

IRENCGE-DF Model - Assessing Environmental and Regional Effects: Tax Policy Simulations



Dipartimento
delle Finanze

Carlo Orecchia
Direzione Studi e Ricerche Economico Fiscali
Ufficio VII

Workshop

Tax policy analysis with the new Italian IRENCGE-DF model: assessing environmental and regional effects

Rome, 31 March 2022



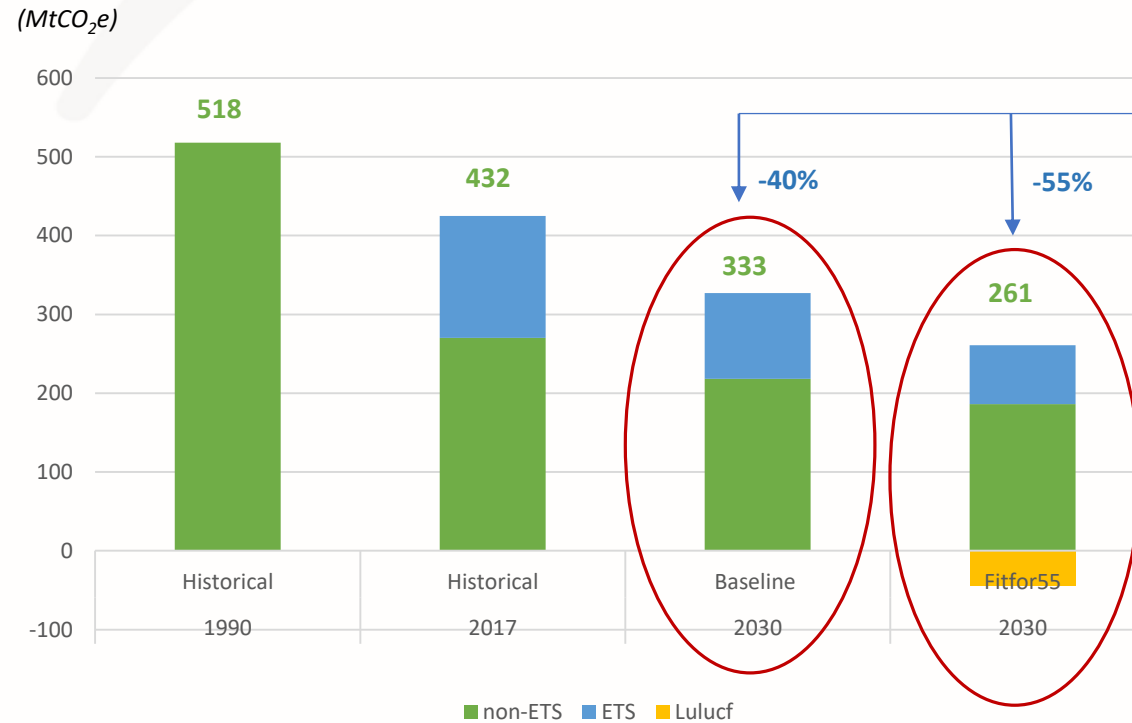
Policy Assessment: Environmental and Regional

- Environmental assessment: 'fit for 55'scenario with different carbon price revenues recycling
- Regional assessment: abolition of the IRAP tax with different tax shifts

Assessment of Environmental Policy: the 'fit for 55'

- July 14, 2021: the European Commission adopted a package of proposals to make the EU's climate, energy, land use, transport and taxation policies fit for reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels
- Climate ambition: the goal is to increase carbon coverage and price signal in the next decade
- ETD Directive: The goal is to update minimum excise duties with current environmental goals

Climate ambition: new 2030 targets for Italy



ETD Reform

- applies to energy products (e.g. gas, petroleum products and electricity)
- aims to redesign excise duties on energy products to make them compatible with the EU's climate objectives within the framework of the Green Deal
- removes all tax exemptions and tax expenditures
- no distinction between business and non-business
- generates revenues for around EUR 13 billion in the first year of introduction.

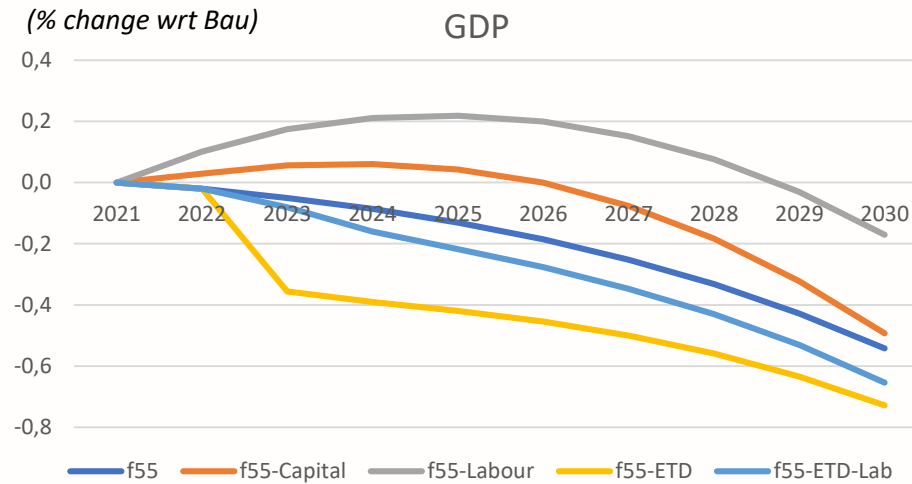
Scenarios Description

Scenarios	Description
Baseline	Continuation of current policies: 40% reduction in GHGs compared to 1990
Fit55	Increased climate ambition to achieve 55% emissions reduction target
Fit55 - Capital	Fit for 55 with carbon revenues recycling to reduce Corporate Income taxes – revenue-neutral reform
Fit55 - Labour	Fit for 55 with carbon revenues recycling to reduce Labour taxes (i.e. Social Security Contributions paid by the employer, SSCer) – revenue-neutral reform
Fit55 - ETD	Fit for 55 with ETD reform
Fit55 – ETD-Lab	Fit for 55 with ETD reform with revenues recycling to reduce Labour taxes (SSCer) – revenue-neutral reform

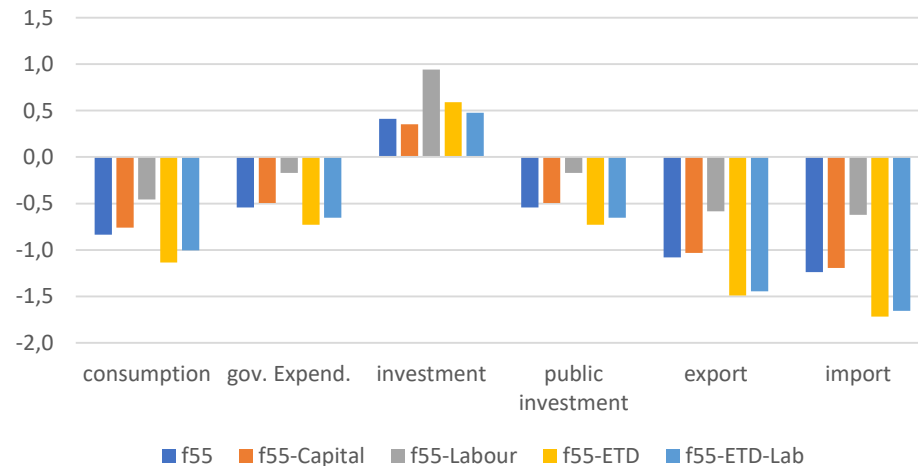


Results: Macroeconomic Variables

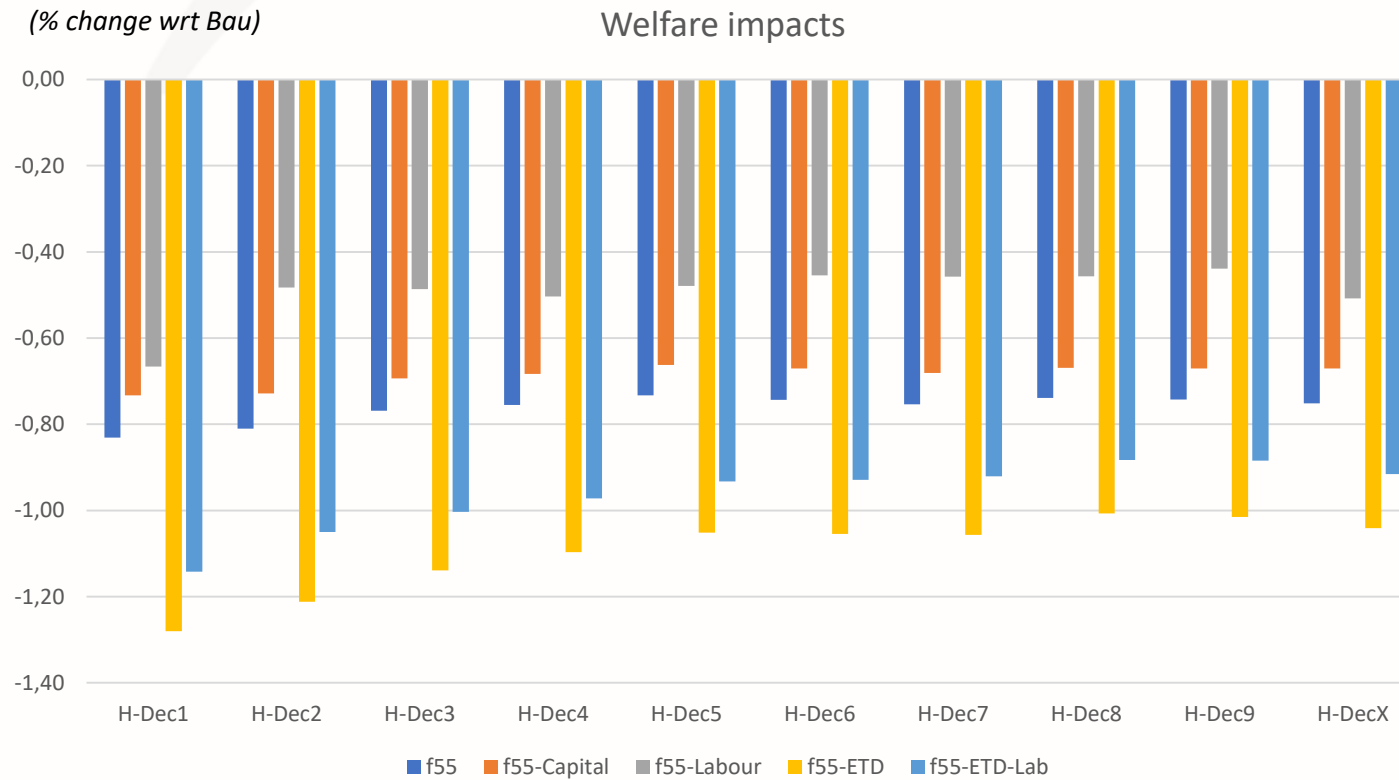
	Carbon Price EUR/tonCO2e
BaU	65
f55	96
f55-Capital	96
f55-Labour	118
f55-ETD	78
f55-ETD-Lab	78



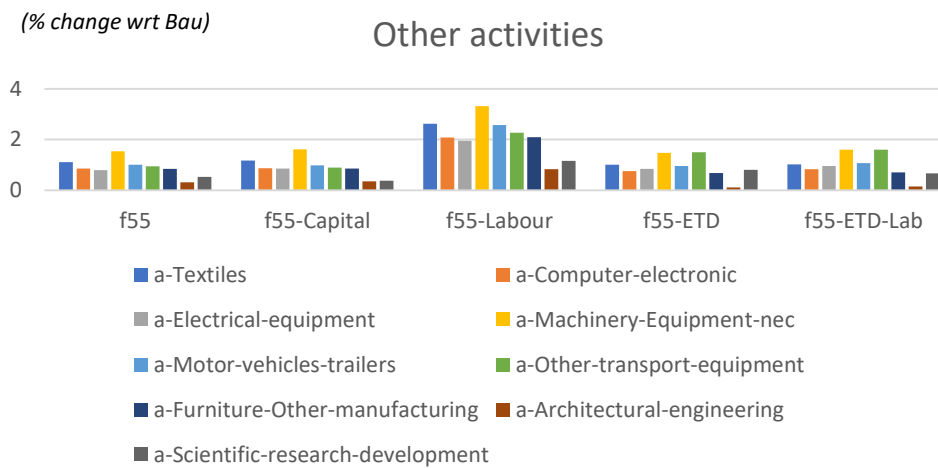
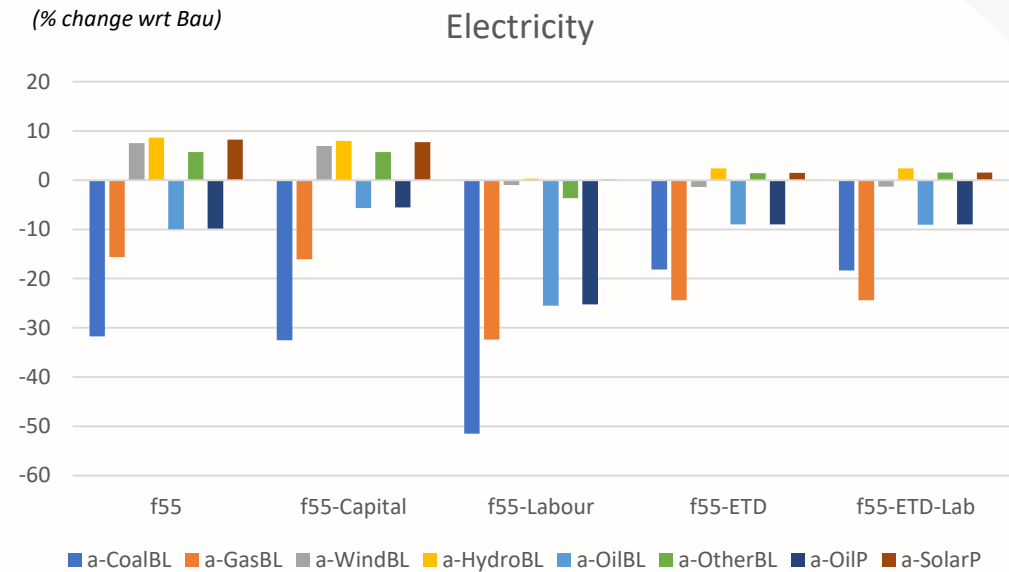
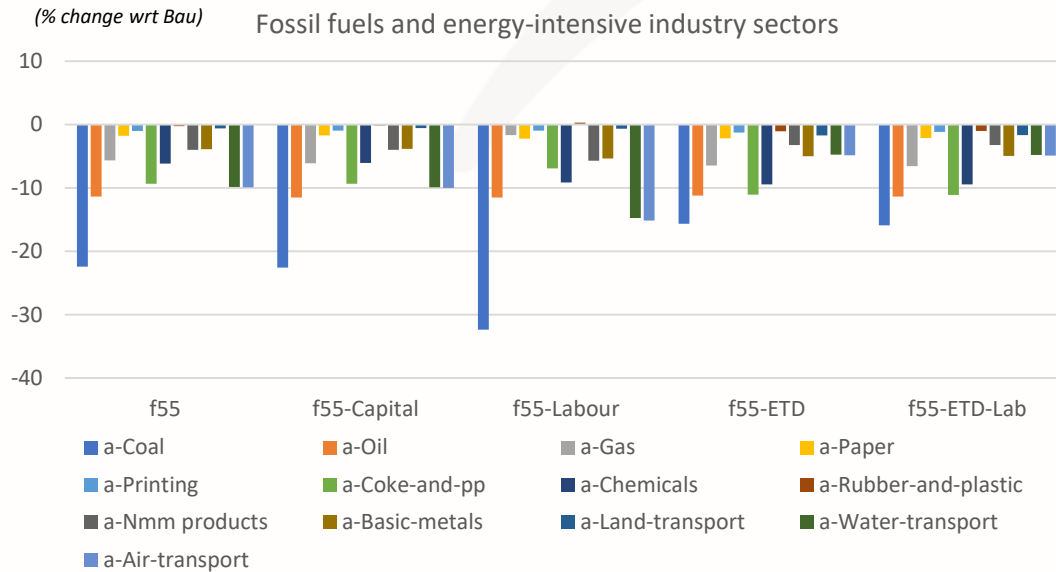
(% change wrt Bau) Macroeconomic impacts in 2030



Results: Welfare impacts by HH decile



Results: Sectoral Production



Assessment of Regional policy: the abolition of IRAP

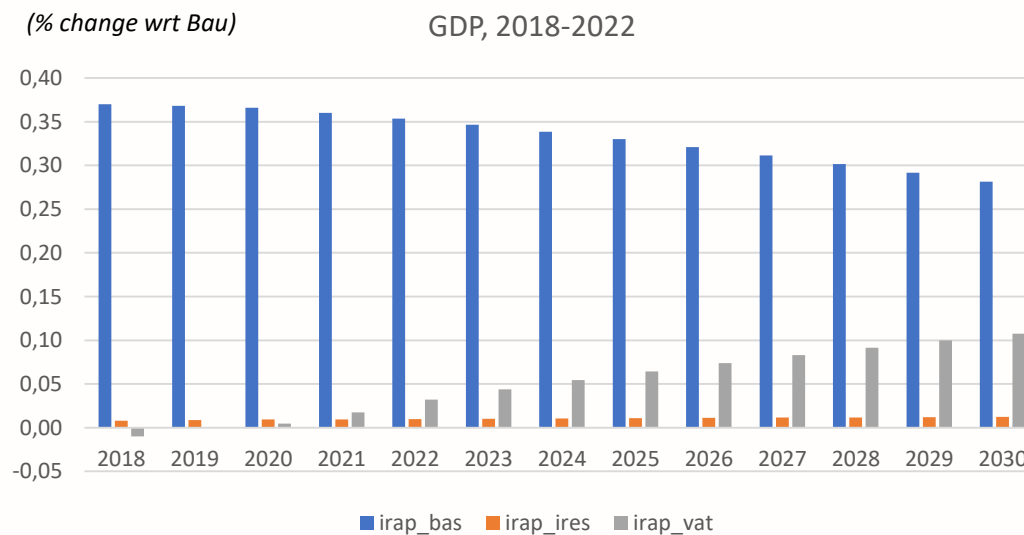
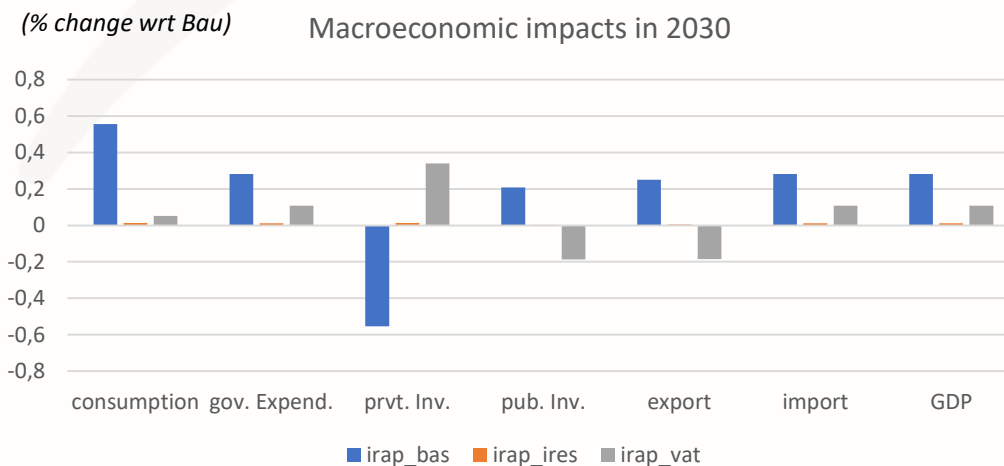
- Italian corporate entities are subject to a corporate income tax, known as “imposta sul reddito sulle società” or IRES, and to a regional production tax, known as “imposta regionale sulle attività produttive” or IRAP.
- In general, the literature suggests that taxes levied on immovable property or consumption are less distortionary and thus, less harmful to economic growth than those levied on corporate or labour income (Mankiw and others, 2009; Slemrod, 1990).
- In that regard, there appears to be significant scope for shifting taxes to more growth-friendly revenue sources in Italy (IMF, 2020).

Scenarios Description

Scenarios	Description
Baseline	No policy scenario
IRAP_bas	Complete abolition of IRAP tax financed by public deficit
IRAP_IRES	Tax shift between IRAP and IRES with a uniform tax rate
IRAP_VAT	Tax shift between IRAP and VAT

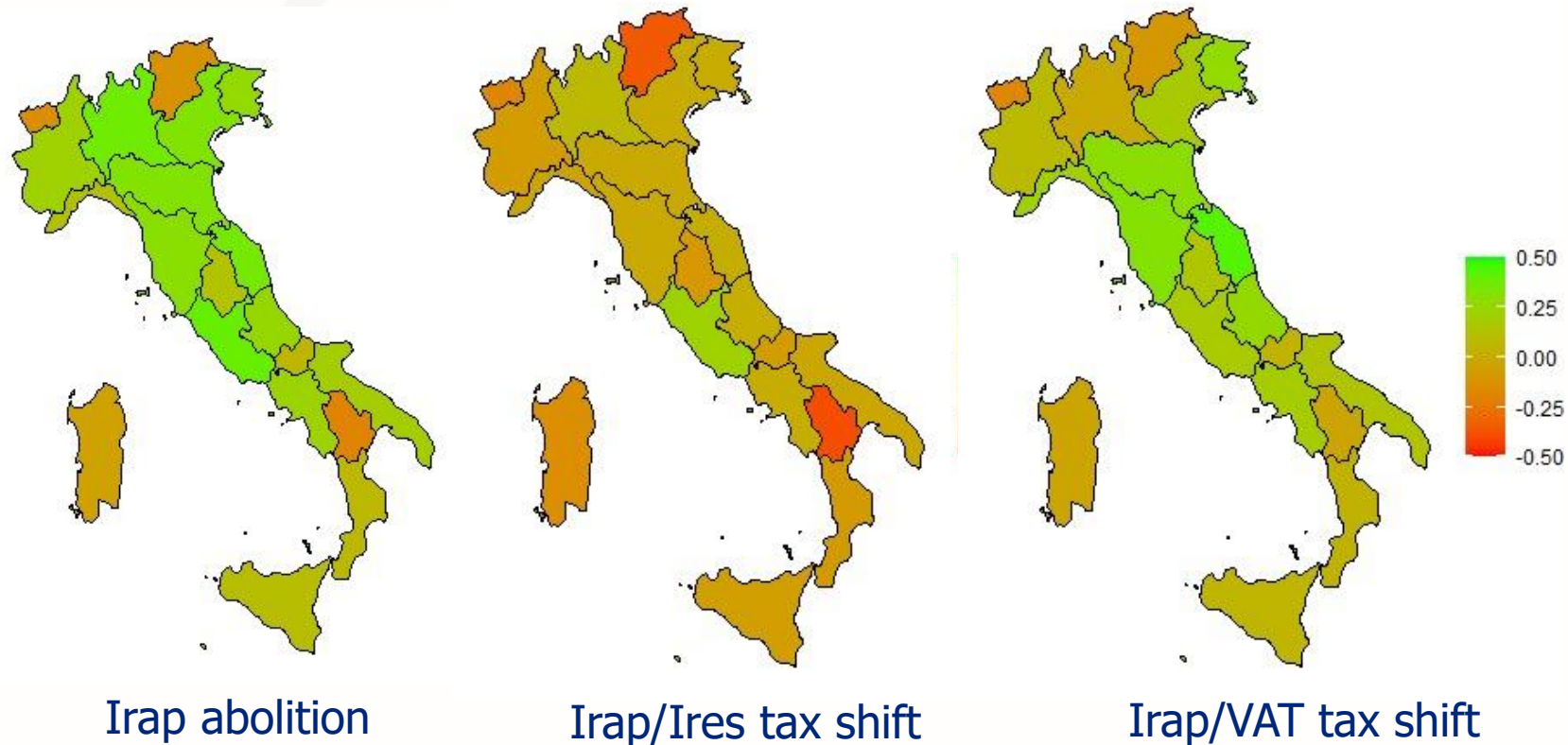


Results: Macroeconomic Impacts



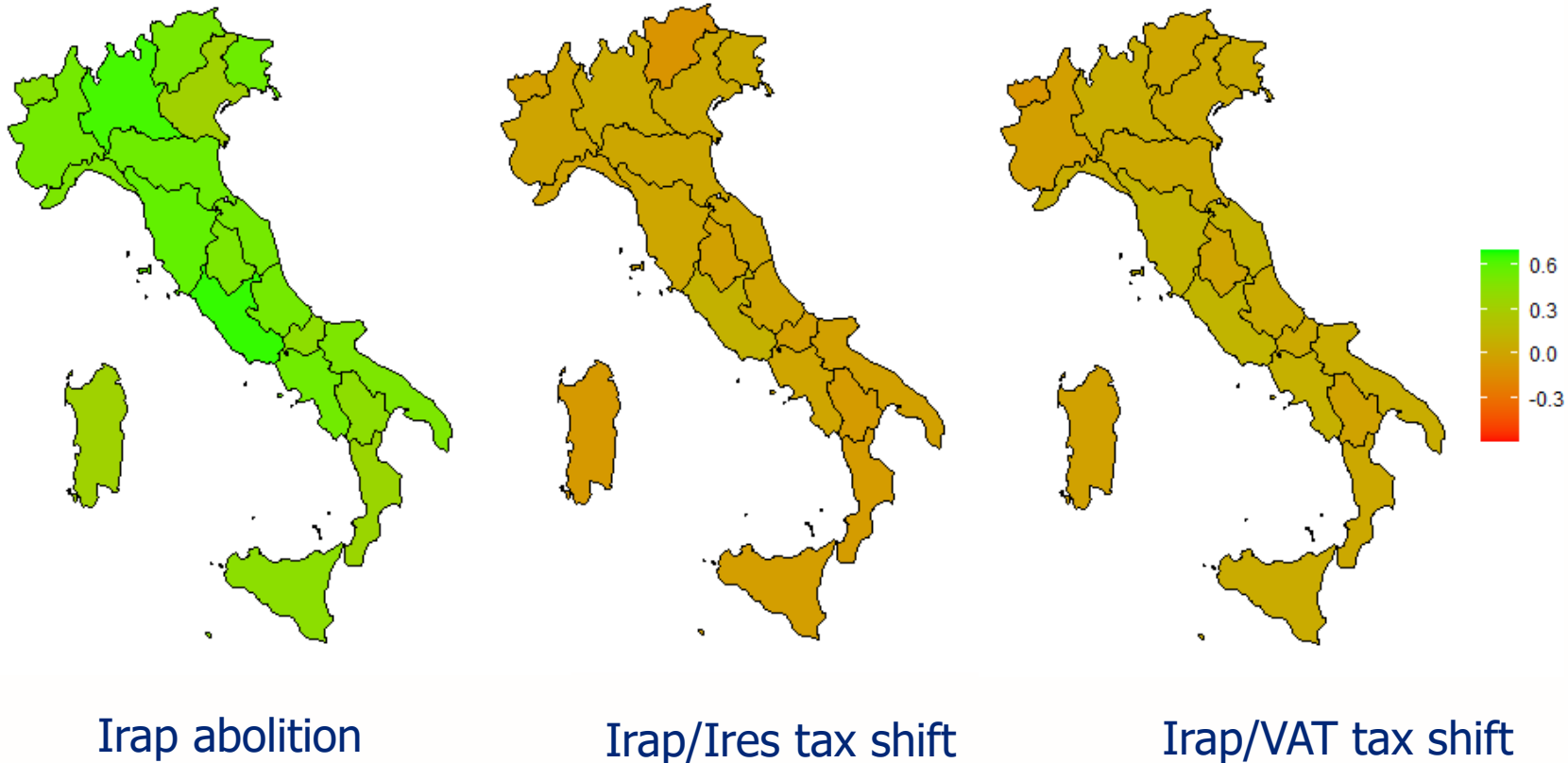
Results: Regional Value Added

Regional Value Added (*% change wrt Baseline in 2030*)



Results: Regional Welfare

Welfare (% change wrt Baseline in 2030)





Dipartimento
delle Finanze

Thank you!

carlo.orecchia@mef.gov.it

