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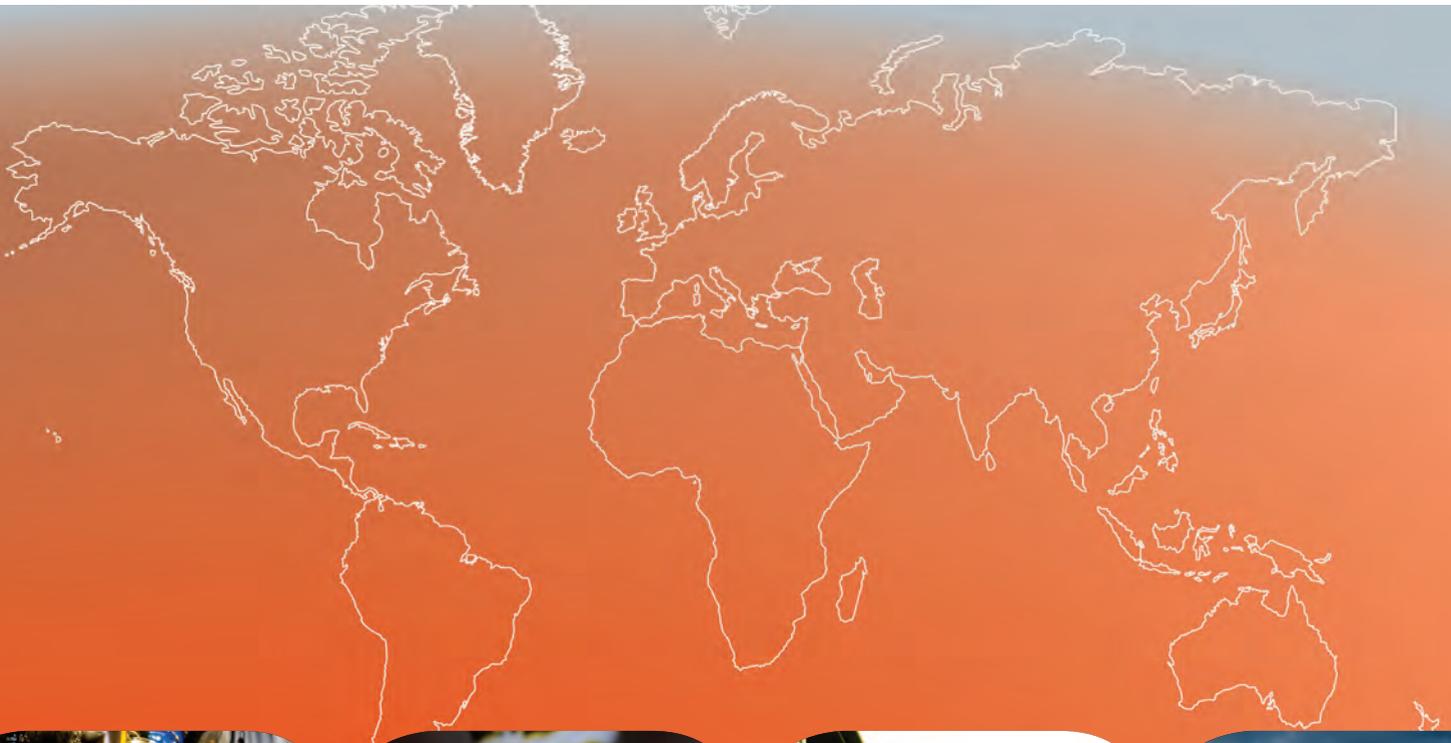
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The Global Innovation Index 2016

Winning with Global Innovation



Confederation of Indian Industry



ATKearney

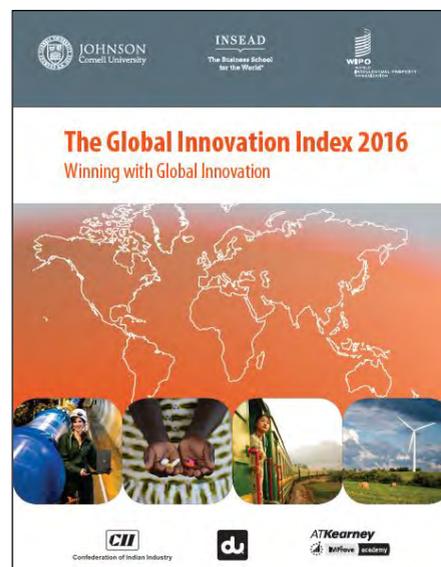


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Theme and coverage of GII 2016

The Global Innovation Index (GII) 2016 covers 128 economies around the world and uses 82 indicators across a range of themes. Thus the GII 2016 presents us with a rich dataset to analyse for global innovation trends. The theme for this year's GII is 'Winning with Global Innovation'. Science and innovation are more internationalized and collaborative than ever before; a rising share of innovation is carried out through collaborative networks, leveraging talent worldwide. The GII explores global innovation as a win-win-proposition.

This report presents chapters that discuss different aspects of the index and the theme, followed by appendices that provide the data from individual data tables for each indicator, a profile for each of the countries/economies covered this year, detailed information about the sources and definitions of each indicator, and technical notes about the composition of the index.



Key findings

The key findings of the report are included in its Chapter 1, "The Global Innovation Index 2016: Winning with Global Innovation", written by Soumitra Dutta, Rafael Escalona Reynoso, and Jordan Litner from Cornell University; Bruno Lanvin from INSEAD; Sacha Wunsch-Vincent and Kritika Saxena from from WIPO. They include the following:

Finding 1: Leveraging global innovation to avoid a continued low-growth scenario : The global economy is not back on track. Concerns about weak future output growth and low productivity are now serious. In this light, uncovering new sources of productivity and future growth are the priority. If R&D expenses or incentives to innovators are not sustained, the progress accumulated in previous years can vanish quickly.

Finding 2: Need for a global innovation mindset and fresh governance frameworks : Science and innovation policies should also become more inclusive of developing countries. Are new governance systems needed to improve global innovation cooperation? This question should be at the centre of future innovation policy debates. A new global innovation mindset can provide a timely counter to rising sentiments of nationalism and fragmentation.

Finding 3: Innovation is becoming more global but divides remain : The GII rankings have shown a remarkable level of global diversity among innovation leaders over the years. In 2016, the GII remains relatively stable at the top. Yet, a symbolic first step in closing the divide between developed and developing countries has also been made: China is the first middle-income economy to join the top 25 of the GII.

Finding 4: There is no mechanical recipe to create sound innovation systems; entrepreneurial incentives and 'space for innovation' matter. How best to create innovation systems that enhance innovation quality is becoming a core challenge in all types of economies. Governments should focus on providing enough space for entrepreneurship and innovation; the right incentives and encouragement to bottom-up forces such as individuals, students, small firms, and others; and a certain 'freedom to operate' that often challenges the status quo is part of the equation.

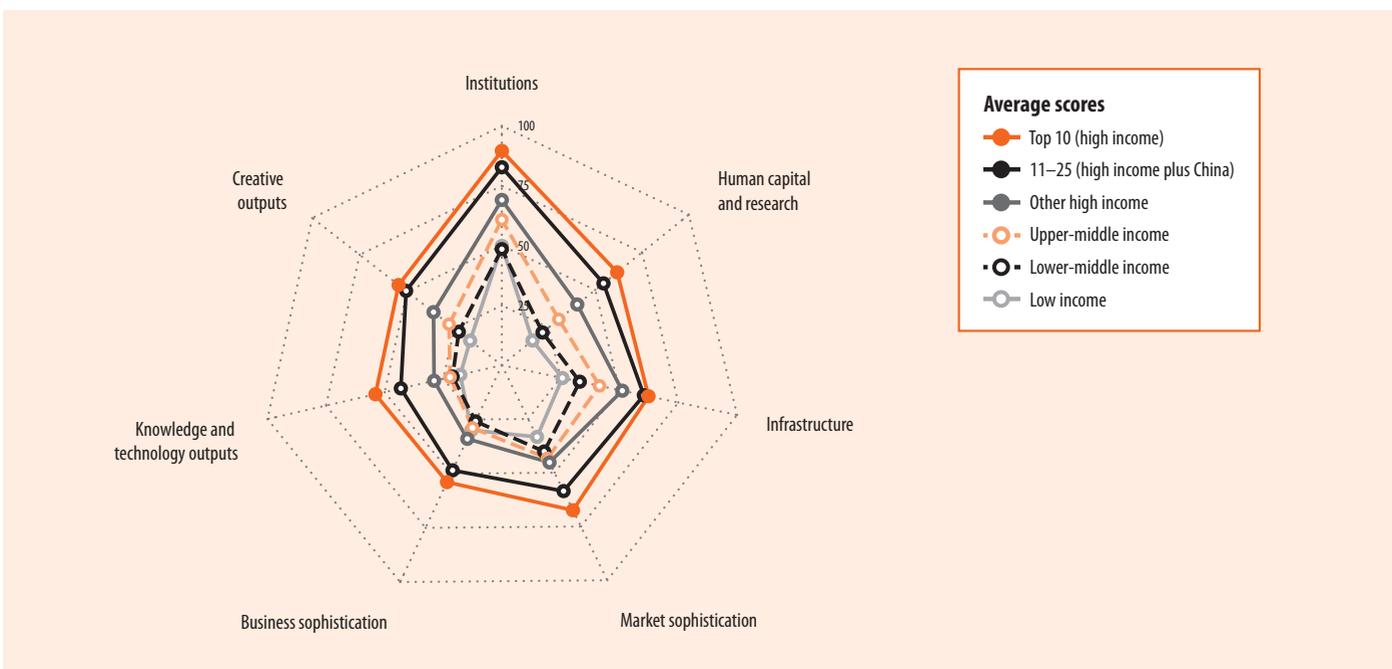
The global dynamics of innovation performance

Movement in the top 10 of the GII



The GII 2016 confirms the continued existence of global innovation divides even within income groups. All top 25 economies are in the high-income group with the exception of China, which is upper-middle income.

Innovation divide being bridged: China reaches the top 25



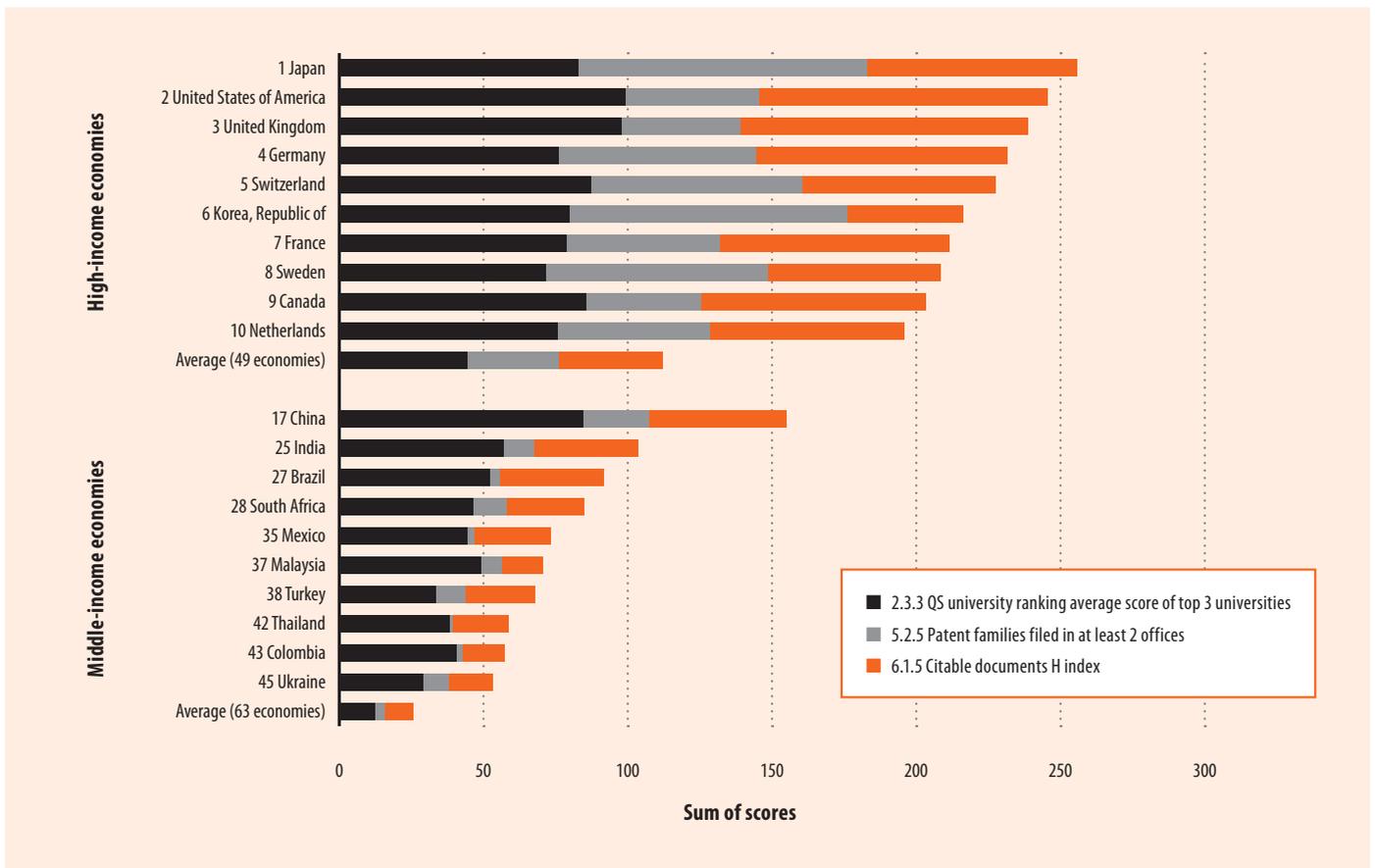
Sub-Saharan Africa’s challenge: preserving the innovation momentum in one of the most promising regions. For several editions, the GII has noted that the Sub-Saharan Africa region performs well on the innovation front. Since 2012, Sub-Saharan Africa has had more countries among the group of innovation achievers than any other region: Kenya, Madagascar, Malawi, Mozambique, Rwanda, and Uganda. Yet the relatively strong performance in innovation in the region is neither uniform across all economies nor is future success guaranteed.

Latin America and the Caribbean still have untapped innovation potential, but will face important risks in the near-term. In the region, Chile, Colombia, Costa Rica, Mexico, and Uruguay achieve the best regional GII ranks again. Yet, as Latin America, especially Brazil, has entered into a zone of considerable economic turbulence, it will be important to overcome short-term political and economic constraints and to cling to longer-term innovation commitments and results. Greater regional R&D and innovation cooperation in Latin America might indeed help in this process, as underlined in this year’s GII theme.

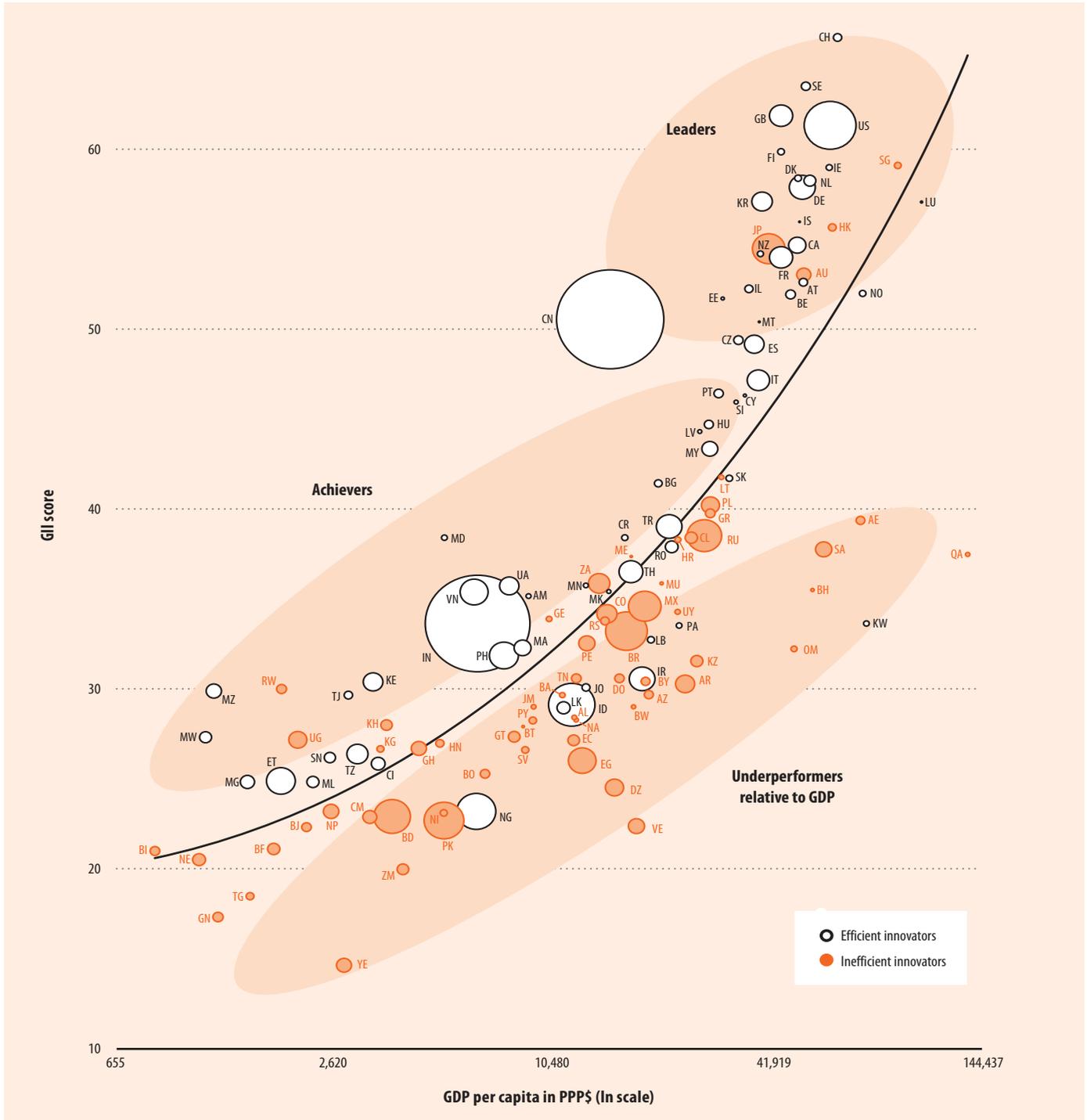
Quality matters

Three indicators of innovation quality are used in the GII to overcome the traditional quantity focused innovation metrics: one - an indicator measuring the performance of a country’s universities; one measuring the international scope of domestic inventions; and, finally, one assessing the extent to which scientific publications emanating from one country are cited.

Metrics for quality of innovation: Top 10 high- and top 10 middle-income economies



GII scores and GDP per capita



Note: 'Efficient innovators' are countries/economies with Innovation Efficiency ratios ≥ 0.66 ; 'Inefficient innovators' have ratios < 0.66 ; the trend line is a polynomial of degree three with intercept ($R^2 = 0.661$).

This figure plots GII scores against GDP per capita in PPP\$ (in natural logs). When countries' stages of development are considered, GII results can be seen in a new light. Economies that appear close to the trend line show results that are in accordance with what is expected from their level of development. Innovation leaders and innovation achievers are found above that line. Bubble sizes reflect populations.

In an innovation-perfect world, who would do what?

HUMAN CAPITAL AND RESEARCH

EDUCATION EXPENDITURE PER PUPIL
MOZAMBIQUE

PERFORMANCE OF PUPILS IN READING, MATH AND SCIENCE
CHINA

PUPIL-TEACHER RATIO
GEORGIA

GRADUATES IN SCIENCE AND ENGINEERING
IRAN

R&D EXPENDITURE AS SHARE OF GDP
REPUBLIC OF KOREA

QUALITY OF UNIVERSITIES
UNITED KINGDOM

CREATIVE OUTPUTS

TRADEMARK APPLICATIONS
PARAGUAY

INDUSTRIAL DESIGN APPLICATIONS
TURKEY

ICTS AND ORGANIZATIONAL INNOVATION
ESTONIA

CREATIVE INDUSTRY EXPORTS
COSTA RICA

PUBLISHING INDUSTRY
LEBANON

BUSINESS SOPHISTICATION

KNOWLEDGE-INTENSIVE EMPLOYMENT
SINGAPORE

WOMEN WITH ADVANCED DEGREES
RUSSIAN FEDERATION

UNIVERSITY AND INDUSTRY RESEARCH COLLABORATION
UNITED STATES

STATE OF CLUSTER DEVELOPMENT
UNITED ARAB EMIRATES

INFRASTRUCTURE

USE OF INFORMATION TECHNOLOGIES
DENMARK

CAPITAL AND INFRASTRUCTURE INVESTMENT
ALGERIA

ENVIRONMENTAL PERFORMANCE
FINLAND

KNOWLEDGE AND TECHNOLOGY OUTPUTS

PCT INTERNATIONAL PATENT APPLICATIONS
JAPAN

QUALITY OF SCIENTIFIC PUBLICATIONS
GERMANY

PRODUCTIVITY GROWTH
INDONESIA

HIGH- AND MEDIUM-TECH MANUFACTURING
SWITZERLAND

HIGH-TECH EXPORTS
MALAYSIA

ICT SERVICES EXPORTS
INDIA

INSTITUTIONS

REGULATORY QUALITY
HONG KONG (CHINA)

EASE OF STARTING A BUSINESS
NEW ZEALAND

MARKET SOPHISTICATION

EASE OF GETTING CREDIT
RWANDA

MICROFINANCE AS SHARE OF GDP
CAMBODIA

VENTURE CAPITAL DEALS
ISRAEL

Dissemination and Media Coverage

Major global media organizations like The Wall Street Journal, The Economist, and the BBC have used the GII as reporting reference material. In 2013, The Economist called the GII “A New Way to Measure Innovation” and hailed its methodology. This was another step toward establishing the GII as one of the world’s reference reports.

In 2013, the GII was launched at the Opening Session of the United Nations Economic and Social Council (ECOSOC). In his opening remarks, United Nations Secretary-General Ban Ki-moon stressed that the “*GII is a unique tool for refining innovation policies ... for providing an accurate picture on the role of science, technology and innovation in sustainable development, and for assessing where more efforts are urgently needed*”.



United Nations Secretary-General Ban Ki-moon launches 2013 Global Innovation Index © WIPO, 2013, Photo by Emmanuel Berrod

In 2014, the GII was launched in Sydney, Australia. Former Australian Minister for Industry Ian Macfarlane joined authors and partners of the report at a gathering of international business leaders (B20) which was part of Australia’s preparations to host the annual Group of Twenty (G20) Leaders Summit in November, 2014.



In 2015, the GII launch was hosted by the United Kingdom (UK). Baroness Neville-Rolfe, Minister for Intellectual Property said: “*The UK has an outstanding tradition in producing the very best in science and research: with less than 1% of the world’s population we produce 16% of the top quality published research. This research excellence is a major factor in the UK maintaining its position at number two in the 2015 Global Innovation Index. The government is committed to making Britain the best place in Europe to innovate, patent new ideas and start and grow a business.*”



The GII 2015 was featured in numerous global media leaders such as The Economist, Bloomberg News, BBC World News, China’s Xinhua news service, and The Hindustan Times.

Additional information, as well as the full report, can be found at: <http://www.globalinnovationindex.org>

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