

R&D Attributes – Description of Modifications

For the description of attributes please refer to:

http://dis.ijs.si/vedrana/wp-content/uploads/2010/11/rd_attributes.pdf

Constructed Attributes

ATTRIBUTE	DESCRIPTION
R&D INPUTS – R&D PERSONNEL	
R&D personnel per million inhabitants (FTE)	Constructed by dividing the “Total R&D personnel (FTE)” with a population of a country and by multiplying the result with a million.
R&D personnel per million inhabitants (HC)	Constructed by dividing the “Total R&D personnel (HC)” with a population of a country and by multiplying the result with a million.
Sector employing the most R&D personnel	Indicates which sector performs the most R&D activities in a country. Constructed from the four “R&D personnel by sector of employment (FTE)” attributes. Considering that “private non-profit” sector never appears as the sector that employs the most R&D personnel, the newly constructed attribute can take one of the four values: business enterprise, government, higher education and N/A (not known).
Sector employing the most researchers	Similar to the previous attribute, except that it accounts only for work of researchers, and not of technicians and other supporting staff.
R&D INPUTS – R&D EXPENDITURES	
GERD as % of GNI	Constructed using the following formula: “Total GERD (000 PPP\$) * 1000) / “GNI per capita (PPP\$)”.
Sector investing the most in R&D	Indicates which sector invests the most in R&D activities. Constructed from the six “Source of Funds for R&D” attributes. Accordingly, it can take one of the six values: business enterprise, government, higher education, private non-profit, abroad and N/A (not known or not distributed funds).
R&D OUTPUTS	
Applications for patents (residents) (%)	Constructed by dividing “Applications for patents (residents)” with “Applications for patents (total)” and multiplying the result with 100.
Applications for patents (non-residents) (%)	Constructed by dividing “Applications for patents (non-residents)” with “Applications for patents (total)” and multiplying the result with 100.
Majority of applications for patents (residents - non-residents)	Indicates whether the residents or non-residents of a country submit the most applications for

	patents, under the assumption that the first author represents the leader in a patent creation process. The attribute can take one of the tree values: residents, non-residents and N/A.
Applications for patents per researcher (FTE)	Constructed by dividing "Applications for patents (total)" with "Total researchers (FTE)".
Applications for patents per researcher (HC)	Constructed by dividing "Applications for patents (total)" with "Total researchers (HC)".
Applications for patents per million inhabitants	Constructed by dividing "Applications for patents (total)" with population of a country and by multiplying the result by a million.
Grants of patents (residents) (%)	Constructed by dividing "Grants of patents (residents)" with "Grants of patents (total)" and multiplying the result with 100.
Grants of patents (non-residents) (%)	Constructed by dividing "Grants of patents (non-residents)" with "Grants of patents (total)" and multiplying the result with 100.
Majority of grants of patents (residents - non-residents)	Indicates whether the residents or non-residents of a country have more granted patents, under the assumption that the first author represents the leader in a patent creation process. The attribute can take one of the tree values: residents, non-residents and N/A.
Grants of patents per researcher (FTE)	Constructed by dividing "Grants of patents (total)" with "Total researchers (FTE)".
Grants of patents per researcher (HC)	Constructed by dividing "Grants of patents (total)" with "Total researchers (HC)".
Grants of patents per million inhabitants	Constructed by dividing "Grants of patents (total)" with population of a country and by multiplying the result by a million.
Grants of patents per application for patent	Constructed by dividing "Grants of patents (total)" with "Applications for patents (total)".