Assignment 2 - synthesis

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MGT 641

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Garbage recycling and degradation

- Negative externalities are massive (land use, public health, pollution, bad jobs)
- Economic and regulatory framework
  - In the less developed world – subsidies are better than tax – but « carrots need to be matched by sticks » to avoid some entities or individuals gaming the system
  - How to go from 'bad' jobs to 'good' jobs? A new industry? – at least a lot of public inputs: to be provided: skill development, investments in equipments and development of sustained business models for firms engaged in the new activity
  - Monitoring framework
- Technologies
  - Automation
  - Recycling and energy generation
- Social norms
  - Awareness and education, incentives
  - Infrastructure (collecting points) (provide reasons for changing behaviours)
- Funding
- Losers
- We need now to understand the process!
  - Where to start?
  - Investing in systems of complementarities
  - Who is leading and coordinating
  - The main focus and essential steps
  - Policy mechanisms – public-private partnership, industrial policy

Challenges: environment, health, jobs
Framework : industrial policy & TIP

Pesticides

- Negative externalities are massive: public health, environment
- Economic and regulatory framework – fix the externalities
  - Tax = increase prices and reduce quantity/accelerate substitution
  - Allocation of rights
  - Regulation = prohibition
  - CAP reform
  - Tariffs for non compliance (at European borders) – interantional trade & competitiveness
- Technologies
  - Technological innovations = policy toolkit
  - Landscape management
- Social norms
  - Diets
- Funding
- Managing losers
- We need now to understand the process!
  - Where to start?
  - Investing in systems of complementarities
  - Who is leading and coordinating
  - The main focus and essential steps
  - Policy mechanisms: Regulatory and technological solutions

Challenges : environment, public health sustainable agriculture
Framework : TIP

Overuse of antibiotics

- Negative externalities: individual antibiotic treatment has a private benefit but a social cost (increase antimicrobial resistance as an externality)
- Economic and regulatory framework (fix the externality)
  - Regulatory framework (healthcare is a highly regulated sector)
  - Prohibiting self-prescription (Greece, etc.)
- Technology (innovation policy toolkit)
  - Alternatives in agriculture
  - New diagnostic tools/drugs
- Social norm – changing the mindset
  - Education & awareness targeting patients, pharmacists
- Funding
- Losers
- We need now to understand the process!
  - Where to start?
  - Investing in systems of complementarities
  - Who is leading and coordinating
  - The main focus and essential steps
  - Policy mechanisms: regulatory and R&D policy

Challenges: public health
Framework : TIP

Hybrid district heating

- Negative externalities (buildings and households as a key contributor to GHG) – gas-based transitional solutions are contested
- Economic and regulatory framework
  - Centralized vs decentralized solutions
  - Cross sector coordination: CPC/PTC+ heat pumps + storage
  - Need to make the economic case (profitability) compared to other energy sources (biomass, gas) and to other organizational modes (centralized)
- Technologies
  - Costs – how to decrease costs?
  - Scalability (when scalability is high, investments become attractive) – how to get low cost scalability?
  - Public procurement as starting point – the State as lead customer
- Social norms
  - NIMBY
- Funding
- Losers
- We need now to understand the process!
  - Where to start?
  - Investing in systems of complementarities
  - Who is leading and coordinating
  - The main focus and essential steps
  - Policy mechanisms: public procurement (spillovers from public to private markets)

Challenges: Energy Framework : TIP

A warmer, sicker world

- Negative externalities – a chain of externalities – pollution – climate - diseases
- Economic and regulatory framework (supplementary materials)
  - Biological control – fumigation
  - Monitoring (international coordination) – forming a club or a coalition – predictive capabilities
  - Who pays who acts? The problem has a strong international dimension – mosquitoes don’t stop at borders
- Technologies
  - Release of sterile mosquitoes
  - Vaccine development – « crisis innovation »
- Social norms
  - Individual practices and behaviors
  - Information
- Funding
- Losers
- We need now to understand the process!
  - Where to start?
  - Investing in systems of complementarities
  - Who is leading and coordinating
  - The main focus and essential steps : vaccine?
  - Policy mechanisms: R&D, international coordination

Challenges – public health
Framework : TIP

Mental health crisis in Academia

- Negative externalities - *is competition ruining science?*
- Economic and regulatory framework (fix the externality)
  - *« scientists today must work in an environment of relentness stress, time pressure and insecurity, factors that are counter-productive to good science*
  - Competition in science – *science would be ruined if (like sports) it were to put competition above everything else*
  - Relationship between competition and misconduct; _ and creativity
  - Is competition essential for good science?
  - But « *passion and fire for learning and discovering* » are key (M.Vetterli)
  - Striking a better balance between competition and collaboration? Main focus: funding agencies, rankings, evaluation, promotion, academic labour market
- Technology
  - Digital innovation
  - AI powered apps
- Social norm?
- Funding
- Losers
- We need now to understand the process!
  - Where to start?
  - Investing in systems of complementarities
  - Who is leading and coordinating
  - The main focus and essential steps : according to the discussion could be slightly different
  - Policy mechanisms: science policy

Challenges – public health; how to do science
Framework : TIP