

The Value of Social Production in Norway

The Mental Wealth Initiative

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About the Mental Wealth Initiative:

The Mental Wealth Initiative (MWI) was founded in 2021 with the aim of promoting and understanding the factors that foster social and psychological health and contribute to thriving, productive and resilient communities. It is a transdisciplinary initiative of the University of Sydney's Brain and Mind Centre in collaboration with the Business School and the School of Public Health. The MWI is supported by leading Australian economists and politicians, and international collaborators including Professor William Hynes, Senior Economist, World Bank (Paris, France); Professor Harris Eyre, Neuroscientist and Head of the Brain Capital Alliance (United States); Professor Petra Meier, Lead Scientist of the SIPHER Consortium applying systems science in public health and economic research (United Kingdom); and CSART, an international alliance of centres of excellence in systems modelling, simulation, and global health. The MWI is supported by seed funding and philanthropic gifts provided to the Brain and Mind Centre, University of Sydney.

Executive Summary

This report introduces a new approach to measuring national prosperity through the concept of Mental Wealth – a metric that explicitly values social production alongside economic output. Social production is a measure of the value of unpaid contributions made by individuals across the life-course to strengthening the social fabric of communities and nations. These contributions are essential for social cohesion, resilience, and wellbeing and are overlooked by traditional macro-economic measures.

We examine the value of social production in Norway across various demographic groups, emphasizing their contribution to society. While the estimates of social production provided here are most certainly an underestimate due to incomplete data available, this report serves as an important starting point for discussion.

- The total value of social production in Norway was estimated to be **284.4 billion Norwegian Kroner (NOK)** in 2022, equivalent to **4.98%** of Norway's Gross Domestic Product.
- Those that are traditionally undervalued in the formal economy made the greatest contributions to social production.
- For example, the contribution of **females** was valued at **160 billion NOK**, while for **males** it was **123.65 billion NOK**.
- The **unemployed** contributed significantly to family care and voluntary work.
- Those **aged 67-74 years**, and those who were **retired, disabled** or unable to work in the formal economy also made substantial contributions, especially in helping other households.

Social production is the missing part of the production equation; the fruit of human productivity that nations currently do not value and insufficiently invest in. Measuring and monitoring social production and having it integrated into Systems of National Accounts rather than an aside, is part of an effort to catalyse a cultural and policy shift towards a more comprehensive view of national prosperity and to support transition to wellbeing orientated economies. Additionally, investments in brain capital and social capital infrastructure as new asset class targets of Norway's Sovereign Wealth Fund, have the potential to contribute significantly to both economic and social production, aligning with the [European Brain Council's National Brain Plans](#) and fostering the Mental Wealth of the nation.

Mental Wealth: Measuring progress towards wellbeing economies

This report comes at a time of growing global momentum towards wellbeing orientated economies in response to the corrosive effects of decades of market orientated economic policies. In May 2024, the 77th World Health Assembly saw Member States overwhelmingly endorse a Special Resolution to recognize the inextricable link between economic policies and health, calling for a realignment of economic priorities with the wellbeing of ecosystems, communities, and individuals (Occhipinti, 2024). This was followed by the United Nations adopting the “Pact for the Future” on September 23, 2024, at the 79th UN General Assembly. The Pact emphasizes the importance of sustainable development, formally recognising the inadequacies of GDP and including among its Action Items, the urgent call for development of measures of progress that better reflect the state of sustainable, wellbeing orientated economies. Similarly, the European Commission's report by Mario Draghi underscores the need for economic policies that integrate social wellbeing and environmental sustainability as key components of societal resilience and prosperity (European Commission, 2024).

A Wellbeing Economy is one that privileges an inclusive, holistic, and balanced approach to development, aligning collective wellbeing and social prosperity with traditional economic and commercial interests. There have been numerous efforts to redefine the economy and reconceptualize what it means to be a prosperous society. Despite decades of advocacy and a broad range of indices and dashboards that have been developed to move beyond gross domestic product (GDP), the original statistic remains the top-line indicator of national prosperity that dominates economic policy discourse and decision making, while investments to foster social and environmental wellbeing are often considered secondary objectives ‘if nations can afford it.’

Overcoming some of the key limitations of existing dashboards and indices, the **Mental Wealth metric** (Box 1) monetises the value generated by a nation's **economic and social production** (Occhipinti *et al.*, 2023). Rather than being an aggregated index of wellbeing indicators, Mental Wealth is a more comprehensive measure of the value that arises from mental capital, brain health, and social wellbeing underpinned by quality healthcare, education, employment, financial security, public trust, connectedness, and ecological health and diversity, etc. Put simply, Mental Wealth is a macroeconomic measure of the strength of a Wellbeing Economy that will be instrumental in assessing the future success of policies and investments to improve prosperity under this new economic frame.

Box 1.

$$\text{Mental Wealth} = \mu \text{GDP}_r + C_s + I_s$$

GDP_r is real GDP (for a given period) calculated using the expenditure approach.

μ is the devaluation coefficient; the downward adjustment to GDP_r to account for the proportion of expenditure not underpinned by mental capital (e.g., the value of mineral exports net of human input) and negative externalities.

C_s is Social Consumption (Production); the consumption/production of non-monetised, socially provided services – the focus of the current report.

I_s is Social Capital Investment; the sum of government (and nongovernment) investment in social capital infrastructure (in a given period), not already captured in GDP.

Section 1: What is Social Production

A key barrier to measuring, monitoring, forecasting and comparing the Mental Wealth of Nations is estimating social production.

Social production is the glue that holds societies together. Engaging in socially productive activities can give people a sense of belonging, purpose, and connectedness that contributes to mental health and healthy aging, it supports productivity in the formal economy, it can improve environmental wellbeing and provide workforce surge capacity to mobilise effectively in times of crisis. In essence, social production makes nations more prosperous, cohesive, and resilient. Valuing social production also promotes a more inclusive narrative of a contributing life, recognising that an individual's value extends beyond their capacity to make money in the formal economy.

Unpaid social contributions (social production) – from caring for children and the elderly, to volunteer work, community building efforts, and environmental stewardship – form the bedrock of Norway's renowned social cohesion and quality of life. Yet despite their fundamental importance to societal wellbeing and economic resilience, these activities remain largely invisible in conventional economic measures. Making the value of social production visible can inform economic policy decisions that enhance economic and social prosperity in balance, serve to track the impact of social policies at a macro level, and act as a benchmark for international comparisons, ensuring Norway continues to lead in building a more inclusive and sustainable model of societal progress.

Social contributions that comprise social production are grouped into eight categories below. Currently, data for Norway is only available for the highlighted categories (see Appendix).

- Volunteering and unpaid charity work
- Unpaid education and care of children
- Unpaid care of the sick, elderly, or disabled
 - Providing a crowd service (where no direct or indirect income is received)
 - Unpaid contributions to the creative arts
 - Community participation and contributions to building community infrastructure
 - Unpaid ecological restoration / rewilding
 - Unpaid informal on the job training, development, and mentoring

Therefore, estimates of Norway's social production presented in this report are a **significant underestimate of its true value** due to incomplete data available. The magnitude of the underestimation is also unknown. Therefore, this report **serves only as an important starting point for discussion**. Strengthening the data infrastructure to enable monitoring of temporal trends in social production and inform policy to foster the Mental Wealth of the nation is a national priority.

Recent challenges, including rising mental health concerns among young people, increasing loneliness across age groups, and the need to integrate new populations into Norwegian society, highlight the urgency of better understanding and invest to support engagement in social production.

Section 2: Valuing Social Production in Norway

The value of unpaid social production of Norway in 2022 was estimated to be at least **284.42 billion Norwegian Kroner (NOK)**, which is equivalent to **4.98% of Norway's Gross Domestic Product in 2022**. The greatest contributors to Norway's social production are those that are traditionally undervalued in the formal economy; namely, women, and the unemployed. Men contribute to a greater extent than women in the category of voluntary work.

The total value of unpaid voluntary work equated to **46.43 billion NOK**. These figures highlight that, while social production does not replace the need for government provision of social services, promoting and supporting population engagement in social production can potentially reduce the burden on governments.

The MWI has employed an input-based approach where a universal value is applied to every hour spent on activities that make a social contribution. This approach is similar to the convention followed in valuing public sector contributions to consumption where such services are not mediated through the market. We apply a universal value to every hour spent making a social contribution that is equivalent to the median hourly earnings in Norway in 2022, thereby equating the value of market and non-market work. Further discussion of the valuation method can be found in Section 3.

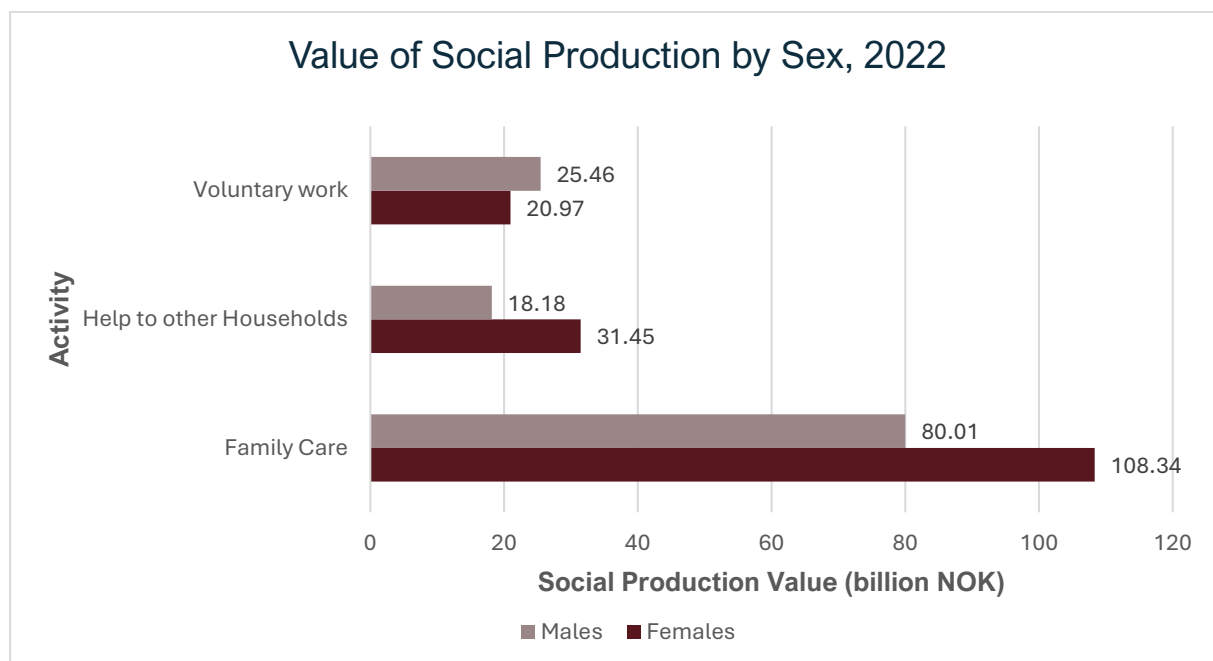


Figure 1. Value of Social Production by Sex, 2022, Source: MWI analysis, Statistics Norway 2022

Figure 1 highlights the economic value of social production, measured in NOK billion, showing contributions by gender. Social production, encompassing in this analysis the limited categories of family care, assistance to other households, and voluntary work, represents a vital part of societal wellbeing and cohesion. **Women contribute more overall**, particularly in family care, while men lead in voluntary work. The total value of these activities produced by women is estimated to be 160.77 billion NOK and for men, 123.65 billion NOK.

Category	16–24 years	25–44 years	45–66 years	67–74 years
Family Care	3.15	146.45	37.97	3.02
Help to other Households	3.15	5.23	24.41	14.32
Voluntary work, time spent participating in organisations	8.40	10.46	18.99	9.05
Total	14.71	162.14	81.37	26.38

Source: MWI analysis, Statistics Norway 2022

Table 2.1. presents the economic value of social production across different age groups, measured in NOK billions. Family care is the most significant category, with a substantial contribution from the **25–44 age group**, which accounts for over 146 billion NOK. Younger adults (16–24 years) contribute a smaller amount, primarily in voluntary work. **Help to other households is particularly prominent in the 45–66 years age group**, contributing approximately 24.41 billion NOK. This demonstrates the substantial and shifting categories of contributions individuals make to society at various life stages.

Category	Working	Unemployed	In retirement	Disabled or unable to work	Student or pupil (including compulsory military service)
Family Care	58,903	83,892	7,140	39,269	21,419
Help to other Households	8,925	1,785	30,344	14,280	5,355
Voluntary work, time spent participating in organisations	8,925	21,419	21,419	8,925	14,280
Total	76,753	107,097	58,903	62,473	41,054

Source: MWI analysis, Statistics Norway 2022

Table 2.2. highlights the distribution of social production activities across different employment and life status categories. Individuals in the **working** and **unemployed** categories contribute the most to family care, while those **in retirement** and **disabled or unable to work** provide significant value through helping other households. **Students and pupils** also contribute notably through voluntary work. Overall, these groups generate substantial value across all categories, reflecting the diverse ways in which different segments of the population support society.

Engagement in social production not only has the potential support the wellbeing of individuals but can also strengthen community bonds and enhance social cohesion. Measuring and monitoring the value of unpaid work, will facilitate research to better understand its importance for underpinning the strength of economic and social systems, and policy analysis to inform transition to a Wellbeing Economy.

Section 3: Method

Method

This method follows the approach outlined by Occhipinti *et al.*, 2023 in the journal *Nature Mental Health*. A universal value is applied to every hour spent undertaking activities that fall under the eight social production categories. This universal value is based on median hourly earnings in the year in which activities are undertaken, which was 293 NOK/hour in 2022. Time spent on activities has been taken from Statistics Norway Time Use. In estimating the value of social production only the cost of labour inputs will be used, capital costs have not been included. This method broadly aligns with approaches of most other practitioners valuing unpaid work.

Number of Hours

Estimates of the number of hours spent providing social contributions per person in 2022 were derived from Statistics Norway Time Use Survey data as follows:

$$H_{ij} = D_{ij} \cdot 365$$

H_{ij} = average hours in 2022 on unpaid work category i per person in demographic group j

D_{ij} = average hours per day on unpaid work category i per person in demographic group j

Estimating the value of social contributions

The input-based valuation estimates of social contributions for 2022 were derived as follows:

$$C_s = \sum_{i=1}^M \sum_{j=1}^N H_{ij} P_j W$$

C_s = Total value of social contributions

H_{ij} = average hours in a given year spent on unpaid work category i per person in demographic group j

P_j = Number of persons in demographic group

W = Median hourly wage rate (median hourly earnings) for a given year.

Input data for the Estimates

The preparation of the 2022 estimates of social production presented in this report required three sets of data:

- Estimates of average time spent on activities that contribute to social production
- Population estimates
- Median hourly earnings

Estimates of the value of social production in 2022 were derived for each 'demographic subgroup' by expanding average daily hours released in the Statistics Norway Time Use Survey estimates to derive an annual figure spent on the unpaid activities that contribute to social production.

Time Use Survey

The analysis in the report is based on the 2022 Norwegian Time Use Survey which is conducted by Statistics Norway (Statistisk sentralbyrå, SSB) is responsible for conducting the Time Use Survey in Norway. This survey collects detailed information on how individuals allocate their time across various activities, such as work, leisure, household chores, and childcare. The survey involved collecting detailed time-use data from participants aged 9–79.

Wage Rate Data

Valuations are based on the median hourly earnings in a given country in a given year. The wage rate used for 2022 was **293 NOK per hour**, the median hourly earnings, sourced from Statistics Norway.

Population Data

The population data used to extrapolate time spent making social contributions from the survey sample to the population level was sourced from Statistics Norway.

Valuation Method Discussion

Estimates of the economic value of 'unpaid work' can vary depending on the valuation method used. The most common valuation methods utilised when estimating the monetary value of unpaid work include: the replacement cost, opportunity cost, and social benefit approach (Salamon et al., 2011).

- *The replacement cost* approach uses an 'observed market proxy' which involves pricing voluntary time at a wage rate which is equal to the cost to hire a paid worker to perform roughly the same task.
- *The opportunity cost* approach seeks to value the unpaid time in terms of the value of the alternative activity the individual has forgone in order to volunteer, this is generally the rate of pay which they would receive in a paid job if they were not volunteering.
- *The social benefit* approach seeks to estimate the social value of the output of volunteering. This approach requires a market proxy for the output, or where this is indeterminate, it would require a willingness-to-pay assessment which seeks to value the output from volunteers based on what the provided service is worth to the receiver.

There are a number of drawbacks to the above approaches, as discussed in Occhipinti, *et. al.* (2023). The MWI uses an alternate method to those mentioned above, employing an input-based approach where a universal value is applied to every hour spent undertaking social contributions. The value used for this estimation is the median hourly earnings in a given country, in a given year. Applying the median wage rate universally across activities and across demographic categories avoids exacerbating existing distortions in the market economy (such as the gender pay gap) and avoids the application of differential activity values in each country that would prohibit meaningful international comparisons. The strength of this approach also lies in its feasibility, requiring very few parameters to calculate, and ensuring its tractability for standard application across high-, medium-, and low-income countries. Additionally, the absolute value of social production is of secondary importance to the direction of relative change over time. The regular measurement and reporting of social production and Mental Wealth across countries will be important for international comparisons of progress towards a Wellbeing Economy.

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Appendix

MWI Social Production Categories and definitions

Social Production Category	Definition
Volunteering and unpaid charity work	Volunteer or charity work such as participating in the delivery of essential community services, emergency services, fundraising, etc.
Unpaid education and care of children	Providing education, active supervision, and domestic care for children aged under 18 years. This includes own children and children of friends, neighbours, and extended family.
Unpaid care of the sick, elderly, or disabled*	Domestic support for the sick, elderly, or disabled including those suffering from dementia.
Crowd service	Producing free digital goods, including open source/free to licence software, and contributing knowledge, advice, instructions, and training via the internet e.g., Wikipedia, YouTube, etc., (where no direct or indirect income is received).
Unpaid contributions to the creative arts	Performing / creating works of art, music, dance, and drama.
Community participation and contributions to building community infrastructure	Developing physical and technical facilities for a community and engaging in community activities. This includes time spent supporting a community clubs, organisations, associations, participating in religious activities, or organising community forums and cultural events etc.
Unpaid ecological restoration / rewilding	Revival of ecosystems (incl. forests, marine, urban areas, animal habitats), animal rescue, environmental clean-up, etc.
Unpaid informal on the job training, development, and mentoring	Providing informal professional mentoring, guidance, capacity building/training workshops to co-workers where these activities are not the primary responsibilities of the salaried position.

Currently, there is only data available for the shaded categories. Therefore, the estimate of social production is likely to be a significant underestimate.

*Please note that we have included Norway's time use data on "Help to other households" (e.g., housework, maintenance work, shopping, various errands, etc) as a proxy for "Unpaid care of the sick, elderly or disabled", therefore the estimate of value generated by this category of activity may not be complete.

For more information:

Occhipinti, J., *et al.* (2023). *Estimating the Mental Wealth of nations: valuing social production and investment*. **Nature Mental Health**, 1(4), 247-253. <https://doi.org/10.1038/s44220-023-00044-w>