THE MEASUREMENT AND EVALUATION OF UNIVERSITIES’ THIRD MISSION ACTIVITIES IN ITALY.

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Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR)
Outline

• Institutional Context
• Evaluation path
• The experience in VQR 2011-2014
• Some results
• Critical issues and next challenges
ANVUR - mission

- National Agency for the Evaluation of Universities and Research Institutes
- Presidential Decree 76/2010 (art. 3, par.1): «to evaluate the quality of processes, results and products of management, teaching, research, including technology transfer activities»
- Evaluation of the Third Mission of Universities and Research Institutions
ANVUR: mission
TM evaluation

• Evaluation of Research Quality (VQR) is the assessment of the quality of the outcomes of the research of:
  • Universities
  • Research Institutions supervised by MIUR
  • private institutions that voluntarily submit their research outcome

• VQR 2004-2010 (VQR 1)
• VQR 2011-2014 (VQR 2)
What we mean for third mission

**DEF:** the openness of the University towards the socio-economic context through the valorization and transfer of knowledge.

TM is a process of knowledge transfer, not only related to technology and encompassing social and cultural benefits (production of public goods)
TM evaluation

Evaluation of Research Quality VQR 2004-2010
• definition of a set of indicators based on counting (number of spin-off companies,..) built on data from HEIs internal monitoring systems (no central data collection system): need for more reliable data and definition refinement

Evaluation of Research Quality VQR 2011-2014
• building of a central data collection system
• integration with quali-quantitative indicators (spin-off companies’ revenues and employees, …)
• development of the informed peer review model (publication of the Evaluation Manual): need for metrics on impact and a more context-based evaluation model
VQR 2004-2010
- Total revenues from third party contracts
- No. of granted patents owned by the university
- No. of spin-off companies
- No. of incubators
- No. of technology transfer consortia and associations
- No. of archaeological excavations
- No. of museums
- No. of other third mission activities

ONE FINAL INDICATOR FOR THIRD MISSION

VQR 2011-2014
- Central data collection system
- Definition of evaluation method (informed peer review)
- Publication of ANVUR TM Evaluation Manual
- Institution of a TM Evaluation Panel

FINAL REPORT ON THIRD MISSION

GROUP OF EXPERTS (DATA, EVALUATION, INDICATORS)

TWO INTERNATIONAL WORKSHOPS

CONSULTATION OF THE ACADEMIC COMMUNITY

GROUP OF EXPERTS (METRICS ON IMPACT AND RELEVANCE OF CONTEXT)

PUBLICATION OF NEW GUIDELINES FOR MONITORING

REVISION OF TM EVALUATION MANUAL
Not only evaluation
What is there inside TM?
TM in VQR 2011-2014

- Publication of ANVUR Evaluation Manual:
  - classification in 8 areas
  - informed peer review (analysis of quantitative indicators through expert judgement)
  - for the 8 areas: criteria, indicators & questions - the evaluation chain

- Set up of the central data collection system (standardized and comparable data related to all HEIs)

- Use of existing official data sources (i.e. for patents and spin-off companies) to improve data quality and reduce burden & costs for institutions

- Creation of 90 TM indicators (standardized and comparable for all the HEIs)

- Constitution of an evaluation panel

- Systemic picture (not case study): activities promoted by the HEIs (not at the individual researcher’s level)

- TM not inserted in the funding formula (no money incentive)
## An Example

<table>
<thead>
<tr>
<th>AREA</th>
<th>1. INTELLECTUAL PROPERTY MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a. inventive activity</td>
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<tr>
<td></td>
<td>b. portfolio management</td>
</tr>
<tr>
<td></td>
<td>c. exploitation</td>
</tr>
<tr>
<td></td>
<td><strong>ability to strategically choose the inventions to be valorized through assignments, licenses, options and spin-out constitutions</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>exploitation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.c.i) number of assignments, licenses, options contracts/ total number of university patents</td>
</tr>
<tr>
<td></td>
<td>1.c.ii) number of spin-out companies using university patents / total number of university patents</td>
</tr>
<tr>
<td></td>
<td>1.c.iii) total revenues / total number of university patents</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>1.c.1) Has the university developed a policy on intellectual property management and exploitation?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.c.1) Is the intellectual property portfolio able to attract the interest of the economic world and obtain a flow of revenues?</td>
</tr>
</tbody>
</table>

**Source:** ANVUR Evaluation Manual
• Universities and research institutes are not asked to report activities in all the areas but based on institutional strategy and features

• There is no unique aggregate ranking, but separate evaluations by TM areas (maturity model: qualitative judgements, ratings, rankings)

• All the methodological tools have been object of review: international experts, public consultation, comments from academics and stakeholders, pilots and tests
# TM in Italian Universities at a glance 1/3

<table>
<thead>
<tr>
<th>Universities</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Monitoring of the TM</td>
<td>85%</td>
</tr>
<tr>
<td>Presence of a manager of the TM</td>
<td>74%</td>
</tr>
<tr>
<td>Integration of the TM-related functions</td>
<td>53%</td>
</tr>
</tbody>
</table>
TM in Italian Universities at a glance 2/3

Valorization of research

- 2011-2014: 2,989 academic patents
- Total revenues of patents in 2011-2014: 1,75 million €
- Total revenues of all spin-out in 2011-2014: 615 million €
- In 2014: 823 active spin-out companies
- Third party funding 945 million €
- 30% of universities in incubators/science parks

Valorization of research 20 June 2019 - UIIN Conference - Helsinki
TM in Italian Universities at a glance 3/3

Production of public goods (2014)

- 115 university museum systems
- 3,000 Life Long Learning courses
- 414 archaeological excavations
- 96% universities report Public Engagement activities
- 118 clinical research centers and bio-banks
- 2,300 clinical trials
Critical issues and future perspectives

• Need for data quality improvement

• New connection to official databases for further areas (better quality and less costs for universities)

• Clear definitions within the TM areas

• Improvement in the monitoring processes by universities
Work in progress

- publication of new guidelines for monitoring and revision of TM Evaluation Manual and set of indicators (socio-economic impacts and relevance of context/strategy)
- specific model for the evaluation of TM of Research Institutions
- preparation of VQR 2011-2015
- development of a new framework on TM Quality assurance in HEIs: process of TM
Challenges ahead

• To reward researchers’ third mission activities, without reducing their research and teaching incentives
• To focus on socio-economic impacts and relevance of context/strategy in the new Manual and set of indicators
• To integrate external sources of data (as already done with EPO database on patents and Chamber of Commerce database on spin-off companies)
• To restart the data collection process by the opening of the central data collection system (*deadlock*)
# External data sources

<table>
<thead>
<tr>
<th>Aree TM</th>
<th>Banche dati esistenti</th>
</tr>
</thead>
<tbody>
<tr>
<td>brevetti</td>
<td><a href="https://patstat.epo.org">PATSTAT</a> (European Patent Office)</td>
</tr>
<tr>
<td>privative vegetali</td>
<td>[Plant Variety Protection Data and Statistics](<a href="https://www.u">https://www.u</a> pov.org) (UPOV International Union for the Protection of New Varieties of Plants)</td>
</tr>
<tr>
<td>Imprese spin-off</td>
<td><a href="https://www.camere.it">Infocamere</a> (Camere di Commercio)</td>
</tr>
<tr>
<td>attività conto terzi</td>
<td><a href="https://www.siope.it">Sistema informativo SIOPE</a> (MEF)</td>
</tr>
<tr>
<td>strutture di intermediazione</td>
<td>banche dati incubatori e parchi scientifici associati (<a href="https://www.pnicube.it">Pni Cube</a> e <a href="https://www.apsti.it">APSTI</a>)</td>
</tr>
<tr>
<td>musei</td>
<td><a href="https://www.museume.it">Sistema museale nazionale</a></td>
</tr>
<tr>
<td>sperimentazioni cliniche</td>
<td><a href="https://www.aifa.it">Osservatorio Nazionale sulla Sperimentazione Clinica dei Medicinali</a> (AIFA)</td>
</tr>
<tr>
<td>biobanche</td>
<td><a href="https://www.bbmri.eu">Censimento biobanche</a> (BBMRI)</td>
</tr>
<tr>
<td>attività di educazione continua in medicina</td>
<td><a href="https://www.agenas.it">Banca Dati Commissione Nazionale Formazione Continua</a> (AGENAS)</td>
</tr>
<tr>
<td>alternanza scuola-lavoro</td>
<td><a href="https://www.piattaformadellalternanza.it">Piattaforma dell'Alternanza</a> (MIUR)</td>
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</tbody>
</table>
Thanks!

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