Analysis of Research Excellence Assessment Frameworks and Providing Policy Requirements for Iran

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Abstract

Purpose: Many countries have developed and implemented research excellence frameworks tailored to their specific social, cultural, and academic context. This study aims to investigate and compare national research excellence frameworks based on their objectives, indicators, levels of implementation, and evaluation processes.

Methodology: This applied and library-based research was conducted using a comparative approach and the Beri model (1969). The study employed a descriptive-comparative method to analyze the structure, implementation, and evaluation mechanisms of selected frameworks

Findings: Seven major research excellence frameworks were identified and examined, including Research Excellence Framework (REF), Standard Evaluation Protocol (SEP), Excellence in Research for Australia (ERA), Committee for Evaluation of Italian Research (CIVR), Canada First Research Excellence Fund (CFREF), Excellence Initiative (EI), Research Assessment Exercise (RAE). The comparative analysis revealed both similarities and differences among these frameworks in terms of objectives, evaluation indicators, levels of comparison (national, international, or both), assessment approaches (quantitative, qualitative, or mixed), scoring methods (quantitative or qualitative), and implementation processes.

Conclusion: evaluating the quality and societal impact of research is essential for determining the role and accountability of academic institutions . Therefore, the development and use of comprehensive, context-sensitive indicators and metrics are necessary to assess research excellence effectively, taking into account each country's unique requirements and policy priorities.

Value: This comparative study provides an opportunity to analyze and compare national research excellence frameworks in terms of their objectives, indicators, scoring methods, approach, levels of implementation, and execution processes.

Keywords: *Research Excellence Frameworks, National Research Policies, Research Quality Indicators, Comparative Evaluation*

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Extended Abstract

Introduction: Research excellence has become a prominent concept in science policy, particularly in the areas of research of funding and evaluation. However, the interpretation and implementation of research excellence in practice and research management are influenced by a complex interplay of factors, including political considerations as well as diverse social, cultural, and organizational contexts in which researchers operate. Accordingly, several countries have developed and implemented their own frameworks and models to assess research excellence, ach adapted to their specific societal and institutional conditions.

Purpose: This study aims to investigate and compare national research excellence frameworks in terms of their objectives, indicators, implementation levels, and execution processes.

Methodology: This research is applied in nature and based on library studies. It was conducted using a comparative method grounded in the Beri model (1969), along with a descriptive-comparative approach.

Findings: A total of seven frameworks were identified and analyzed, including Research Excellence Framework (REF), Standard Evaluation Protocol (SEP), Excellence in Research for Australia (ERA), Committee for Evaluation of Italian Research (CIVR), Canada First Research Excellence Fund (CFREF), Excellence Initiative (EI), and Research Assessment Exercise (RAE). The comparative analysis revealed that these frameworks share both similarities and differences regarding their objectives, evaluation indicators, levels of comparison (national, international, or both), scoring methods (quantitative or qualitative), approach (quantitative, qualitative, or mixed), and implementation processes. A summary of the key findings is presented in the following table, which highlights the main comparative results.

Table 1. Objectives of National Research Excellence Frameworks

Frameworks	objectives
Research Excellence Framework (REF)	Providing a unified framework for evaluating research across all disciplines, with a set of common required data in all submissions from academic institutions, using standardized criteria and procedures
Standard Evaluation Protocol (SEP)	Detecting and verifying the excellence and societal value of research, and enhancing them as necessary
Excellence in Research for Australia (ERA)	Identifying and promoting research excellence across all fields and activities in Australian higher education
Committee for the Evaluation of Italian Research (CIVR)	Assessing research capacity and identifying areas for development to inform policy and investment decisions
Canada First Research Excellence Fund (CFREF)	Empowering Canadian institutions to compete globally for top talent and collaborative opportunities, capitalize on emerging trends and opportunities, and unlock their full potential by developing bold, innovative, and forward-thinking institutional strategies that drive excellence and impact
Excellence Initiative (EI)	Fostering a culture of excellence in universities by introducing robust incentives for outstanding research and doctoral education, and enhancing their global reputation to attract the world's most talented researchers and students
Research Assessment Exercise (RAE)	Elevating research excellence globally and fostering a culture of quality in well-funded universities through a comprehensive and independent peer review process

Table 2. Indicators of National Research Excellence Frameworks

Frameworks	Indicators
Research Excellence Framework (REF)	Research outputs, iImpact, and research environment
Standard Evaluation Protocol (SEP)	Research quality, research activity, and research application
Excellence in Research for Australia (ERA)	Qualitative indicators, research productivity, international mobility, socio-economic impact, resource attraction, and resource management
Committee for Evaluation of Italian Research (CIVR)	Qualitative indicators, research productivity, international mobility, socio-economic impact, resource attraction, and resource management
Canada First Research Excellence Fund	Inputs, activities, outputs, immediate outcomes, intermediate outcomes, long-term outcomes, and final outcomes.
Excellence Initiative (EI)	Excellence in research and education, interdisciplinary integration, international research collaborations, and collaboration with Other universities or non-academic research institutions
Research Assessment Exercise (RAE)	Research outputs, impact, and environment.

Table 3. Comparison Levels of National Research Excellence Frameworks

Frameworks	Comparison Levels
Research Excellence Framework (REF)	National and international
Standard Evaluation Protocol (SEP)	National and international
Excellence in Research for Australia (ERA)	National and international
Committee for Evaluation of Italian Research (CIVR)	National
Canada First Research Excellence Fund	National and international
Excellence Initiative (EI)	National
Research Assessment Exercise (RAE)	National and international

Table 4. Approach of National Research Excellence Frameworks

Frameworks	Approach
Research Excellence Framework (REF)	Mixed (Quantitative and Qualitative)
Standard Evaluation Protocol (SEP)	Mixed (Quantitative and Qualitative)
Excellence in Research for Australia (ERA)	Quantitative
Committee for Evaluation of Italian Research (CIVR)	Mixed (Quantitative and Qualitative)
Canada First Research Excellence Fund	Mixed (Quantitative and Qualitative)
Excellence Initiative (EI)	Qualitative
Research Assessment Exercise (RAE)	Mixed (Quantitative and Qualitative)

Table 5. Implementation Processes of National Research Excellence Frameworks

Frameworks	implementation process
Research Excellence Framework (REF)	A comprehensive collection of research outputs from higher education institutions, spanning 36 units and diverse fields of study, is gathered through a specialized software system and assessed by panels of subject-matter experts and specialists
Standard Evaluation Protocol (SEP)	The evaluation of research is the sole responsibility of the board of directors and professors at Dutch universities
Excellence in Research for Australia (ERA)	Research is evaluated by a committee of internationally recognized experts, who bring their expertise and knowledge to the evaluation process
Committee for Evaluation of Italian Research (CIVR)	The Ministry of Education, Universities and Research has established a Research Evaluation Committee to assess the quality and effectiveness of research in Italy and provide recommendations for improvement
Canada First Research Excellence Fund	Leaders of Canada's main research funding agencies, along with senior officials from Health Canada and Innovation, Science and Economic Development Canada, form a high-level steering committee that guides the country's research agenda
Excellence Initiative (EI)	The university's management team ensures that proposals align with institutional strategic goals and priorities and are submitted consistently with the university's mission and values
Research Assessment Exercise (RAE)	An expert panel composed of leading researchers and scholars evaluates research projects, bringing their expertise and knowledge to the assessment process

Conclusion: Overall, evaluating the impacts and benefits of research is essential to determine the role and responsibilities of academic research in society. Consequently, it is crucial to develop and employ comprehensive, accurate, and relevant indicators and metrics to assess research quality, while considering the specific requirements and contextual factors of different countries.

Value: This comparative study offers the opportunity to systematically examine and contrast national research excellence frameworks in terms of their objectives, indicators, scoring methods, approaches, implementation levels, and execution processes.

References

Andras, P. (2011). metrics, quality, and management implications. *Research Evaluation*, *20*(2), 90-106. https://doi.org/10.3152/095820211X12941371876265

Arocena, R., Göransson, B., & Sutz, J. (2019). Towards making research evaluation more compatible with developmental goals. *Science and Public Policy*, *46*(2), 210-218. https://doi.org/10.1093/scipol/scy051

Aubert Bonn, N., & Bouter, L. (2023). Research assessments should recognize responsible research practices. Narrative review of a lively debate and promising developments. *Handbook of Bioethical Decisions. Volume II: Scientific Integrity and Institutional Ethics*, 441-472. http://dx.doi.org/10.1007/978-3-031-29455-6_27

Azadi Ahmadabadi, G., &Ghanadi Nejad, F. (1404). *Prioritizing Research: Current Needs and Future Directions*. Iranian Institute of Information Science and Technology. https://irandoc.ac.ir/book/6181 [In Persian]

Bornmann, L., & Marx, W. (2023). The measurement of research excellence: Challenges, developments, and future directions. *Informetrics, 17*(1), 101345. https://doi.org/10.1016/j.joi.2023.101345

Bucchi, M., & Papponetti, V. (2007). Research evaluation as a policy design tool: Mapping approaches across a set of case studies. *The Fondazione Eni Enrico Mattei Note di Lavoro Series Index*. http://dx.doi.org/10.2139/ssrn.999929

Davidson, P. M., Homer, C. S. E., Duffield, C., & Daly, J. (2011). A moment in history and a time for celebration: The performance of nursing and midwifery in Excellence in Research for Australia. *Collegian, 18*(2), 43–44. https://doi.org/10.1016/j.colegn.2011.02.001

Eslami, Z. , Hakimzadeh, R. & Saboury, A. A. (2018). Comparative Study of Explanation the Framework for Assessment he Quality of Research in Iran's Higher Education System with the Countries of Britain, Australia, the Netherlands, Italy and Hong Kong. *Journal of Research in Educational Systems*, *12*(42), 59-76. http://doi.org/10.22034/jiera.2018.84465 [In Persian]

Evans, E. D., Gomez, C. J., & McFarland, D. A. (2016). Measuring paradigmaticness of disciplines using text. *Sociological Science, 3*, 757–778. http://dx.doi.org/10.15195/v3.a32

Evans, G., Rob, M., & Hamish, S. (2021). *Excellence in Research*. https://www.mbie.govt.nz/dmsdocument/16598-excellence-in-research

Fallon, D. (2008). Germany's" Excellence Initiative". *International Higher Education*, (52). http://dx.doi.org/10.6017/ihe.2008.52.8036

Gaunand, A., Hocde, A., Lemarié, S., Matt, M., & De Turckheim, E. (2015). How does public agricultural research impact society? A characterization of various patterns. *Research Policy*, *44*(4), 849-861. https://doi.org/10.1016/j.respol.2015.01.009

Geuna, A., & Piolatto, M. (2016). Research assessment in the UK and Italy: Costly and difficult, but probably worth it (at least for a while). *Research Policy, 45*(1), 260–271. http://doi.org/10.1016/j.respol.2015.09.004

Geyer, A. (2014). *The German Excellence Initiative*. In: Promoting Research Excellence New Approaches to Funding(PP.87-110). OECD. https://www.upla.cl/noticias/wp-content/uploads/2015/01/StateofHigherEducation2014.pdf#page=88

Goodarzvand Chegini, M., and Yousefi, S. (2024, February 18). *Analysis of the Onion Research Model and its Application in Social Science Research*. Tehran Institute of Humanities and Cultural Studies. https://civilica.com/doc/2024893 [In Persian]

Government of Canada, I. C. (2022). *Canada First Research Excellence Fun: Application Process*. Canada First Research Excellence Fund. http://www.cfref-apogee.gc.ca/programprogramme/apply-demande-eng.aspx

Haslam, N., & Koval, P. (2010). Possible research area bias in the Excellence in Research for Australia (ERA) draft journal rankings. *Australian Journal of Psychology, 62*(2), 112–114. https://doi.org/10.1080/00049530903334489

Jamali, H. (2011). Research Evaluation: Approaches, Techniques and Challenges. *Rahyaft*, *21*(49),39 -52. https://rahyaft.nrisp.ac.ir/article_13512.html?lang=en [In Persian]

Jones, C. R., & Walmsley, A. (2022). A change would do you good: advances in research impact in sustainable tourism and some 'home truths' for the sector. *Journal of Sustainable Tourism*, *30*(9), 2073-2088. https://doi.org/10.1080/09669582.2021.2000995

Jonkers, K. & Zacharewicz, T. (2017). *Research performance-based funding systems A comparative assessment. Luxembourg.* Publications Office of the European Union. http://doi.org/10.2791/70120, JRC101043.

Musgrave, S., & Hajek, J. (2011). Excellence in research for Australia and sustainable data. In *Sustainable Data From Digital Research 2011: Humanities Perspectives on*

Digital Scholarship (pp. 193-205). The Custom Book Centre. https://ses.library.usyd.edu.au/handle/2123/7939

Parks, S., Ioppolo, B., Stepanek, M., & Gunashekar, S. (2018). Guidance for standardising quantitative indicators of impact within REF case studies. *Santa Monica, and Cambridge: RAND Europe.* https://www.rand.org/pubs/research_reports/RR2463.html

Peruginelli, G., & Pölönen, J. (2023). The legal foundation of responsible research assessment: An overview on European Union and Italy. *Research Evaluation*, *32*(4), 670-682. https://doi.org/10.1093/reseval/rvad035

Pinar, M., & Horne, T. J. (2022). Assessing research excellence: evaluating the research excellence framework. *Research Evaluation*, *31*(2), 173-187. http://dx.doi.org/10.1093/reseval/rvab042

Radi, S. (2025). *Major Challenges in Knowledge Transfer and Research Excellence in Higher Education Institutions.* In Navigating Quality Assurance and Accreditation in Global Higher Education (pp. 435-456). IGI Global Scientific Publishing. https://www.igi-global.com/chapter/major-challenges-in-knowledge-transfer-and-research-excellence-in-higher-education-institutions/365745

Reed, M. S., Ferré, M., Martin-Ortega, J., Blanche, R., Lawford-Rolfe, R., Dallimer, M., & Holden, J. (2021). Evaluating impact from research: A methodological framework. *Research Policy*, *50*(4), 104147. https://doi.org/10.1016/j.respol.2020.104147

REF (2016). Building on Success and Learning from Experience: An independent review of the Research Excellence Framework. *London: Department for Business, Energy and Industrial Strategy*.

Royal Netherlands Academy of Arts and Sciences, Association of Universities in the Netherlands. (2020). Standard Evaluation Protocol 2021–2027. Protocol for research assessment in the Netherlands. Netherlands: KNAW. https://storage.knaw.nl/2022-06/SEP_2021-2027.pdf

Salajegheh, M. & Jahanshahi Javaran, R. (2021). Comparison of Researches Assessment Criteria in America, UK, Italy, Canada, Australia, Finland, Hong Kong, Denmark and Iran. *Popularization of Science*, *11*(2), 48-77. http://doi.org/10.22034/popsci.2021.260018.1068 [In Persian]

Salimi, Q. & Hosseini, N. (2017). An Explanation of Research Excellence Framework (REF): a Step towards Providing a Model for Research Quality Assessment System in Nation's Higher Education. *Rahyaft*, *27*(65), 83-98. https://dor.isc.ac/dor/20.1001.1.10272690.1396.27.65.6.4 [In Persian]

Saunders, N. K., Lewis, P., & Thornhill, A. (2023). *Research Methods for Business Students, 9th Edn*. Pearson Education. https://www.researchgate.net/publication/240218229_Research_Methods_for_Business_Students

Tan, C. (2024). A Foucauldian analysis of research Assessment in a postcolonial context: the example of Hong Kong. *Journal of Education Policy*, *39*(4), 660-678. https://doi.org/10.1080/02680939.2023.2269382

Thiem, A., & Dusa, A. (2012). *Qualitative comparative analysis with R: A user's guide* (Vol. 5). Springer Science & Business Media. https://link.springer.com/book/10.1007/978-1-4614-4584-5

Tijssen, R. (2020). Re-valuing research excellence: From excellentism to responsible assessment. *Transforming Research Excellence*. http://dx.doi.org/10.5281/zenodo.3607319

Tijssen, R., & Kraemer-Mbula, E. (2018). Research excellence in Africa: policies, perceptions, and performance. *Science and Public Policy*, *45*(3), 392-403. https://doi.org/10.1093/scipol/scx074

Trevisol, J. V., & Brasil, A. (2023). Evaluation policies for research and graduate education in the Netherlands: lessons on self-evaluation and institutional autonomy. *Revista Brasileira de Educação*, *28*, e280107. https://doi.org/10.1590/S1413-24782023280108

Williams, K., & Grant, J. (2018). A comparative review of how the policy and procedures to assess research impact evolved in Australia and the UK. *Research Evaluation*, *27*(2), 93-105. http://doi.org/10.1093/reseval/rvx042

Wiśniewska, M. Z., & Grudowski, P. (2024). The culture of excellence and its dimensions in higher education. *The TQM Journal*, *36*(2), 593-615. https://doi.org/10.1108/tqm-11-2022-0325

Zacharewicz, T., Lepori, B., Reale, E., & Jonkers, K. (2019). Performance-based research funding in EU Member States—a comparative assessment. *Science and public policy*, *46*(1), 105-115. https://doi.org/10.1093/scipol/scy041