Societal impact assessment in Italian HEIs

CHER 35th Annual Conference - Conference track 3. Third mission and Impact Vienna, August 31, 2023

Sandra Romagnosi
Brigida Blasi
Third mission & Societal Impact Office ANVUR
ANVUR MISSION

ITALIAN NATIONAL AGENCY FOR THE EVALUATION OF UNIVERSITIES AND RESEARCH INSTITUTES (ANVUR)

Presidential Decree d.P.R. no. 76/2010 “Regulation concerning structure and functioning of the National Agency for the Evaluation of Universities and Research Institutes”.

Evaluating procedures, results and outputs of institutions’ management, teaching, research and technological transfer activities.
Third Mission DEFINITION

«Third Mission is the set of activities with which the Institutions interact with society, besides the traditional missions of research and teaching»

(Rapporto sullo Stato del Sistema Universitario e della Ricerca 2013 – p. 559)

TM is a process of knowledge exchange, not only related to technology and encompassing social and cultural benefits.
Evaluation of Research Quality (VQR)

• The VQR is aimed at evaluating the results of the scientific research of Italian Institutions and related internal divisions (Departments and similar units), also taking into account the scientific area.

• The exercise is also aimed at evaluating Third Mission activities carried out by the Italian Institutions and their internal divisions.

• VQR results are used by the Ministry of Universities and Research for allocating the performance-based share (the Quota premiale) of the main university funding.

• Three evaluation exercises have been conducted so far, one exercise every five years.
  – the first in 2011-2013, the VQR 2004-2010
  – the second in 2015-2017, the VQR 2011-2014

• In the first two exercises VQR, the evaluation of TM is introduced experimentally, while in the third round, the evaluation of TM also used in the funding allocation formula (5%).
Case studies were related to TM activities in one or more fields of action, whose impact was verifiable in the period 2015-19

Usually referred to Departments or similar structures (max 2 per Department) or to the whole Institution

Referred to activities during the period 2015-2019, but that generated an impact in part or in the whole period 2015-2019

Case studies with an impact outside the period of evaluation were not considered admissible
Third Mission and impact case studies

Case studies were related to TM activities in one or more fields of action, whose impact was verifiable in the period 2015-19

Usually referred to Departments or similar structures (max 2 per Department) or to the whole Institution

Referred to activities during the period 2015-2019, but that generated an impact in part or in the whole period 2015-2019

Case studies with an impact outside the period of evaluation were not considered admissible
Fields of Action

- Intellectual and industrial property valorisation
- Academic entrepreneurship
- Technology transfer structures and other Third mission intermediaries
- Production and management of artistic and cultural heritage
- Clinical experimentations and health protection
- Lifelong learning and open education
- Public Engagement
- Production of public goods and policy instruments for inclusion
- Innovative tools to support Open Science;
- Activities related to the UN 2030 Agenda for Sustainable Development Goals.
Fields of Action

- Intellectual and industrial property valorisation
- Academic entrepreneurship
- Technology transfer structures and other Third mission intermediaries
- Production and management of artistic and cultural heritage
- Clinical experimentations and health protection
- Lifelong learning and open education
- Public Engagement
- Producing of public goods and policy instruments for inclusion
- Innovative tools to support Open Science
- Activities related to the UN 2030 Agenda for Sustainable Development Goals
Definition of impact

- In the VQR decree there was not a strictly closed definition of impact.

- Impact was supposed to take place in the period 2015-2019 and should have emerged as the difference between the situation before and after the development of the activities.

- It is intended the transformation or the improvement generated for economy, society, culture, health, environment or, more in general, combating economic, social and territorial inequalities in order to increase the quality of life in a territorial context (local, regional, national, European or international); the reduction or prevention of damage, risks, or other negative externalities.
The panel «GEV TM»

- high scientific qualification, international evaluation experience + third mission background
- third mission and impact professionals (university staff, managers from public/private administrations, incubators, science parks, museums, etc.)
The relation with research results is not taken for granted and involved in the evaluation only if relevant for the type of initiative and impact.

The GEV TM has qualified each criteria according to the FoAs > Document on the evaluation panel criteria.
Criteria & ratings

A. Excellent and extremely relevant
B. Excellent
C. Standard
D. Sufficiently relevant
E. Scarcely relevant or not acceptable

Social, economic and cultural dimension of the impact

Relevance in relation to the context

Added value for the beneficiaries

Contribution of the department or similar structure, highlighting the scientific linkage if relevant
<table>
<thead>
<tr>
<th>Institutions</th>
<th>Number</th>
<th>Case studies</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universities</td>
<td>98</td>
<td>460</td>
<td>68,05</td>
</tr>
<tr>
<td>EPR</td>
<td>14</td>
<td>159</td>
<td>23,52</td>
</tr>
<tr>
<td>Voluntary</td>
<td>22</td>
<td>57</td>
<td>8,43</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>134</strong></td>
<td><strong>676</strong></td>
<td><strong>100,00</strong></td>
</tr>
</tbody>
</table>
Fields of action

- Public Engagement: 32.84%
- Technology transfer structures and processes: 11.09%
- Production of public goods and policy: 9.76%
- Clinical experimentations and health: 8.43%
- Academic entrepreneurship: 8.14%
- 2030 Agenda for Sustainable Development: 7.84%
- Lifelong learning and open education: 7.69%
- Intellectual and industrial property: 7.25%
- Innovative tools to support Open Access: 5.92%
- Other: 1.04%
Indicators Analysis

• The impact had to be corroborated through a set of indicators and evidences chosen by each institutions.

• The institution was required to propose a set of indicators, relevant and capable to corroborating the impact taking into account the four criteria:
  – a. Social, economic and cultural dimensions of impact;
  – b. Relevance to the reference context;
  – c. Added value for beneficiaries;
  – d. Contribution of the evaluated institution.

• The choice of indicators was entirely in the hands of the institutions.

• In the Document on the evaluation panel criteria, some indicators for each field of action and criterion were given as examples.

• Indicators related to the “Social, economic and cultural dimensions of impact” criterion were analysed by breaking down the three dimensions. as also suggested by GEV to the institutions.
Methodology

• The indicators chosen and proposed by the institutions were classified and compared by fields of action and by criterion.

• A sample was drawn from the set of evaluated case studies A - *Excellent and extremely relevant*, B - *Excellent*, and C – *Standard*. From this new population (573 case studies) we extracted a sample of 70 case studies (12%).

• The sample was constructed with a double extraction: an initial random extraction procedure for each field of action (1 case every 10) and then a subsequent extraction of cases sorted by judgment class (again 1 case for every 10), therefore overall representing the three judgment classes with at least one case.
<table>
<thead>
<tr>
<th>Field of Action</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>Total</th>
<th>% total (sample)</th>
<th>% total (population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production and management of artistic and cultural heritage</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>8,6</td>
<td>8,9</td>
</tr>
<tr>
<td>Lifelong learning and open education</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>7,1</td>
<td>6,8</td>
</tr>
<tr>
<td>Academic entrepreneurship</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>8,6</td>
<td>8,2</td>
</tr>
<tr>
<td>Production of public goods and policy instruments for inclusion</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>7</td>
<td>10,0</td>
<td>10,1</td>
</tr>
<tr>
<td>Clinical experimentations and health protection</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>7</td>
<td>10,0</td>
<td>9,2</td>
</tr>
<tr>
<td>2030 Agenda for Sustainable Development Goals and SDGs.</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>7,1</td>
<td>7,2</td>
</tr>
<tr>
<td>Innovative tools to support Open Science</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>4,3</td>
<td>1,0</td>
</tr>
<tr>
<td>Public Engagement</td>
<td>2</td>
<td>11</td>
<td>7</td>
<td>20</td>
<td>28,6</td>
<td>30,9</td>
</tr>
<tr>
<td>Intellectual and industrial property valorisation</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>5,7</td>
<td>5,9</td>
</tr>
<tr>
<td>Technology transfer structures and Third mission intermediaries</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>7</td>
<td>10,0</td>
<td>11,7</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>38</td>
<td>20</td>
<td>70</td>
<td>100,0</td>
<td>100,0</td>
</tr>
<tr>
<td>Total (% sample)</td>
<td>17,14</td>
<td>54,29</td>
<td>28,57</td>
<td>100,00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (% population)</td>
<td>13,79</td>
<td>57,94</td>
<td>28,27</td>
<td>100,00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criteria</td>
<td>Nr. cross-cutting</td>
<td>Nr. specific</td>
<td>Nr. total</td>
<td>Total (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------------------</td>
<td>--------------</td>
<td>-----------</td>
<td>-----------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic dimension of impact</td>
<td>6</td>
<td>7</td>
<td>13</td>
<td>21,7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural dimension of impact</td>
<td>9</td>
<td>3</td>
<td>12</td>
<td>20,0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social dimension of impact</td>
<td>5</td>
<td>11</td>
<td>16</td>
<td>26,7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relevance to the reference context</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>10,0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Added value for beneficiaries</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>11,7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contribution of the evaluated institution</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>10,0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>31</td>
<td>60</td>
<td>100,0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (%)</td>
<td>48,3</td>
<td>51,7</td>
<td>100,0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Results

• The indicators are primarily used to corroborate the economic, cultural and social impact (first evaluation criterion), collecting the 68% of indicators.

• Within this criterion, the social dimension carries more weight than the others and is highly specific by field of action or social target (for example, accessibility of facilities, improvement of health conditions or quality of the environment).

• In contrast, the cultural dimension is mainly represented by cross-cutting and general indicators.

• The other three criteria - relevance to the reference context, added value for beneficiaries and contribution of the evaluated institution - are less developed in terms of number of indicators. Moreover, these indicators are often interchangeable or overlapping with the indicators of the other criteria.

• In general, the choice of indicators by institutions were guided by GEV document
A1. Economic dimension of impact

1. External funding source: type (public/private; international/national/regional/local...), amount and trend over time, number of contracts (e.g. funding from international research projects)

2. Funding from internal resources, especially research funds: type (research grants/fellowships/docoral fellowships...), amount, trend over time

3. Revenues from activities/services (e.g. provided by the spin-off; training course fees, museum/event ticketing...)

4. Efficiency and cost reduction metrics (e.g., development of services and products to save money in businesses; energy optimization of devices, deflation of the judicial burden)

5. Investment in activities, facilities, personnel, goods and services

6. Creation of new jobs
A2. Cultural dimension of impact

1. Events/activities/manifestations/fairs (number and type)

2. Number of press releases and Media coverage (website, press, social channels...)

3. Conferences and workshops (number and type)

4. Training activities conducted (number and type)

5. Collaborations/partnerships and type (public/private, international/national/regional/local...)

6. Number of innovative products, processes, services and tools (e.g., a database, multimedia tools, educational materials, patents)

7. Number of scientific and non-scientific publications

8. Number of awards and certifications

9. Mentorship activities (Number of dissertations; doctoral dissertations, Internships, Workshops)
A3. Social dimension of impact

1. Social and commercial network (number of collaborations with practitioners, institutions, commercial/industrial partners...) and type (e.g., with global corporations)

2. Number of stakeholders directly involved in the implementation of the activity/event and type (operators, students, teachers, civil society members, etc.)

3. Number of services, facilities and interventions by target audience

4. Training activities conducted (number and type)
B. Relevance to the reference context (internal and external)

1. External network: Number of collaborations/partnerships and type

2. Internal network: Number of researchers, students, academic staff involved in activities; number of departments.

3. Number of awards and recognitions received by staff/proposers and type
C. Added value for beneficiaries

1. Number of stakeholders directly involved in the activity and type (operators, students, teachers, civil society members, patients, partners, etc.)

2. Training activities conducted (number and type)

3. Results of evaluations, satisfaction questionnaires and observers
D. Contribution of the evaluated institution

1. Commitment in terms of human, financial, instrumentation and space resources (e.g., committed budget or co-funding; number and role of committed teaching and FTE staff units)

2. Number of scientific publications

3. Number of national and international seminars, workshops, symposia
• The indicators chosen by universities are often simple, referring to the number of activities and sometimes to the trends over time.

• They are mainly indicators related to short-term results (output) or medium-term results (outcome) and in few cases a benchmark with the external context is reported.
Classification (Ben Martin, 2007)

a) **Causality:** the cause-effect link between the research and the outcome is not always clear

b) **Attribution:** there is not always a direct correspondence between research activity and the impact generated; the impact may be diffuse, complex and it may not be clear what part of the impact should be attributed to a given research

c) **Internationality:** the most innovative activities are intrinsically international and consequently it is difficult to attribute the impact of a given research to a local or national context

d) **Timing of the assessment:** the time window can vary enormously and is difficult to predict

- Boundary issue: users, interaction, and channels of impact transmission may be heterogeneous
- Selection of expert evaluators and referees
- Monitoring and data collection and benchmarking
Final considerations

- The Third Mission evaluation in the last VQR exercise was based on a broad and multidimensional concept of impact that aims to investigate the economic, social, cultural and environmental effects of the activities of academic institutions.

- The use of case studies made it possible to combine qualitative and quantitative approaches and enhance the capability of better assessing the different impacts produced, not only in STEM and LS, but also in SSH.

- The definition of impact was not always clear and the importance of useful indicators to demonstrate impact has not always been understood by institutions. Especially for the less codified and newer fields of action, the different types of indicators proposed were not very relevant and meaningful.

- For the next VQR exercise, one could support the definition of impact with examples of indicators or good practices for each field of action, to be offered to the institutions to facilitate their presentation work.
Thanks for your attention
sandra.romagnosi@anvur.it