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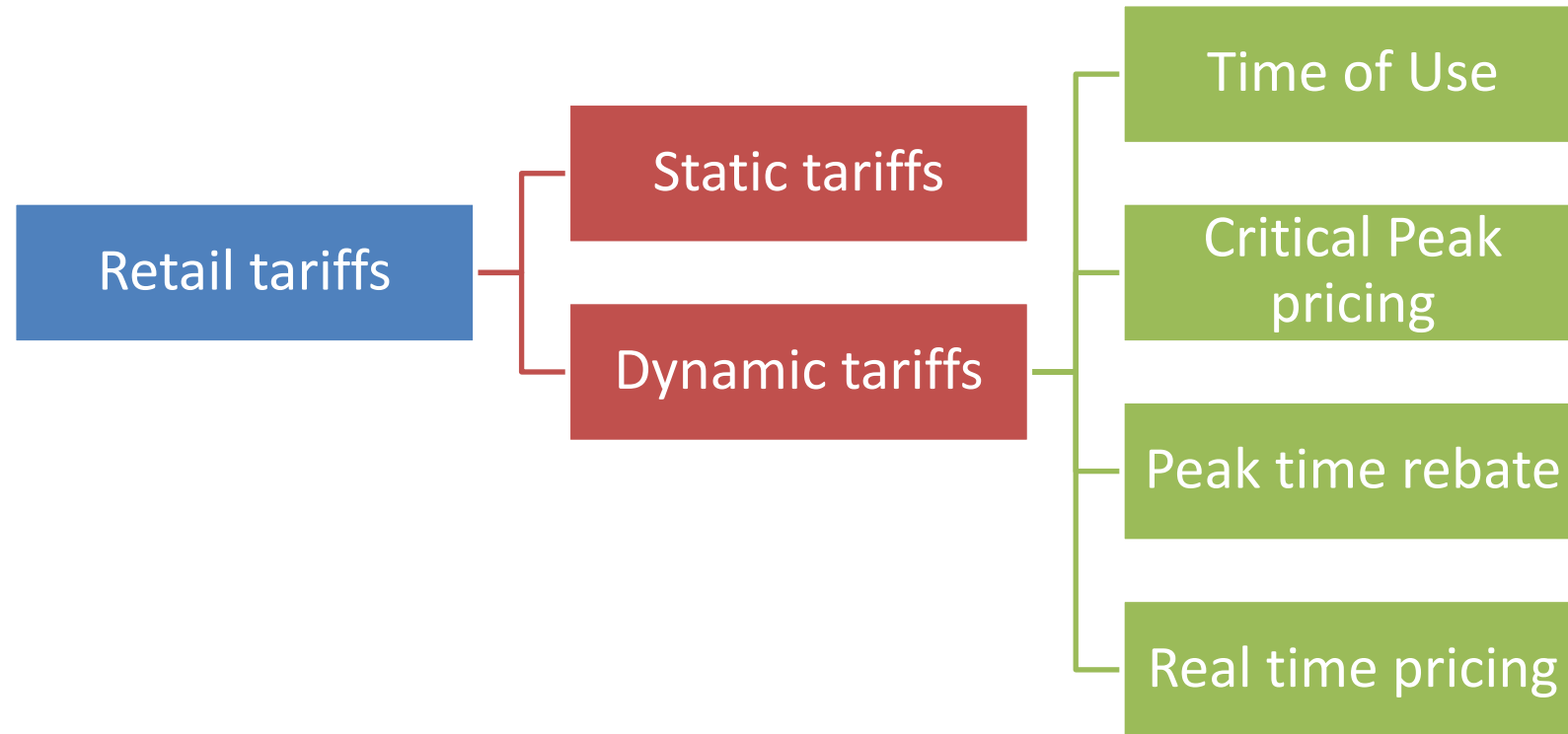
Regulatory Knowledge Hub

# Dynamic retail electricity tariffs : choices and barriers

Dr Pradyumna Bhagwat

FSR Global

# Taxonomy of Retail Tariffs



**Definition of dynamic tariff:** Tariffs that vary in time to provide an economic signal that encourages the consumer to change their consumption patterns to reach an optimal socio-economic use of electricity.

# Identifying choices and barriers while introducing dynamic prices

**Europe**

- France
- Sweden
- Norway
- Estonia
- Finland
- Great Britain
- Portugal

**US & Latin America**

- California
- Connecticut
- New York
- Brazil

**Australia & Asia**

- New South Wales
- Victoria
- Queensland
- Japan

**Africa**

- South Africa

The image shows the cover of a policy brief. At the top left is the European University Institute logo. Below it is the Robert Schuman Centre for Advanced Studies logo. The title 'Dynamic Retail Electricity Tariffs: Choices and Barriers' is prominently displayed in a blue font. Below the title, the authors 'Pradyumna Bhagwat and Samson Hadush' and their affiliation 'Florence School of Regulation' are listed. The cover also features a vertical 'POLICY BRIEF' label on the left side and a list of highlights on the right side. The background of the cover has a blue and white abstract pattern.

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**Dynamic Retail Electricity Tariffs:  
Choices and Barriers**  
By Pradyumna Bhagwat and Samson Hadush  
Florence School of Regulation

**Highlights<sup>1</sup>**

- Sixteen international case studies on the implementation of dynamic retail electricity tariffs are reviewed to identify the design and implementation choices that have to be made when introducing such tariffs.
- Two primary design choices are identified: 1) the time block length, which means the number of distinct tariff levels; and 2) the price periodicity, which is the time interval between revisions of the tariff. Time-of-use tariffs are widely used and they can be the first step in applying dynamic tariffs before moving to more advanced approaches such as real-time pricing.
- Two types of implementation choices are identified: 1) those made by the regulator regarding regulatory interventions to protect vulnerable customers; and 2) those made by consumers regarding whether to opt for a dynamic tariff and the selection of a suitable dynamic tariff option.
- The implementation of dynamic retail tariffs depends on the availability of physical and information and communication technology (ICT) infrastructure, the maturity of the power market design and consumer behaviour.
- Before implementing dynamic tariffs, it is essential to conduct a careful cost-benefit analysis of the effects on consumers, suppliers and the overall implementation system. Moreover, enabling innovative business models and technologies will help to derive the maximum benefit from the application of dynamic tariffs.

POLICY BRIEF

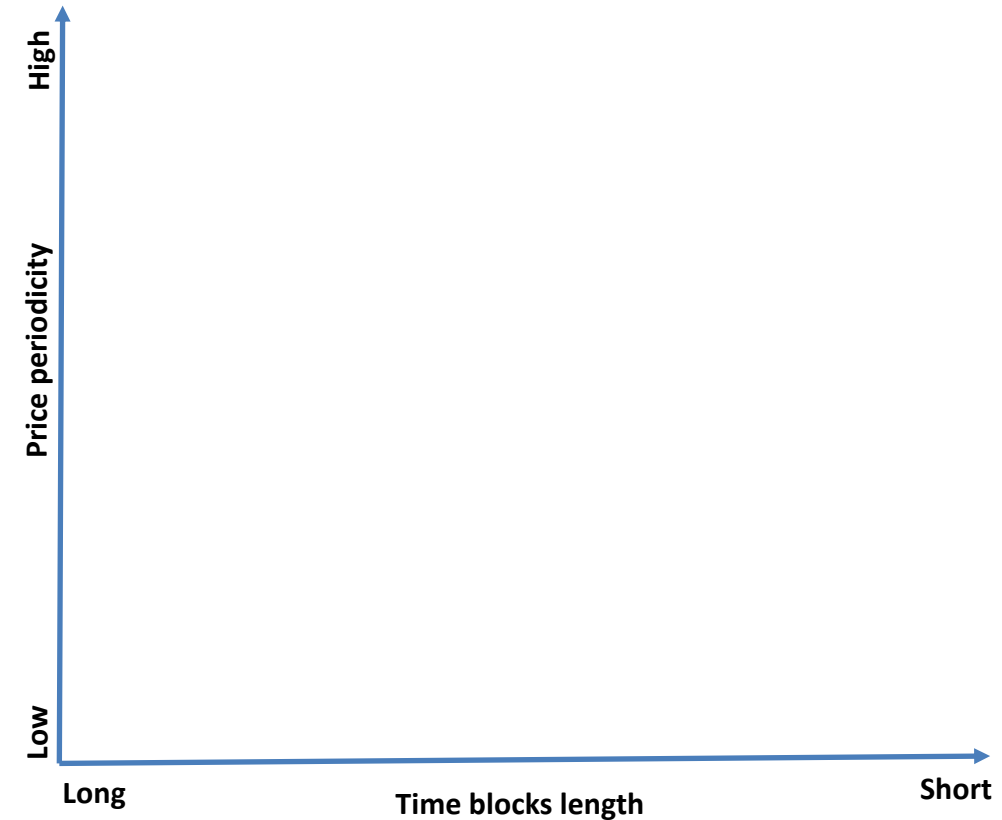
# Primary Design Choices

## Time block length

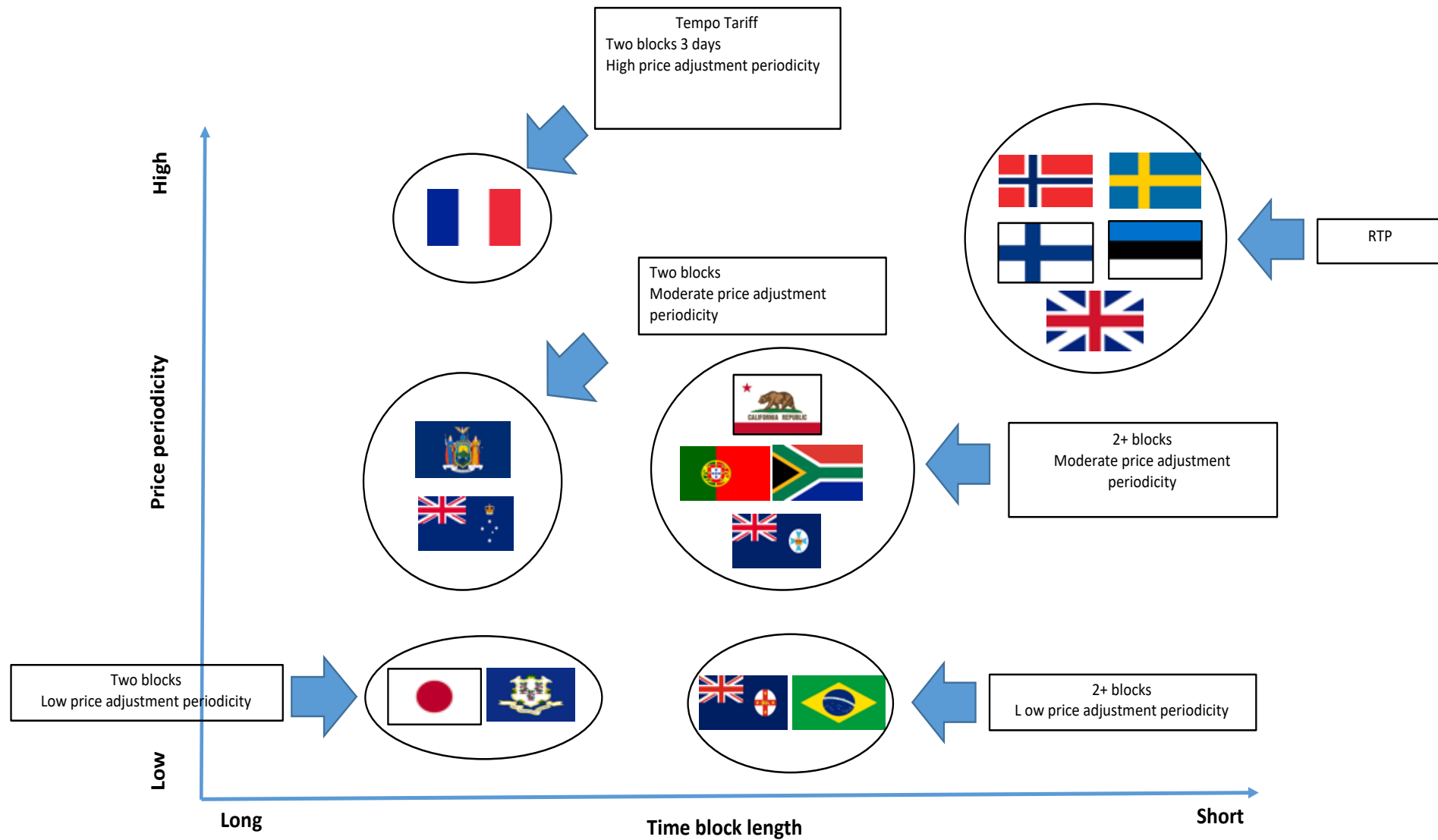
- Time block length refers to the number of distinct tariff periods into which a day is divided,

## Price periodicity

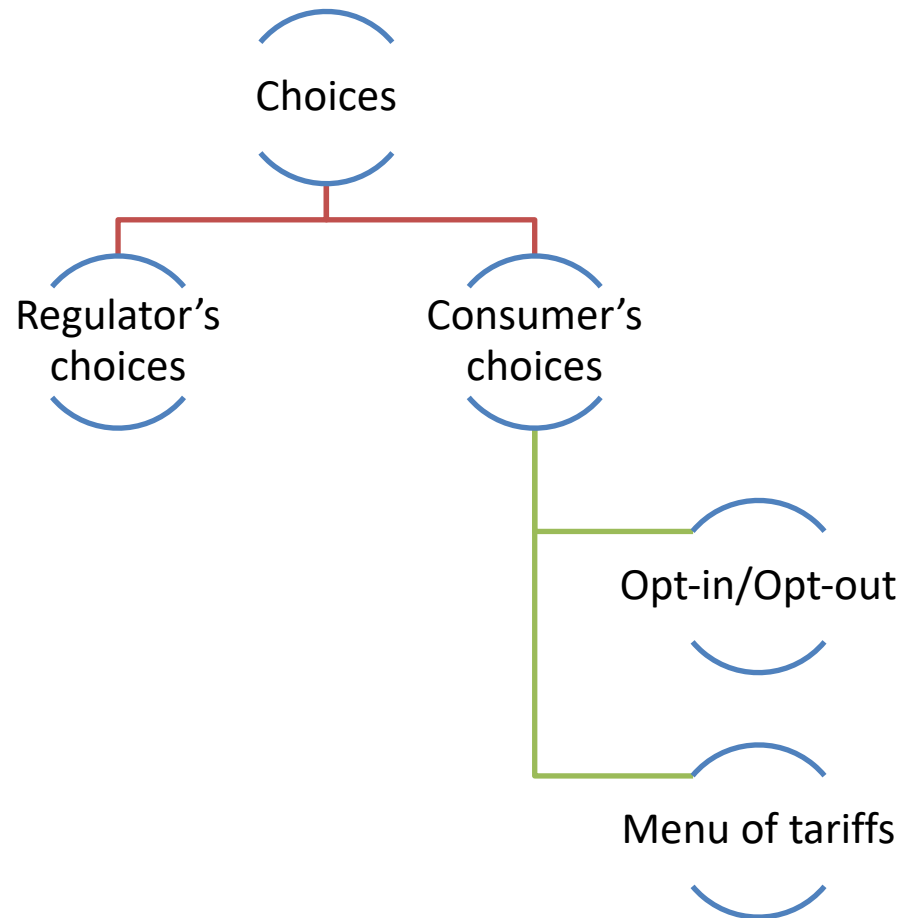
- How often are prices updated for given time period



# One size does not fit all...



# Implementation choices



Country	Regulatory intervention
Estonia	The regulator has the right to control prices
France	A regulated tariff option, a subsidy for the energy-poor
Finland	Last resort supplier (DSO)
Great Britain	Retail price caps and last resort supplier
Norway	Last resort supplier (DSO)
Portugal	Last resort supplier
Sweden	Last resort supplier
California	A framework for ensuring adequate supply
Connecticut	Utilities are obliged to provide standard service
New York	Customers are protected under the Energy Consumer Protection Act
Brazil	Default tariffs
Victoria	Default tariffs
Queensland	Last resort supplier
NSW	Default tariffs
Japan	Last resort supplier
South Africa	Last resort supplier

# Implementation barriers



Physical and ICT infrastructure requirements



Market arrangement requirements



Consumer behaviour

# Thank you!

Email: [Pradyumna.Bhagwat@eui.eu](mailto:Pradyumna.Bhagwat@eui.eu)

Twitter: @PCBhagwat

LinkedIn: in/PCBhagwat