Green Tax Expenditures
A Rising Climate Policy Tool

Patrick Lenain (Senior Associate, CEP)

Launch of GTED Flagship Publication

Zurich, 10 October 2023

A diversified fiscal policy toolbox to fight climate change

High carbon taxes

Broad Emission Trading Systems

Low fossil fuels subsidies

Feebates, congestion fees, parking charges

Feed-in tariffs

Public investment

Green tax expenditures

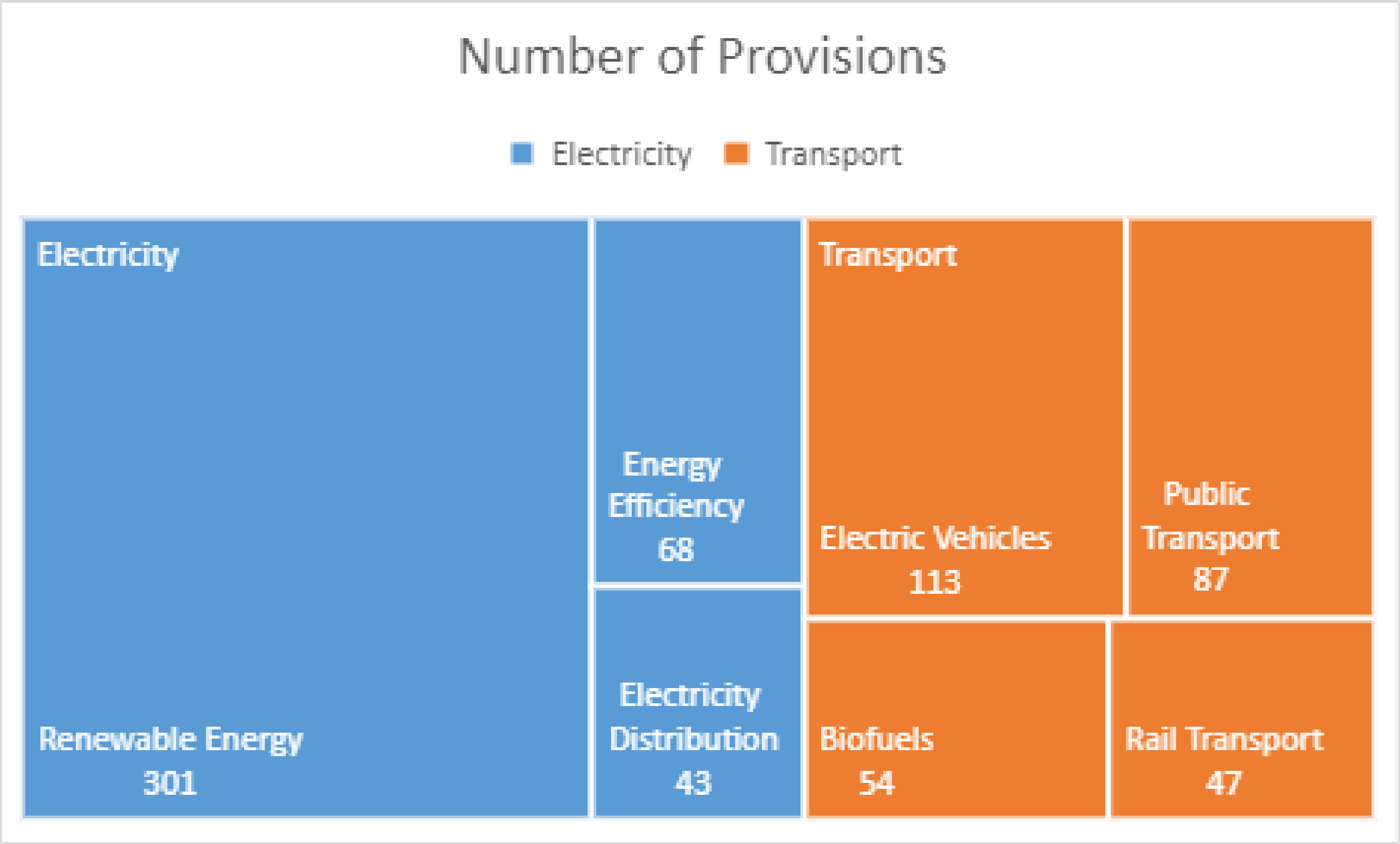
U.S. Inflation Reduction Act gives large impetus to GTEs

Green tax expenditure	Description	Fiscal cost estimates over 10 years
Production Tax Credit (PTC)	The PTC reduces the federal income taxes of qualified owners of renewable energy projects based on the megawatt-hours (MWh) of electricity generated from qualifying low-emitting resources.	$163 billion to $233 billion
Investment Tax Credit (ITC)	The ITC reduces federal income taxes for qualified taxpayers based on capital investment in renewable energy projects.	
Individual clean energy and efficiency tax credit	Solar panels, battery storage, solar water heating, small wind energy, home insulation, windows, doors, electric heat pumps.	$38 billion
Clean Vehicle tax credit	Tax credit of up to $7500 per vehicle, provided that the vehicle meets criteria regarding domestic content, including critical material used in the battery, and provided that it was assembled in North America.	$10 billion to $72 billion

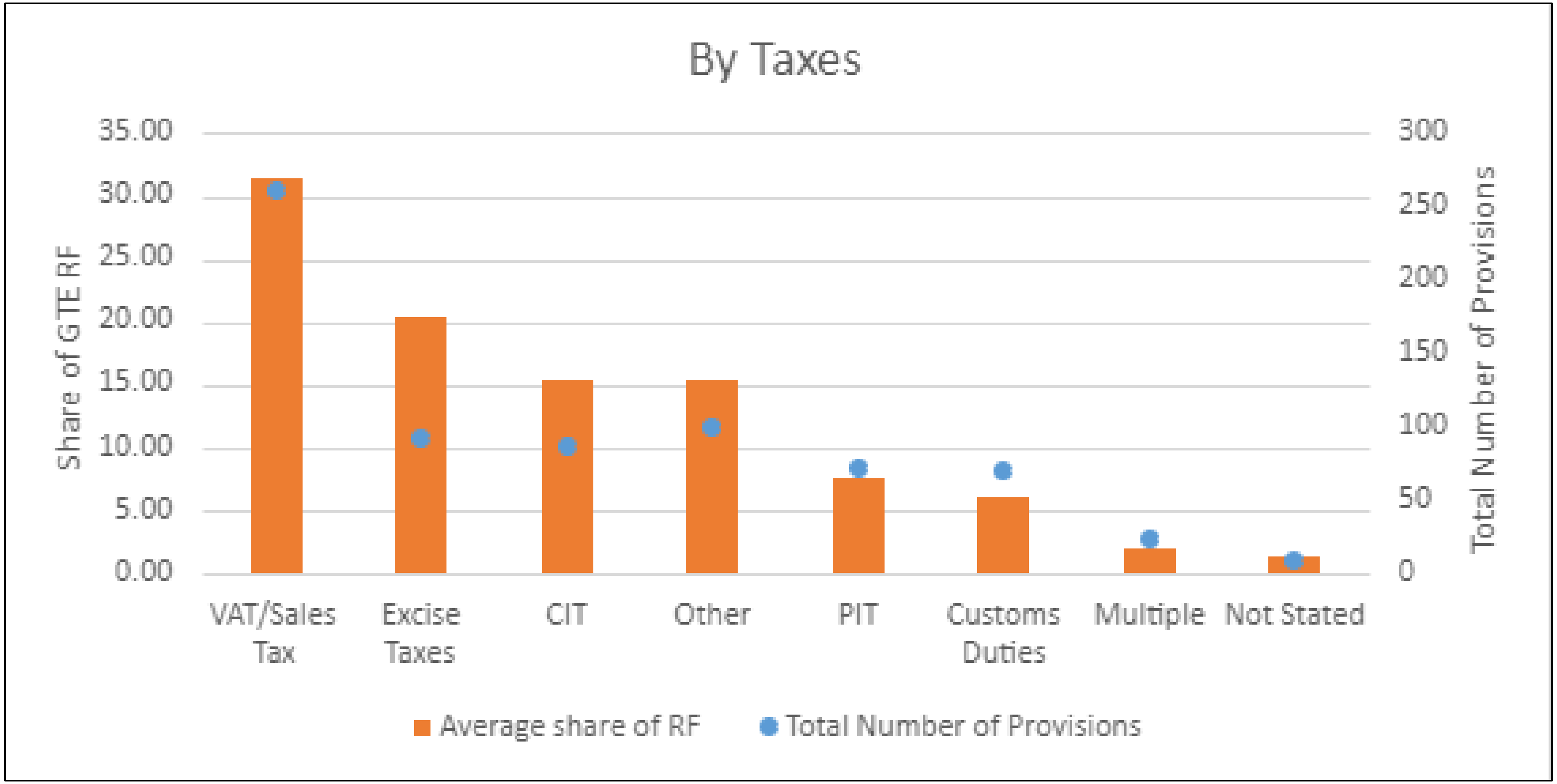
GTEs available in many countries

China	A 15% corporate income tax rate (instead of 25%) for qualifying wind power enterprises.	Wind power tax relief
France	Eligible building renovation work is subject to reduced VAT of 5.5% (instead of standard rate of 20%)	Reduced VAT on retrofitting
India	Corporate investment in renewable energy plants (solar, wind, biogas) and electric vehicles benefit from an accelerated depreciation tax benefit	Accelerated depreciation for renewable energy
Norway	Exemption from the VAT of 25% on the purchase of BEVs (2001-2022).	Lower VAT on EVs

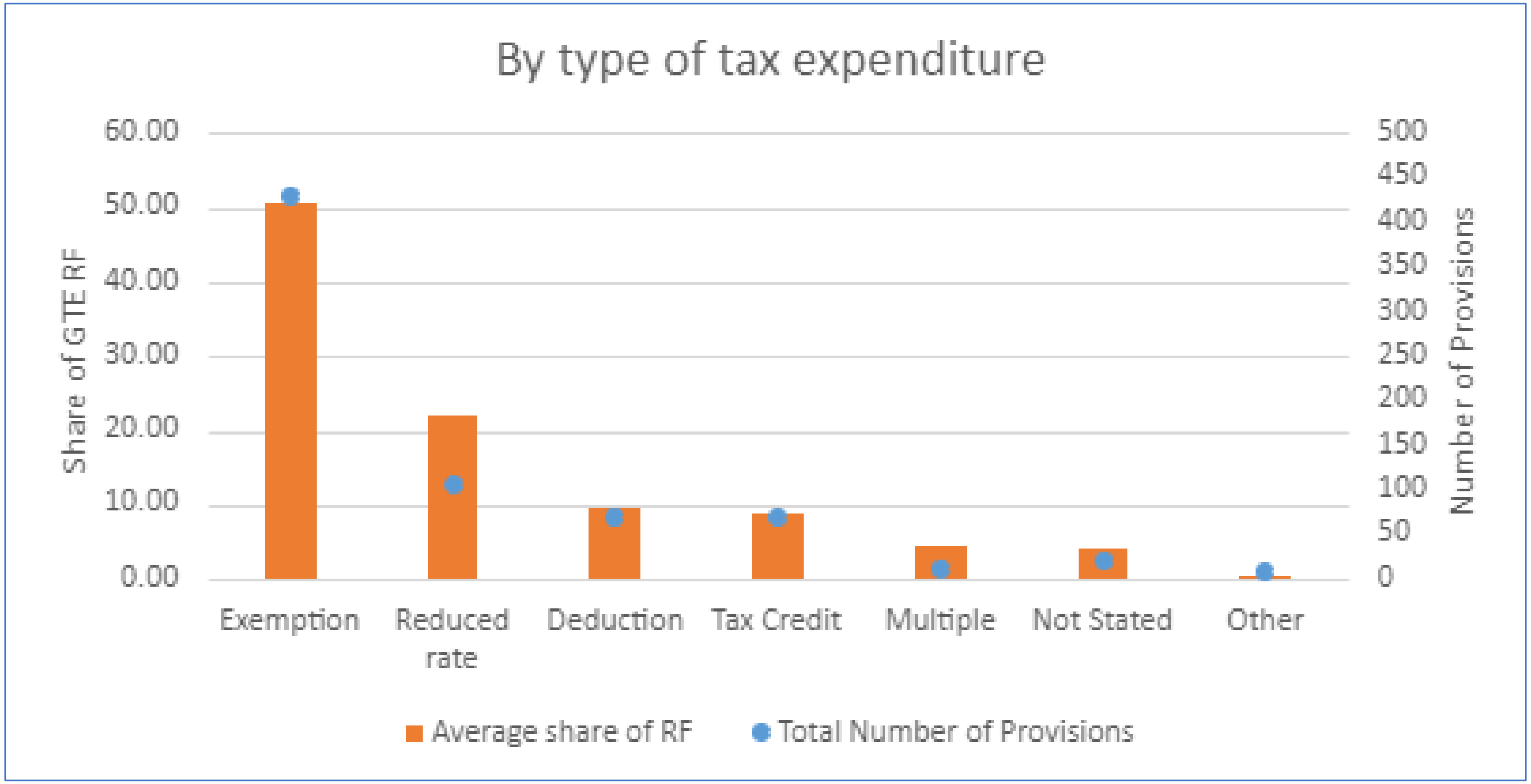
In GTED, 713 green tax expenditures



Lower VAT and excise taxes are most frequent



Tax exemptions and reduced tax rates are frequently used



Support for GTEs

- GTEs provide temporary incentives to speed up adoption of green technologies, especially with S-shaped curves.
- GTEs improve affordability of green technologies, e.g. lower total cost of ownership of electric vehicles => more inclusive transition
- GTEs help address market failures such as learning by doing, economies of scale, and knowledge diffusion.
- Political economy arguments support GTEs relative to carbon taxes.

Unintended consequences

- Risk of poor cost-effectiveness
- Large fiscal impact (e.g. IRA)
- Risk of low take-up
- Risk of picking inadequate technology
- Regressive tax cuts
- Low impact on emissions

Greater transparency needed: future steps

- Establish taxonomy of green tax expenditures
- Compile an inventory of GTEs in G20 countries
- Estimate fiscal cost
- Assess ex-ante economic and environmental impact (CGE models)
- Assess ex-post impact (independant evaluation)

THANK YOU!

pl@cepweb.org