation about 'macro control'.

Consumption, labour income and life-cycle deficit (LCD)

Per capita life cycle

Aggregate life cycle

Legend: Labour income (purple), Consumption (blue)

Note: (1) Per capita and aggregate labour income, consumption, and the life-cycle deficit by age, US 2015;
(2) The aggregate values are the result of multiplying the age-specific per capita value by the population age distribution.
Source: Miller, T. (2021). Population Ageing and Sustainable Development Draft Manual for the UN Population Division (June 25, 2021).

Age reallocation: Asset-based reallocations and transfers

Per capita reallocations

Aggregate reallocations

Age reallocation		
Sectors	Transfers	Asset-based reallocations
Public sector	• Public education • Publicly funded health care • Unfunded public pensions • Taxes and social contributions	• Public debt • Student loan programmes • Sovereign wealth funds
Private sector (or household)	• Familial support of children and parents • Charitable contributions • Remittances	• Owner-occupied housing • Farms and family businesses • Funded pension programmes

Note: (1) Per capita and aggregate age reallocations by age, US, 2015;
(2) The aggregate values are the result of multiplying the age-specific per capita value by the population age distribution.
Source: Miller, T. (2021). Population Ageing and Sustainable Development Draft Manual for the UN Population Division (June 25, 2021).
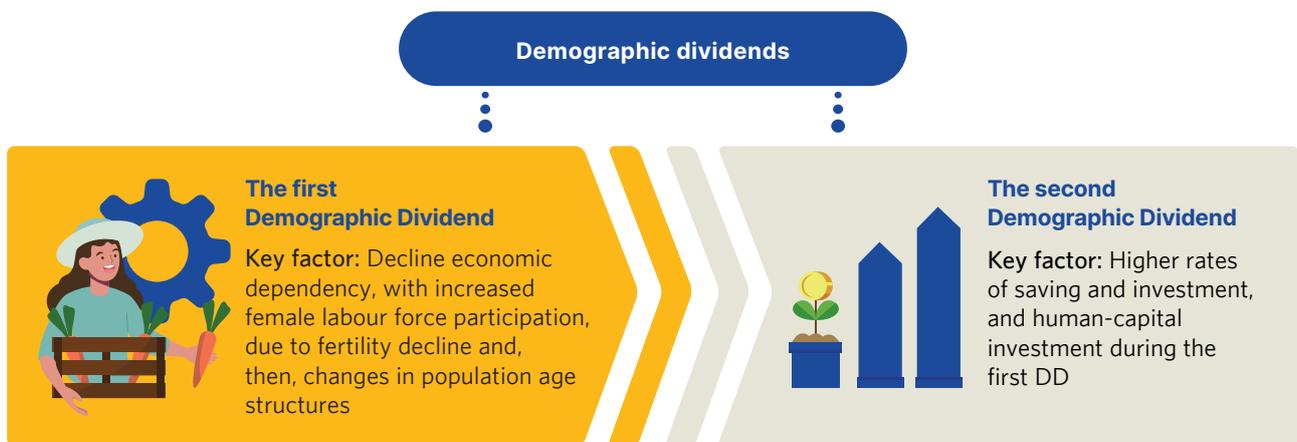
NTA and demographic dividends

What are the demographic dividends (DDs)?

DDs are economic benefits from changes in a population's age structure, including economic growth.

How do DDs occur?

The first DD occurs as falling fertility rates lead to fewer children compared to the workforce. This frees up resources for increased investments, growth, and higher living standards. This can be compounded by increasing the labour supply having more women participating in the productive workforce. The first DDs can be prolonged and enhanced through policy choices that prioritize pro-growth investments, including higher savings, increased investment, and human capital development (defined as: investing in health, education, and labour productivity). These policies help prepare for the second DD in the future, which occurs when the country has an ageing population.

First and second demographic dividends

Demographic dividends

The first Demographic Dividend

Key factor: Decline economic dependency, with increased female labour force participation, due to fertility decline and, then, changes in population age structures

The second Demographic Dividend

Key factor: Higher rates of saving and investment, and human-capital investment during the first DD

Economic Support Ratio (ESR) and DDs

Economic Support Ratio (ESR) is a useful indicator of how population age structure will affect economic performance and can be used to estimate demographic dividends. The first DD is defined as the rate of growth of the ESR.[7]

Economic Support Ratio (ESR)

The number of effective producers / the number of effective consumers

One effective producer
An individual earning the average labour income of a prime-age worker (age 30–49)

One effective consumer
An individual consuming the average consumption of a prime-age worker (age 30–49)
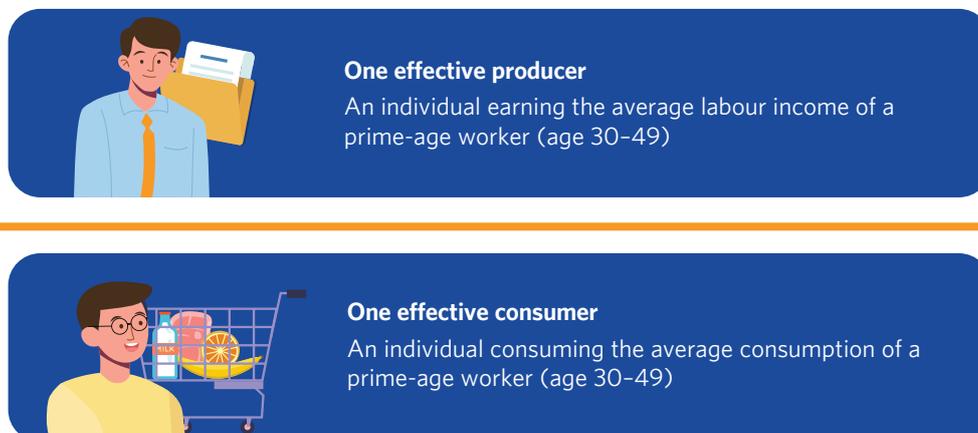
[7] See more about Economic Support Ratio and the first DD, Mason, A., & Lee, R. (2022)

Viet Nam and India both experienced the onset of the first DD in 1973, but Viet Nam's ended earlier due to faster fertility rate decline

Demographic dividends, Viet Nam

Demographic dividends, India

Combined Dividend (%)

First Dividend (%)

Second Dividend (%)
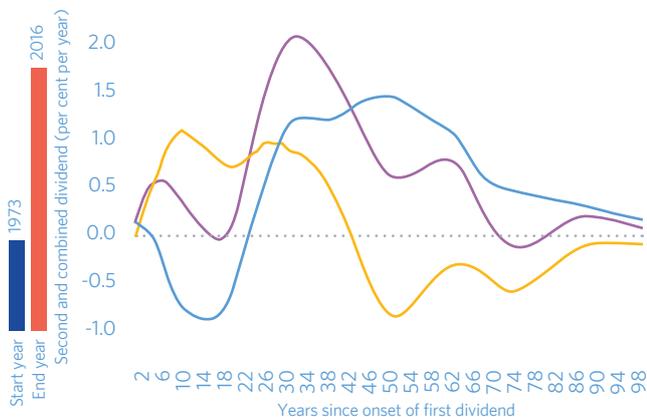
Note: (1) Demographic Dividends of Viet Nam and India;
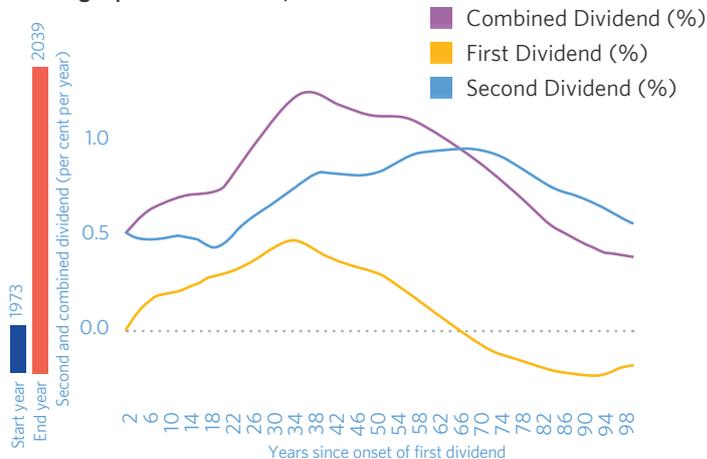(2) The 1st DD phase is the period during which the first dividend (the growth rate of the ESR) exceeded zero.
Source: UNPD Project (2016)

NTA data implications

For countries currently undergoing the first DD, NTA data can assist in prolonging this dividend until a country reaches the second DD. It provides evidence for countries to be mindful and implement appropriate policies related to education and health for the young population when fertility rates are declining. On the other hand, countries that have already passed through the first DD phase can use NTA to understand how to sustain economic growth. It provides projected data for preparing governments and families for the challenges of population ageing. Gaining insights into the consumption and age-reallocation patterns of both the young and old proves to be valuable data for shaping effective policy and promoting development.[8]

The less children there are, the more money is likely to be spent on human capital

Africa

Asia-Pacific

Americas

Europe
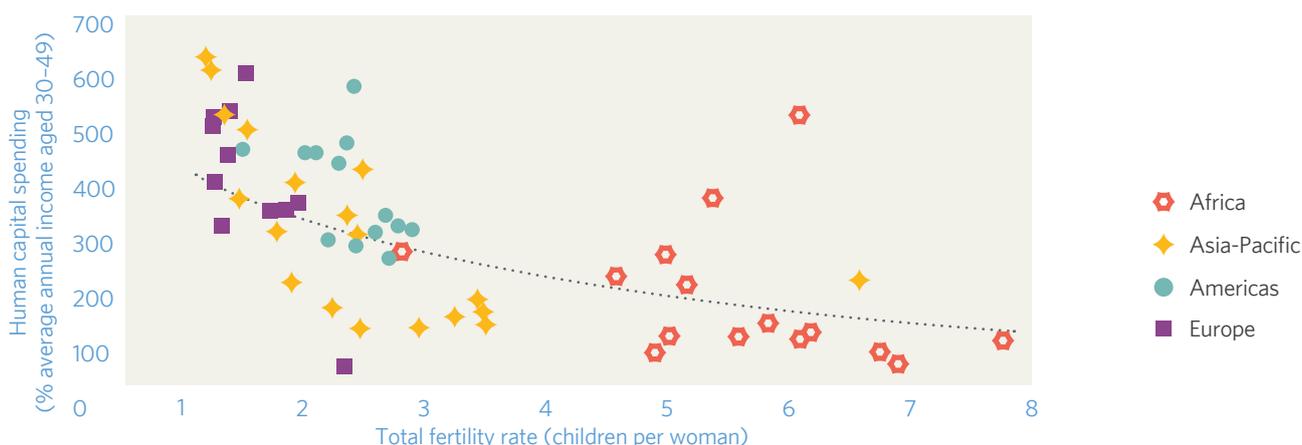
Note: (1) Trade-offs between fertility and human capital spending;
(2) Human capital spending is total spending per child given per capita health spending for children aged 0-17 and per capita education spending for children aged 3-26 in the base year.
Source: National Transfer Accounts Bulletin (2016)

[8] See Per capita consumption for children (0-19) versus for older persons (65 and older), Lee, S-H, and Q. Chen, 2016, "The Economic Impact of Demographic Change in China and India".

How do demographic changes affect "fiscal sustainability"?

Fiscal sustainability is when a government is able to sustain its current spending, tax levels, and other finance policies in the long-term without defaulting or going into solvency and having to borrow more money to pay for programmes. When a country has an increasing proportion of older persons and a decreasing birth rate, it is anticipated that in the future it will have less taxpayers (15–65-year-olds: working-age population). Meanwhile, the number of people who access public services and social welfare, such as pensions and healthcare will increase. This trend may increase a country's risk of fiscal instability.

What can NTA data tell us?

NTA data can provide information about the demographic dividends by examining the Economic Support Ratio (ESR). Similarly, in terms of fiscal sustainability, NTA can produce an indicator called the "Fiscal Support Ratio" (FSR). This ratio compares tax revenue received to the costs of the government having to pay for public services and welfare. In predominantly young societies still enjoying demographic dividends with high numbers of future taxpayers, the FSR generally tends to increase. Meanwhile, in ageing societies, the FSR will decline.

Fiscal support ratio

Fiscal support ratio (FSR):
tax revenues and contributions received

Public transfers paid out for education, pensions, and healthcare

Source: Miller, T. (2021). Population Ageing and Sustainable Development Draft Manual for the UN Population Division (June 25, 2021).
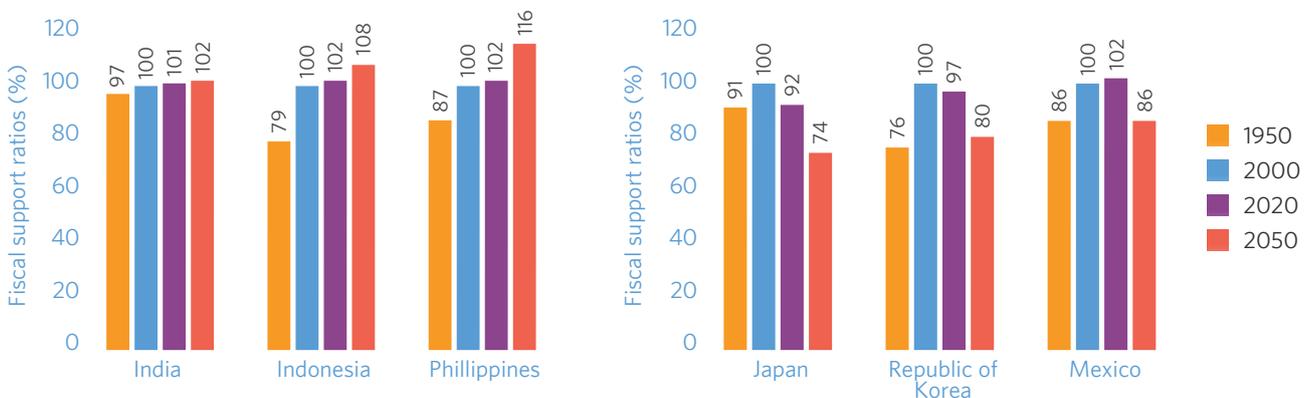
FSR typically increases in young societies, while it decreases in aged societies

Young
society countries

Aged
society countries

Note: Fiscal support ratios per cent 1950–2050.
Source: National Transfers Accounts (datasheet).

Mexico case study

Mexico is a country that is transitioning to an ageing society. Without any changes, the FSR during this period is projected to decrease due to the growing proportion of the older population. It is expected that public debt will approximately double between 2013 to 2030. NTA analyses provides evidence to support the Mexican government in considering policy changes and reforms related to public spending and the tax system to protect social programmes, such as universal health care and welfare.

Reducing the fiscal support ratio is projected to increase the public debt of Mexico
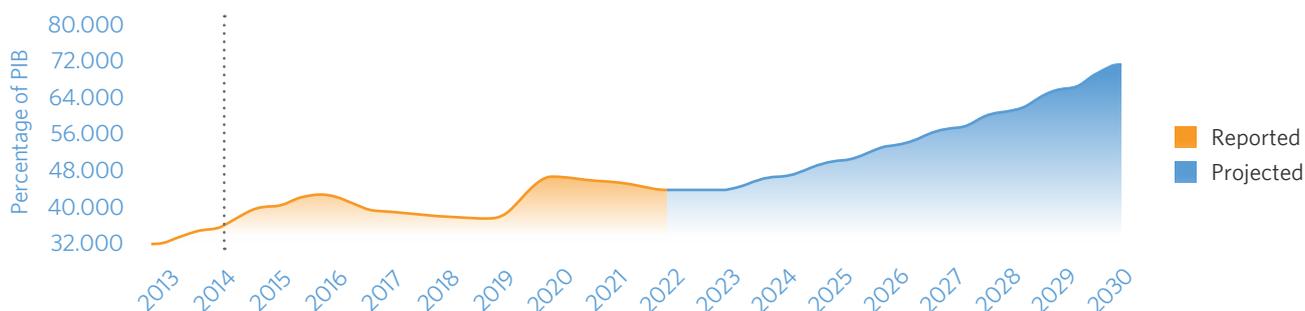
Note: Reported and projected public debt of Mexico during 2013-2030.
Source: CIEP Fiscal Simulator

Japan case study

The FSR of Japan is projected to decrease from 100 in 2000 to 74 in 2050. In 2020, public pension spending in Japan accounted for 9.4 per cent of GDP. The rising expenses related to the elderly for health and long-term care, combined with projected increase in public debt, has led to the Japanese government implementing changes in 2023 to the social security system.

Apart from the examples of Mexico and Japan, there is also a study in Austria that used NTA analyses to inform possible policy reforms. The analysis examined the impact of tax revenue and paying for social programmes if the retirement age was delayed from 65 to 67 to 69 or 71. This analysis provided evidence for the government about the most efficient option in reducing pension expenditures and increasing the lifetime labour income of the overall population.[9]

Increasing public debt is a big challenge of Japan's fiscal sustainability

Projected public debt (2010–2060), Japan

Note: (1) Projected public debt for Japan (2010-2060);
       (2) New debt (2020-2060), or the increase in public debt that is attributable to demographic factors, are estimated based on the adjusted tax profiles and government transfers that produce fiscal balance in 2015.
       (3) From the same study (Sang-Hyop Lee, Andrew Mason, and Donghyun Park. (2022)), projected public debt for the Republic of Korea, China, Taiwan, Indonesia, Thailand, Singapore, Philippines are also available.
Source: Lee, S.H., Mason, A., & Park, D. (2022)

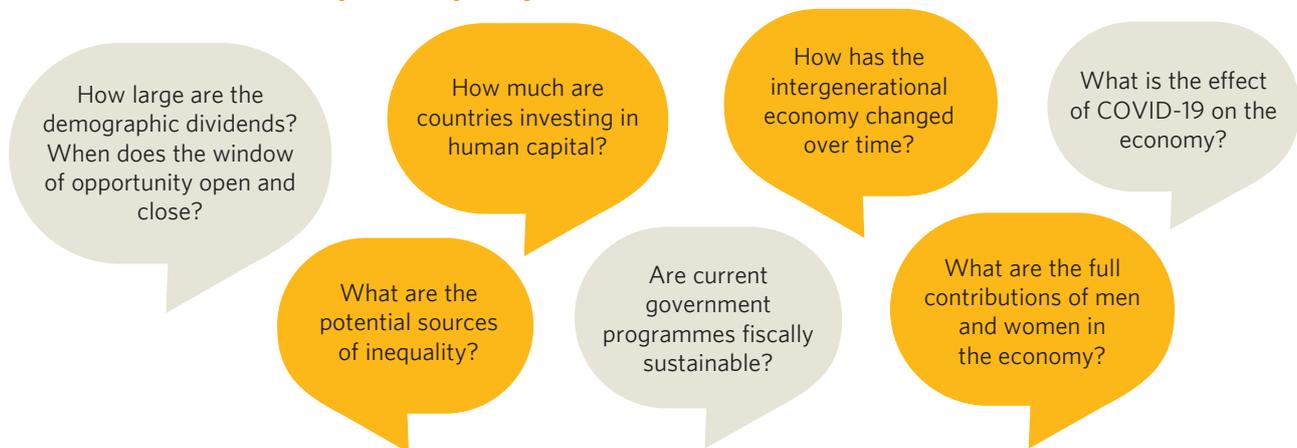[9] See Sánchez-Romero, M., et al. (2019)

Measuring and forecasting population change impacts

NTA analyses can measure and forecast population change impacts on; e.g. economic growth (by the economic support ratio (ESR) and estimated demographic dividend); income and employment (by evaluating potential changes in labour supply and labour force participation); investment in human capital (education and health) and physical capital (which will affect the productivity and income of the workers in order to accelerate the long-term economic growth.)
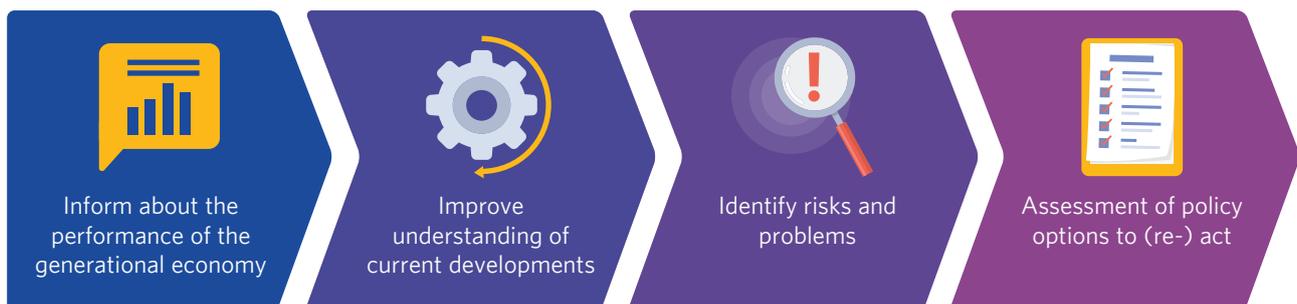
Potential uses for policy development

Using NTA data can provide several outcomes, including predicted demographic changes, estimates and projections of future public funding needs, and a snapshot of the current situation regarding tax and welfare systems. These data can enhance understanding and improve policy decisions, identify potential risks and issues, and assist in assessing options for action or reaction.

NTA data addresses important policy issues

How large are the demographic dividends? When does the window of opportunity open and close?

How much are countries investing in human capital?

How has the intergenerational economy changed over time?

What is the effect of COVID-19 on the economy?

What are the potential sources of inequality?

Are current government programmes fiscally sustainable?

What are the full contributions of men and women in the economy?

Source: Adapted from Sang Hyop Lee's presentation on "National Transfer Accounts (NTA) as Evidence for Intergenerational Policy Advancement".

NTA data for policy development

Inform about the performance of the generational economy

Improve understanding of current developments

Identify risks and problems

Assessment of policy options to (re-) act

Source: Sakunphanit T. et al. (N.A.). Final Report Utilization of the National Transfer Account Analysis for Policy Guidance.

Every society exhibits distinct consumption patterns and economic-age profiles for the elderly population and their welfare or support systems. Evidence-based data on these aspects help policymakers in effectively addressing and preparing for population ageing. In the case of younger populations, decisions on policies related to health and education, particularly in terms of public services and transfers, aimed at promoting inclusive generational equity, can be more evidence-based.

In the last stage of life, healthcare consumption in Sweden is notably higher than the Republic of Korea and primarily funded through public spending
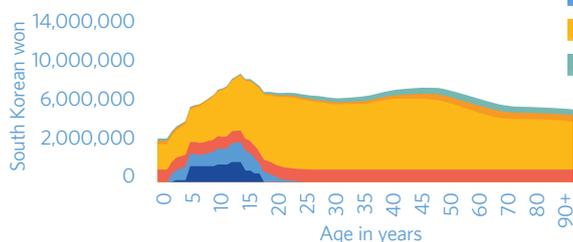
Legend:
- Public education
- Public other
- Public healthcare
- Private education
- Private other
- Private healthcare

Sweden (2003)

Swedish krona — 450,000 / 350,000 / 250,000 / 150,000 / 50,000 / 0

Age in years — 0 5 10 15 20 25 30 35 40 45 50 60 70 80 90+

Republic of Korea (2000)

South Korean won — 14,000,000 / 10,000,000 / 6,000,000 / 2,000,000 / 0

Age in years — 0 5 10 15 20 25 30 35 40 45 50 60 70 80 90+

Source: National Transfer Accounts (2016)

Public spending for children and youth primarily focuses on "education", while for older persons, it predominantly centres on "healthcare".

Legend:
- Public education
- Public healthcare
- Public other cash
- Public other in-kind
- Social insurance
- Taxes

Persons under age 25

Publice transfer inflows, normalized — 0.35 / 0.30 / 0.25 / 0.20 / 0.15 / 0.10 / 0.05 / 0.0

Taxes, normalized

Age — 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Persons aged 65 and older

Publice transfer inflows, normalized — 0.75 / 0.60 / 0.45 / 0.30 / 0.15 / 0.0

Taxes, normalized

Age — 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90

Note: Per capita public transfer inflows received, and taxes paid by single year of age, US, 2015.
Source: Miller, T. (2021). Population Ageing and Sustainable Development Draft Manual for the UN Population Division (June 25, 2021).

Examples of NTA application in Thai policies

Thailand provides a successful example of using NTA analyses to inform policy decisions. This includes policy formulation, evaluation, and advocacy for crucial economic and social development agendas, such as social protection, health inequality analysis, the Child Support Grant Policy, and the development of the National Population Plan.

NTA applications for policy development in Thailand

Policy formulation + **Policy advocacy** + **Policy evaluation**

NTA results and the 2040 projection were incorporated in the drafting of **Population Plan during the Twelfth National Economic and Social Development Plan (2017-2021)**

Public and private consumption for children in early age was an empirical evidence for government's decision making process on the introduction of **"Child Support Grant"**

NTA's evidence on sustainability of social protection was included in the **Quarterly Social Situation Report** February 28, 2022

Public health consumption was a critical element of health inequality analysis in **"Poverty and Inequality Situation of Thailand 2019"**

NESDC and UNFPA Thailand co-organized an online symposium on **"National Transfer Accounts and Social Protection Provision in Thailand"** on December 17, 2021
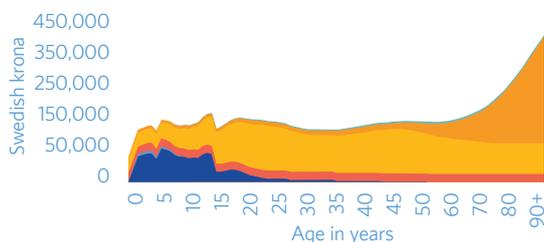
Source: NESDC in Sakunphanit T. et al. (N.A.). Final Report Utilization of the National Transfer Account Analysis for Policy Guidance.
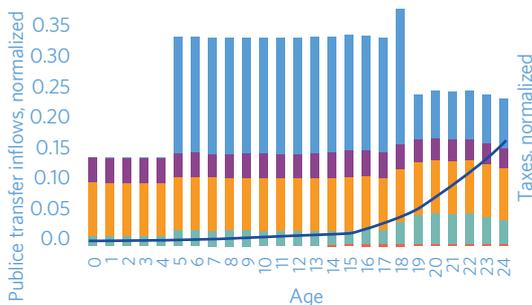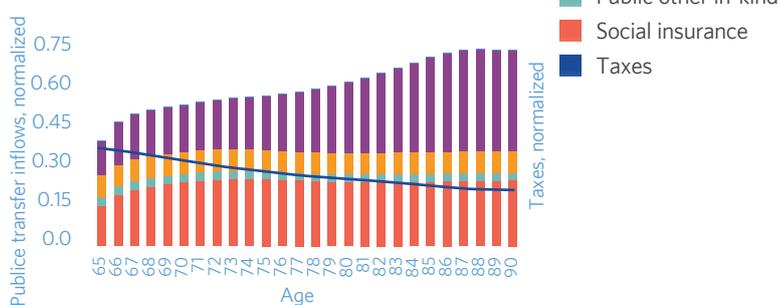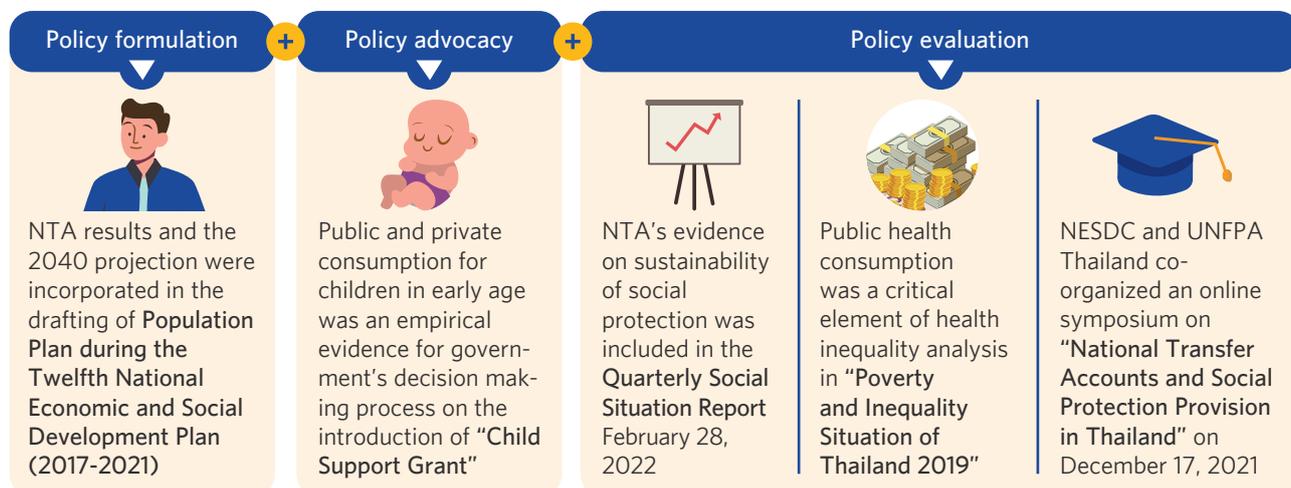
NTA and other tools

NTA data can be strengthened by presenting the data by specific factors such as income, socioeconomic classes, age groups, or education levels.[10] These attributes can serve as inputs for various modelling methods and analytical tools; for example, microsimulation, macrosimulation, econometric regression, and CGE modelling.

Analyses of the combination of NTA data with various analytical tools enhance the understanding of policy implications, can offer evidence-based information to governments into the short-term and long-term effects of policy interventions for decision-makers in various domains. These are particularly valuable for developing specific policies, especially on the social protection system such as pensions, unemployment benefits, long-term care, and health care.

Examples of such analyses include:

Macrosimulation Modelling

Tools like the "Social Budget Model (SBM)" by the International Labour Organization (ILO) can use NTA analyses to design and evaluate social protection strategies. For instance, the ILO has applied this model to assess the Thai Social Security system and social health protection schemes, offering recommendations for reform.

### NTA in macro-simulation modelling
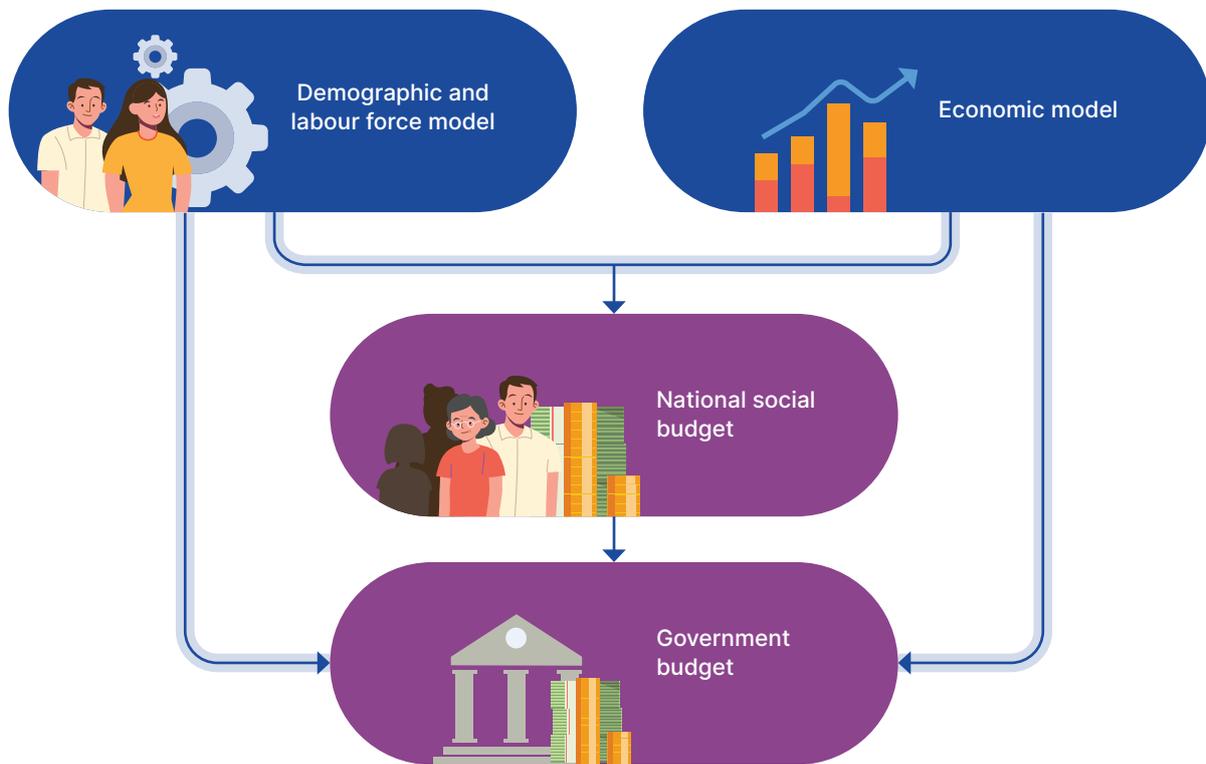
Microsimulation Modelling

Studies like Spielauer et al. (2020) and Abio et al. (2021b) have used NTA analyses to examine public transfers and tax policies, providing policy indications based on attributes like education level, partnership status, parenthood status, and school enrolment. The results inform tax policy decisions and public transfers.

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[10] The UN Department of Social and Economic Affairs (DESA) has developed the UN Manual on National Time Transfer Accounts (NTTA) to suggest how men and women contribute to the economy. See details from: https://www.ntaccounts.org/web/nta/show/Gender%2C%20Time%20use. An ongoing pilot is being carried out by DESA to address the socioeconomic dimension of NTA, known as 'the National Inclusive Accounts' in which factors like wealth or education attainment of individuals are considered in the NTA estimate.

NTA in Micro-simulation modelling
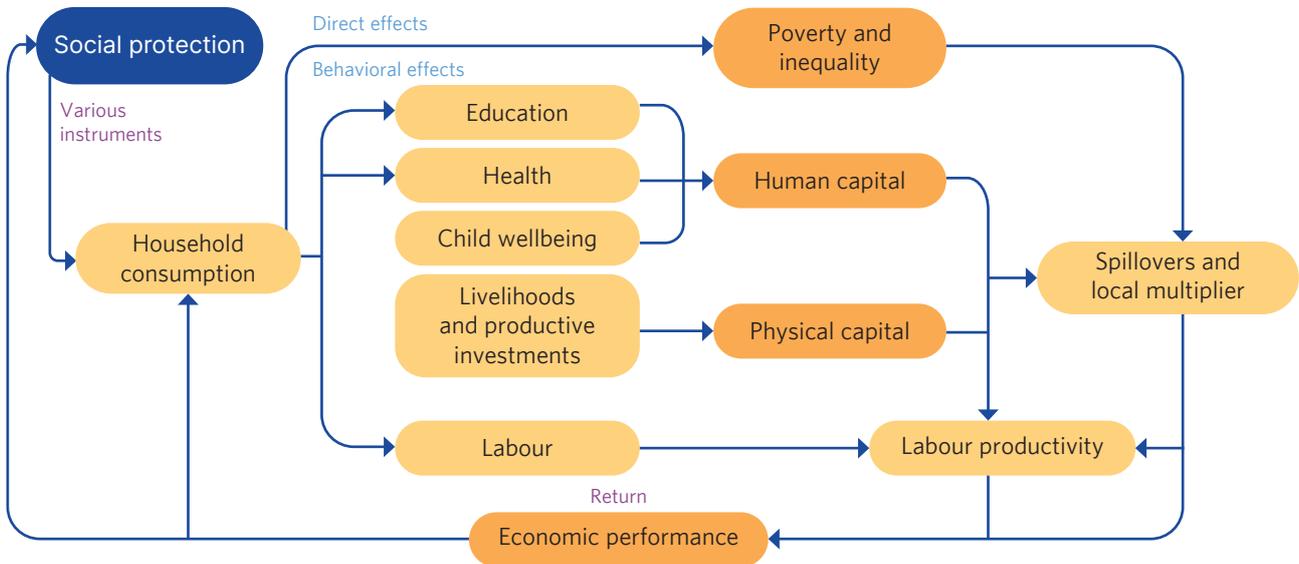
Source: (Mideros et al., 2016)

Overlapping generations (OLG) Modelling

An OLG model examines the economic effects of agents from different generations with overlapping lifespans. Combining NTA data with OLG models is a way to answer various questions. For example, Miguel Sanchez-Romero (2022) used this approach to study the generational impacts of the COVID-19 pandemic. The findings indicate that COVID-19 had a more significant financial impact on people aged 25 to 64 years and their children compared to older persons. Public contribution for income losses could help distribute the economic burden more evenly across age cohorts. Additionally, a 1 per cent decline in labour income leads to an average increase in the debt-to-total labour income ratio, ranging from 1.2 per cent (without fiscal policy) to 1.6 per cent (with fiscal policy).

OLG-NTA model to assess the impacts of the COVID-19 pandemic
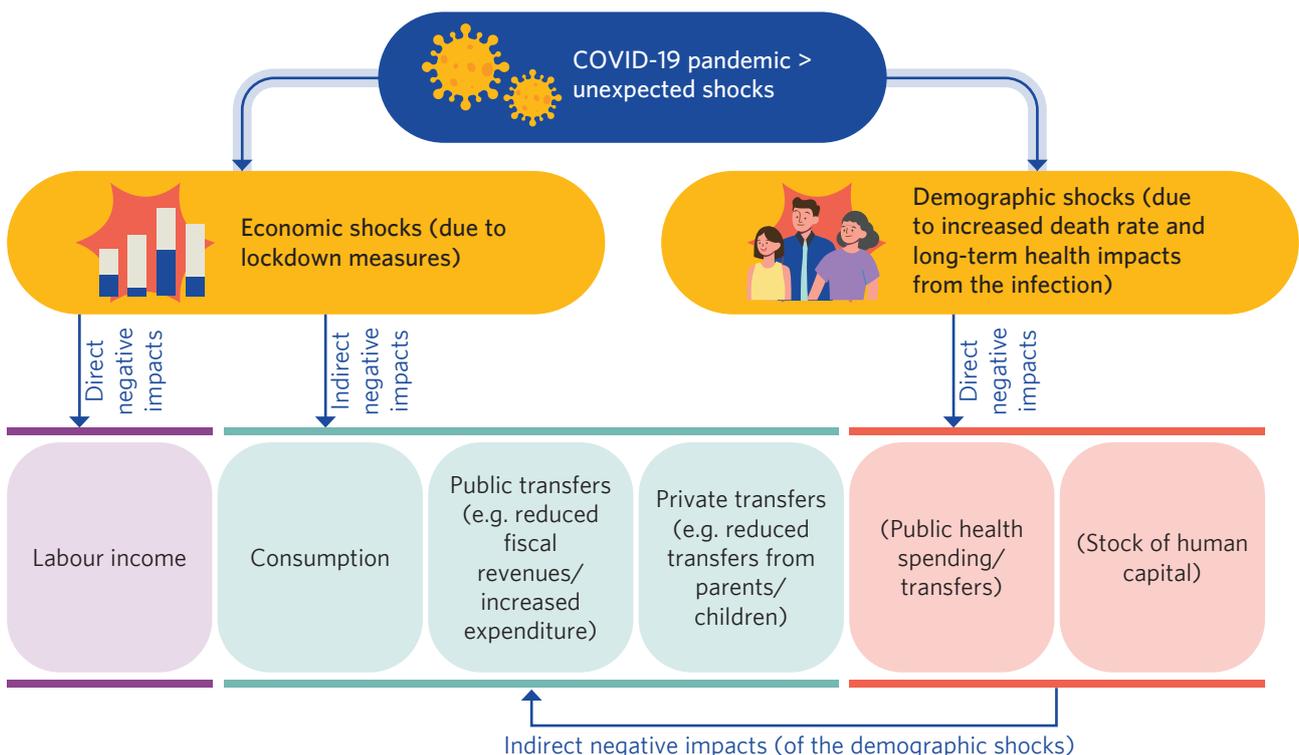
Source: Miguel Sanchez-Romero, 2022

NTA measures intergenerational economic flows within the framework of national income accounts, but they lack coverage of non-market production or unpaid work, which is often covered by women. NTA does not differentiate the estimates by socioeconomic consideration such as by education attainment or by individual wealth, which would reflect inequalities across the population.

Addressing shortcomings of the NTA

Non-market production or unpaid care and domestic work, e.g. provision of care and services within the households, **are not counted**

Introduction of **National Time Transfer Account (NTTA)** ▶ including **age and gender specific** in the production and consumption of unpaid care and household services

**Inequalities across the population,** by socioeconomic groups, **are not reflected**

Introduction of **National Inclusive Accounts (NIA)** ▶ including **education attainment** and income groups in the production and consumption into NTA/NTTA framework

What is the NTTA?

The NTTA, or National Time Transfer Account, built on the NTA framework, includes unpaid care and domestic work, such as the work traditionally provided by women and mothers. It sheds a light on gender disparities in economic contributions. The NTTA incorporates unpaid work using data from time-use surveys, revealing that, on average, women devote more than three times as much time to unpaid care and domestic work compared to men. When non-market production (e.g. women's time use for housework, cooking, cleaning, childcare or elder care) is included, the gender difference in total production between men and women is not as significant as when only market production or labour income is considered.

This information is a valuable message for policymakers looking to increase female labour force participation. Women are not an "untapped" labour source-they are already contributing significantly to the economy. Policies aimed at promoting women's labour force participation should include mechanisms to decrease their unpaid work burdens at home.

Women contribute three times more than men in unpaid care and domestic work. Gender gaps in employment (paid work) remain large.
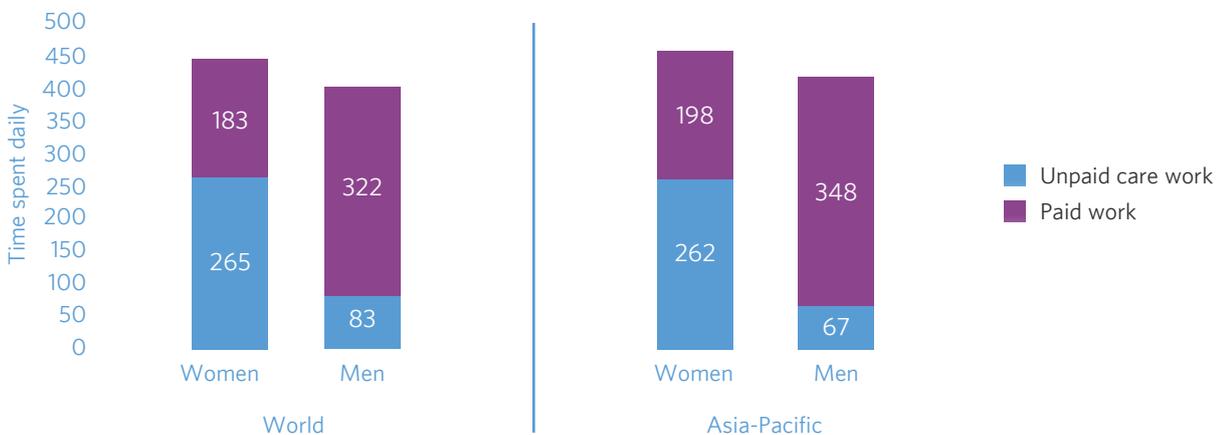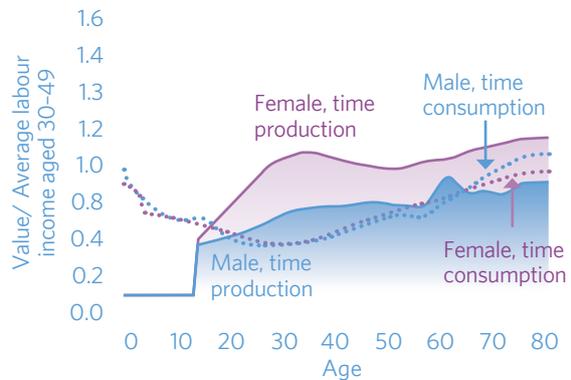

Note: (1) Time spent daily in unpaid care and domestic work, paid work, and total work by sex and region, latest year;
(2) The estimates (of time spent daily) cover the population aged 15 and over;
(3) ESCAP calculations based on ILO, Care work and care jobs for the future of decent work, 2018.
Source:. ESCAP, 2019

Total production of males and females

Market
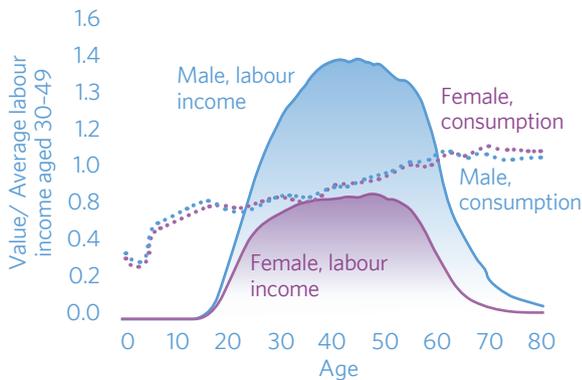
Household

Source: Gretchen, 21 April 2022

What is the NIA?

NIA, or National Inclusive Accounts, are an extension of NTA/NTTA that disaggregates national accounts by age, gender, and socioeconomic groups. They offer a more detailed understanding of the impacts of population age structure, gender, and socioeconomic distribution, especially education levels, on a country's economic growth, inequality, and development. This data highlights the importance of investing in human capital and advancing an inclusive development agenda for all groups within the population.

Age profiles of labour income and consumption vary by education levels
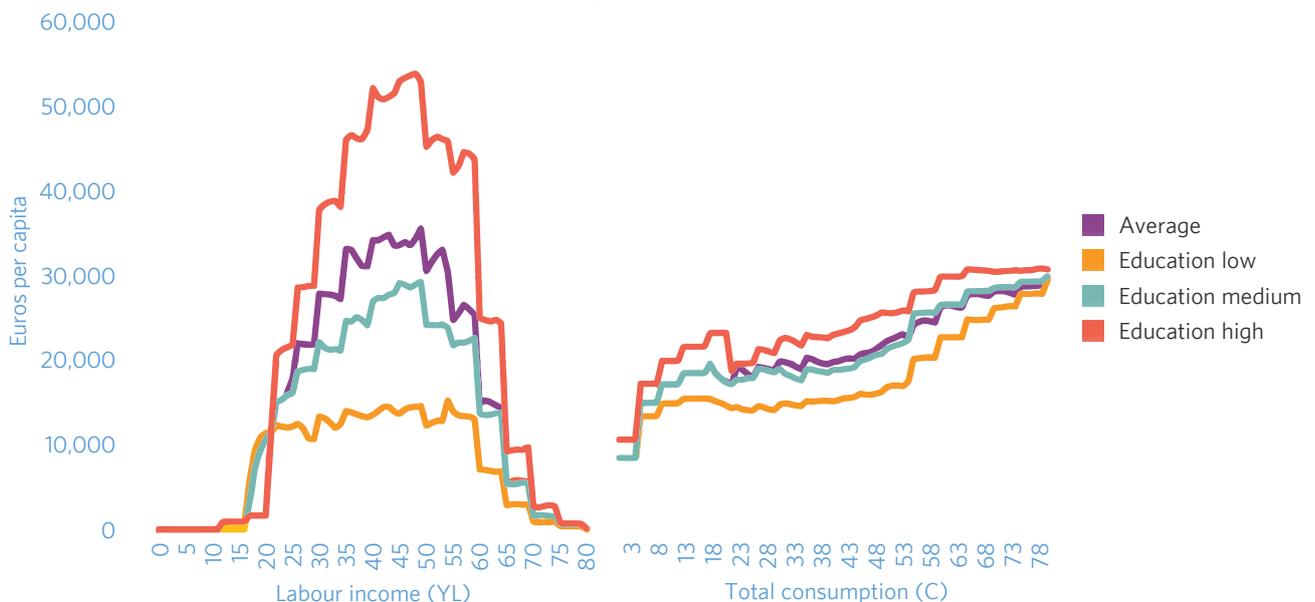
Note: UK - United Kingdom, Data expressed in Euro per capita in year 2010.
Source: M. Spielauer, et al. (2022)

Challenges for NTTA/NIA

One of the main challenges for NTA, NTTA, and NIA is the requirement for age- and gender-specific data on unpaid care and domestic work. Collecting and measuring this data from time use surveys can be complex, with many countries lacking national data or conducting surveys on a small scale, making it unsuitable for policymaking.

UNFPA's involvement in NTA in the Asia-Pacific region

Key activities

UNFPA advocates NTA analyses and intergenerational transfer concepts to policymakers in the Asia-Pacific region through several key approaches. UNFPA's prime interest in the NTA methodology is on building evidence to suggest economic interplays of incomes and consumption across generations from children, working age populations, and old age populations. In brief, NTA generates evidence to guide a life-cycle approach on population ageing, taking the economic consideration across different age groups.

This includes supporting high-level advocacy by coordinating with UNFPA country offices and involving relevant line ministries. Capacity development and advocacy platforms are established to enhance understanding and engagement.

There is a focus on striking a balance between the demand for and supply of NTA/NTTA estimates to gain the attention of policymakers. Collaboration with other UN agencies, such as United Nations Department of Economic and Social Affairs (DESA), ESCAP, and ILO, is also encouraged to strengthen a comprehensive approach. Networking, information sharing, and sharing lessons learned across all levels play a vital role in promoting NTA analyses.

Additionally, UNFPA reviews and packages key NTA messages to create straightforward communication materials tailored for policy planners.

Key challenges

Advocating for NTA within the Asia-Pacific region comes with a set of unique challenges. The diversity across the countries, each at different stages of demographic transition, highlights the need to demonstrate that the NTA can be used at any stage of the demographic transition. Particularly for those at the first demographic dividend.

Effective communication between NTA practitioners and policy planners is crucial, facilitating the translation of data into actionable policies.

Furthermore, the non-continuous nature of work with the same team in the country presents difficulties, as frequent changes in government and policy planners can disrupt the linkage between NTA and policy implementation.

These challenges underscore the need for adaptable strategies and ongoing engagement in the pursuit of NTA advocacy across the region.

Over the last 10 years UNFPA has supported the capacity development training for NTA knowledge, and from now will strengthen advocacy efforts to influence policymakers

Capacity Development

2002–2003 — NTA regional project in Thailand

2010 — Regional training

2014
2015
2016 — Regional training
2017

Advocacy Efforts/Platforms

2021 — The SAMANTA Project
NTA Conferences/side meeting

2022 — Regional training
NTA Mapping

2023 — The Demographic Dividend Atlas
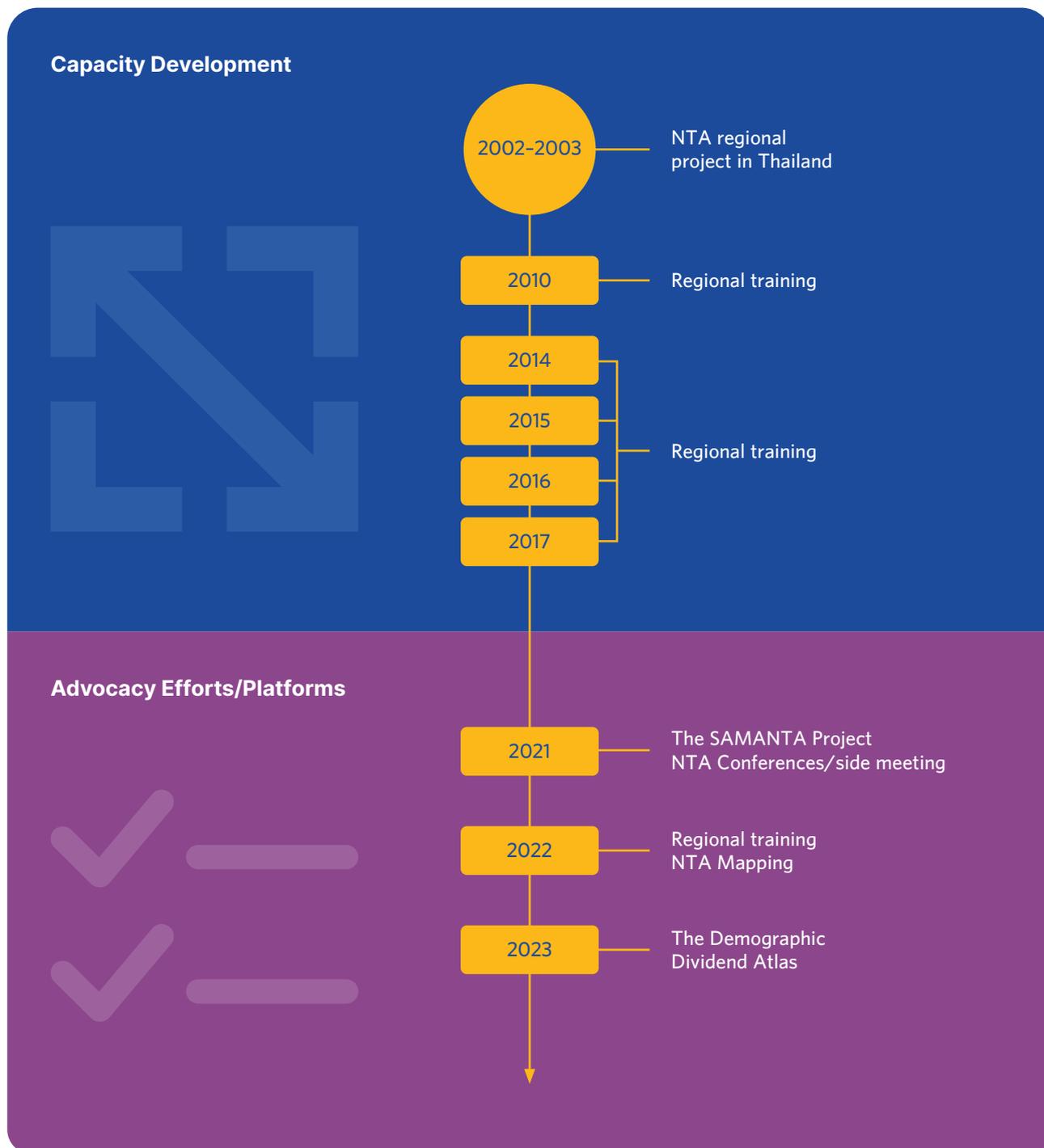
Note: The SAMANTA Project by UNFPA Asia-Pacific Regional Office stands for 'Strengthening, Accelerating, and Mainstreaming the NTA for policy applications.

NTA initiatives in the Asia-Pacific region

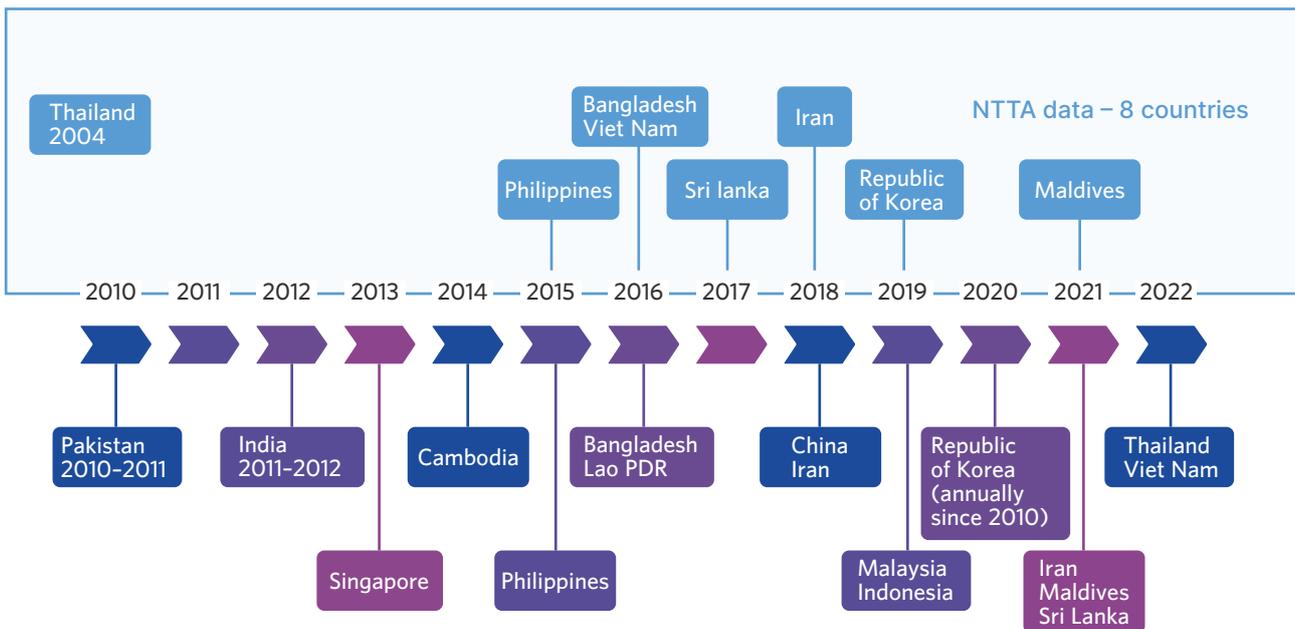## NTA Country Team in the Asia-Pacific region

As of 2023, there is a global network of NTA teams spanning 62 countries, including 23 country teams located in the Asia-Pacific region. UNFPA collaborates with the NTA global network to initiate continuous capacity-building activities aimed at enhancing knowledge and understanding of NTA/NTTA. These activities cover methodology, production, and implications for policy development.

However, the progress of NTA in each country depends on data readiness, technical capacity, awareness of the impact of demographic changes on development, as well as understanding the benefits of NTA analyses. Long-term engagement of NTA teams and relevant policy agencies is also crucial.

About NTA/NTTA production

Several countries have been consistently producing NTA data. Notably, the Republic of Korea has mandated NTA data as official national statistics, leading to the annual production of NTA under the responsibility of the national statistics office. In many countries, the work of NTA country teams involves collaboration between academic and educational communities, significantly contributing to NTA production. NTTA production has also been initiated in various countries, including recent efforts in Iran and Sri Lanka in 2022 and Maldives in 2021.

Productions of NTA/NTTA in Asia-Pacific countries

NTTA data – 8 countries

Year	NTTA data	NTA data
Thailand 2004		
Philippines	2015	
Bangladesh Viet Nam	2016	
Sri lanka	2017	
Iran	2018	
Republic of Korea	2019	
Maldives	2021	

Timeline: 2010 — 2011 — 2012 — 2013 — 2014 — 2015 — 2016 — 2017 — 2018 — 2019 — 2020 — 2021 — 2022

Pakistan 2010–2011
India 2011–2012
Singapore
Cambodia
Philippines
Bangladesh Lao PDR
China Iran
Malaysia Indonesia
Republic of Korea (annually since 2010)
Iran Maldives Sri Lanka
Thailand Viet Nam

Utilization of NTA/NTTA data for policy development

Based on the 2021 NTA/NTTA data mapping survey compiling data from its 22 country offices Asia, the primary utilization of NTA data is in understanding demographic dividends, followed by policy or research in areas related to population ageing, low fertility, investments to enhance population quality, improving labour productivity, child investment, social protection, poverty, inequality, fiscal sustainability, health and public health spending.

However, NTA data are still predominantly used for research rather than informing policy development due to a lack of understanding and awareness among policymakers regarding the significance and potential implications of NTA analyses. Translating and simplifying NTA methods and data for more effective communication with policymakers is a challenge, highlighting the importance of capacity building in this area.
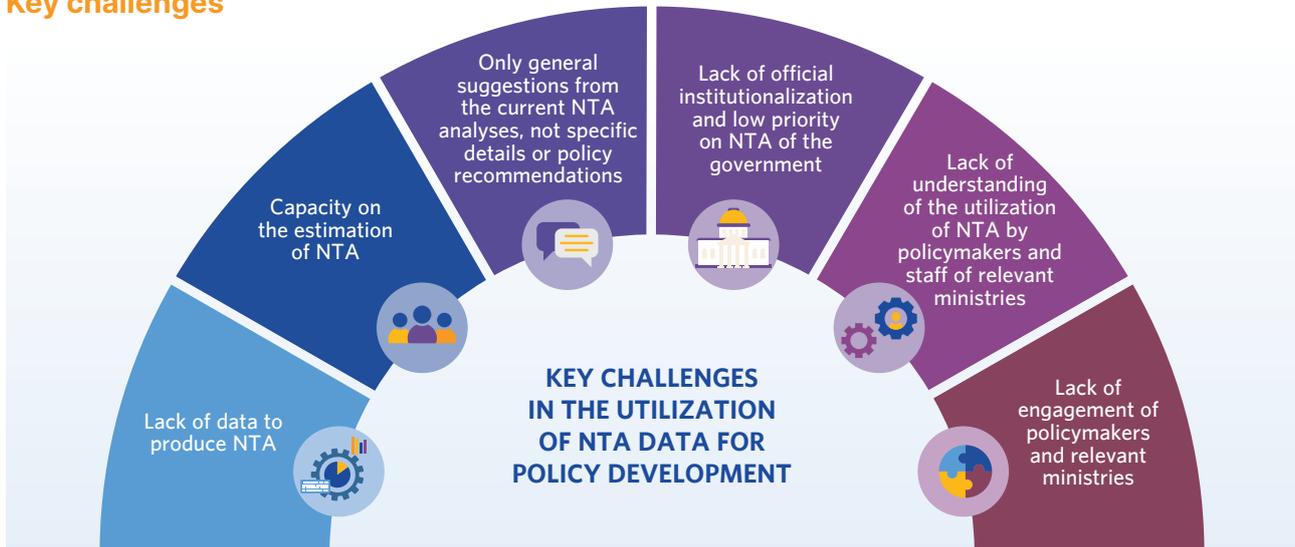
Demographic dividend in Asia-Pacific region

Source: The Demographic Dividend Atlas for Asia and the Pacific

Good practices of NTA governance
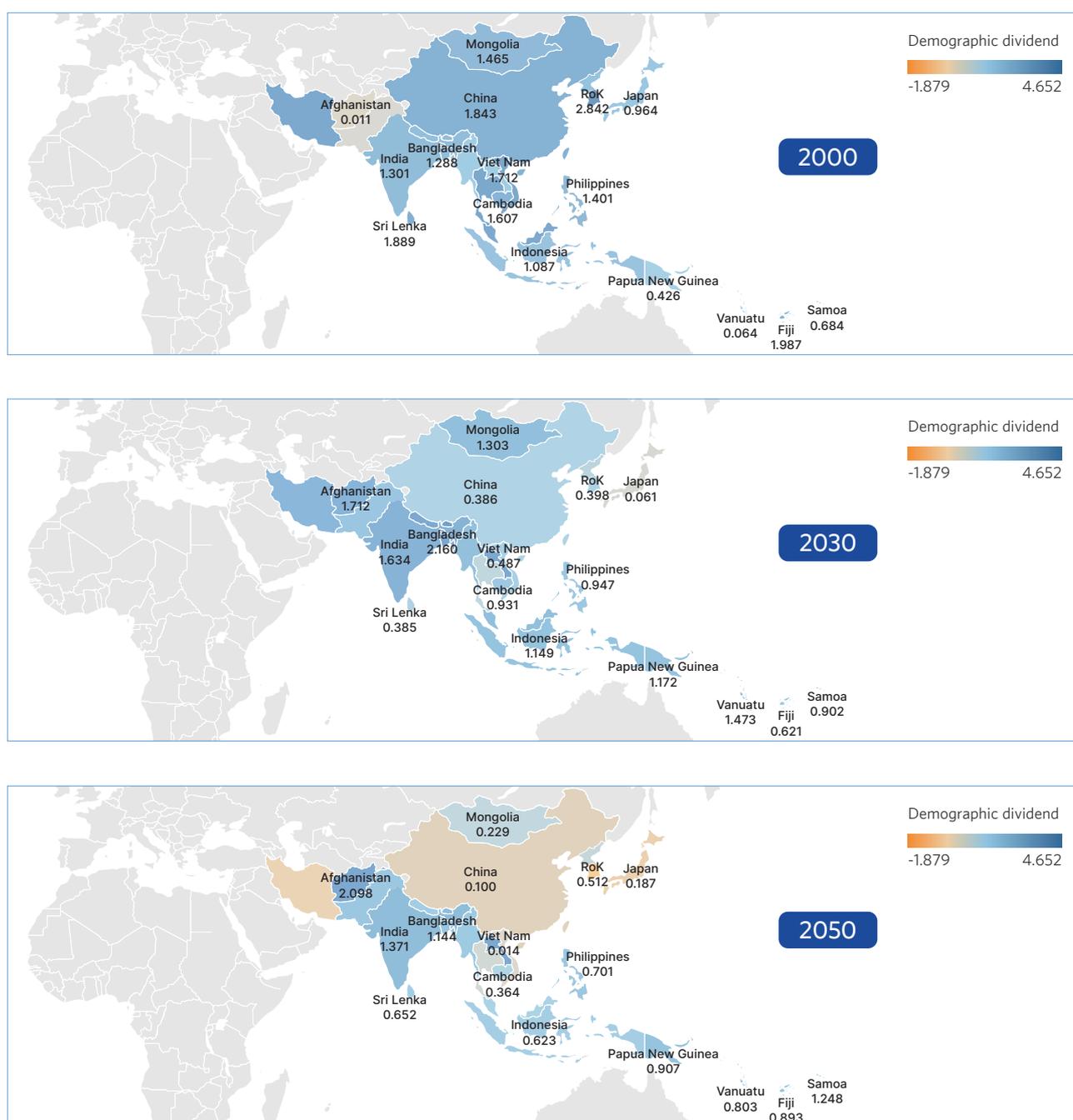
Key challenges of countries regarding the NTA include; First, challenges of the production - mainly due to limited data and estimation capacity for NTA estimation; Second, challenges of the utilization for policy development – mainly due to limited capacity and understanding among policymakers and relevant personnel for utilizing NTA data, and lack of engagement from policymakers and relevant ministries.

Key challenges

Only general suggestions from the current NTA analyses, not specific details or policy recommendations

Capacity on the estimation of NTA

Lack of official institutionalization and low priority on NTA of the government

Lack of understanding of the utilization of NTA by policymakers and staff of relevant ministries

Lack of data to produce NTA

KEY CHALLENGES IN THE UTILIZATION OF NTA DATA FOR POLICY DEVELOPMENT

Lack of engagement of policymakers and relevant ministries

Source: Summarized from Sakunphanit T. et al. (N.A.). Final Report Utilization of the National Transfer Account Analysis for Policy Guidance.

These challenges often stem from initial conditions, particularly the lack of official institutionalization and low government priority for NTA. However, several countries have demonstrated good practices in addressing these challenges, leading to more effective and sustainable NTA governance.

Examples of these practices include:

1. **Official institutionalization of NTA production:** Colombia and the Republic of Korea have integrated the production and estimation of NTA as an official and regular process within national statistical offices.

2. **Collaborative institutionalization of NTA teams:** Japan has institutionalized a collaborative NTA team responsible for NTA production, analysis, and linking evidence to policy development under the National Institute of Population and Social Security Research (IPSS). The team comprises high-level staff of the IPSS and experts from academic institutes.

Japan's collaborative institutionalization of NTA teams

From "**researchers in universities**"

To "**collaboration between government research institutes and universities**"

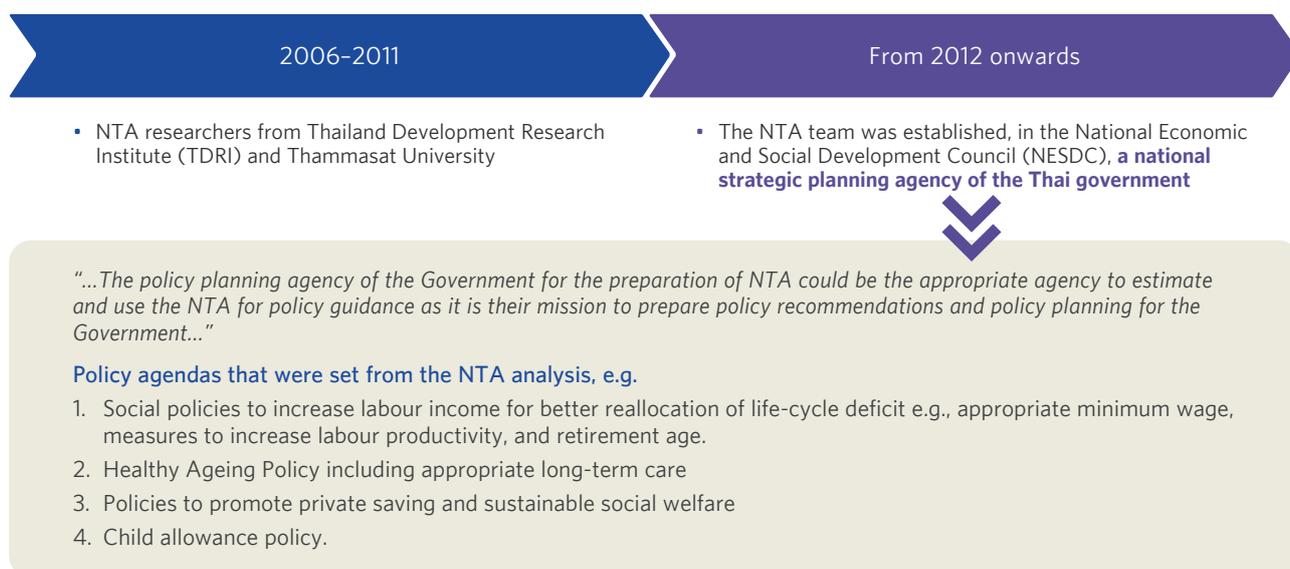| Early 2000	2015–2020	Since 2021
NTA research team at Nihon University • constructed and used NTA, organized NTA training workshops	**The research team at Tokyo University, engaged by the National Institute of Population and Social Security Research (IPSS) of the Ministry of Health, Labour and Welfare** • evaluated the impacts of declining birth rate and ageing society using NTA/NTTA	**Institutionalization of NTA/NTTA in the IPSS with an official committee comprising of high-level staff of the IPSS and experts from academic institutes** • link NTA/NTTA academic activities and policy guidance, and provide recommendation for population and social policy especially social protection policy to the government.

Source: Summarized from Sakunphanit T. et al. (N.A.). Final Report Utilization of the National Transfer Account Analysis for Policy Guidance.

3. **Institutionalization within the national policy planning agency:** Thailand established the NTA team within the National Economic and Social Development Council (NESDC) to facilitate NTA utilization for policy development.

4. **Mandated public institutions:** In Maldives, a public institution is mandated for coordinating the regular preparation and utilization of NTA, involving a multi-stakeholder committee consisting of ministries, statistical bureaus, and national universities.
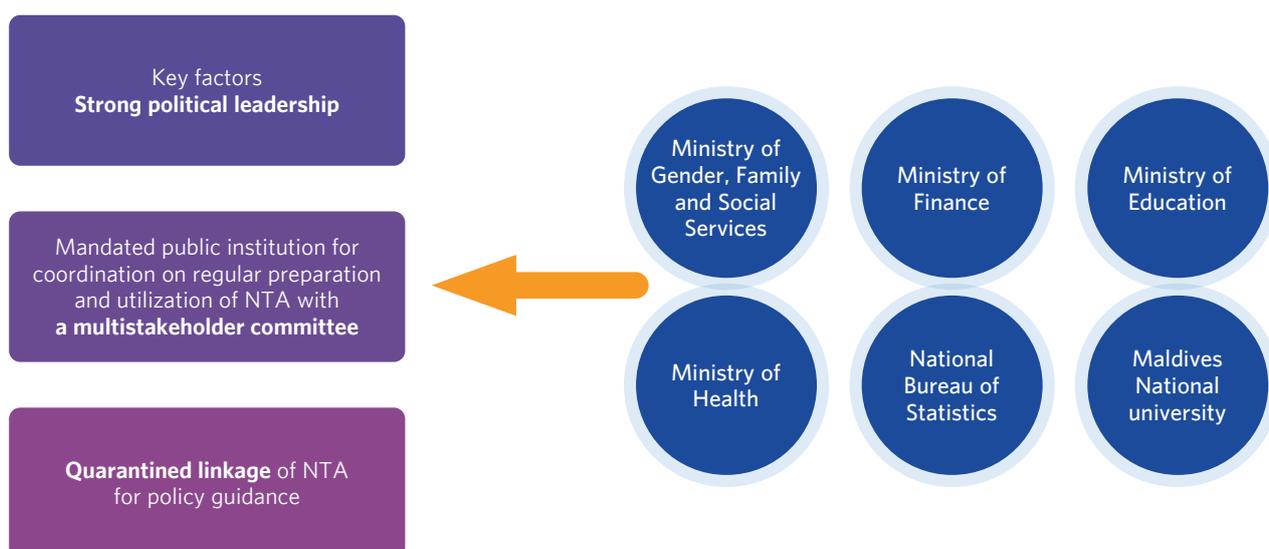
These examples showcase how effective institutionalization and collaboration can overcome NTA challenges and ensure its utility in the policymaking process. The move towards formal integration of NTA into national data and policy structures is key to enhancing its impact on economic and social policy decisions.

Thailand's institutionalization within the national policy planning agency

2006–2011	From 2012 onwards

- NTA researchers from Thailand Development Research Institute (TDRI) and Thammasat University

- The NTA team was established, in the National Economic and Social Development Council (NESDC), **a national strategic planning agency of the Thai government**

"...The policy planning agency of the Government for the preparation of NTA could be the appropriate agency to estimate and use the NTA for policy guidance as it is their mission to prepare policy recommendations and policy planning for the Government..."

Policy agendas that were set from the NTA analysis, e.g.

1. Social policies to increase labour income for better reallocation of life-cycle deficit e.g., appropriate minimum wage, measures to increase labour productivity, and retirement age.
2. Healthy Ageing Policy including appropriate long-term care
3. Policies to promote private saving and sustainable social welfare
4. Child allowance policy.

Source: Summarized from Sakunphanit T. et al. (N.A.). Final Report Utilization of the National Transfer Account Analysis for Policy Guidance.

Maldives' mandated public institutions

Key factors
Strong political leadership

Mandated public institution for coordination on regular preparation and utilization of NTA with **a multistakeholder committee**

Quarantined linkage of NTA for policy guidance

- Ministry of Gender, Family and Social Services
- Ministry of Finance
- Ministry of Education
- Ministry of Health
- National Bureau of Statistics
- Maldives National university

Source: Summarized from Sakunphanit T. et al. (N.A.). Final Report Utilization of the National Transfer Account Analysis for Policy Guidance.

"No action means no impact."

NTA, including NTTA/NIA, serves as a powerful and beneficial tool for quantifying and projecting the impact of demographic shifts. They can inform policies in many crucial areas. However, having data and insightful evidence lacks meaning without any corresponding actions or implementation plans.

This topic serves as an example of important action plans for countries, whether they are young or aged societies, and irrespective of whether they are low, middle, or high-income countries. It is essential to consider and incorporate these plans to address the economic impacts resulting from demographic shifts or age-structural transitions in the population.

1. For NTA evidence-based policy

Establish a process for monitoring on impacts of demographic change on key economic indicators.

2. For advocacy

Increase awareness of the linkage between population and economy among policymakers and the public.

3. The first Demographic Dividend

Enhance reproductive health, reduce mortality and encourage people to participate in the labour market.

4. The second Demographic Dividend

Develop financial sectors and design a system to help people make good financial decisions.

5. For Silver and Gender Dividend

Remove labour market barriers and enhance productivity for older people and women. Encourage their labour force participation.

6. For all dividends

Strengthen and restructure human capital investment for higher productivity and better employability.

7. NTA's public flows

Maintain sustainable public policy to increase welfare, especially for people living in poverty.

8. NTA are comparative but difficult to understand

Build regional cooperation , integration and South-South collaboration.

9. Make a good population policy

Population age structure is still the most important factor affecting NTA results.

10. For effective policy

Act now (very important). Population related policies are often not the top priority compared with its importance.

Source: Collaborative ideas from the NTA experts.

Key materials of NTA/NTTA/NIA

This section provides a list of key NTA/NTTA/NIA materials and sources that support understanding of and some clues on how to use NTA/NTTA/NIA in policy areas – including estimation manuals and a guidance note, platforms that stock the database and visualizations of some key estimates or indicators; a collection of analyses, studies and discussions on policy implications; and NTA/NTTA websites.

Sources of materials for NTA/NTTA/NIA capacity development and policy advocacy

Estimation manuals and guidance

- NTA Manual
- NTTA Manual (forthcoming in 2024)
- NIA Manual (forthcoming in 2024)
- A guidance note for UNFPA offices on NTA and NTTA (forthcoming in 2024)
- Population Ageing and the Generational Economy: A Global Perspective

Database and visualizations:

- NTA database
- Demographic Dividends Atlas

Analyses, studies and policy implications:

- NTA Working Papers
- NTA Bulletin
- NTA Country's Brief
- Studies and published articles
- Meeting and conferences

NTA/NTTA Networking/ Websites:

- NTA Accounts Website
- Counting Women's Work

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Acknowledgements

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