9 The case of Sweden

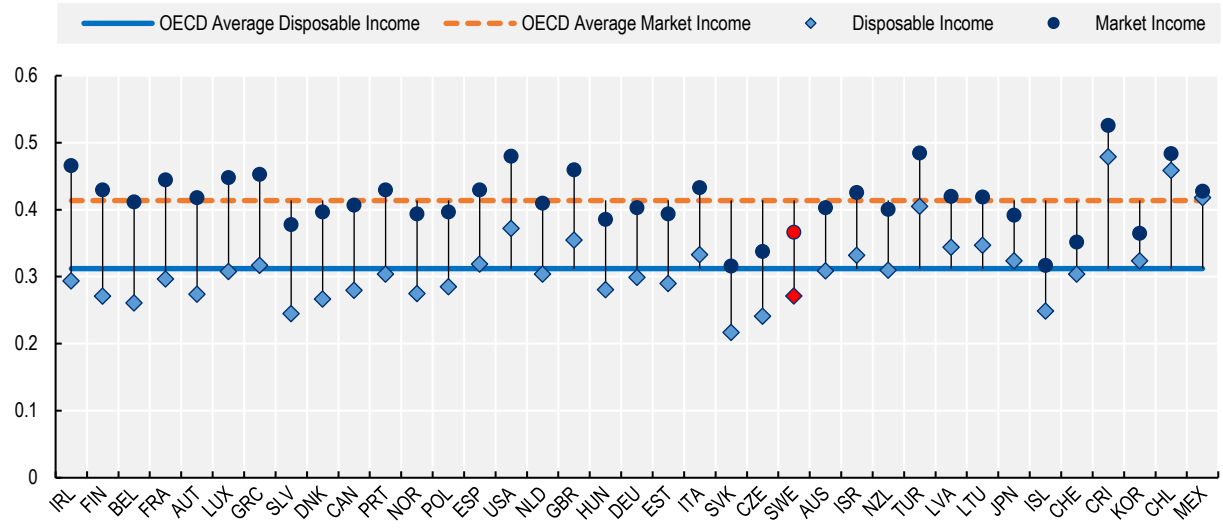
This case study provides an overview of recent trends in income inequality in Sweden, and discusses how considerations for inequality and distributional implications of public expenditure are brought to bear as part of the budget process. It discusses the practices currently in place in the country, how they are set up in the country's public expenditure frameworks, and how they are supported at the technical level, through the range of models and data tools that are utilised in policy practice.

9.1. An overview of recent trends in income inequality in Sweden

9.1.1. Overall income inequality

Sweden is one of the most equal countries in the world regarding income distribution with both relatively low levels of market income inequality and significant impacts of taxes and transfers (OECD, 2021[1]). In 2018, before taxes and transfers, Sweden had a Gini coefficient of 0.366, as shown in Figure 9.1. However, taxes and transfer reduced this coefficient to just 0.271, below the OECD average (OECD, 2021[1]).

Figure 9.1. Differences in household income inequality among the working-age population pre- and post-tax and government transfers, 2019

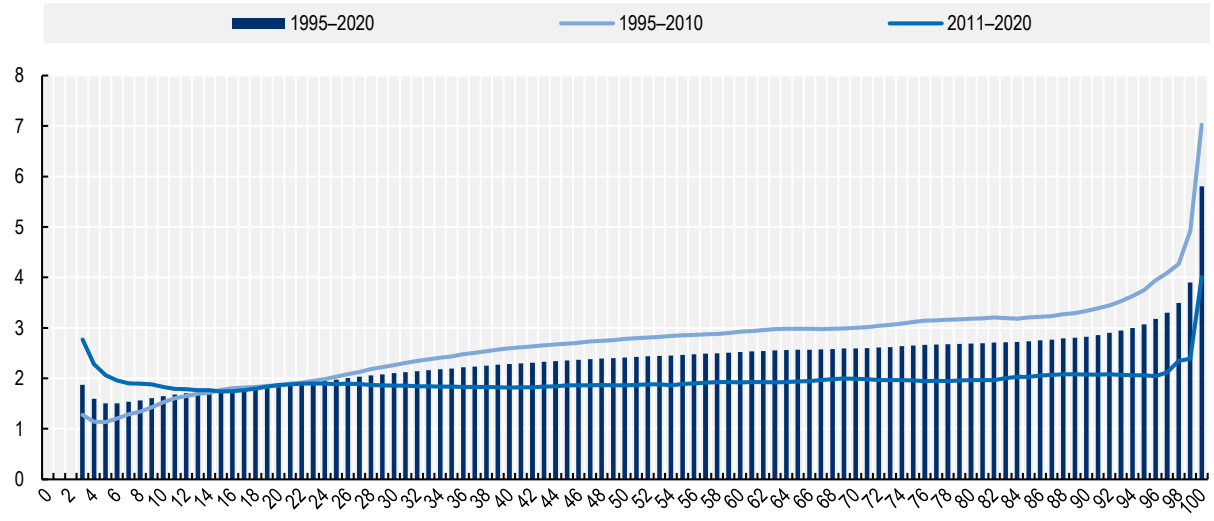


Note: Countries are ranked from the highest to the lowest difference before and after taxes. Before taxes and transfers data for Mexico are post taxes but before transfers. The latest data refer to 2019 for all countries except Costa Rica and the United States (2021); Australia, Canada, Latvia, Korea, Mexico, the Netherlands, New Zealand, Norway, Sweden and the United Kingdom (2020); Ireland, Italy, Japan and Poland (2018); Chile, Iceland and South Africa (2017). No data available before 2018 for Belgium and Japan or before 2015 for Luxembourg and South Africa. Earlier data for Brazil, Chile, Estonia, Sweden and the United States are from 2013.
Source: OECD Income Distribution Database.

Between 1995 and 2020, all income groups in Sweden experienced economic growth, with the median economic standard[1] increasing by 82%. This income growth was highest at the top of the distribution while lowest at the bottom. In 2020, the top decile of the income distribution earned on average three times more than the median income earner and eight times more than the bottom decile (Swedish Government, 2022[2]).

Much of this income dispersion has been driven by the top percentile, who in 2020 earned five times more than the lower part of the top decile, ten times more than the median income earner, and 25 times more than the bottom decile. The main reason for this has been the top percentile's increase in property and other capital income. However, policies implemented in the latter half of the 2010s had an equalising distributive effect, reducing the Gini coefficient from its peak in 2017 (Swedish Government, 2022[2]). These trends mirror those of many OECD countries, with a general increase of property and capital income over the period.

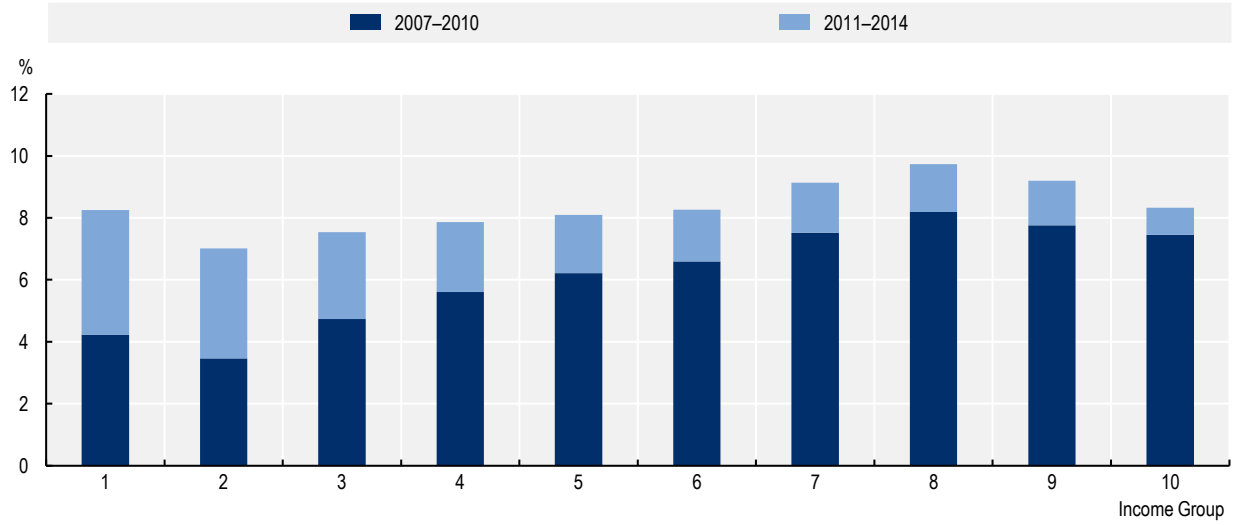
Figure 9.2. Annual change in real equivalised disposable income, percentiles 1995-2020



Note: First few percentiles have such low income that even small changes have a significant relative impact. As such, they are not included in the graph.
Source: Swedish Ministry of Finance

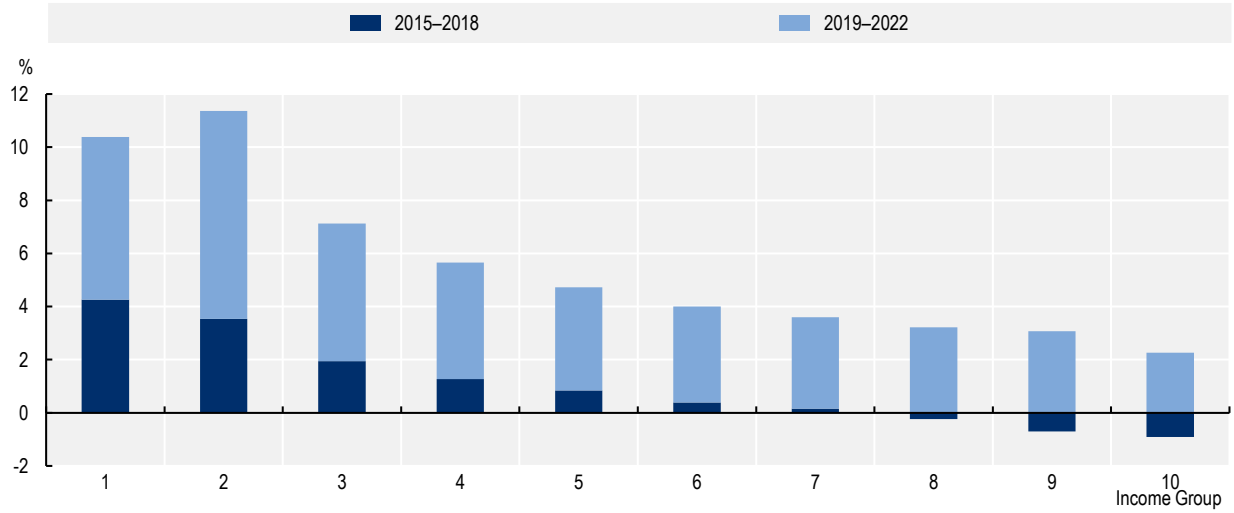
The reforms of 2007–2010 contributed to a more unequal distribution of the economic standard in the short run. For example, the gradual expansion of the employed tax credit meant that gainfully employed people, who are largely in the upper half of the income distribution, received a significant increase in their economic standard. Between 2011 and 2014, several reforms were carried out which targeted lower-income households with additional support, such as a reduction in pension tax and an increase in housing allowance. Further reforms in 2015-2018 improved the distribution to an even greater extent, and are estimated to have had a strong redistributive effect, benefitting the two lowest deciles the most. These reforms included increased housing allowance and reduced tax for pensioners, increased unemployment insurance benefits, and increased maintenance support. Reforms in 2019-2022 continued to be directed towards the lower deciles, and included changes in unemployment insurance and supplementary housing allowance for families with children. Not all reforms were progressively distributed in this manner: some reforms, such as a 5% cut in marginal tax rates for high income earners, , have had the greatest effect on the upper part of the income distribution, while others, such as the tax reduction on earned income, have had the greatest impact on the middle of the distribution (Swedish Government, 2022[2]).

Figure 9.3. Average effect on equivalised disposable income in difference income groups as a result of reforms 2007-2014



Source: (Swedish Ministry of Finance, 2022[3]).

Figure 9.4. Average effect on equivalised disposable income in different income groups as a result of reforms 2015-2022

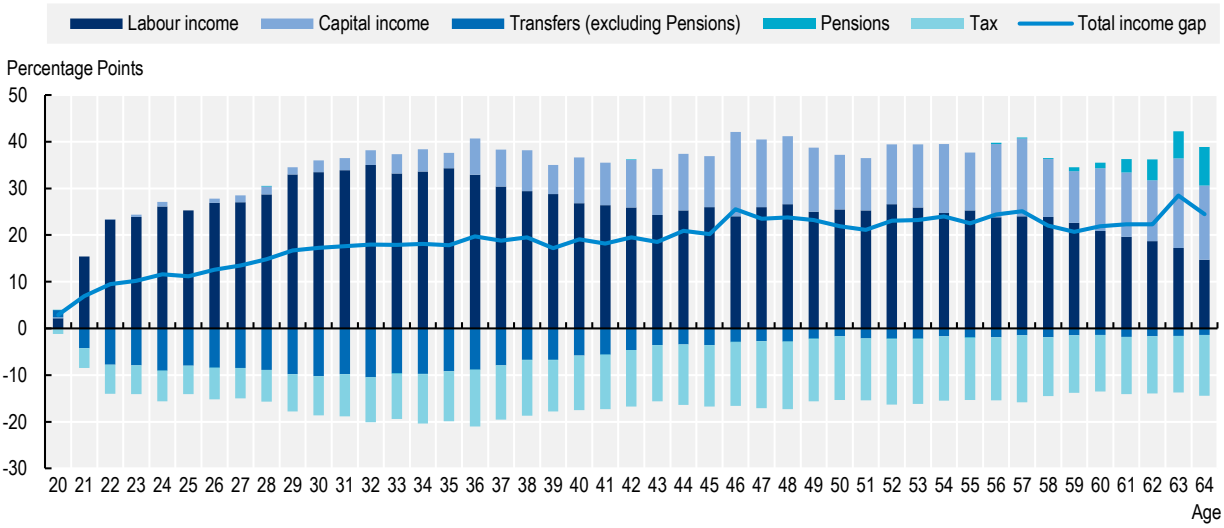


Source: (Swedish Ministry of Finance, 2022[3]).

9.1.2. Income inequality by gender

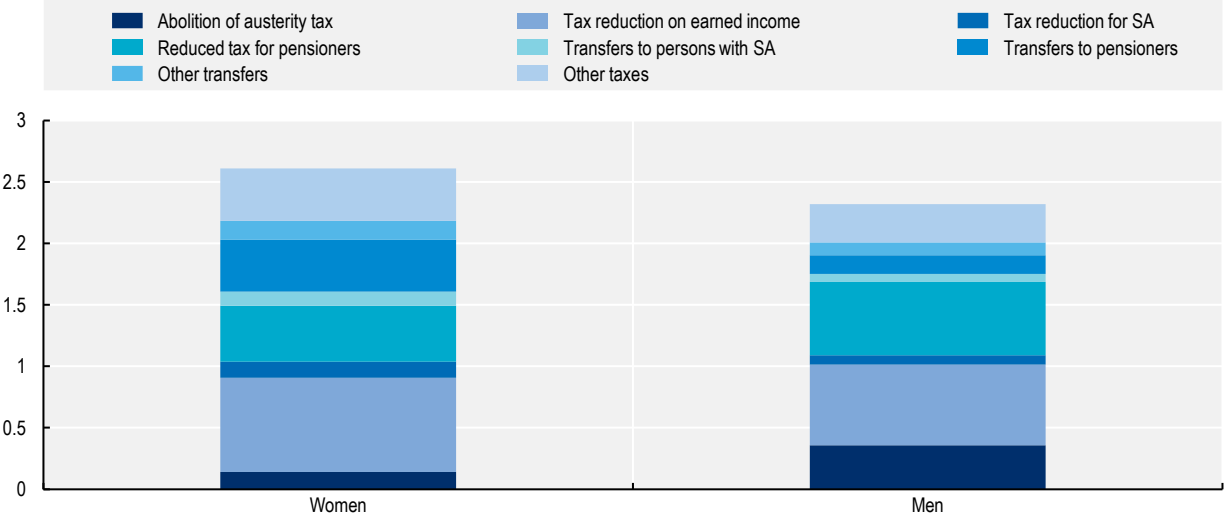
While there is an income gap[2] between women and men at all ages, this gap increases over time, from 3% at the age of 20 to as high as 25% at the age of 50. After that, the gap remains constant up to about 65. Labour income is the largest contributor to the gap, while taxes and transfers trend to reduce it. In the 65 and older age group, pension income dominates and contributed the most to the income gap (Swedish Government, 2021[4]). Overall, the impact of the Swedish government's 2019-2022 reforms was larger for women than for men.

Figure 9.5. Contribution of different income components and taxes to the income gap by age (2019)



Source: (Swedish Government, 2021[4]).

Figure 9.6. Average change in disposable income resulting from the Swedish Government's reforms 2019-2022

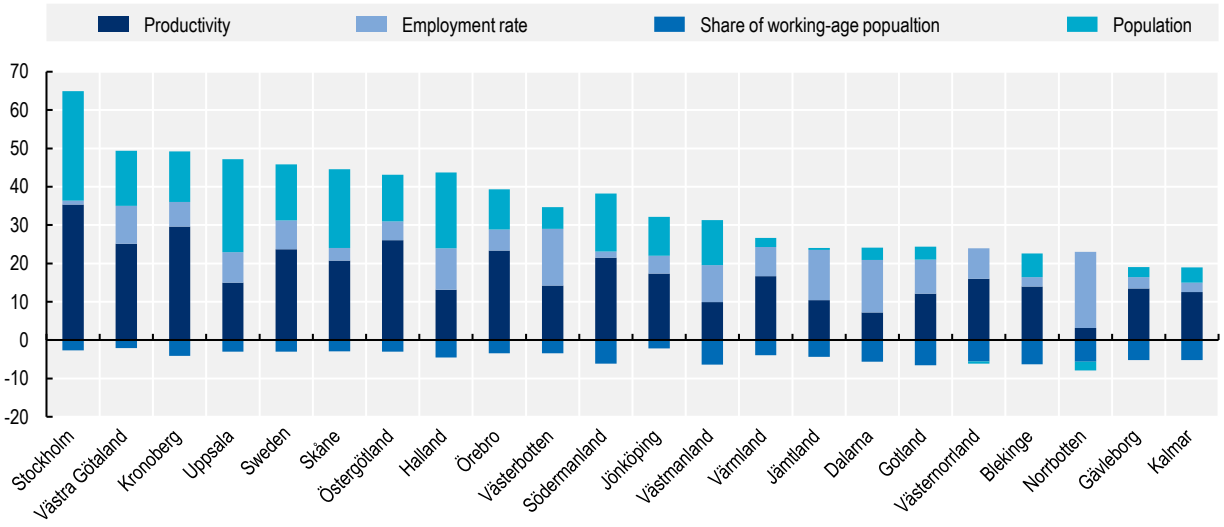


Note: "SA" means early retirement. The '"austerity tax" refers to a 5% cut in marginal tax rates for high earners, implemented during the Swedish recession in the 1990s.
Source: "Economic Gender Equality 2021"

9.1.3. Selected insights on income inequality at regional level

While regional inequality is low in Sweden compared to most OECD countries, it has been rising since the 1980s. The main urban areas, most notably Stockholm, have enjoyed the strongest growth both in population and in productivity (OECD, 2021[5]). This matches broad economic trends observed across OECD countries over the period as big cities have driven half of global economic growth.[3]

Figure 9.7. GDP growth components across Swedish regions



Source: OECD Economic Surveys 2021: Sweden

In Sweden, regions and municipalities are responsible for most welfare services. This has continued in recent years, with the central government increasing grants to sub-national governments – although it is worth noting that 70% of their revenue come from municipality-level income taxes, while central government grants account for around 22% (OECD, 2021[5]). In March 2021, the government unveiled its 2021-2030 national strategy for sustainable regional development throughout the country. Some of its key governance aims include strengthening multi-level co-ordination between government institutions, regions, and other stakeholders, and strengthening policy assessment through research and evaluation (OECD, 2021[5]).

9.2. Budgeting frameworks related to inequality and well-being

The systematic consideration of distributional implications in the budget process is well established in Sweden – an annual report looking at income inequality has been published since 1994, while an annual report examining gender inequality has been published in connection with the Budget Bill since 1988. The country is among those with the longest standing experiences in integrating distributional concerns into the budget. In terms of capacity, the work is supported by a distribution analysis section within the Division for Economic Policy and Distribution (DEPD), a division whose role is in part to analyse the distributional impacts on income inequality and economic gender equality of proposed policies, and use these analyses to inform the discussion on the new budget each year. The unit addresses the distributional implications of taxes, transfers and publicly funded welfare services.

9.2.1. The role of the division for economic policy and distribution in the Ministry of Finance

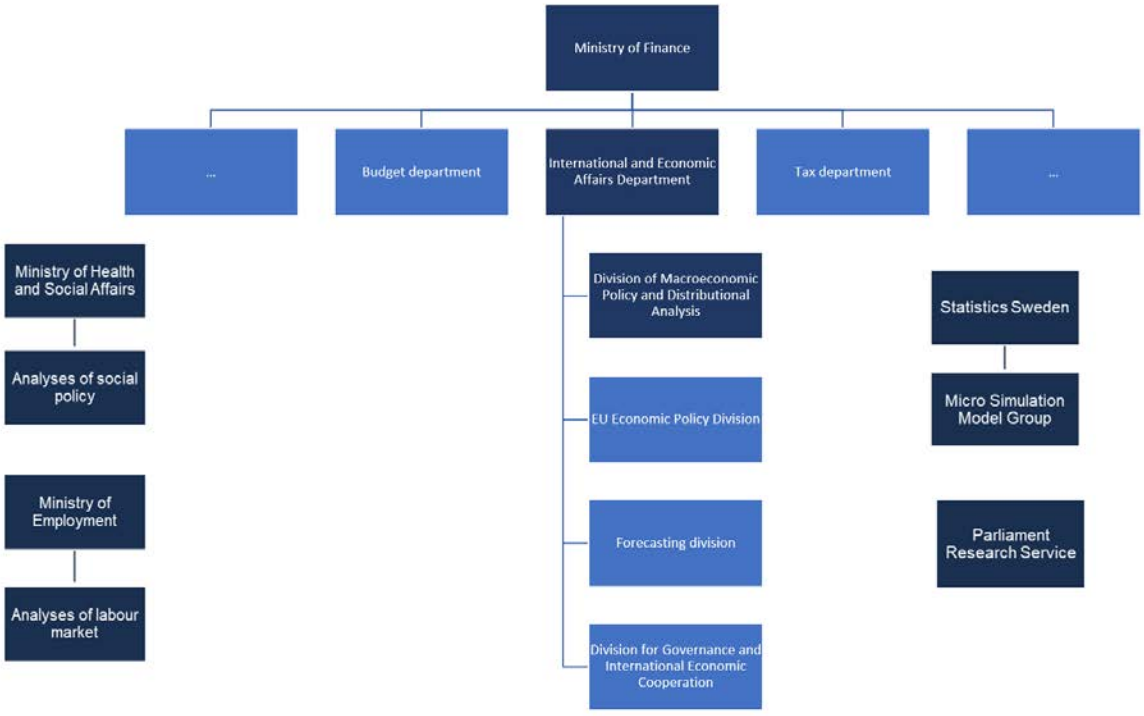
The work on distributional analysis is carried under a section of the division for economic policy and distribution (DEPD) under the International and Economic Affairs Department. The section of the division focusing on DIA focuses on two key areas:

1. the development and driving forces of economic inequality and economic gender inequality,
2. the reforms on taxes, transfers and publicly funded individual welfare services.

Depending on the requests of the sitting Minister of Finance the DEPD also analyses long term effects on the income distribution stemming from impact of reforms on labour supply.

The section focusing on distributional analysis includes 5-10 professional staff and predominantly uses data from Statistics Sweden (see section 4), and uses the FASIT static microsimulation model as its main model (see section 3). It is responsible for analyses of income inequality and economic gender inequality in budget documents. In practice, the section in the DEPD collaborates regularly with other ministries, as the Ministry of Health and Social Affairs and the Ministry of Employment. As far as available data allows, the Ministry of Finance's analysis is quantitative, as this is what politicians request, but for unexpected events (such as the Coronavirus pandemic) and reforms where microdata is lacking qualitative analysis is often used. All analysis is published on an inflation adjusted basis (Swedish Ministry of Finance, 2022[6]). The division also has professional and methodological exchanges with statistics Sweden.

Figure 9.8. Position of distribution analysis section of the DEPD within the government of Sweden



Source: Swedish Ministry of Finance

9.2.2. The budget process

The distributional analysis unit supports the budget process within the Ministry of Finance in three phases:

1. It provides a general basis for the Ministry's prioritisation and thinking at an early stage, by helping to calibrate the potential impact of various scenarios.
2. It aids in the development of draft budgets and concrete estimates in practice.
3. It contributes to the impact statement in the Budget Bill.

In addition, it undertakes analytical work on many different topics, for example the impact of COVID, or how current inflation affects distribution.

The upper-level work on the Budget generally begins in January or February. Here, the Ministry of Finance and its political leadership, alongside all the other ministries, starts determining their political priorities for the next year, and puts forward proposals for reforms. Such proposals can vary greatly, and may consider the impacts of several different types of inequality, including income, gender, and regional inequality. The DEPD aids when proposals from other ministries are processed within the Ministry of Finance. Either at the initiative of political leadership or by their own initiative, the division will propose reforms that ensure shared increases in prosperity. In these discussions, the various effects of economic driving forces are also taken into consideration. This means that efforts to ensure that increases in income equality do not come at the cost of a reduced labour supply. A large number of possible reforms are considered during this process, ranging from very general potential policies to those on certain demographics. While in some cases the division will work in collaboration with the Budget department, in other cases they will work alone (Swedish Ministry of Finance, 2022[6]).

The DEPD also aids in the development of draft budgets. The first of these, the Spring Budget Bill, is published in April, and provides both the expenditure ceiling for two years into the future and an assessment of public finances to indicate the scope for reform. Since 1994, the division has prepared an annex to this budget known as the distributional account (Swedish Government, 2022[7]). While the Ministry of Finance has relatively high levels of freedom to determine the content of the annex, during the writing stage, leadership may request to review the draft.

The subsequent steps occur in May and June, when ministries submit their proposals for the next year along with their financing propositions. At this stage, a collective budget review occurs, where the proposals from all the ministries are weighted and prioritised, and trade-offs have to be made. This process tends to be highly political, with heated debates within the government offices, as the different ministries compete for funds within the expenditure ceiling set out in the Spring Budget Bill two years prior. While the Budget Department has the upper hand during this period, the distributional analysis unit also plays a role. The DEPD conducts both quantitative and qualitative analysis to look at the potential impact of suggested changes to tax and transfer systems. As the main task of taxes is to finance government income, while most redistributive policies are enacted through transfers, analysis of new transfer policies tends to happen sooner than for tax policy analysis for which it occurs at a late stage, with direct orders from the Minister of Finance occurring at an early stage in the Budget process (Swedish Ministry of Finance, 2022[6]). The DEPD works in collaboration with the budget department, and will often contact other ministries in order to discuss the distributional impact and other aspects of their respective proposals. The type of analysis the division conducts is not limited to distributional effects – the team will also conduct system analysis and look at budget effects (i.e. how the policy in question will affect the budget). This analysis can influence the negotiations about which proposals are ultimately included in the final budget (Swedish Ministry of Finance, 2022[6]).

In September, the Budget Bill is released,[4] which provides the coming year's new policies. The proposals in the Budget Bill often consider the distributional effects of their implementation, as calculated by the DEPD. The division also contributes to the "economic gender inequality" annex, which has been a component of the Budget Bill since 1988. Furthermore, it scrutinises the distributional effects of political oppositions' proposals, particularly for the larger opposition parties. Often this will be done solely with the information available in the opposition parties' budget texts, but sometimes the Ministry of Finance will request further information from the parties if it is needed to effectively carry out analyses.

9.2.3. Discussion with Parliament

The distributional profile of new policies is important to parties across the Swedish political spectrum. Distributional impact assessment is thus a relevant component of parliamentary debates. However, the DEPD does not deliver work directly into Parliament – apart from the distributional analysis presented to parliament in the budget bills the division's role is limited to preparing briefs and answers for the Minister

for Finance, when he/she needs to appear in Parliament. Instead, there is a research unit connected to the Parliament, through which Members of Parliament can request their own analysis. The Parliament Research Service will work on any topics requested of them, including distributional analysis. Such analysis is done year round, but a large part of the DIA analysis is conducted in the autumn, both before and after the DIA in the autumn Budget Bill is released, as opposition parties will produce their own responses for the bill, which themselves often include DIA (Parliament Research Service, 2023[8]). The Parliament Research Service is apolitical and is widely accepted by Members of Parliament as independent (although this independence is not enshrined in law).

The two DIA teams have many similarities – they use the same tools and data, and have some exchange of staff. Furthermore, they convene to resolve any technical issues in their respective analyses, in order to ensure that politicians are able to focus on political differences in the analysis during debates, rather than the technical ones (Swedish Ministry of Finance, 2022[6]). In particular, the Parliament Research Service will try to use the same assumptions as the Ministry of Finance as much as it can and will contact them if it is not clear on anything. However, as the Ministry of Finance has political leadership and the Parliament Research Service is apolitical and independent, the Service will always discuss and evaluate the assumptions the Ministry uses before deciding whether to also use them.

9.2.4. DIA external to the government

The Swedish Fiscal Policy Council provides regular DIA of government policies (Swedish Ministry of Finance, 2022[6]), providing an input to the public debate.

9.2.5. Gender budgeting

Gender governance is deeply integrated into the budget process, with gender mainstreaming having been in operation in Sweden since 1994 and introduced into the budget process in 2002 (OECD, 2017[9]). Since 2016, the annual budget has included instructions on the application of gender budgeting, and requires that gender impact analysis be carried out early in the budget process. In addition, Sweden is one of only two OECD countries to systematically collect gender-disaggregated data, a decision underlined by the OECD as key in the development of gender-responsive policymaking (OECD, 2017[9]).

As Sweden requires all policies to have a gender perspective, every unit will conduct at least some gender analysis. However, there are three main units who concern themselves with gender budgeting issues, DEPDA being one of them, being responsible for the statistical analysis of economic gender inequality. The other two include the Ministry of Labour, who are responsible for the overall gender perspective, and the Structural Unit in the Budget Department, who are responsible for analysing structural issues in society with the aim of promoting efficient use of resources, and examine the processes around gender budgeting. (Swedish Ministry of Finance, 2022[6]).

9.2.6. Analysis of financially vulnerable households

While the annual reports described above tend to focus on trends in income distribution, the previous five editions have also contained sections looking at economically vulnerable households, using a relative measure of poverty (60% of median income). These sections report the percentage of the population living under this poverty line, and break them down by age group, proportion of household members working full time, and whether or not they were born in Sweden.

Some editions have also contained a specific focus section on children, underlining that financial vulnerability at a young age can lead to a higher risk of reduced education levels, bad health, and increased vulnerability to further economic insecurity down the road. Here, the report uses longitudinal data to follow children between the ages of 1 and 18 born between 1990-2000, and children between the ages of 1 and

10 born between 2000-2008, in order to measure how many years each child is classified as economically vulnerable.

The sections account for earnings both from income and from social benefits, breaking down the data by social benefit and highlighting that the further one goes down the income distribution, the more likely one is to earn a living predominantly from social benefits. On top of this, the paper examines the impact of each year's policies in reducing the number of people living below the poverty line. In 2021, it found that in total, government reforms reduced this figure by 13%.

9.2.7. Inter-generational equity

While the Swedish government regularly pursues new welfare initiatives, it also recognises that increases in the number and quality of welfare services in pace with real income can cause inter-generational distributive issues. In other words, under some circumstances, the case can be made that an increase in government surpluses today can be justified on the basis that it will allow greater public spending to occur in the future. To ensure this happens, the Government's annual assessment of the long-term sustainability of fiscal policy in the Spring Fiscal Policy Bill is sometimes supplemented with generational analyses, which show whether spending decisions are likely to cause redistribution between different generations. Any proposal expected to have an impact on inter-generational equity must be preceded by such an analysis.

9.3. Tools for assessing the distributional impacts of budget decisions

The integration of distributional implications in the budget process calls for policy formulation to be evidence-based, and thus supported by comprehensive impact analysis and evaluation. Sweden's advanced modelling capacities demonstrate that it recognises this fact – its micro-simulation model allows it to make detailed analyses of the potential impact of proposed policies, and thus ensure that expenditure is aligned with the strategic goals and priorities of government, as suggested by the OECD's good practices for performance budgeting (OECD, 2019[10]).

9.3.1. Micro-simulation modelling – FASIT:

DEPDA uses the static microsimulation model FASIT.[5] The model was developed jointly by the Ministry of Finance and Statistics Sweden in the late 1980s and is today managed, developed, and updated following changes in taxes and transfer systems by Statistics Sweden (SCB), while the distributional analysis unit uses it and makes suggestions for changes. It is also available to all government agencies free of charge, while the Parliament and other users pay a users' fee. Organisations external to the government can have access to the code but not the data, they can also order analyses from Statistics Sweden for a fee.

FASIT can:

1. Examine how disposable income is affected by changes in the rules for calculating taxes and transfers. This can be done both for specific social and income groups, or aggregated to the societal level.
2. Examine how regulatory change affects marginal effects and replacement rates for households. This can be done both for specific social and income groups, or aggregated to the societal level.
3. Evaluate statistics on publicly funded welfare services. To do this, welfare services are divided into 30 categories, and each reform is allocated to one category. The value of the service is then divided into the population, partially based on actual consumption from register information, and partially based on an insurance principle, with costs differentiated between groups by age, sex, and region.[6]

The model is also able to give indications of certain economic variables, such as wages, interest rates and capital gains. These indications are based on forecasts from the National Institute of Economic Research, Pensions Agency, and the National Financial Management Authority.

Statistics Sweden delivers four versions of the FASIT model each year, with the first version delivered in February. The three subsequent versions use new updated forecasts from the Pensions Agency, the Social Insurance Agency, the Public Employment Service and the National Institute of Economic Research,[7] (an apolitical government agency under the Ministry of Finance with about 50 employees), to update the model's structural and economic projections. These may differ from the Ministry of Finance projections. The Ministry of Finance is also able to change these projections, although these projections are separate to those conducted by Statistics Sweden.

While the model is predominantly static, it does contain a labour supply model, which is able to estimate the effects of tax and transfer changes on the long-term labour supply and the implied long-term effect on income distribution. The module contains detailed rules for taxes and transfers, data on income, and several estimated equations based on individuals' characteristics (education level, household type, etc.) that partly describe individuals' preferences for market work, and partly examine the probability of their transitions from non-work to work when the compensation rate changes. The module is also able to consider labour market heterogeneity – for example, it accounts for the fact that different types of households (e.g. single women, single men, cohabitants) are likely to have different work preferences.

The labour supply module is able to simulate various rule changes, which in turn alter the possible combinations of leisure and consumption that a household can choose between. Not all individuals who wish to work more are assumed to be successful in obtaining work – some will become unemployed. The model also accounts for ulterior dynamic effects – for example, a change in working hours will affect the individuals labour income and transfers, which in turn will affect the public sector economy, household income and income distribution.

9.3.2. How FASIT works

Before running the model, the user utilises a control programme to specify the year he/she wants to analyse, the selection of sample used, and several other controls. The user has access to many modules, where generally one module represents one type of tax or transfer in the base year, and can be adapted for any regulatory changes in the years thereafter. If a proposal has been officially presented by the Government but has not yet been made law, Statistics Sweden will programme the new regulation as a 'switch', meaning the proposal is present within the model, but will not run by default, the user has to take an active decision to run the switch. When the regulation is formally confirmed by law it will run by default.

Modules are then organised into three key groups, all of which look at every income group:

- The first group of modules simulates individual transfers and direct taxes. FASIT contains detailed information about tax and benefit rules, and uses register data to obtain information about individuals' incomes and how many days of a certain benefit an individual uses.
- The second group of modules simulates household transfers and fees. While most individual- level transfers are based on earnings, household transfers are often needs based, and so people must apply to them (see the Table 9.1 below for a full breakdown of which areas FASIT simulates at individual level and which it simulates at group level). As in reality, not everyone who is eligible for a model will apply to it, FASIT models a take-up rate, which provides an estimate as to the proportion of the population eligible for a transfer that actually applies for it.
- The third group of modules simulates indirect taxes and publicly funded welfare services. However, some parts of the data needed for simulating indirect taxes rely on survey data from 2012, and as such are not considered reliable. While Statistics Sweden have tried to collect more up-to-date data since, the reply rate for the survey has been so low that it has not been usable. As such, this module is not in regular use.

Table 9.1. Areas that FASIT simulates at individual level vs at group level

Areas simulated at individual level	Areas simulated at household level
Pensions	Housing allowance
Sickness and activity compensation	Housing supplement for pensioners and sick people
Sickness benefit and rehabilitation allowance	Older income support
Labour market allowance	Social assistance
Parental allowance	Fees for preschools and recreation centres
Dividends from small companies	Fees for elderly care
Direct taxes	
Maintenance support	
Child allowance and multi-child allowance	
Student aid/study grant	
Start-up compensation	
Public welfare services	
Dental subsidies and patient expenses	

Source: (Swedish Ministry of Finance, 2022[6])

9.3.3. Limitations of the model

A first key limit of the model is that it is predominantly static (with the exception of the labour supply model, although even this can only be run after the static model itself has already been run). As such, it has no way to simulate behavioural reactions to welfare changes as the change occurs (Swedish Ministry of Finance, 2022[6]).

A further limitation is that all analysis is done on a yearly basis, while many transfers are decided upon on a monthly basis. While some income data is available on a monthly basis, there is not enough to comprehensively analyse the month-to-month impacts of transfer changes.

Several policies cannot be simulated in FASIT. For example, policies on collective public goods such as police and defence and any kind of reform on public goods where it cannot be ascertained exactly who will use the services is unable to be simulated in FASIT.

A final key limitation is the reliance of indirect tax calculations on a household survey examining consumption patterns. The response rate to this survey has historically been very low, with the last available survey collected ten years ago. As such, much of the information the model contains related to indirect taxation is now out of date.

9.4. Data and information infrastructure

A key component of integrating distributional implications in the budget process hinges on the availability of data disaggregated by individual characteristics. In Sweden, high quality data is collected in several key fields. Statistics Sweden collects detailed and disaggregated statistics, and regularly evaluates the quality of these statistics, including information on production time, punctuality, cost, and time spent on data collection.

In addition, statistics are collected through 28 government agencies, with Statistics Sweden responsible both for co-ordinating these agencies and producing its own statistics. The statistics are divided into 22 subject areas and 112 statistical areas. However, there is only a legal mandate to disaggregate data based on income and gender criteria. While detailed data at the individual level also allows researchers to disaggregate by age, country of birth and parents' country of birth, there is no legal basis for collecting data on other individual characteristics such as race, sexual orientation.

Data sources for income distribution statistics – Statistics Sweden. Every year, Statistics Sweden publishes a variety of statistics on the income of individuals and households, taking advantage of the wealth of registries available in Sweden. However, the way Statistics Sweden has collected the data needed to create these statistics has evolved over time. For example, between 1975 and 2013, Sweden's official income distribution statistics came from the Economics of Households Survey (HEK), a dataset consisting of individuals 18 or older which was collected data via a mix of declaration data, telephone interviews and register data. In 2013, due to improvements in the quality of register-based statistics, Statistics Sweden decided to close HEK[8] and replace it with a new, completely register-based dataset known as Total Income Distribution Statistics (TRIF). Statistics Sweden provided a study in which it highlighted the differences in how the data from these two sources were collected,[9] and found that TRIF generally provided slightly higher estimates of the average and median of the economic standard, a slightly lower Gini coefficient, and a slightly lower share of income below 60% of the median (Statistics Sweden, 2016[11]). As of 2019, employers are obliged to provide earnings to Statistics Sweden on a monthly basis,[10] and as of 2020, pension and wage income from Denmark, Finland, Iceland and Norway has also been included in TRIF.

Alongside TRIF, Statistics Sweden also uses data from EU-SILC for its income distribution statistics. Between 1994 and 2018, it also used LINDA (Longitudinal Individual Database), which contained a sample of about 3% of the Swedish population from 1968 onwards, with household members added to sample individuals.[11] The results from LINDA were never published as official statistics, and thus were predominantly used by researchers.

Data sources for income distribution statistics used in FASIT Indeed, the largest register used for the model is the Income and Taxation Register,[12] which is managed by Statistics Sweden, who in turn gets its data from the tax authority and others. However, data is also collected from a variety of other sources, including the Social Insurance Agency,[13] the Land Survey,[14] the Swedish Pensions agency, the Swedish Public Employment Service, and the National Board of Health and Welfare, and many others. It is worth nothing that there has been no wealth data in Sweden since 2007, after the wealth tax was abolished[15] (Swedish Ministry of Finance, 2022[6]).

As the basis for specific FASIT calculations, the Ministry of Finance (as well as any other Ministries that use FASIT) use an unrestricted random sample of TRIF known as STAR, consisting of approximately 2.1 million individuals, divided into 960 000 family households, and MSTAR, which is a subsample of STAR, consisting of approximately 92 000 individuals and 42 000 family households. The data in STAR and MSTAR are very detailed and consider various types of income, including capital income, entrepreneurial income, various kinds of transfers, fees paid by individuals, and others. The samples also contain data on people's living situations, and if they are married or cohabiting and have children, as well as information on year of birth, year of immigration, municipality, occupation, etc.

A large part of the data for STAR and MSTAR are obtained from Statistics Sweden, including data on population, income and tax data, education, property, vehicle ownership, and many others.

The data in STAR and MSTAR is available to the Ministry of Finance with a lag of two years, and so projections of the data are used for more recent and future years. These projections are updated and calibrated four times a year within the Ministry, to be consistent with the latest macroeconomic forecasts. Statistics Sweden officially recommends that STAR should be used for analyses due to its lower margin of error, and that MSTAR should only be used for testing the model. However, in reality most analyses will use MSTAR, as STAR takes a significant amount of time to run. The metric the Ministry of Finance uses in calculations is disposable income, equivalised to account for differences in household size and composition. The Ministry sometimes uses other data sources external to FASIT to conduct analysis.

9.4.1. Gender analysis data sources

Sweden's Official Statistics Ordinance contains a section which explicitly states that official statistics related to individuals must be disaggregated by sex, unless there are special reasons for not doing so. A booklet by Statistics Sweden further highlights that statistics broken down by sex alone are insufficient for analyses on gender equality, and thus statistics must be employed that illustrate gender equality issues in society (Statistics Sweden, 2018[12]). To this end, Statistics Sweden provides data related to the six sub-goals of Sweden's gender equality policy: an even distribution of power and influence, economic equality, equal education, equal distribution of unpaid home and care work, equal health, and fighting violence against women. Within the economic equality sub-goal, gender equality statistics are further broken down into various income statistics (including return on capital and entrepreneurship earnings) as well as labour force participation, including illness and sick leave (Statistics Sweden, 2020[13]). Furthermore, Statistics Sweden breaks down gender statistics to the regional level, examining gender equality issues in all counties and municipalities. Aside from presenting the data, Statistics Sweden has in the past written detailed guides on how to use its gender statistics, including advice on methodology and presentation (Statistics Sweden, 2004[14]).

The analysis of women and men's income in is also based on TRIF and HEK, while the analysis on gender equality in the labour market is mainly based on the Labour Force Surveys.

In the analysis presented in their respective annexes, gender analysis and distribution analysis focus on two different income concepts:

1. Distribution analysis looks at total (equivalised) disposable income of all household members. The income is shared equally among everyone in the household, even children.
2. Gender analysis looks at individual disposable income. Each individual receives his/her own income, taxes, and transfers. Household-based transfers are shared equally among adults – children are not included.

9.4.2. Data sources for analysis of other individual characteristics

Neither the Ministry of Finance nor Statistics Sweden is allowed to collect data on race or sexual orientation, and as such there is no explicit mention of data disaggregation for these characteristics in any of Sweden's statistics reports.

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Notes

[1] The economic standard, otherwise known as equivalised disposable income, is calculated as a household’s total disposable income divided by its total household weight. Total household weight is calculated as follows: the first adult in a household is given a weight of 1. The second adult has a weight of 0.51, and additional adults 0.6. The first child has a weight of 0.52, and each additional child a weight of 0.42.

[2] Note that there is a slight difference between how Sweden measures income inequality and how it measures economic gender inequality. For the former, income is adjusted by consumption weights, while for the latter men’s and women’s individual disposable incomes for those aged 20 and above are measured.

[3] Financial Times. https://www.ft.com/content/24dbcc0f-7974-48d7-9824-ab86b58a3a29, McKinsey Global Institute analysis, consistent with OECD findings.

[4] In election years the Budget Bill is released later to avoid any political interference. The latest it can be released is the 15th November.

[5] FASIT stands for Analytic Distribution Statistics System for Incomes and Transfers (or *FördelningsAnalytiskt Statistiksystem för Inkomster och Transfereringar*).

[6] About half of this is divided according to actual consumption based on register information, while the other half is done according to an insurance principle, with costs differentiated between groups by age, sex and region. The measure used is called extended disposable income.

[7] *Konjunkturinstitute*t in Swedish https://www.konj.se/

[8] The final version of HEK included 39 000 individuals divided into approximately 17 000 households.

[9] A first difference is that in HEK, the household concept is defined as all people who live together with joint housekeeping (i.e. with common facilities). With TRIF, the concept is defined as all people registered in the same property or appartement, regardless of whether or not there is joint housekeeping. A second difference concerns the fact that maintenance payments (transfers that occur between separated parents) are not recorded in administrative registers. To make up for this, HEK collected data on maintenance payments in the interview, while TRIF uses model simulation of these payments.

[10] As of now, earnings information collected by Statistics Sweden does not include capital income. However, there are ongoing projects within the organisation to try and include this in the future.

[11] As STAR (See subsequent subsection) also contains a longitudinal sample, it was considered inefficient to publish two longitudinal databases, and as such Statistics Sweden opted to stop publishing LINDA.

[12]The Income and Taxation Register contains around 900 variables. The other two main registers used are for family households and household-dwelling units, and contain 80 and 40 variables respectively, most of which are background variables. FASIT also uses several supplementary registers, which include data on unemployment, parental benefits, sickness benefits, dental care, and many others.

[13] *Försäkringskassan* in Swedish

[14] *Lantmäteriet* in Swedish

[15] There is currently a government inquiry into starting the wealth register again. See (Swedish Government, 2022[15]).