The Measurement of Behavioural Additionality – Rationale and Challenges

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Goal and outline of the presentation

• to provide an input in a current discussion among evaluation practitioners, program managers and policy makers about the concept of 'behavioural additionality'

• context: (potential) OECD working group
Why is „Behavioural Additionality“ important?

- Limits of traditional measures of additionality to capture effects
- New strands in innovation theory: evolutionary approaches stressing long term-effects
- Changes in programme design: increasing number of programmes / policies directly addressing changes in behaviour
State of the art in addressing „Behavioural Additionality“

- Only loosely defined concept
- Measurement tricky
- Meaning for programme managers and policy makers unclear
What is „Behavioural Additionality“?

- Additionality: „extent to which public support stimulates new R&D activity as opposed to subsidising what would have been done anyway“ (Buisseret et al. 1995)
- B.A.: „... The difference in firm behaviour resulting from the intervention“ (Georghiou 2003)
What is „Behavioural Additionality“?

- Georghiou (2003): „In simple terms the range of additionality perspectives is: input additionality [...], output additionality [...], behavioural additionality [...]“
- Can it be discerned from Input and Output and Impact additionality?
What is „Behavioural Additionality“?

• Davenport et al. (1998): „Behavioural additionality is inextricably linked with output additionality...“

• Luukkonen (2000): „in impact measurement, input additionality and behavioural additionality are usually merged together ...“

• Polt (2003): b.a. as a dimension of both input, output and impact additionality!
Input, Output, Impact

Resources

Structure
(e.g. firm)
Process
(e.g. R&D)

Impact

\[ \frac{I_a}{I_e} = \text{economy} \]
\[ \frac{O_a}{O_e} = \text{effectiveness} \]
\[ \frac{O_a}{I_a} = \text{efficiency} \]
\[ \frac{O_a}{O_0} = \text{additionality} \]

Source: Arnold/Guy (1998)
Dimensions of „Behavioural Additionality“

- Identification of b.a. needs to focus on:
  - strategies and
  - capabilities of actors
    (capabilities change through ’learning‘ !)
# Levels and Sustainability of Behavioural Effects

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<tr>
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<th>Short-term effect</th>
<th>Sustainable Effect</th>
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<tbody>
<tr>
<td><strong>Strategy</strong></td>
<td>• Project in new business area for firm</td>
<td>• Developing capabilities in new business/ market</td>
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<td></td>
<td>• New market alliance</td>
<td>• Joint venture or supply chain arrangement</td>
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<td></td>
<td></td>
<td>• SME shift from contract research to manufacturing</td>
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<tr>
<td><strong>Prioritisation</strong></td>
<td>• Project in new technology area for firm</td>
<td>• Acquired technological competences</td>
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<td>• New technology alliance eg with user</td>
<td>• Sustained technology alliance</td>
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<tr>
<td><strong>Operationalisation</strong></td>
<td>• New project reporting procedures to comply with monitoring requirements</td>
<td>• Acquisition of management capability for collaborative projects</td>
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from: Romanainen, J. (TEKES)
Examples of changes in behaviour

- conduct of the individual R&D project (longer, more risky, with increased scope..) (identified in many programmes)
- portfolio of R&D projects (...)
- cooperative behaviour (ALVEY, FP, competence center programmes, ISR related programmes)
- use of external sources of knowledge (BUNT, MINT)
Examples of changes in behaviour

- Proliferation of project management tools and techniques (ESA programmes, ISO 9000)
- Changes in R&D and business strategy (esp. for SMEs – establishment of research unit, combining business strategy with technology strategy in diffusion of technology [e.g. FlexCIM] etc.)
Questions to capture Behavioural Additionality

- Would the project have been carried out
  - anyway / not at all
  - at a reduced scale / with less ambitious goals
  - less risky / with shorter time-horizon
  - without / with different collaborators
Challenges in the evaluation of „Behavioural Additionality“

• Identifying b.a. does not justify the intervention!
• Identification of b.a. as such does not allow to choose between alternatives!
• B.a. must be able to be quantitatively and/or qualitatively assessed! (strong effects, weak effects)
Challenges in the evaluation of „Behavioural Additionality“

- Evaluation of b.a. continues to be of great importance as programmes / instruments increasingly address (dimensions of) b.a. -> e.g. ‚new instruments‘ in FP6
- Our understanding of b.a is still far from being sufficient
- Our current methods don‘t allow proper measurement
Challenges in the evaluation of „Behavioural Additionality“

- Identify programmes / policies for which the identification of b.a. makes sense (e.g. not all support measures influence strategic behaviour)
- ..for those who do, put more emphasis on ex-ante evaluation (e.g. new instruments of FP6 !)
Challenges in the evaluation of „Behavioural Additionality“

• Find good ways to measure / assess the „weak test of incrementality“ (Lipsey/Carlaw 1998)
• Look for the methods developed in the social sciences (e.g. network analysis)
Challenges in the evaluation of „Behavioural Additionality“

• Use surveys primarily as entry points for case studies:
  „the complexity of the additionality issue and the present level of understanding of its manifestation in reality mean that its measurement should be addressed by means of case studies and interviews..“ (Georghiou, 2003)

• Problems of aggregation levels and of linking projects to firms
Using evaluations of „Behavioural Additionality“

Does the identification of B.A. help to

• to *rank* programmes by outcome / impact?
• to aid *selection* of programmes?
• to better *design* new programmes?
Using evaluations of „Behavioural Additionality“

- Programme Manager?
- Policy Maker?
- Innovation researcher?
- Manager in the company?
Future activities?

- Future OECD activity 'Evaluation of Behavioural Additionality'?
- Future TAFTIE activities in this vein?
(some) References