IEA workshop: The role of economic instruments in scaling up markets for low energy buildings

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We need to take a longer term view on scaling energy efficiency investment

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- Economic instruments have had a critical role to play in driving energy efficiency uptake:
  - Loans (both commercial and subsidised)
  - Grants/Cashbacks
  - Guarantees
- A 2010 study of 18 energy efficiency programmes in the USA found existing programmes cannot address much of the need without significant public support in the form of grants, rebates and soft loans
- **But given the huge volumes that need to be invested, are they sustainable?**

To be financially sustainable the role of such instruments needs to be considered in the context of building markets

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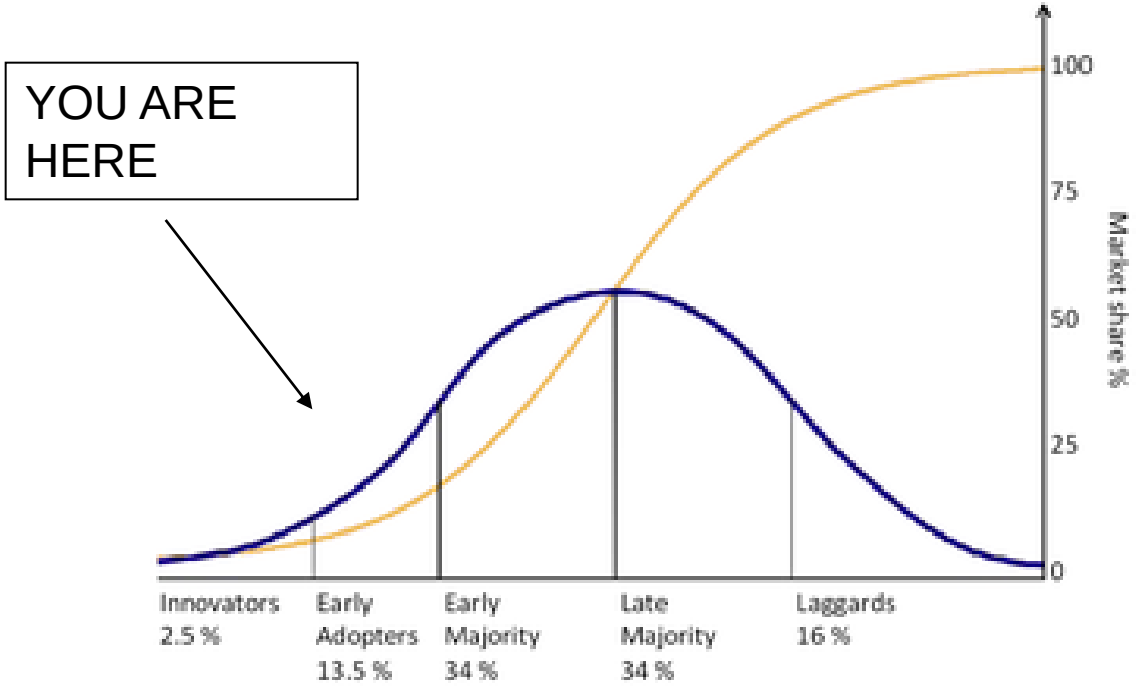
Rogers "Diffusion of Innovation" curve describes the technology adoption lifecycle according to the demographic and psychological characteristics of defined adopter groups



Regulation must drive the longer term market

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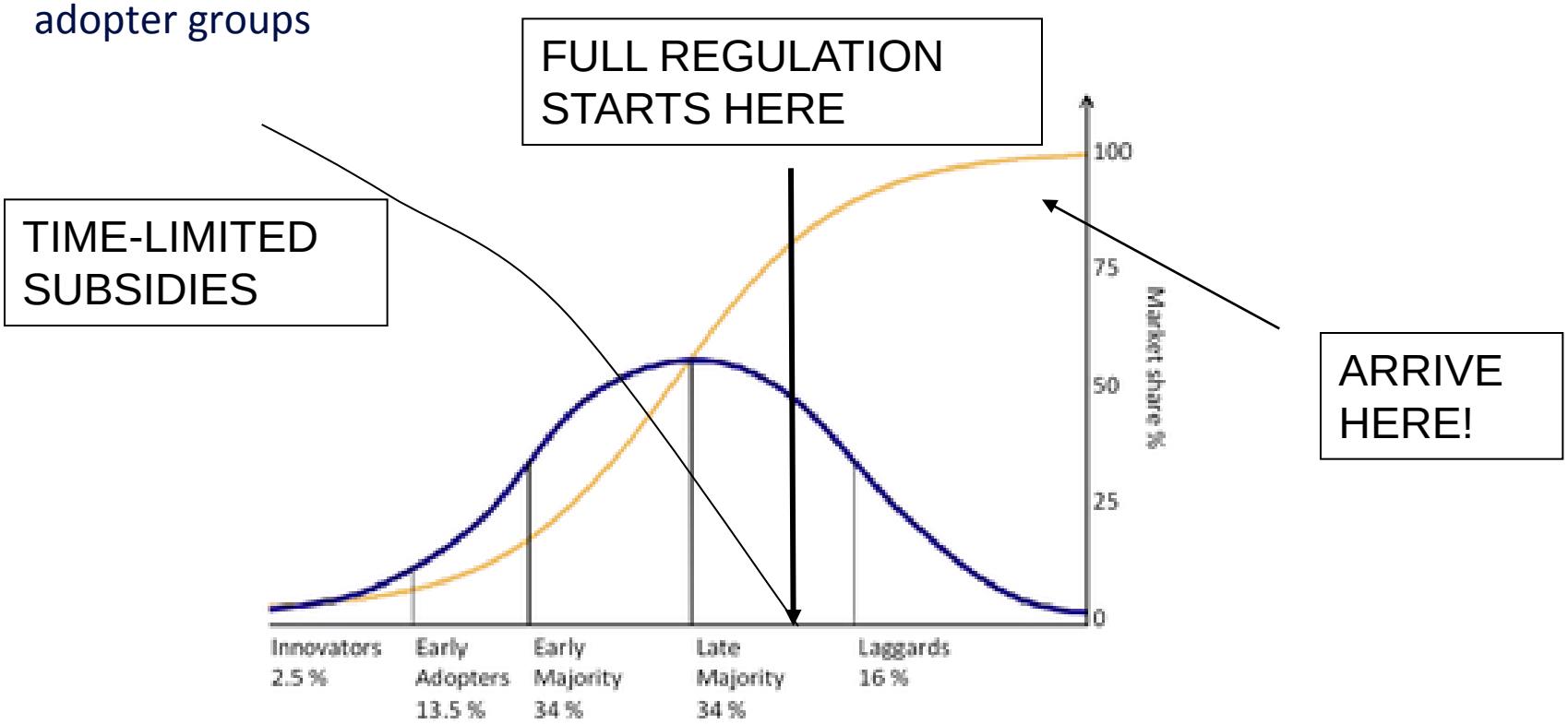

The innovators have carried much of the market to date

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INNOVATORS ARE THE 2.5% OF THE POPULATION WHO ARE ENTHUSIASTS AND MOVE EARLY

- These are the ‘deep greens’ and technophiles who will invest in energy efficiency even if it not economic and take technology risk
- They are important for ‘proof of concept’ but they won’t move the market alone
- But we need to move beyond this … and some countries already are

Task 1: Create demand

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EARLY ADOPTERS ARE THE 13.5% OF THE POPULATION WHO ARE OPINION LEADERS AND TRY NEW IDEAS OUT BUT IN A CAREFUL WAY …

- Access to capital is not the whole story
  - Opportunity cost is just as important
- Behavioural attitudes to energy efficiency investment need to change
  - Can help make the economics stack up (especially in countries with low energy prices)
  - Economic instruments can boost the low social value placed on energy efficiency investments currently as well as the hassle in securing them
- They economic instruments deployed to date have been helpful in incentivising this portion of the population

Incentives should focus on maximising leverage of private capital as well as fairness

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- For high income groups focus on incentivising focus on deployment of savings or use of short-term loans … one-off cashbacks to incentivise action e.g. Poland's Thermomodernisation Programme
- For middle income groups focus on affordability wrt monthly outgoings … subsidised loans and grants to incentivise deep retrofits e.g. Germany's KfW House Programme
- For low income groups … large grants and limited subsidised loan opportunities. (The strongest case for regulation to protect the poor.) e.g. UK's Warm Zones Programme

Multiple instruments reinforce and accelerate behavioural change

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- Additional instruments can reinforce pricing signals and change behaviour
  - E.g. Feebates when a property is sold that links energy performance to housing taxes (can be fiscally neutral)
  - E.g. Muni-tax rebates that give a cashback on local taxes when energy efficiency improvements are made (PACE and British Gas Council tax scheme)

Task 2: Manage risk in the system to maximise value

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- Tangential policies are also needed to help build a high quality and scaled market for retrofits
  - Technological impact: Better information is needed: 'you can't manage what you can't measure' e.g. smart meters
  - Reputation of programme: Assurances of high quality and appropriate work e.g. accredited energy auditors, accredited installers
  - Lowering defaults and increasing range of access: Innovative financing mechanisms in the style of the Green Deal or PACE – which address split-incentives
  - Signalling the size of the market: Needed for investment in supply chain scale up

Task 3: Shift to the mainstream

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THE EARLY MAJORITY ARE THOUGHFUL PEOPLE WHO ACCEPT CHANGE MORE QUICKLY THAN THE AVERAGE PERSON

THE LATE MAJORITY WILL ONLY ADOPT NEW INNOVATIONS WHEN THE MAJORITY ARE USING IT.

LAGGARDS ARE SKEPTICS WHO WILL ONLY ADOPT AN INNOVATION ONCE IT IS MAINSTREAM

Subsidies taper down

Regulation ramps up

In summary

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- Governments should strongly focus initial efforts on creating commercial demand for retrofits among the 15% of the population that are innovators and early adopters
- Early majority should enjoy minimal incentives, as cost should have come down, there should be fewer risks in the system that need compensating and social norms should be changing
- In parallel plans should be made to mandate retrofits at the point of sale/rental within a, say, 10-year timeline
- At this time mature supply chain should be in place – 'no excuses'
  - Emerging evidence that some building owners would never retrofit properties … in the UK the Committee on Climate Change found 30% of households surveyed would never retrofit their home
  - In the UK new regulation will require private landlords to implement energy efficiency where finance packages (i.e. Green Deal) is available and the tenant requests it from 2016
  - Wider regulation is not yet on the table but being discussed

Longer term regulation is critical to manage cost to the public purse

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- Economic instruments must pump-prime the market within a longer term framework for driving demand
- Regulation across the board will only be politically acceptable if Governments have taken steps to ensure functioning energy efficiency markets with strong supply chains are in place first
- Minimum standards on all buildings will effectively mean that energy performance of properties is reflected in property prices
- Energy efficiency will shift from being an operating to a capital cost … and access to private finance facilitated at scale

A note on commercial buildings

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- For SMEs: treat more like residential building owners …. a careful combination of incentives and longer term regulation should be applied e.g. Environmental Upgrade programme (with rebate on business rates)
- For larger businesses: the large balance sheet changes things
  - Phase 1: Focus on changing behavioural attitudes through information (requiring audits) e.g. Australia's Energy Efficiency Opportunities Program
  - Phase 2: Combine with an element of mandation – e.g. investments with paybacks of less than 'xx' years must be made