

Finland: Selected Issues



FINLAND

SELECTED ISSUES

January 2020

This paper on Finland was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on December 16, 2019.

Copies of this report are available to the public from

International Monetary Fund • Publication Services
PO Box 92780 • Washington, D.C. 20090
Telephone: (202) 623-7430 • Fax: (202) 623-7201
E-mail: publications@imf.org Web: <http://www.imf.org>
Price: \$18.00 per printed copy

International Monetary Fund
Washington, D.C.



FINLAND

SELECTED ISSUES

December 16, 2019

Approved By
European Department

Prepared by Philippe Wingender

CONTENTS

PROMOTING LABOR SUPPLY THROUGH TAX AND BENEFIT REFORM	2
A. Introduction	2
B. Main Features of the Finnish Welfare Model	3
C. Methodology and Data Sources	5
D. Reform Scenarios	8
E. Economic Effects of Reform Scenarios	10
F. Conclusions	13
FIGURES	
1. Income Levels and Income Inequality	3
2. Guaranteed Minimum Income	4
3. Tax Rates Comparisons	4
4. Potential Income Distributions, 2018	5
5. Disposable Income Decomposition	6
6. Marginal Effective Tax Rate Composition	6
7. Participation Tax Rate Decomposition	7
8. Estimated Social Marginal Welfare Weights	7
9. Social Marginal Welfare Weights for Reform	8
10. Participation Tax Rates	8
11. Marginal Effective Tax Rates	9
12. Labor Supply Responses, Combination Reform	10
13. Net Income Changes from Reform	11
14. Marginal Effective Tax Rates, Robustness	12
15. Economic Effects from Reform	13
TABLES	
1. Tax and Benefit Parameters: Current and Proposed Reforms	9
2. Economic Impact of the Proposed Reforms	12

PROMOTING LABOR SUPPLY THROUGH TAX AND BENEFIT REFORM

The Finnish social welfare system has supported high income levels alongside low inequality. However, disincentives from high tax rates can weigh on labor supply and the state's capacity to finance generous levels of spending and social protection. A comprehensive reform of the tax-benefit system could support the government's objective of increasing employment. The equity-efficiency tradeoff of the proposed reform scenarios improves social welfare when using Finland-specific preferences. The main recommendations are:

- *Support for low-wage and part-time workers could be increased through higher and means-tested in-work benefits. This could substantially increase employment rates.*
- *Better targeting of out-of-work benefits, especially for secondary earners, could increase fiscal space and improve labor supply incentives.*
- *Marginal tax rates for upper-middle income workers could be lowered to increase labor supply and earnings. This could even be done in revenue-neutral terms.*

A. Introduction

1. The Finnish tax and benefit system has served the country well, having supported high income levels alongside low inequality. The model is characterized by strong institutions, high taxes and public service provision, a highly skilled labor force and a generous social safety net. While the current tax and benefit system offers enviable levels of social protection, this potentially comes at a cost as high tax rates can dampen labor supply incentives. Using a micro-founded approach, we find that the tradeoff between equity and efficiency could be improved through comprehensive tax and benefit reform and produce even stronger employment and redistributive outcomes than the current system, in line with Finland's growth objectives and social preferences.

2. Potential gains from tax and benefit reform are significant, despite Finland's current sound policies. Channeling more resources to low-wage and part-time workers through means-tested in-work benefits could improve incentives to take up employment. Lower participation tax rates and higher employment rates would boost incomes and lessen the need for transfers. Reducing marginal tax rates for upper-middle income earners could boost labor supply. Top tax rates appear to be on the wrong side of the Laffer curve—a rate cut could even be self-financing. Importantly, the proposed reforms take into account Finland's strong preferences for equity, which are inferred using current tax rates. Results for revenue neutral reforms suggest employment rates could be increased by up to 3 percentage points and average earnings could increase by up to 3.5 percent compared to current levels.

3. The analysis is based on a microsimulation method and the Mirrlees framework. In a seminal contribution, James Mirrlees derived the conditions under which a tax reform can achieve the optimal tradeoff between efficiency and equity.¹ The framework provides guidance on how to incorporate social preferences over income inequality, features of the income distribution and responsiveness of the tax base to changes in tax rates to formulate optimal reforms (see [Piketty and Saez 2013](#) for a recent review and introduction). The approach can be transparently calibrated to country-specific circumstances to derive recommendations that improve social welfare in line with countries' preferences.

B. Main Features of the Finnish Welfare Model

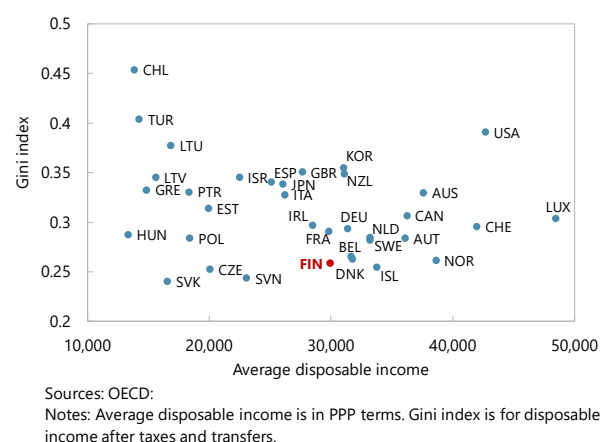
4. Finland has achieved an enviable tradeoff between efficiency and equity.

While several countries have higher average income levels (Figure 1), few have achieved this while maintaining similarly low income inequality. Substantial public spending on education, health and social protection has ensured Finnish workers are relatively well positioned to adapt to a changing world from globalization and automation.

5. Low inequality is supported by generous transfers to low-income households.

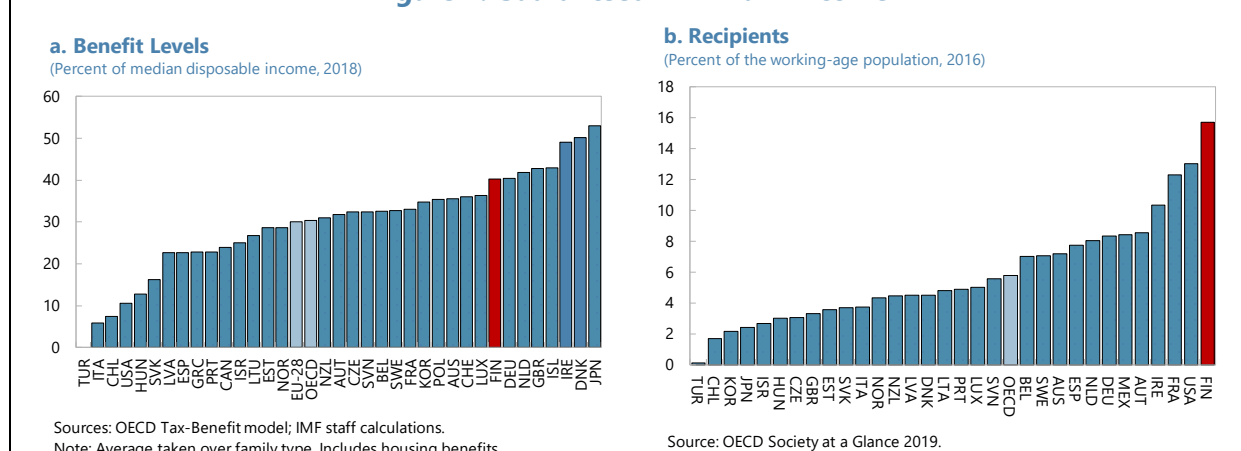
A helpful way to summarize these transfers is to compare the basic income level to which all citizens are entitled to when permanently out of work. The guaranteed minimum income (GMI) includes cash benefits and housing assistance assuming no household earnings.² Finland ranks among the most generous countries, well above the average for OECD and European countries. For 2018, illustrative calculations show a representative family without earnings could be expected to receive the equivalent of around 40 percent of the median disposable income in transfers (Figure 2). In addition, Finland has the largest share of out-of-work benefit recipients among OECD countries. As a result, the poverty rate is among the lowest in OECD countries at 5.8 percent, compared to an average of 11.7 percent.

Figure 1. Income Levels and Income Inequality
(2016 or most recent year)



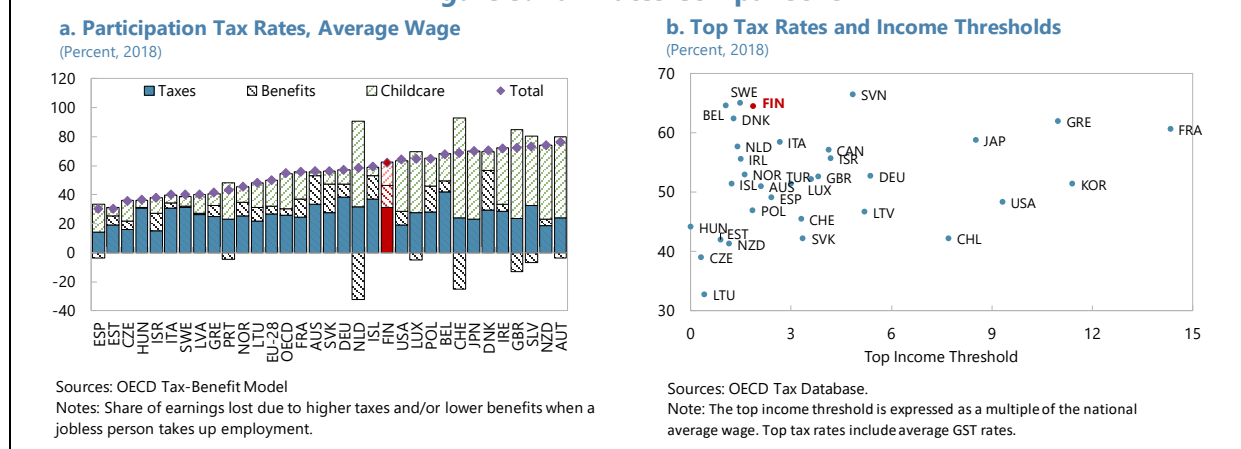
¹ Mirrlees, James A., 1971. "An Exploration in the Theory of Optimum Income Taxation," *Review of Economic Studies*, 38(2), 175–208.

² Calculations for benefit levels do not include unemployment benefits as the focus of the analysis is on the decision to join the labor force, rather than involuntary unemployment. Benefit levels are simple averages across the usual family types presented by the OECD, which include single and married, with and without 2 children ([OECD 2018](#)).

Figure 2. Guaranteed Minimum Income

6. Generous transfers ensure strong redistribution but can also create inactivity traps.

Participation tax rates (PTR) affect labor supply along the extensive margin by determining how much net incomes change upon entering employment. A high PTR could arise from workers: (i) losing a larger portion of low-income transfers; (ii) having to pay more income tax; and (iii) incurring childcare costs in the case of parents. Finland's PTR for those taking up a job paying the average wage is not quite as high as in some OECD countries (Figure 3a). Notably, childcare subsidies keep costs relatively low. But the home care allowance and the level of childcare subsidy are tied to labor market participation, which reduces the net return to work. This likely keeps some individuals out of the labor force. Young women in particular have lower employment rates than in neighboring Nordic countries.

Figure 3. Tax Rates Comparisons

7. Financing large benefits also requires elevated marginal tax rates. High marginal tax rates can reduce labor supply along the intensive margin, since the net return of working an additional hour or moving to a better-paying job might not be worth it for some workers. Finland has one of the highest top marginal tax rates among advanced economies and it applies to a large share of workers (Figure 3b). The top personal income tax rate of 64 percent (including indirect taxes, but excluding employers' social contributions) applies to incomes in excess of 1.9 times the average wage, comparable only to those of Sweden, Belgium and Denmark.

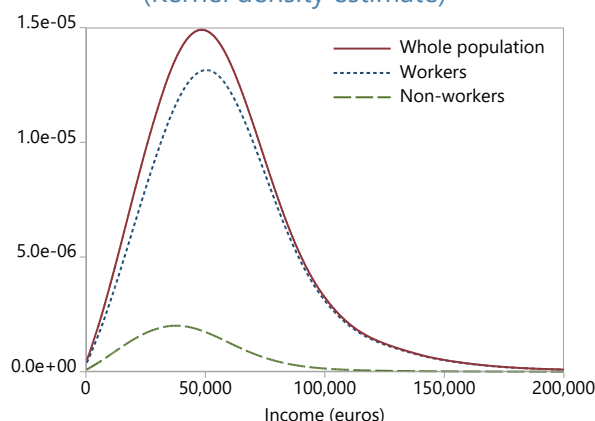
C. Methodology and Data Sources

8. The tradeoff between equity and efficiency in Finland could be improved. To assess this tradeoff, we use a microsimulation approach to determine whether a reform of the tax and benefit system could improve labor supply incentives while collecting the same amount of net revenues. Crucially, the approach ensures that such a reform can preserve a level of redistribution that is consistent with Finland's social values as reflected in current policies. The micro-founded analysis relies on:

- Household survey data from the 2017 Income Distribution Survey. The survey contains information collected from 25,000 individuals in 10,000 households, with details on individual and household incomes, family structure and labor market participation. We also rely on published education and labor force statistics to determine the employment rates by education level.
- Parameters of the current tax and benefit system, including the personal income tax, social contributions, social and housing benefits, family allowances and childcare subsidies. These are calculated using the OECD TaxBEN model ([OECD 2019](#)).
- Parameters capturing the responsiveness of earnings to changes in tax rates, which are calibrated using recent estimates for Finland.³

9. The distributions of potential incomes among workers and non-workers are not very different in Finland. The notion of potential income is the level an individual would earn if she faced no disincentives from taxes.⁴ The average potential income is 45,400 euros for non-workers compared to 60,000 euros for workers. Also, 30 percent of inactive individuals have potential income above the median level for workers (54,700 euros). This suggests a relatively large share of inactive individuals are highly skilled and that targeting of the current benefit system could potentially be improved. In particular, mothers of young children are often highly educated second earners. They also have relatively low employment rates that extend for long periods (2019 Finland Staff Report).

Figure 4. Potential Income Distributions, 2018
(Kernel density estimate)



³ We set the hours (intensive) elasticity at 0.10 and the average participation (extensive) elasticity at 0.20 for the baseline calibration. Robustness checks use lower (0.05 and 0.1) and higher (0.2 and 0.3) elasticities. [Economic Policy Council Report 2015](#) provides a review of recent empirical studies for Finland.

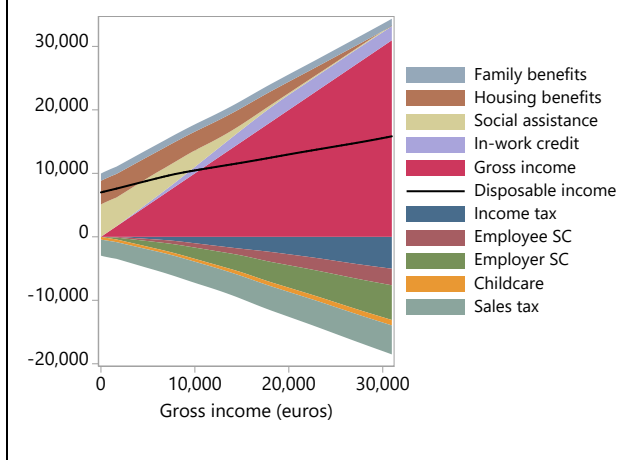
⁴ This distribution is imputed for current non-workers using employment rates by educational attainment, which varies between 80 percent for those with primary school to 97 percent for doctoral graduates. The average employment rate in the sample is 89 percent. We exclude retirees, students and the disabled. We also drop mothers of children aged less than one.

10. Generous transfers support disposable incomes at the bottom of the distribution.

For a representative individual with zero or very low earnings, social assistance, housing, and family benefits ensure an average disposable income of around 7,300 euros (net of income and sales tax), equivalent to 36 percent of the median disposable income (Figure 5). As gross earnings increase, social assistance and housing benefits are phased-out and income tax liabilities along with childcare costs (due to lower means-tested subsidies) increase. Finland also has an in-work tax credit that increases net incomes for low-income workers.

This benefit is phased in starting on average at around 5,000 euros. The break-even gross income level is around 10,000 euros. There is a small penalty to work at the lowest earnings level for parents, a result of out-of-pocket childcare costs.

Figure 5. Disposable Income Decomposition
(Representative worker, 2018)

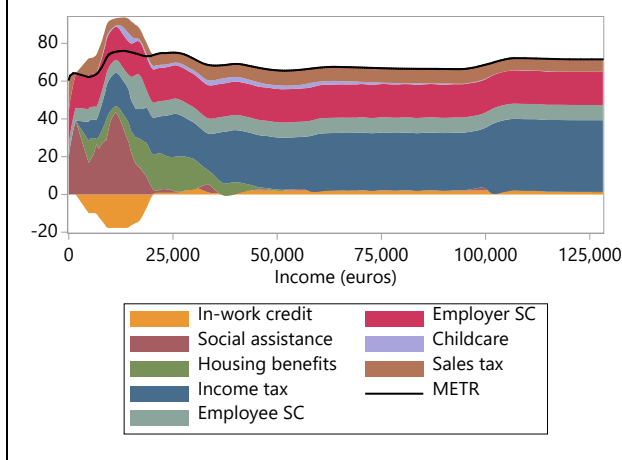


11. Despite having a progressive personal income tax, the schedule of marginal effective tax rates is largely flat.

Marginal changes in taxes and benefits as earnings increase are important to understand since marginal effective tax rates (METRs)—the change in disposable income from small changes in gross earnings—are central in determining aggregate labor supply in the economy. The different components of disposable income also affect METRs (Figure 6). The phasing-out of social assistance and housing benefits contributes significantly to lowering the additional return to work for low income workers. The peak marginal rate of 40 percent means that social assistance benefits are reduced by 0.4 euros for every additional euro earned.

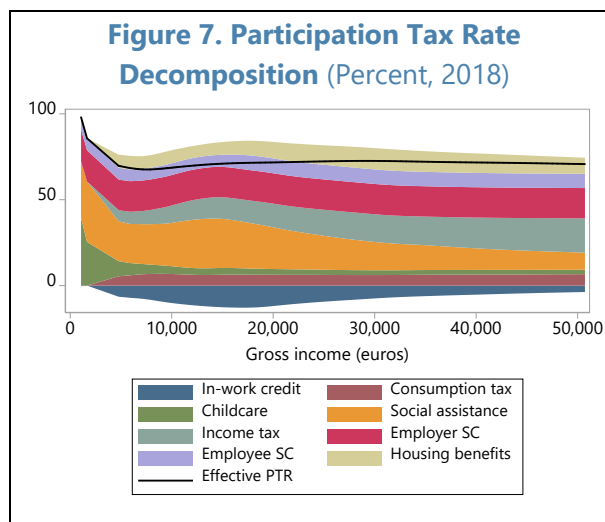
This is partially counterbalanced by the in-work credit which reduces the METR by around 20 percent until 22,000 euros in earnings. Overall, METRs for the representative individual go from 60 percent on the first euro earned, peak at 76 percent for gross incomes around 13,000 euros and then decrease to 65 percent for middle income earners. Beyond the average earner, a higher personal income tax rate eventually pushes the top METR to 72 percent.⁵

Figure 6. Marginal Effective Tax Rate Composition
(Percent, 2018)

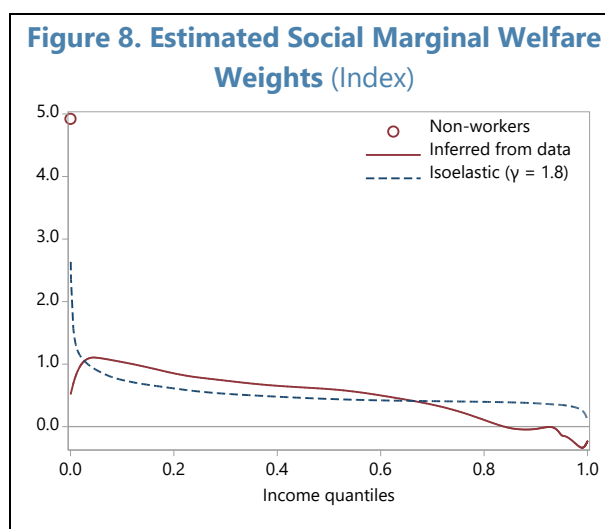


⁵ The METR includes consumption taxes. We use the ratio of indirect tax revenues to private consumption, which was 26.6 percent in 2018.

12. Despite being targeted to low-incomes households, social assistance and housing benefits affect the labor supply incentives of a much broader range of workers. Participation tax rates (PTR) influence labor supply decisions along the extensive margin. The PTR is calculated as one minus the net financial gains from work compared to not working. This means that net earnings and out-of-work benefits both influence the participation decision. Even for individuals earning 50,000 euros—well beyond the phase-out range of the benefits—the two programs still increase PTRs by 20 percent (Figure 7). At the very bottom, childcare costs add 40 percent to the PTR and push it up above 100 percent as earnings approach zero (not shown in the chart). Similar to the METR, the in-work credit makes work more attractive along the extensive margin by reducing the PTR by up to 13 percent for low-wage and part-time workers.



13. Society values the marginal consumption of the less well-off relatively more than higher incomes. The implicit value society assigns to individuals' marginal consumption can be inferred from the current tax and benefit system. Under the assumption that the current tax-benefit system has been optimally chosen, METRs and PTRs at every income level provide information on how much each additional unit of consumption is valued by policy makers ([Bourguignon and Spadaro 2012](#); [Jacobs, Jongen and Zoutman, 2017](#)). Three features of the social welfare weights stand out:



- First, social welfare weights are generally declining in income. However, they are increasing below the 5th percentile. This means that government values the marginal consumption of the lowest income workers less than those with slightly higher earnings potential.
- Second, there is a stark contrast between the welfare weights assigned to individuals outside the labor force and to low-wage and part-time workers. This reflects the small financial penalty from working at the very bottom (Table 1 below).
- Third, looking at the top of the distribution, social welfare weights are negative for the 15 percent highest income earners. This implies that policy makers would rather *decrease* the

consumption of top earners than collect more tax revenues. These negative weights suggest that top rates in Finland exceed the Laffer peak.⁶

D. Reform Scenarios

14. The reform proposals seek to address these apparent inconsistencies in social welfare weights. An isoelastic social welfare function can provide a useful benchmark to compare the estimated weights in Figure 8. We fit the isoelastic function to the data and find an estimated Constant Relative Inequality Aversion (CRIA) parameter of 1.8. This means society values the additional consumption of someone at the 10th percentile of the income distribution 13.4 times more than someone at the 90th percentile.⁷ Many options for reform are possible, but we consider the following adjustments: i) using isoelastic weights; ii) using isoelastic weights at the bottom to ensure strictly decreasing weights and using the average of revealed and isoelastic weights at the top to ensure positive weights for all workers. In addition, we model reform scenarios that iii) keep the out-of-work benefit constant and iv) where only top rates are adjusted to reflect positive social welfare weights. This last reform is a Pareto improvement since top earners can be made better-off without affecting the private utility of anyone else.

15. Increasing support for low-wage and part-time workers could improve the equity-efficiency tradeoff. In the reform scenarios considered, the in-work tax credit would be substantially increased. The current system entails a small penalty of approximately 1.6 percent of median income

Figure 9. Social Marginal Welfare Weights for Reform (Index)

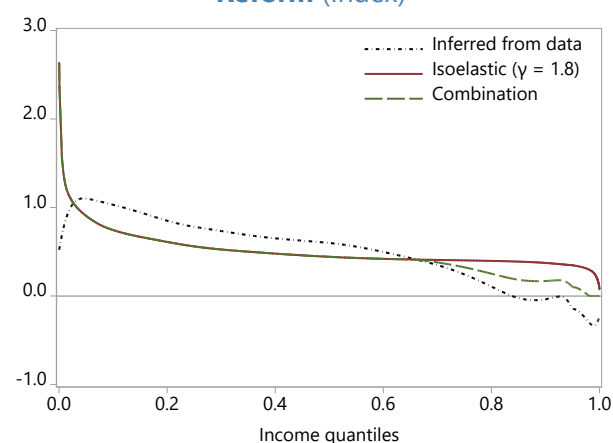
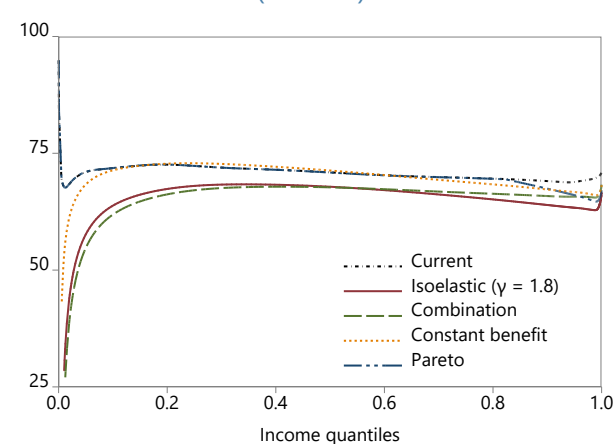


Figure 10. Participation Tax Rates (Percent)



⁶ Under alternative calibrations, all weights are positive with lower labor supply elasticities (0.05 for the intensive and 0.10 for the extensive margin), while the top 30 percent has negative weights with higher elasticities (0.2 and 0.3). For further discussion on the revenue-maximizing rate, see [Economic Policy Council Report 2015](#) and [Lundberg 2017](#).

⁷ A CRIA function means society values the additional consumption of two individuals only according to their relative income levels. For individuals at the 10th and 90th percentiles of the income distribution in Finland, this is calculated as $\left(\frac{88,000}{20,800}\right)^{1.8} = 13.4$.

from entering employment (Table 1). This is the result mainly of having to pay for some childcare costs. In contrast, a comprehensive optimal tax and benefit reform would introduce an in-work tax credit that could reach up to 16 percent of the median income. This significantly improves incentives to take up work through a reduction in PTRs (Figure 10). PTRs are also reduced through lowering out-of-work benefits for individuals outside the labor force. In the *Isoelastic* and *Combination* reform scenarios, the out-of-work benefits would decrease by 13 percent. Without combining these ‘push-pull’ measures, the incentives along the extensive margin do not improve as much (*Constant benefit* curve in Figure 10).

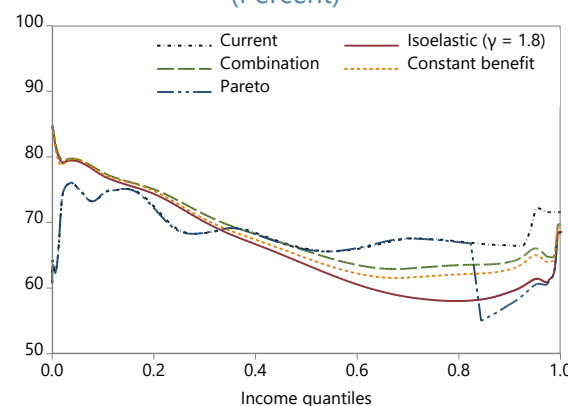
Table 1. Finland: Tax and Benefit Parameters: Current and Proposed Reforms

	Current	Isoelastic	Combination	Constant benefit	Pareto
Out-of-work benefit	7,329	6,356	6,356	7,329	7,329
(percent median income)	36.1	30.3	30.2	36.5	38.1
In-work tax credit	-332	2,958	3,368	1,436	-332
(percent median income)	-1.6	14.1	16.0	7.1	-1.7
Marginal tax rates:					
1st percentile	64	81	81	80	64
10th percentile	74	77	78	78	74
25th percentile	69	73	73	73	69
Median	66	64	66	65	66
75th percentile	67	58	63	62	67
90th percentile	67	59	64	63	57
Top rate	72	69	70	69	68

Notes: *Current* uses the current tax and benefit system. *Isoelastic* implements the optimal reform using isoelastic social welfare weights with $\gamma=1.8$. *Combination* uses isoelastic weights at the bottom and the average of isoelastic and current weights at the top. *Constant benefit* uses the same marginal social welfare weights as *Combination*, but keeps the out-of-work benefit constant. *Pareto* uses isoelastic weights when current weights are negative, keeping all other taxes rates and transfers constant.

16. The in-work benefit should be means-tested with a steep phase out rate. This means that the METR for the bottom percentile could reach up around 81 percent (Table 1 and Figure 11). This higher phase-out rate ensures that the in-work benefit for low-wage and part-time earners can be as large as possible, while still being targeted to those that are most in need. This also ensures fiscal costs of redistribution remain in check.

Figure 11. Marginal Effective Tax Rates (Percent)

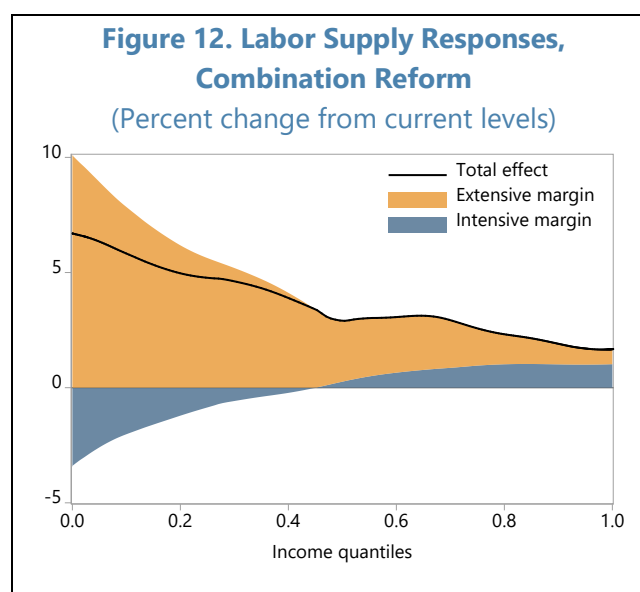


17. Optimal tax and benefit reforms could reduce marginal tax rates for upper-middle income earners to promote labor supply. The optimal METRs for higher income earners will depend on the social marginal welfare weights assigned to them. However, there appears to be scope to reduce tax rates across a range of assumptions. In the first three reform scenarios considered, the METR for the worker at the 75th percentile would be reduced by up to 9 percentage points (Figure 11). The largest difference in METRs under reform would be for workers at the 85th percentile, with marginal rates declining from 67 to 58–63 percent. Under the scenarios considered, the marginal tax rate at the very top would remain largely unchanged from the current level.

18. A Pareto reform would display a large cut in tax rates for earnings above the 85th percentile, while leaving taxes and benefits constant at lower income levels. This scenario is another important benchmark since it shows that the current tax schedule is sub-optimal under baseline assumptions. The METR cuts of around 11 percent shown in Figure 11 (*Pareto reform*) still leave total revenues collected unchanged because current rates are above revenue-maximizing rates and on the wrong side of the Laffer curve.

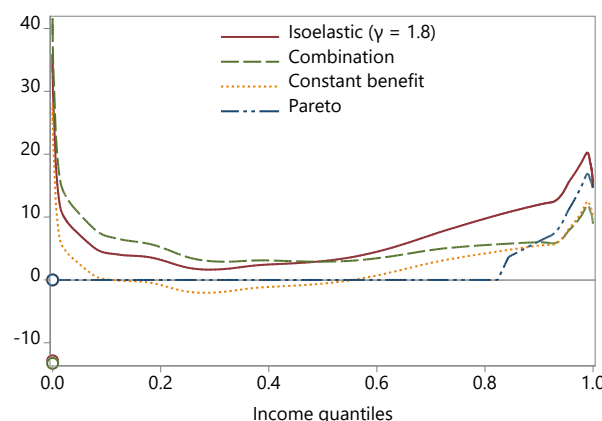
E. Economic Effects of Reform Scenarios

19. Marginal tax rates under optimal reform would be U-shaped and highest at the bottom of the income distribution. This is a result of a generous in-work benefit along with a steep phase out at low earnings. While this reduces labor supply incentives along the intensive margin, a comprehensive reform could also achieve a substantial decrease in PTRs. This is an important distinction. For the *Combination* reform scenario for example, the improved incentives to take up employment strongly dominate the negative effects of higher marginal tax rates. In words, this means there are more low-income workers, but they work fewer hours. The contributions of the intensive and extensive margins are shown in Figure 12. For the lowest wage earners, increased participation raises total labor supply by 10 percent compared to current levels. On the other hand, the higher METRs lower hours worked by 3 percent. The net effect on labor supply is a 7 percent increase. Beyond the median income, both the intensive and extensive margins contribute to increasing labor supply.



20. The distribution of gains from reform are concentrated at the tails. Low-wage and part-time workers would see strong after-tax-and-benefit income gains of up to 40 percent under the *Isoelastic* and *Combination* reforms. Top earners would see net income gains ranging from 10 to 20 percent, while the median worker would have a 5 percent increase. Individuals outside the labor force—around 8 percent of the sample after reform—would see a decline of 13 percent in net benefits. In the *Constant benefit* scenario, out-of-work benefits would stay the same, but this would result in net income losses of about 1 percent for workers between the 20th and 55th percentiles. Finally, under the *Pareto* reform, everyone below the 85 percentile is unaffected. Individuals above this threshold would gain up 8.8 percent on average, with the largest gains reaching 17 percent for those at the 99th percentile of the earnings distribution.

Figure 13. Net Income Changes from Reform
(Percent)



21. The overall economic gains from reform could be substantial despite being revenue-neutral. In the *Isoelastic* reform, aggregate labor supply increases by 3.8 percent and the employment rate goes from 89 percent to 91.7 percent (Table 2). Total earnings increase by 3.5 percent, while income inequality rises marginally with the Gini index increasing from 0.25 to 0.27.⁸ Other inequality indices (generalized entropy and Atkinson index) should show similar small increases. The social welfare gain, a micro-founded measure that evaluates both the level and distribution of incomes, shows an improvement of 3.7 percent, expressed as a share of current output. The earnings and hours gains are not quite as large under the *Combination* reform, but inequality doesn't increase, and the social welfare gains are similar given the larger gains for lower income workers (Figure 13). Employment gains are even larger. Keeping the out-of-work benefit constant significantly reduces the economic effects of reform. In addition, inequality increases in the *Constant benefit* reform. Finally, in the *Pareto* reform, aggregate earnings see a large increase of 1.8 percent. However, social welfare doesn't increase much since all the gains accrue to top incomes, which do not receive large weights in the social welfare function.

⁸ This would still imply lower inequality than in Sweden, for instance.

Table 2. Finland: Economic Impact of the Proposed Reforms

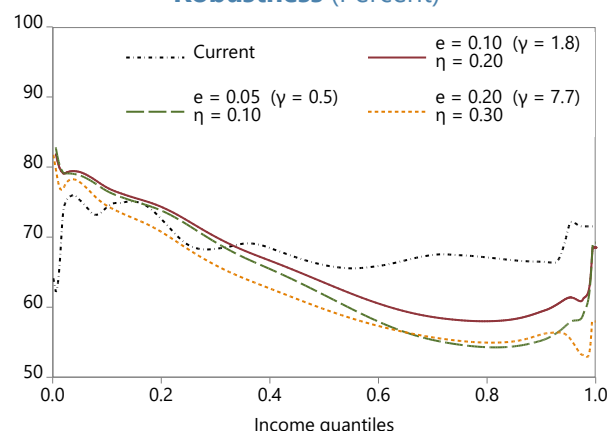
	Current	Isoelastic	Combination	Constant benefit	Pareto
Net revenues (percent of earnings)	55.3	55.2	55.2	55.2	55.2
Total earnings change (percent)	-	3.5	2.5	0.9	1.8
Total hours change (percent)	-	3.8	3.2	0.7	0.6
Employment rate	89.0	91.7	91.8	89.4	89.2
Disposable Gini index	0.25	0.27	0.25	0.27	0.27
Generalized entropy ($\alpha=1$)	0.11	0.12	0.11	0.12	0.12
Atkinson index ($\epsilon=1$)	0.11	0.12	0.11	0.12	0.12
Welfare gains (percent of earnings)	-	3.7	3.6	0.3	0.2

Notes: *Current* uses the current tax and benefit system. *Isoelastic* implements the optimal reform using isoelastic social welfare weights with $\gamma=1.8$. *Combination* uses isoelastic weights at the bottom and the average of isoelastic and current weights at the top. *Constant benefit* uses the same marginal social welfare weights as *Combination*, but keeps the out-of-work benefit constant. *Pareto* uses isoelastic weights when current weights are negative, keeping all other taxes rates and transfers constant.

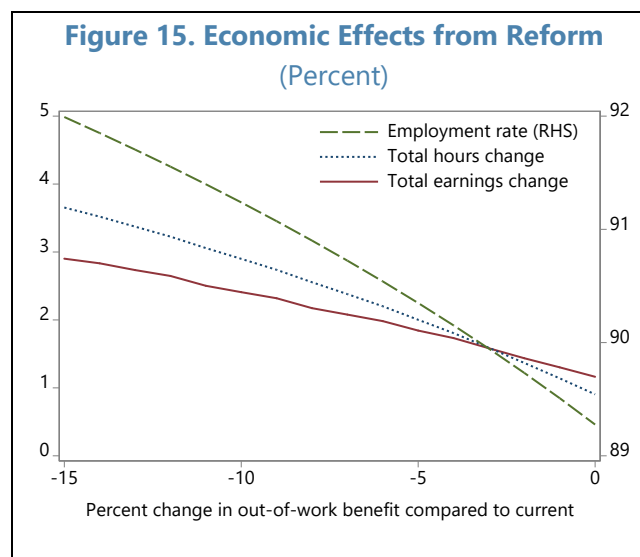
22. Reform parameters are broadly stable across different elasticity assumptions.

Figure 14 shows that optimal METR schedules have similar shapes whether we use baseline (0.1 and 0.2 for the intensive and extensive margins, respectively), lower (0.05 and 0.1) or higher elasticities (0.2 and 0.3). First, marginal rates should be increased at the bottom, reflecting steep phasing out of larger in-work benefits. And second, the largest METR cuts would still be on upper-middle income workers, although the magnitude would depend to some extent on the chosen elasticities. The reason for this is that the estimated CRIA index depends on

underlying elasticities and the two effects go in opposite directions: higher elasticities call for lower METRs everything else equal, while higher inequality aversion would mean higher METRs. In net terms, the two effects largely cancel each other.

Figure 14. Marginal Effective Tax Rates, Robustness (Percent)

23. The level of out-of-work benefits has a large impact on the economic and welfare gains from reform. As seen in Table 1, allowing full optimization would reduce out-of-work benefits by 13 percent. Combined with more in-work benefits, the ‘push-pull’ measures would generate large overall earnings and welfare gains and would increase the employment rate by almost 3 percentage points. The overall effects of the reform are much lower in the *Constant benefit* reform scenario. Figure 15 shows how much aggregate earnings, hours and the employment rate would change when constraining how much out-of-work benefits can be adjusted. The results suggest that to increase the employment rate—a central target of the government’s program—both measures to incentivize work and measures to reduce the attractiveness of inactivity are needed if fiscal sustainability is to be preserved.



F. Conclusions

24. The microsimulation analysis shows that, despite strong redistribution and high income levels, Finland could improve its tax and benefit system. Even for revenue-neutral reforms, economic gains in terms of labor supply and earnings could be substantial. The reform proposals take into account Finland’s strong preferences for equity, while seeking to correct potential inconsistencies in how the tax burden is distributed. A comprehensive reform could:

- Increase reliance on ‘pull’ measures such as in-work benefits. This could be combined with greater means-testing to preserve fiscal sustainability. This would reduce PTRs and increase employment.
- Increase ‘push’ measures through better targeting of out-of-work benefits. A large share of inactive individuals is highly skilled and around 75 percent are secondary earners. Reducing out-of-work benefits for these groups through better targeting would mitigate distributional concerns. Examples include the home care allowance and housing benefits ([OECD 2018](#); [Pareliussen and others 2018](#)). Tightening activity requirements for the Labor Market Subsidy would also improve incentives to re-enter employment for the long-term unemployed.
- Reduce METRs for upper-middle income workers. These appear to be on the wrong side of the Laffer curve, so that rate cuts could even be self-financing.