New directions for R&I policy in the EU
Designing the next FP “Horizon-for-Europe” budget fit for purpose

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Some principles for a next EU R&I budget

- **Evaluate whether effective (to reach the objectives that matter)**
  - Both ex ante for new instruments and ex post for existing instruments
  - Independent, scientifically sound, counterfactual, RCT
  - Open government data
  - Use results of evaluation: what does not work: fix, decrease budget, exit; what work: increase budget;
Some principles for next R&I budget

- Evaluate the whole funding escalator from idea to social value: parts missing?  Parts connected?
  - Public funding escalator: eg ERC, SMEinstrument/EIC/EIF
- Focus better the different parts of the FP budget
  - Each program should have a clear distinct mission (not covered by other instruments)
    - Avoid conflicting multiple missions in one program: eg excellence and cohesion in ERC
  - Each program should assess its leverage on other parts (to see scope for complementing, closer coordination)
- More effectiveness from better connecting, leveraging other funding
  - EU FP with structural funds
    - Eg use structural funds for investing in R&D infrastructure, institutions & people to catch up for EU (ERC) excellence competition
  - MS PubR&D funding
    - Eg MS funding for runner’s up to ERC
  - Private funding;
    - assess additionality, crowding in;
    - Also requires other policy instruments to increase the RoR to private R&D: framework conditions
Some principles for a next EU R&I budget

- Closer aligned to the priorities of EU policies: smart, sustainable, inclusive growth
  - Not the same as “grand challenges”
  - Sufficiently broadly defined to allow for bottom-up proposal
  - Balance between sufficiently flexible (some room for “strategic initiatives e.g. defense, security, migration”) but also sufficiently stable LT for actors to anticipate

- Closer aligned to the priorities of EU policies: innovation based growth
  There are many highly innovative European companies,
  but on average
  Europe has consistently failed to exploit its potential for innovation-based growth,
  despite a series of innovation policy strategies and targets.
Diagnosing EU’s innovation deficit

- The nature of EU’s industrial structure is a major reason for the persistent business R&D investment deficit/divide:

  **A DEFICIT IN THE CAPACITY FOR CREATIVE DESTRUCTION**

- EU fails to specialize in innovation based growth sectors
- EU misses « yollies » in high-growth sectors

**Innovation Based Growth Sectors**: sectors which (i) have an R&D intensity above average, (ii) an R&D growth rate above average and/or (iii) an above average share of young companies among its leading innovators.

  *aerospace, biotech, computer hardware&services, health care equipment & services, internet, pharmaceuticals, semiconductors, software, telecom equipment.*

**Yollies**: young companies who have made it into world leading innovators

  *Amazon, Google, Microsoft, Qualcomm, Amgen...*

*Joint work with Michele: eg:*


WHAT WE NEED:

- more focus on improving capacity for structural change through Schumpeterian creative destruction:
  - new leading firms in new markets;

Will the current EU emphasis on framework conditions, - improving access to finance, improving access to skills, improving access to a large market and strengthening partnerships – although necessary, be sufficient to address the specific barriers for development of new innovation based growth markets and firms - access to early risk financing, access to frontier science, access to risk-taking lead customers and complementary suppliers, specialized know-how and skills?

A close monitoring of emerging innovative markets

Public funding for creative destruction capacity
How effective and efficient is public R&D funding to address creative destruction capacity?

Policy take-aways from SIMPATRIC (structural) micro R&I funding evaluation

- **Substantial heterogeneity in effects across countries**
  - Target should be firms that are impeded to develop R&D projects where social rates of return are substantially exceeding private rates of return.
  - In view of the diminishing private returns to R&D investment
    - Inducing firms that are already spending on R&D to spend more, is costly for public budgets
- **A more promising target for public R&D programs would be to entice ‘new’ firms to engage in innovative projects, conditional they have socially valuable projects**
- **An important impediment for the effectiveness of public R&D programs, is the low application rate;**
  - Reduce application costs
  - Improve the private returns of R&D projects:
    - framework conditions for innovation
An important bridging programme, is a Small Business Innovation Research (SBIR) type of programme, which would fund proposals from young innovative firms that would help bridge the gap between idea and market.

It should be a bottom-up programme, which funds entrepreneur-driven proposals.

The quality of the selection is crucial because it provides a form of certification to the beneficiaries, which will help them to access other financing and partners.

The European value added comes from the economies of scale in selection and evaluation.

It should be connected to other parts of the funding escalator;

A proper ex-post evaluation should be included in the design of the programme
Loans; bigger investment projects with still too much risk

Critical VA is through selection; importance of private co-funding

Leverage other funding, rather than crowding out;

Evaluate

Closer aligned to the EU policy priorities; along grand challenges
  - Green pillar; Digital pillar; ...
  - But note that more delicate balance to match private RoR requirements;

Room for this program in the funding escalator;

Is complementary to FP rather than substitute; not iso subsidies: grants; but grants for next steps of basic research and precompetitive research;

Its funding should not come from other parts of the FP which are complements;