

UNU-MERIT

United Nations University - Maastricht Economic and social
Research and training centre on Innovation and Technology

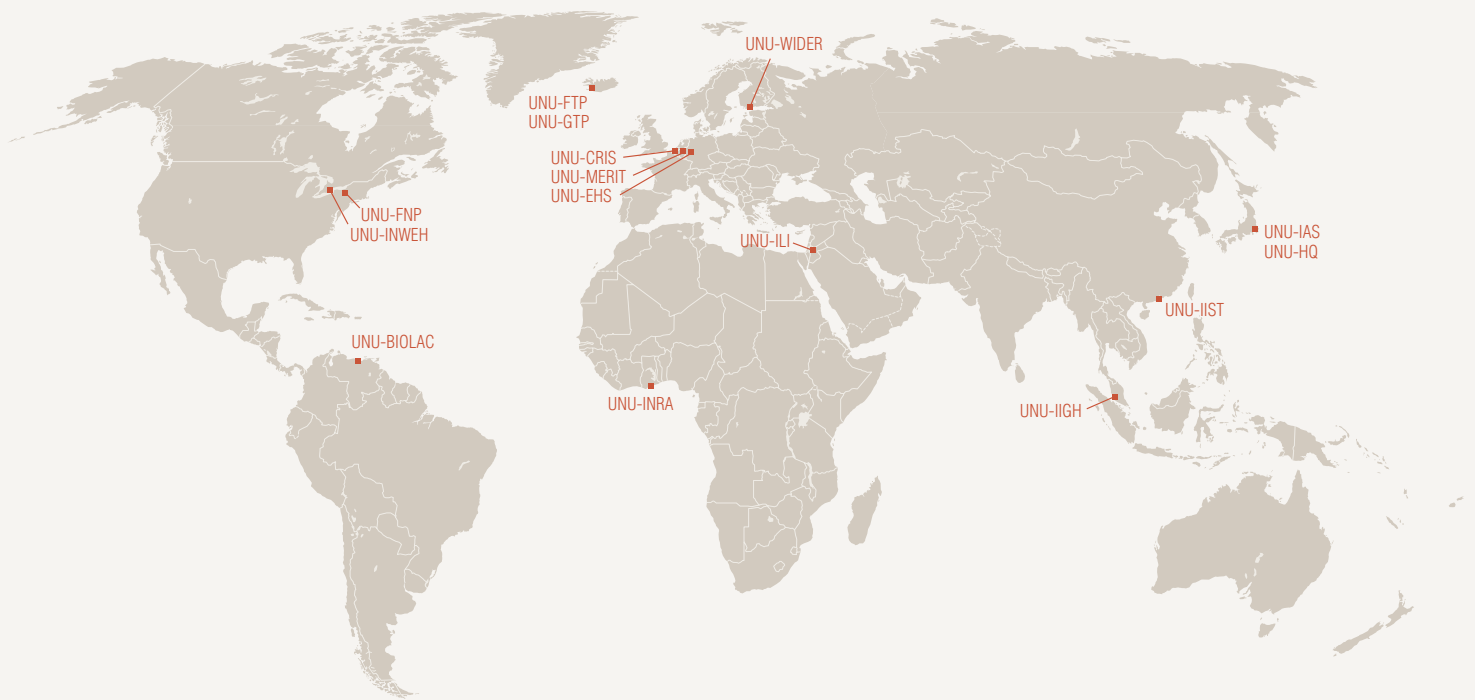


UNITED NATIONS
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Universiteit Maastricht



UNU Research and Training Centres worldwide

UNU-BIOLAC

UNU Programme for Biotechnology in Latin America and the Caribbean
IDEA, Edificio Bolívar, Planta Baja, Estado Miranda, Venezuela

UNU-CRIS

UNU Programme for Comparative Regional Integration Studies
C/o Grootseminarie Potterierei 72, 2nd floor 8000 Brugge Belgium

UNU-EHS

UNU Institute for Environment and Human Security
UN Campus, Hermann-Ehlers-Str. 10, 53113 Bonn, Germany

UNU-FNP

UNU Food and Nutrition Programme for Human and Social Development
Cornell University, 127 Savage Hall Ithaca, New York 14853 USA

UNU-FTP

UNU Fisheries Training Programme
Hafrannsóknastofnunin - Marine Research Institute, Skúlagata 4, P.O. Box 1390 121 Reykjavík, Iceland

UNU-GTP

UNU Geothermal Training Programme
ORKUSTOFNUN, Grensásvegur 9 IS-108 Reykjavík, Iceland

UNU-ILIAS

UNU Institute of Advanced Studies
International Organizations Center, 6F Pacifico-Yokohama 1-1-1 Minato Mirai Nishi-ku Yokohama 220-0012 Japan

UNU-IIGH

UNU International Institute for Global Health
Kuala Lumpur, Malaysia

UNU-IIST

UNU International Institute for Software Technology
Casa Silva Mendes, Estrada do Engenheiro Trigo No. 4, Macau

UNU-ILII

UNU International Leadership Institute
c/o University of Jordan, Amman, Jordan

UNU-INRA

UNU Institute for Natural Resources in Africa
ISSER Building Complex, Nasia Road, University of Ghana, Legon

UNU-INWEH

UNU International Network on Water, Environment and Health
McMaster University, John Hodgins Engineering Bldg., 1280 Main Street West, Hamilton, Ontario, Canada L8S

UNU-MERIT

UNU - Maastricht Economic and Social Research and Training Centre on Innovation and Technology
Keizer Karelplein 19, 6211 TC Maastricht, The Netherlands

UNU-WIDER

UNU World Institute for Development Economics Research
Katajanokanlaituri 6B, 00160 Helsinki, Finland

UNU-MERIT is a joint research and training centre of United Nations University and Maastricht University in the Netherlands. Established in 1990 as the UNU-Institute for New Technologies (UNU-INTECH) it was renamed UNU-MERIT in 2006 following formal integration with its sister research institute, MERIT, at Maastricht University.

Our mission

In practically all countries of the world, both rich and poor, there is a growing awareness of the need for creative new approaches to achieve sustainable and equitable economic growth. For the least developed countries especially - already struggling to 'catch up' with older phases of industrialization - a strong analytical capacity is critical in understanding and mapping innovation patterns, monitoring the emergence of new technologies, assessing their likely socio-economic impacts, and making informed decisions on the technological and institutional changes that will contribute to their sustainable development goals.

A large multicultural and interdisciplinary research community that brings together more than 100 researchers, affiliated fellows, and graduate students from over 40 countries across the developed and developing world, UNU-MERIT's mission is to provide insights into the social, political and economic factors that drive technological change and innovation. The Institute's research and training programmes address a broad range of policy questions relating to the role of science, technology and innovation in bringing about development and social welfare. In short, how individuals, organizations, productive sectors, countries and entire regions can make better use of knowledge resources to enhance their growth and development opportunities.



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Flavia Carvalho, Brazil :

'The best thing about studying at UNU-MERIT is the chance to interact with people from such different cultures and backgrounds. Such diversity positively impacts on my view of the world, and broadens my perspective on the serious problems confronting developing countries today.'



Bilal Mirza, Pakistan:

'There is no doubt about the distinction of UNU-MERIT in terms of its area of research and academic standing- the main motive for me to join the institute. The research course is indeed exceptional by training and engaging learners from across the globe to discuss and address the present challenges of developing countries through innovation and technology.'

Towards academic excellence

With two PhD programmes and tens of research projects undertaken each year, UNU-MERIT's work is organized around five strategic themes based on common methodological approaches.

Micro-based evidence research on innovation and technological change

This research area employs a range of econometric and statistical tools to systematically analyze data on the determinants and effects of innovation in both developed and developing countries. 'Micro data' such as research and development (R&D) and innovation surveys, research publications, patents, and tax incentives are utilized to improve our understanding of the links between innovation, R&D, employment, productivity and competition, and to benchmark innovative performance across countries.

The role of technology in growth and sustainable development

This research theme focuses on a range of macro-economic questions with respect to the impact of technology and innovation on growth and development. Emphasis is placed on social aspects of innovation such as: international dimensions of labour and human capital; economic growth and income inequality; and the linkages between education, health and other basic needs, and economic development.

Knowledge and industrial dynamics

This theme investigates the nature of knowledge, by analyzing knowledge flows and learning within different technology sectors. While high-tech sectors such as biotechnology and information and communication technologies are covered, emphasis is also placed on technological upgrading and innovation in more traditional sectors such as agriculture, industrial production and services.

Innovation, entrepreneurship and development

Studies carried out under this theme include the international R&D strategies of firms, the role of affiliates of multinational corporations (MNCs) in host countries, and the effect of inter-firm networks on innovation. A particular focus is on host government policies with regard to foreign direct investment and the technological catching up strategies of companies originating from developing countries.

The governance of science technology and innovation

The globalization (and regionalization) of the economy and the changing paradigms of knowledge-driven economies are reshaping the contours of science, technology and innovation. This primarily policy-oriented research cluster forms a creative hub for identifying new policy directions to respond to a changing world. Drawing on research carried out across the Institute, as well as the broader research network, this group develops new knowledge, analytical concepts and recommendations to address latent or future policy needs.

Post Graduate Training

UNU-MERIT is a leading training institution with two established PhD programmes on ‘Economics and Policy Studies of Technical Change,’ and ‘Innovation Studies and Development.’ Together they admit up to 12 postgraduate researchers each year, roughly half of whom come from developing countries in Africa, Asia and Latin America and the Caribbean. With a multidisciplinary approach that addresses a broad range of theoretical, institutional and policy issues, the study programmes provide an opportunity for young researchers to interact with world class scholars and researchers, while at the same time enriching the core research and policy analysis activities at the Institute. UNU-MERIT also hosts visiting researchers, including PhD interns based at other universities and research organizations.



Fernando Santiago Rodriguez, Mexico:
 ‘One of the best things I’ve found at UNU-MERIT is the close communication, solidarity and strong sense of community built among PhD students. Casual discussions and everyday sharing of knowledge and experiences, whether or not related to my research topic, has made my stay all the more valuable and rewarding.’



Ivan Kulis, Croatia:
 ‘I applied for the programme because I was looking for a centre of excellence on innovation studies - and a unique link with developing countries. By bringing together students from such different backgrounds the courses allow for challenging discussions and exciting group learning. Also, the institute bridges the gap between research and policy, and makes it ideal place to get exposed to a mix of academic, policy and development practitioner experience.’



The following are a few examples of policy-oriented research projects at UNU-MERIT.

FLOSS World

Recent studies of free/libre open source software (FLOSS) communities around the world have demonstrated that the process of learning and adapting software enables users to become 'creators of knowledge' rather than mere passive consumers of proprietary technologies. The FLOSSWorld project at UNU-MERIT aims to strengthen Europe's leadership in research into FLOSS and open standards, building a global constituency with partners from around the world.

Knowledge Economy Indicators (KEI)

Covering 30 European countries as well as the US, Japan, India, China, Australia and Canada, the project is developing innovative and reliable indicators to improve our understanding of the knowledge economy. The project aims to contribute to a methodological framework to measure interdisciplinary issues such as sustainability, employment, social cohesion, and economic disparities.

Foreign Direct Investment and Innovation

This project analyzes the types of policies that host countries should adopt to maximize the positive impacts of foreign direct investment (FDI) on their knowledge base and economy. The study seeks to contribute towards more effective FDI policies in four advanced developing countries: China, India, Brazil and Mexico.

A policy think-tank

At the core of our policy work is the recognition that the technological factor is a critical component in understanding economic development processes and decision-making. This holds not just for macro-economic performance indicators such as growth and employment but also for the individual decisions of firms and other organizations on how best to invest in research and development, the adoption and licensing of new technologies, education and training, and other innovation inputs. These so-called 'intangible' investments are in many sectors more important today than physical infrastructure and other capital investments.

UNU-MERIT draws on the vast pool of evidence-based research within the Institute and broader research network to contribute to the development of knowledge policies at the global, national and regional level, in the developing as well as developed world.

With its base in Europe, UNU-MERIT is particularly well embedded in European research and policy circles and coordinates a broad range of EU-wide studies each year. These projects feed directly into the work of national government agencies, the European Commission, OECD, World Bank and other international bodies.

The World Knowledge Report (WKR)

The World Knowledge Report is a major UNU-MERIT study that offers a new global perspective on knowledge and development in the world economy. It draws on academic research, explores its policy relevance and challenges some of the conventional views on the allocation of knowledge and the relative importance of diverse actors and regions in innovation dynamics. The culmination of a major collaborative effort by a large team of UNU-MERIT researchers, the study contributes new empirical analysis to explain how developing as well as developed countries can enhance knowledge diffusion, and subsequently build on this knowledge base to add value to their economic production activities and overall sustainable development.

At the country level, the report addresses both the growing shift in knowledge flows in favour of Asia and a small number of advanced industrializing countries, as well as new priorities in developed countries. Drawing on comparative analysis and empirical research, the WKR research team explores the convergence of firms in advancing developing countries closer to the state of art of technological development; the increasing importance of financial and human capital complementarities in new investment for knowledge intensive activities; and the emerging dualistic production structure in developing countries. The report also deals with the pressing needs for access to knowledge and social innovation and identifies crucial gaps of statistical information for the introduction of knowledge development policy instruments in developing countries.



INNO-Metrics

The INNO-Metrics initiative analyzes and benchmarks innovation performance in Europe, with a view to identifying innovation strengths and weaknesses at European and national level and measuring progress over time. It builds on the European Innovation Scoreboard (EIS), a widely recognized tool to benchmark innovation performance in Europe.

Comparative Study of Biotechnology Innovation Systems

While all developing countries need to acquire and master a wide array of technologies, some have been more successful in stimulating innovation. This project explores the role of institutional structures and policies in the development of the biotechnology sector in Kenya, Tanzania, Nigeria, Malaysia, and Vietnam, and draws lessons on how these budding innovation systems can be strengthened.

Policy Mix in R&D

In line with the Barcelona target of devoting 3% of GDP on knowledge investments in European countries this project analyzes a broad range of policies and public financing instruments that promote investments in innovation. It draws on a range of knowledge sources - both theoretical and practical - to help identify optimal policy mixes that can lead to effective R&D investments in different country contexts.



Training for Policymakers

The rapidly changing global economic environment presents a particularly difficult challenge for developing countries. With the dismantling of barriers to trade and investment, innovation-based competition has increased, putting pressure on countries to not only master new technologies, but to develop policies that stimulate and support a process of innovation across all productive sectors.

The strengthening of research capabilities as a support to evidence-based policy making, and the training of policymakers themselves, is therefore a key component of UNU-MERIT's work.

UNU-MERIT organizes numerous training programmes and capacity building activities each year in collaboration with government bodies, policy research organizations and other institutional partners around the world. One of the regular programmes offered by the Institute is the training course in the Design and Evaluation of Innovation Policies, (DEIP). The training courses are designed to meet the growing demand from developing countries for support in analyzing the latest technological developments and designing appropriate responses tailored to their specific development contexts. Hundreds of senior policymakers and technical advisers from science and technology ministries and related bodies have participated in the programme since its establishment in 2004.

A participant at a UNU-MERIT training workshop on strategic alliances management receives his certificate. The course was specially organized for senior managers at the Corporate Strategy Department, Central Bank of Nigeria.



International migration

Researchers at UNU-MERIT are studying the changing nature of international migration, particularly the increasingly competitive global 'market for brains', in order to understand the impacts this has on science, technology and innovation in both developing and developed countries.



Transitions to sustainability

UNU-MERIT promotes networking amongst researchers and policymakers to develop alternative road maps for achieving sustainability in crucial sectors such as energy, transport and agriculture.

A foot on the ground

Through its decentralized Learning, Innovation and Knowledge (LINK) network on 'pro-poor' rural innovation policy studies, UNU-MERIT engages with, and provides capacity building support to, local clusters of researchers, policymakers, and development organizations in developing countries. Operating out of regional offices in India (South Asia), Kenya (East Africa) and Ghana (West Africa, in collaboration with UNU-INRA), the programme contributes new analytical approaches to help policymakers and development planners to move beyond the traditional focus on agricultural research, technology transfer and rural industrialization, towards a more holistic understanding of rural innovation capacity. This perspective recognizes the multidimensional nature of the rural economy that includes, but goes beyond agriculture to cover a broad range of rural enterprises and services such as food processing, textiles, forest products, health care, transport, energy, banking, telecommunications, and water and sanitation.



Developing countries need to pay attention to knowledge upgrading in traditional sectors as part of their strategies to tackle rural poverty



Access to medicines

Against a backdrop of increasingly stringent international trade rules UNU-MERIT works with researchers and policymakers in developing countries to explore new opportunities to develop drugs and vaccines that help meet priority health needs, and to promote learning and innovation in the health sector.



Learning to innovate

UNU-MERIT researchers carry out numerous case studies each year to analyze the complex learning and innovation processes that take place within specific manufacturing and service sectors in response to changing market conditions and other external factors. In doing so they aim to identify specific strategies that firms, as well as countries and regions, can adopt in order to remain competitive in a rapidly changing global environment.



Marion Motari, Kenya:

'UNU-MERIT is a centre of academic and research excellence, which provides an atmosphere for free and vibrant enquiry into issues affecting the developing world.'



Abraham Garcia, Spain :

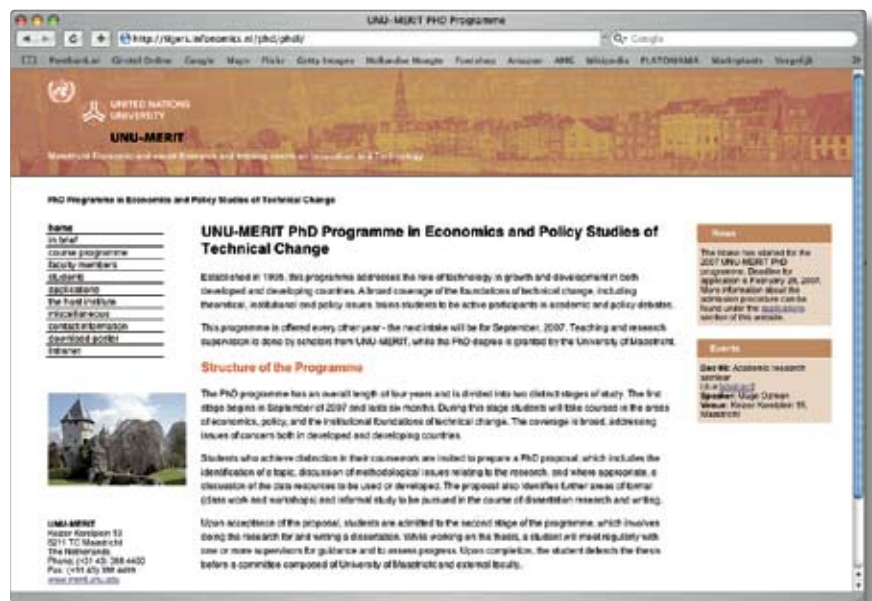
'UNU-MERIT provides an excellent environment for PhD research. You do not only improve your academic research skills, but also get practical experience in analyzing policy issues by participating in international projects.'

Dissemination, outreach and networking

UNU-MERIT organizes a range of activities designed to stimulate academic debate, disseminate research findings, and facilitate knowledge sharing among researchers and policymakers. The Institute's researchers also publish numerous books, journal articles and other research outputs each year. Research, training and capacity development activities at UNU-MERIT are collaborative processes, involving more than 200 research institutes, networks and policy bodies around the world. The Institute's researchers are involved in, among others: the Dynamics of Institutions and Markets in Europe (DIME) Network of Excellence; the European Policy for Intellectual Property (EPIP) Network; the European Techno-Economic Policy Support Network (ETEPS); the Ibero-American and Inter-American Network on Science and Technology Indicators (RICYT), Argentina; The Global Network for the Economics of Learning, Innovation, and Competence Building Systems (GLOBELICS); the Africa Technology Policy Studies (ATPS) Network; and the Initiative for Policy Dialogue.

To make academic results more meaningful for policymakers and the general public, UNU-MERIT publishes regular policy briefs with overviews of key technology policy issues and recommendations for policymakers. The Institute also organizes an annual public lecture series named in honour of professor Charles Cooper, the founding director of the UNU Institute for New Technologies.

The Institute's website www.merit.unu.edu showcases the diverse activities undertaken at the Institute and provides a one-stop portal for accessing research reports and numerous academic publications and ongoing research activities.





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**UNITED NATIONS
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United Nations University (UNU) is an international community of scholars engaged in research, postgraduate training and the dissemination of knowledge aimed at resolving the pressing global problems of human survival, development and welfare, in line with the purposes and principles of the Charter of the United Nations.



Universiteit Maastricht

Established in 1976, Maastricht University (UM) is the youngest university in the Netherlands. It has gained a reputation at home and abroad for its unique 'Problem-based learning' approach. Approximately 12,000 students and 3,250 staff study and work within the University's seven faculties.