

## Aligning Fiscal Policy with the Circular Roadmap in Finland

### A macro-economic impact study based on European best practices

Many countries are considering new policies to support the transition to a low-carbon circular economy. In 2018, the Finnish Innovation Fund (Sitra) commissioned a one-year study to:

- a) Identify best practices of market-based instruments in EU Member States to enhance the circular economy;
- b) Define options in the phase-out of environmental harmful subsidies in Finland;
- c) Study the potential of environmental fiscal reform (shifting the tax burden from labour to natural resource use); and
- d) Provide an overview of potential measures and economic instruments in the Finnish context to promote the objectives of a carbon-neutral circular economy.

The study is based on the Finnish roadmap to a circular economy 2016-2025, published by Sitra in 2016 with relevant ministries and other stakeholders. Following the rationale of the road map, the following objectives were studied in further detail:

- **Sustainable food systems:** using sustainable crop production, organic farming, short supply chains, and nutrient recycling;
- **Forest-based loops:** recycling of the forest industry's side streams, processed products other than pulp and paper, wood construction and wooden furniture, substituting fossil resources and using more wood-based textiles;
- **Technical loops:** minimising the need for virgin raw materials by lengthening product life cycles through redesign, reuse, recycling, repair and maintenance, promoting the use of secondary materials and remanufacturing by pricing the external costs of virgin raw materials; and
- **Carbon-neutral transport and logistics:** moving beyond fossil-fuels, improving service-based transport systems, ending fossil fuel use in private cars by 2040, promoting sustainable biofuels, replacing fossil fuels with renewable and non-fossil alternatives, optimising transport routes and material flows, and promoting public transport.

The study provides a series of fiscal and other instruments to promote these carbon-neutral circular economy objectives. The project also reviewed the Finnish tax system to define measures to improve resource and energy efficiency, while reducing labour taxes to ensure fiscal neutrality and boost employment.

Finland has relatively high labour taxation compared with other EU Member States and OECD countries. When comparing the tax wedge<sup>1</sup>, Finland occupied the second highest position among the OECD countries in 2016. The OECD has advised Finland to reduce the tax burden on labour, increase environmentally-related taxes and phase out environmentally harmful subsidies.<sup>2</sup> A reduction in labour taxes is crucial to enable labour and knowledge intensive business models needed for a circular economy, such as reuse, recycling, repair and maintenance, redesign of supply chains and products.

The following measures were included in a scenario, which was modelled by Cambridge Econometrics in the E3ME model:

- **Air pollution:** A carbon floor price;

<sup>1</sup> The tax wedge is defined as the ratio between the amount of taxes paid by an average single worker and the corresponding total labour cost for the employer. The average tax wedge measures the extent to which tax on labour income discourages employment. (OECD)

<sup>2</sup> OECD (2018), OECD Economic Surveys: Finland 2018. [https://read.oecd-ilibrary.org/economics/oecd-economic-surveys-finland-2018\\_eco\\_surveys-fin-2018-](https://read.oecd-ilibrary.org/economics/oecd-economic-surveys-finland-2018_eco_surveys-fin-2018-)

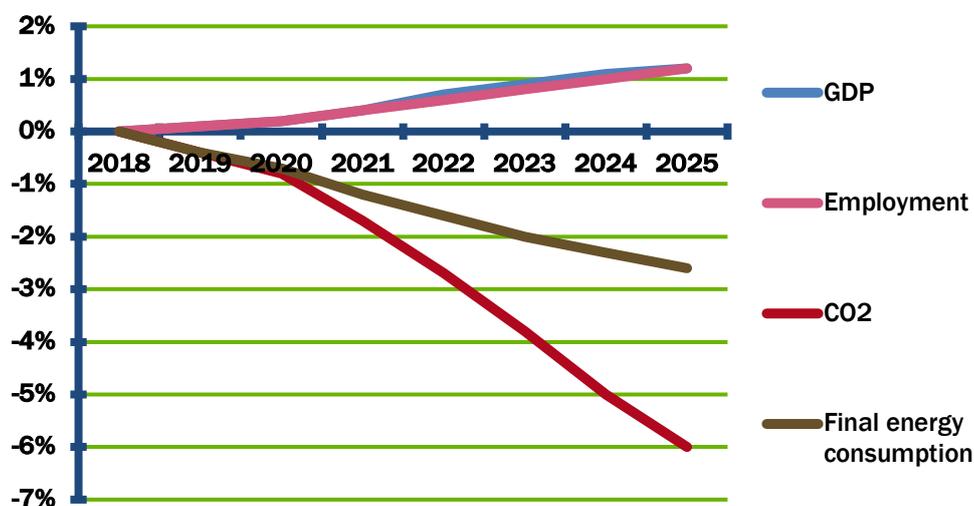
- **Fossil fuels:** Removal of the diesel subsidies (transport sector); removal of the light fuel oil subsidy; removal of the peat subsidy; taxation of non-energy use of fossil fuels (mineral oils and other fossil material used in plastics and other chemical industry);
- **Energy:** Electricity tax increase for bulk users and removal of the subsidy for energy-intensive industries;
- **Transport related taxes:** Air passengers and air freight taxes;
- **Waste related taxes:** Incineration of waste and a nuclear waste tax;
- **Natural resource taxes:** Water abstraction; extraction of metal ores and extraction of non-metallic minerals;
- **Agricultural related taxes:** Pesticides tax.

## Results

In the scenario, the measures were phased in over the 2018-2025 period, with revenues amounting to €3.5 billion in 2025. Every year, the revenues were used to lower labour taxes (personal income tax, social contributions paid by employers and employees as well as additional income support for the lowest 2 income quintiles) and towards investments in R&D and renewables.

The modelling results indicate that the scenario increases GDP and employment by 1.2% in 2025 compared to business as usual. Similarly, CO<sub>2</sub>, SO<sub>x</sub> and NO<sub>x</sub> emissions would be reduced by 6.0%, 8.1% and 6.3% respectively. Exports and imports would be virtually unaffected, apart from energy imports, which would be reduced by 6.1%.

### Overall result: Decoupling (2018-2025, difference from baseline) (Cambridge Econometrics)



This study is meant to provide directions on how fiscal systems can be rationalized in light of the circular economy goals and describe the potential impacts. The authors hope that the report will be used as a source of inspiration for further discussion and planning on environmental fiscal reform in Finland and Europe in general.

More studies will be required on the possibilities of aligning fiscal systems with circular economy goals. Cooperation among EU countries will be key to ensure a level-playing field.

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