The University of Manchester
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Horizon 2020 Policy Support Facility

Mutual Learning Exercise on Ex-post evaluation of business R&I grant schemes

Reconciling 'Hard' and 'Soft' approaches to evaluation

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Direct Measures – a recap

- Provision of funds (grants, soft loans, loan guarantees, direct subsidies) to single firms…
- Support to R&D projects proposed by individual firms, selected through a programme management process
- Usually NOT collaborative (all private sector)
- Usually NOT networks (one grant → one firm)

Key features

- Longstanding measure type
- Shifted to increased SME focus (comparative efficiency)

- Consequences:
  - Large variation in target (recipient) size, behaviour, capacity, capability
  - Variation in performance across sectors
  - Need to account for wider economic and societal impact
  - Many companies will receive several forms of support, simultaneously or sequentially

Rationales

- to assist firms to do more development work than would otherwise be the case, producing more innovation
  - (leading to increased sales/profits for assisted businesses, increased productivity gains, etc.)
- Classical economic rationale: relative importance of spillovers associated with firms' R&D efforts (although may be minimised via support to SMEs cf. larger firms)
- Market failure paradigm:
  - Addresses firm under-investment
  - Able to target specific policy needs (regions, nascent/failing industries, economic priorities, etc.)
- Issues:
  - not effective at broad level – cf. fiscal measures
  - prone to 'government failure' argument – non-optimal selection/allocation

Typical policy issues

- Insufficient levels of business R&D expenditure – to tackle a perceived market failure
- Outdated or inappropriate use of technology by firms leading to relatively lower (manufacturing) productivity rates - to assist firms to upgrade their production technologies and improve competitiveness
- Help firms shift to higher value added activities or develop new business sectors – promoting export intensity or fostering creation and growth of NTBFs.
- Optimise socio-economic impact of public funding for research by encouraging commercialisation of results through spin-off companies or licensing.

Typical intervention logic

Illustrative intervention logic for a business innovation financing measure

Inputs	Outputs	Results	Long term results
▪ Grants ▪ Subsidised loans ▪ Equity financing (subordinated loans, seed capital, funds of funds, etc.)	▪ Increased business R&D investment leveraged by public funds ▪ Acquisition of new technology ▪ Equity (co-) investment in new or existing innovative firms	▪ New products or services launched ▪ New or upgraded production lines ▪ New hi-tech firms established ▪ Increased collaboration with universities, etc;	▪ Growth in sales and exports of innovative or hi-tech products and services ▪ Increased labour productivity rates ▪ Increased share of hi-tech manufacturing employment and knowledge intensive service jobs in total employment

Hard or soft?

Purpose/audience of evaluation –

- Assessing implementation/management
- Measuring success = achieving programme objectives – what worked? (what didn't?)
- Understanding success – how? and why?
- Policy learning & feedback

- Economy – Efficiency - Effectiveness

Broad evaluation questions

- Appropriateness of underlying programme rationale
- Appropriateness of measure's goals
- Appropriateness of design/modality of measure
- Coherence/complementarity (with other programmes and policy initiatives)
- Goal attainment/effectiveness
- Outputs (direct, immediate results)
- Outcomes and impacts (longer term and broader effects)
- Value for money/return on investment, cost/benefit efficiency
- Programme implementation efficiency (well managed/administered)
- Additionality (input, output or behavioural)
- Policy/strategy development
- Uptake of programme (extent to which attracted applicants)
- Degree of satisfaction of stakeholders
- Collaboration/partnerships
- Mobility
- Career development/progression
- Networking (creation of virtual communities, information dissemination)

What do we mean by hard and soft?

Hard:

- Essentially quantitative:
- Descriptive statistics (uptake)
- Output oriented: profit, employment, patents, products, etc.
- Input oriented: extra R&D spend, other resources, sales revenue
- Surveys (hard data)
- Input/output comparison (VfM, cost benefit, RoI, etc.)
- Bibliometrics
- IP data
- Econometrics

Soft:

- Essentially qualitative (process-based):
- Document analysis
- Case studies (in-depth analysis)
- Surveys (soft information)
- Interviews (participants, non-participants & stakeholders)
- Peer reviews
- Focus groups/workshops

Pros and cons of hard approaches (aka econometrics)

- ✓ Can provide simple appreciation of effects – i.e. input/output gains or ratios – useful for audit purposes
- ✓ Offers experimental or quasi-experimental approach to policy analysis

- Requires high quality data that can be coupled to micro-level firm statistics
- Limited data availability can restrict analytical options
- Need valid control groups – ignores many endogenous and exogenous variables affecting firm behaviour
- Techniques and approaches open to debate, even amongst experts – different methodologies result in non-comparable outcomes
- Communication of econometric results is a challenge – requires expert interpretation
- Gives information on the 'what', but not on the 'how' and 'why'
- Sheds little light on the innovation journey

- ✓ Can form basis for further 'soft' avenues of investigation

Is a hard/soft reconciliation necessary?

- Select methodologies that answer the key policy questions:
  - Effectively (i.e. rely on indicators that reflect the required evidence)
  - Efficiently (i.e. rely on data that can be collected easily or which is already in existence)
  - Are robust enough to measure persistence of effects
  - Provide answers that are timely
  - Reflect the focus of the question: aggregate, success stories, specific case examples…
  - Do not just measure overall success but that which leads to successful cases

Key messages

- Construct a logical framework or intervention logic – ideally ex ante
- There is no magic bullet – no single approach will provide the full picture
- Ideally, use mixed approaches – hard and soft as appropriate
- Try to look for unintended consequences
- Avoid ‘project fallacy’ (all outcomes are the result of a single grant)

Monitoring requirements

Key data to maintain on beneficiary firms

In order to facilitate surveys and or statistical analysis of beneficiary firms, the managing authority should ensure that there is a minimum set of data maintained on beneficiary firms:

- Identification:
  - Full legal name (as used in business registers, etc.)
  - Enterprise registration number and/or VAT number
  - Name, phone and email address of company representative (wherever possible)
- Baseline data (should be ideally gathered at stage of application)
  - Turnover / value added (in euro/national currency)
  - Employment (full time equivalents) (year preceding application)
  - R&D expenditure (and if possible percentage of R&D contracted externally)
- Outcome data (indicative)
  - Values for all baseline indicators updated to latest available year
  - Sales (turnover) from new products