

S&T Cooperation of the ERA¹ Countries with Brazil, India and Russia – A Challenge or a Trouble

Dr. Ales Gnamus, Institute for Prospective Technological Studies, Seville, Spain
Joint Research Centre, European Commission

Information on the means and extent of ERA countries' S&T cooperation with BR, IN and RU (BIR) is fragmented and not readily available. Often countries themselves re-orientate their strategies and internationalisation of their S&T policies according to emerging competitiveness and economic challenges. Therefore, to obtain better insights into ERA countries' international S&T cooperation with these countries, a questionnaire based approach was developed through the CREST Working Group on Internationalisation of R&D², focused on ERA countries' policies on internationalisation of S&T. It was aimed at providing an overview of their S&T cooperation policies, government strategies and related experiences with BIR. The current paper, thus, aims to provide an assessment of the status of public S&T cooperation based on analysis of questionnaire responses and further analytical work to identify good practices, common objectives and open questions. These in turn feed more focused discussions and possible transnational coordination of certain internationalisation policies with these countries. The original questionnaire data has been summarised and used to produce some composite indicators, which served as a basis for an overall comparative assessment. 23 completed sets of questionnaires had been received³ covering twenty MS representing approximately 75% of MS and three AC representing 60% of the addressed five countries and an additional single questionnaire was submitted⁴.

A newly developed assessment methodology was developed for a thorough analysis of the questionnaire responses based on the quantification of numerous qualitative responses. Two models describing corresponding composite quantitative indicators were introduced for comparison of intensity of ERA countries' governmental S&T cooperation with BIR. *Model 1 - Index "Degree of Networking"* based on policy instruments implemented in ERA countries for international S&T cooperation; and *Model 2 - Index "Cooperation Status"* a composite indicator summing up information on ERA countries' S&T cooperation policy dynamic, institutional capacity and related policy measures, and practical implementation of S&T cooperation policies together describing the overall S&T cooperation policy implementation framework for internationalisation of S&T with BIR. Since the two models and indexes supplement each other, calculated numeric values for ERA countries were combined and the composite quantitative indicator named *"Intensity of Cooperation"* was introduced for integrated assessment of ERA countries' international S&T cooperation. A composite indicator for the assessment of policy relevance was related with expected impact of policy measures introduced. On this basis, ERA countries were ranked and further comparative assessment/analysis of expected practical impacts of introduced and planned policies on internationalisation of S&T cooperation in ERA countries with BIR based on comparisons of questionnaire data with the additional information obtained via data mining was made. Comparisons with information obtained via the Thomson Reuters Scientific ISI Web of Knowledge - ISI Science Citation Index (Expanded), EUROSTAT and EC, DG RTD Regional Key Figures Databases supported assessment of underlying reasons for good S&T cooperation practices. The paper summarizes the lessons learned from a comparative perspective, addressing good practices in international S&T cooperation and, where possible, underlying reasons for successful practices were acknowledged. Three indicative graphs presenting intensity of S&T cooperation of the ERA countries with BR, IN and RU are attached in the Annex indicating also the expected potential impact of policy measures introduced in the ERA countries on practical performance of their cooperation policies.

¹ ERA (European Research Area) countries - EU-27 and as of December 2008 also 11 associated countries: Iceland, Liechtenstein, Norway, Switzerland, Turkey, Israel, Croatia, FYROM, Serbia, Montenegro and Albania;

² CREST (The European Scientific and Technical Research Committee)

³ MS: AT, CY, CZ, DE, DK, ES, FI, FR, GR, IE, IT, LT, LV, NL, PL, PT, RO, SE, SI and UK + BE*(see ⁴);
AC: CH, NO and TR;

⁴ BE* - A single questionnaire covering internationalisation of R&D cooperation of Flanders (one of the three Belgian regions) with India was also received. Despite it only represents one of the 3 regions, this partial data is presented in the paper for indicative purposes, however it is marked with an asterisk where shown.

Annex: Indicative graphs presenting intensity of S&T cooperation of the ERA countries with BR, IN and RU.

Comparison of Intensity of S&T Cooperation of the ERA countries with Brazil

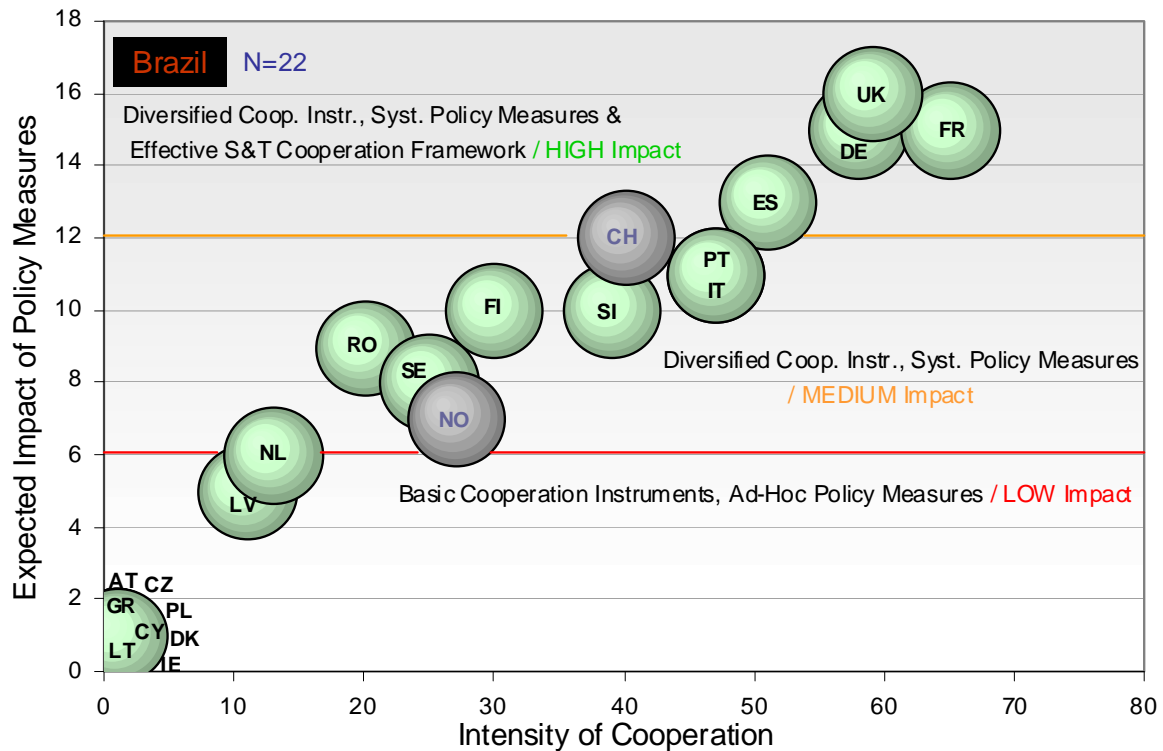


Fig.1 Comparison of intensity of cooperation and expected impact of implemented ERA countries' policy measures on their S&T cooperation with Brazil.

Comparison of Intensity of S&T Cooperation of the ERA countries with India

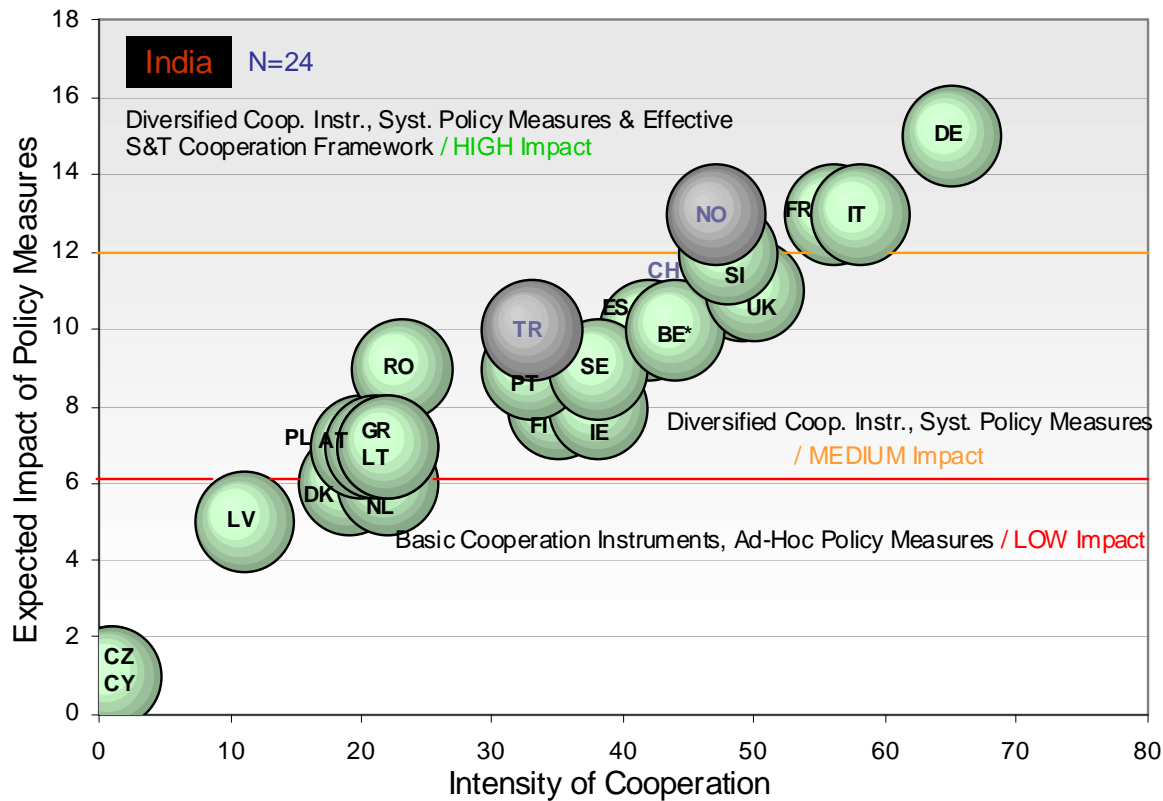


Fig.2 Comparison of intensity of cooperation and expected impact of implemented ERA countries' policy measures on their S&T cooperation with India.

Note: Data entries for BE* are represented only by information given by Flanders.

Comparison of Intensity of S&T Cooperation of the ERA countries with **Russia**

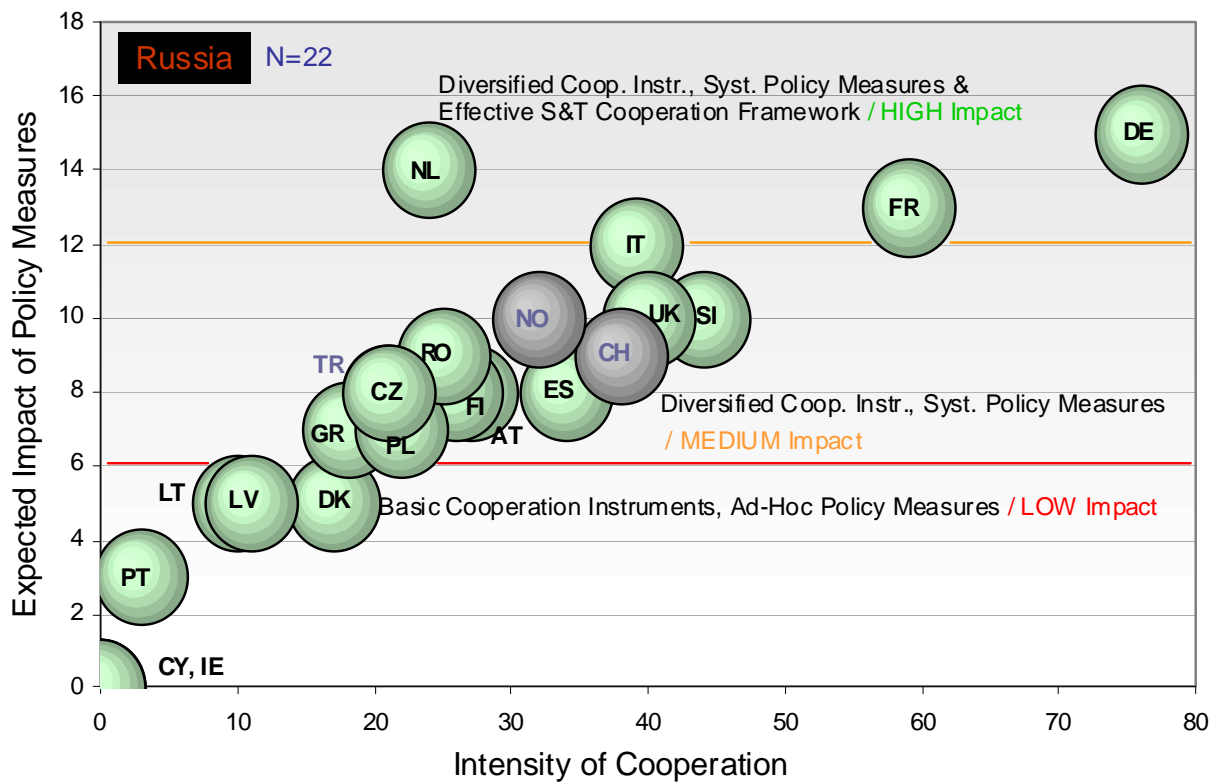


Fig.3 Comparison of intensity of cooperation and expected impact of implemented ERA countries' policy measures on their S&T cooperation with Russia.