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# Policy packaging or policy patching? The development of complex policy mixes

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# Why study policy mixes?

- **Much research focused on 1) individual policy instruments, 2) pairwise interactions of instruments, or 3) deliberately designed policy packages at one point in time**
- **Murphy et al. found that while policy instrument combinations addressing the energy performance of buildings exist, they appear rather ad hoc, often resulting from EU legislation and overlapping policy aims**
- ***Need more comprehensive evaluations of real-life (rather than intended) policy mixes, how they develop over time and their overall characteristics (which ultimately influence impacts of policy mix)***

# How to study policy mixes?

**Policy mixes can be understood as “*complex arrangements of multiple goals and means which, in many cases, have developed incrementally over many years*”  
(Kern and Howlett 2009: 395)**

**Economists (and other evaluators) often focus on instrument interactions (and how to design most effective mixes) and ex post evaluation of policy instruments**

**Policy design literature in policy studies: focus on potential effects of policy mixes on basis of ‘good design’ criteria such as coherence and consistency**

- Building on this approach in this article

## Design criteria

**Coherence:** “ability of multiple policy goals to co-exist with each other and with instrument norms in a logical fashion”; and

**Consistency:** “the ability of multiple policy tools to reinforce rather than undermine each other in the pursuit of policy goals” (Howlett and Rayner 2013: 174).

**BUT: New goals and instruments might be added (and subtracted) over time without necessarily discarding previous policy; policy doesn't start with a 'blank slate'**

# Conceptual framework (II)

**Complex policy mixes typically emerge through one or more of four processes:**

1. **Layering:** new goals and instruments are simply added to existing mix without abandoning old ones
2. **Drift:** new goals replace old ones without changing the instruments
3. **Conversion:** new instruments evolve while holding goals constant
4. **Replacement:** conscious effort to re-structure policy regime and replace old goals and instruments with new ones to make them coherent & consistent

	Instruments	Consistent	Inconsistent
Goals			
Coherent		Replacement	Conversion
Incoherent		Drift	Layering

**Howlett& Rayner (2013): most existing policy mixes have developed through layering, conversion or drift, often resulting in incoherent and inconsistent policy mixes**

## **‘policy packaging’ vs ‘policy patching’**

- Development of new ‘policy packages’ through *replacement* is rather rare: earlier policy design studies had preference for this approach
- They argue *layering, conversion or drift* can also be strategically designed as a form of ‘policy patching’ “much in the same way as software designers issue ‘patches’ for their operating systems and programmes in order to correct flaws or allow them to adapt to changing circumstances” (Howlett and Rayner 2013: 177)

## **Also important: ‘making full use of toolbox’**

**→ Evolution of mix over time and overall characteristics like coherence and consistency and use of toolbox can be used as a proxy for assess likely policy outcome ex ante**

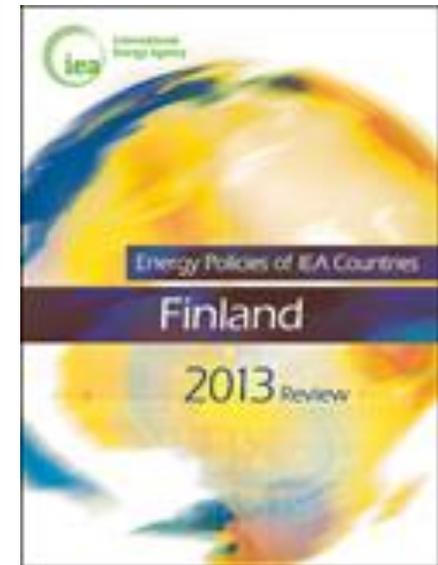
# Empirical application

**Building energy efficiency policy mix in Finland and the UK:**

**Goals and instruments between 2000 and 2014**

- 1) Tracing development of the mix over time and**
- 2) assess overall characteristics**

**Mapping of goals and instruments using existing databases, documentary analysis and 19 semi-structured interviews w stakeholders**



[Building Energy Efficiency Policies \(BEEP\) Database](#)



# Evolution of policy mix over time (UK)



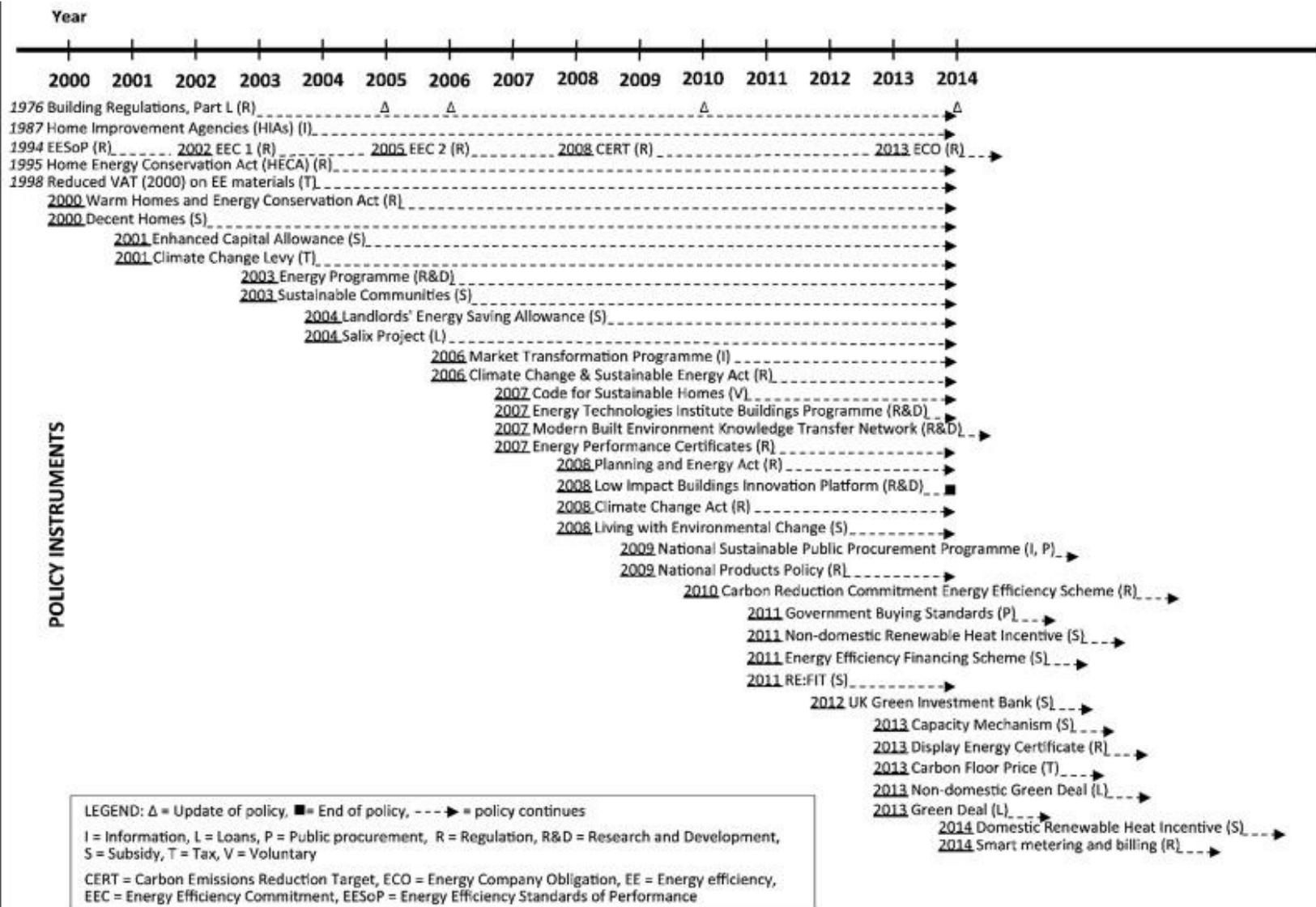
## Goals 2000-2014:

**A range of goals and objectives were introduced, but primarily building energy efficiency was seen as important for tackling fuel poverty and contributing to carbon reduction targets**

***“the cheapest, cleanest and safest way of addressing our energy policy objectives is to use less energy”*** (Energy White Paper 2003)

**Whole house approach towards zero carbon homes (UK Low Carbon Transition Plan 2008)**

# Evolution of policy mix over time (UK)



instruments

# Evolution of policy mix over time (UK)

## Instruments 2000-2014:

- Targeted and increasingly comprehensive policy mix (different situation today)
- some gaps: information provision, building energy use
- lots of 'churn': 50 new instruments added, 22 removed: uncertainty for firms and households → slow down innovation
- Ensuring consistency becoming more challenging (IEA 2006 report finds UK government is managing tension well)

Summary of types of instruments in Finland and the UK in place in 2014.

Types of instruments		Finland	UK
Economic instruments	Subsidy	8	11
	Loans	0	3
	Taxation	2	3
	Public procurement	2	2
	Research & Development	3	4
Regulatory instruments	Regulation	9	12
Soft instruments	Voluntary measures	7	1
	Information	6	3
	Total	37	39

# Evolution of policy mix over time (UK)



## COHERENCE:

**Most cost effective climate change mitigation strategy (internalising energy costs)  
vs. affordable energy bills**

***New affordable homes* vs. zero carbon new build**

**(IEA critique of mixing social goals into EE policy; use of economic instruments in domestic sector ruled out)**

## CONSISTENCY:

**no major issues identified in our analysis**

Instruments	Consistent	Inconsistent
Goals		
Coherent	Replacement	Conversion
Incoherent	Drift	Layering

**UK:** case of *drift*: introduction of social policy and climate mitigation goals into energy efficiency policy which led to partly incoherent goals; difficult for policy instruments to achieve both goals in a cost effective way (but no major inconsistencies between instruments per se); also evidence of layering

**Finland:** case of *replacement*, also used policy patching strategy to good effect: continuity plus adopting mechanisms to create synergistic effects between old and new instruments

- Paper drew on policy design literature to conceptualise how policy mixes evolve over time
- Our results support the claim by Howlett and Rayner (2013) that strategic *policy patching* can be promising (cf. creation of new policy packages)
  - Important consideration for policy evaluation
  - Also chimes better with the messy real world experience of policy makers

## Policy lessons

- 1) a broad mix of different policy instruments to stimulate transformative change is needed,
- 2) need to evaluate portfolios rather than individual instruments, and
- 3) manage the mix over time in a way which doesn't deter investment (e.g. through unexpected changes or excessive 'churn') but at the same time incentivises progressively more radical changes



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# Thank you

Kern, F., Kivimaa, P., & Martiskainen, M. (2017). Policy packaging or policy patching? The development of complex energy efficiency policy mixes. *Energy Research & Social Science*, 23, 11-25. (available open access)

## **Other relevant publications on policy mixes:**

Kivimaa, P., Kangas, H-L, Lazarevic, D (2017). Client-oriented evaluation of 'creative destruction' in policy mixes: Finnish policies on building energy efficiency transition. *Energy Research & Social Science*, in press.

Kivimaa, P., & Kern, F. (2016). Creative destruction or mere niche support? Innovation policy mixes for sustainability transitions. *Research Policy*, 45(1), 205-217.

Rogge, K. S., & Reichardt, K. (2016). Policy mixes for sustainability transitions: An extended concept and framework for analysis. *Research Policy*, 45(8), 1620-1635.