

Networks for Prosperity

Connecting Development Knowledge Beyond 2015 Executive Summary



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Connecting Development Knowledge Beyond 2015

Executive Summary



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

partner for prosperity



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Foreword

Jesús Gracia Aldaz Secretary of State for International Cooperation and for Latin America of Spain

The Millennium Development Goals Achievement Fund (MDG Fund) is a Spanish initiative created to accelerate progress on the achievement of the MDGs, by supporting high-impact innovative actions in selected countries and sectors, actions that could be wide replicated.

Another key objective of the Fund has been to promote the cooperative inter-agency work within the UN System. In fact, all MDG-F-financed programs build on the collective strength of the UN, bringing several Agencies together to address issues that cut across the mandate of individual organizations. The MDG-F is thus contributing to the UN Reform process, in particular to the UN efforts to deliver as one.

With the resources assigned to this Fund (a total of 618 million Euros) Spain has supported more than 130 joint programs in fifty countries from five regions around the world. Over twenty UN Agencies have been involved in the formulation and implementation of MDG Fund joint programs, with an average of six Agencies participating in each programme.

In 2010 the MDG Fund requested UNIDO to create a knowledge management concept that would help developing countries to adapt private sector development knowledge to their specific contexts and needs, and, at the same time, enhance the knowledge capabilities of the United Nations system and its national counterparts and partners in the field of Private Sector Development policy. As a result, the *Networks for Prosperity* initiative was born within the context of the project "Establishing a Global Knowledge System for Private Sector Development (PSD) Policy".

In this context, a first report Networks for Prosperity: Achieving Development Goals through Knowledge Sharing was published in November 2011, and has received an overwhelmingly positive response. This is not surprising. Policy-makers increasingly recognize the potential of networking and cooperation as essential tools to create jobs through economic growth and prosperity. From a historical perspective, this field has been severely underestimated and underresearched but recent academic research shows its relevance and direct impact in economic development.

This is why Spain is proud and honoured to be part of this second report and cherishes UNIDO for its continued work in this field. The *Networks for Prosperity* initiative has been supported by Spain since its beginning, and we value all the related achievements and activities developed under this programme by UNIDO. We especially welcome the focus on Latin America and the Caribbean in this first phase of the initiative and I truly believe that UNIDO's catalytic work and expertise are ideal for matching the economic development priorities of the countries from this geographic region.

The MDG Fund represents the Spanish commitment to multilateral cooperation for development, and acknowledges the extraordinary effort made by Spain in this regard. This expertise-based partnership of UNIDO with the MDG Fund has made a tremendous contribution to the impact and visibility of the Fund efforts, both globally and in its country programs. We are therefore looking forward to the continuation of the fruitful collaboration and partnership with UNIDO in this field of economic governance and knowledge networking.

Jesús Gracia Aldaz

Secretary of State for International Cooperation and for Latin America of Spain



Foreword Kandeh K. Yumkella Director-General, UNIDO

The first Networks for Prosperity report was launched in November 2011 at a time of great economic uncertainty, great inequity, high urbanization, financial constraints and high youth unemployment.

It was intended to build on the existing literature by examining types of knowledge networks and exploring their relationship with private sector development and economic growth. It was a genuine and original academic exercise which reflected the critical role of knowledge networks as one of the driving, though invisible, forces of economic growth.

The first report highlighted in its recommendations that countries could significantly benefit from ensuring that their local and international networks are successfully embedded. Vibrant knowledge networks require a living ecology of institutions, which perpetually provide new knowledge and opportunities, and which continuously enhance socioeconomic and private sector development policymaking abilities at the national and international levels. Globalization means that world economies cannot grow in isolation, and in this context of interrelations and connectedness higher economic growth stems from regional and international integration. If this integration is to be successful, it is necessary to create a strong infrastructural base, and to diffuse the transfer of knowledge, skills, information, technology, innovation and investments with the objective of achieving a major goal: sustainable growth and prosperity.

One year on, the global community seems ready to embrace new forms of partnership in the pursuit of sustainable development. The High-level Forum on Aid Effectiveness held in Busan in November 2011 has set the scene for new modalities of development assistance that go beyond traditional concepts of donor and recipient, to incorporate more complex networks of South-South, triangular and public-private cooperation. Efforts towards agreeing to a new set of global development goals beyond 2015 are also looking to unleash the power of new development actors through networks. It has for some time been an important feature of the global economic environment that industrial production has become segmented into different stages across different countries. Many of these countries are located in the South. Emerging or transition economies are increasingly broadening and deepening their range of knowledge and expertise to a point where traditional development actors will need to re-define their role towards acting as a connector and catalyst, facilitating countries on their paths to greater independence and international leadership.

This second Networks for Prosperity report collects all these interests from a rich diversity of sources and goes one step further by analyzing knowledge networks and network governance in practice, including some factors that allow some to be more successful than others. An updated version of the Connectedness Index covering more countries, together with a comparative analysis of all international networking indices and additional case studies introduced, provides a closer and more detailed approach to networks, reflecting its influence and impact on global policymaking and development cooperation. Reflective essays by leading experts point to key issues to be tackled in the near future with regard to knowledge networks. The report was prepared on behalf of the United Nations system by UNIDO's Networks for Prosperity initiative in close collaboration with the University of Leuven. The Networks for Prosperity initiative was generously supported by the Government of Spain through the Development and the Private Sector thematic window of the Millennium Development Goals Achievement Fund. I am convinced that this report will prove to be a useful tool for policymakers, professionals and experts in the achievement of sustainable development and economic growth.

Kandeh K. Yumkella Director-General, UNIDO



Foreword

Sophie de Caen Director, MDG Achievement Fund

As part of a larger knowledge management initiative for private sector development programming, the MDG Achievement Fund has proudly supported the Networks for Prosperity initiative since its inception. The second report of the Networks for Prosperity initiative provides the reader a clear and insightful picture on the critical role that knowledge networks play in a new global aid architecture.

Remarkable academics and practitioners have collaborated in the elaboration of this report by providing new and innovative essays covering different aspects of networks, from regulatory networks to business networks or the analysis of barriers to learning.

The Connectedness Index presented in this report shows the correlation between a high degree of regional and global integration with economic improvement. Knowledge networks have an impact in economic growth, so policymakers and practitioners will find this report particularly useful as it shows the internal workings of knowledge networks, how they are created, what factors are going to play a decisive role in the successful end of a network. Country case studies show networks in action, particularly through the creation and promotion of knowledge platforms aimed at the achievement of sustainable economic growth. We are convinced that the achievements and results presented in this report will have a strong impact in the overall field of sustainable development, the debate about the post-2015 agenda, and the growing relevance of South-South cooperation.

Sophie de Caen

Director, MDG Achievement Fund



Foreword

Jan Wouters Director, Leuven Centre for Global Governance Studies

In the face of evolving global challenges and shifting notions of development, the strategies which developing countries devise in order to achieve economic growth and stability must also adapt. Industrial development is no longer the monopoly of large hierarchically organized institutions.

Networks and knowledge networks are becoming increasingly important to support industrial development in line with the Millennium Development Goals. The present second Networks for Prosperity report, building on the foundational first report, taps the knowledge of academics and practitioners alike to demonstrate how networks and network governance can help states in applying sound and profitable industrial development strategies. By disseminating information, encouraging learning, and diffusing management practices, networks spark and support private sector development.

This report aims to expand the understanding of how networks function in theory and in practice. Doing so exposes the ways in which networks can disseminate information capable of influencing development practices. The research centres on UNIDO's recognition of networks as major contributors to private sector development. Bearing this in mind, the report acknowledges networks as an emerging governance structure, and it recognizes that there is both a profound lack of scientific research on this phenomenon and significant potential for such research to bolster developing countries' capacity to more effectively utilize networks to reach development goals.

The contributions to this report span across academic disciplines, indicating that networks and network governance offer significant opportunities for private sector development. Delving deeper into the concepts first elaborated in the 2011 report, they look into various ways to measure the links between states, the role networks play in various societal settings, and the

degree to which organizations, firms, and people influence knowledge flows across and between networks. A series of case studies expose networks in action, drawing lessons from the experience of states, NGOs, and sectors.

The findings and results reflect coordinated action and discourse between academics and practitioners fermented under the framework of the UNIDO-Leuven Centre for Global Governance Studies Expert Group Meeting on Knowledge Networks. The insights on networks, knowledge management, and network governance stem from studies prepared and discussed in this forum, and embody the multidisciplinary research approach honed at the Expert Group meeting. The report submits not only that networks constitute an innovative tool for developing countries to pursue private sector development, but also that they are a potent instrument with vast potential to impact sectors, domestic industrial development, and international cooperation to achieve the Millennium Development Goals. As we continue to investigate the magnitude of a network's effect on industrial development, the information and experiences detailed here can help challenge and rethink current notions of development, reestablishing industrialization as a key force to achieve sustainable economic development.

Prof. Dr. Jan Wouters

Jean Monnet Chair Ad Personam EU and Global Governance Professor of International Law and International Organizations Director, Leuven Centre for Global Governance Studies – Institute for International Law University of Leuven President, Flemish Foreign Affairs Council



Introduction

This study is the second report prepared by UNIDO's Networks for Prosperity initiative. The initiative was born under the funding window "Development and the Private Sector" of the Spanish MDG Achievement Fund (MDG-F). In 2010, UNIDO, as the technical convenor agency of this thematic window, was requested by the MDG-Fund Secretariat to establish a knowledge management concept that would support developing countries in acquiring and adapting private sector development (PSD)-relevant knowledge to their specific contexts and development needs, and enhance the knowledge capabilities of the United Nations system and its national counterparts and partners in the field of PSD policy.

The first report, titled *Networks for Prosperity: achieving development goals through knowledge sharing* was launched in November 2011, as a global study inspired by initial discussions on the issue of knowledge management and networking in development cooperation that took place during a global workshop among MDG-F programme coordinators in March 2011 in Panama City. This workshop was the starting point in developing a concept of the role that knowledge networks and knowledge sharing can play in private sector development policy at local, regional and global level. The meeting also inspired a first round of consultations on knowledge networks as an essential tool for policymakers to achieve economic and other development goals.

This first report was launched in Vienna, Brussels, New York, San José and Washington D.C. between November 2011 and April 2012 and served as a basis for policy considerations related to development strategy, effectiveness and governance, and led inter alia to UNIDO General Conference resolution GC.13/Res.2 *"Knowledge networking and knowledge sharing for achieving development goals"*.

Knowledge networking and knowledge sharing for achieving development goals

The General Conference,

Recalling resolution GC.13/Res.6 on the crucial role of the productive sectors in supporting the achievement of the Millennium Development Goals,

Recalling also decision IDB.38/Dec.8 on UNIDO activities in the field of industrial policy, and in particular paragraph (g) (ii) of that same decision requesting the Director-General to support the exchange of knowledge, experiences and best practices among experts and policymakers at the global and regional level,

Recalling further decision IDB.36/Dec.13 on United Nations system-wide coherence: UNIDO's role, and in particular paragraph (d) of that same decision stressing the essential contribution of industrial development in achieving the Millennium Development Goals,

Stressing the key role of the productive sectors in reducing poverty and supporting sustainable development, and thus in the achievement of internationally agreed development goals, including the Millennium Development Goals,

Underlining the importance of international knowledge networking and the exchange of experiences and best practice for the achievement of local, regional and international development goals and prosperity,

Welcoming the role of UNIDO as convenor agency for the eighth funding window of the Spanish MDG Achievement Fund (MDG-F) on "Development and the Private Sector" and, within this context, its active coordination role in the first global meeting of Joint Programme Coordinators in Panama City from 1 to 3 March 2011 and the resulting Panama Plan of Action, Taking note of the global report "Networks for Prosperity: Achieving Development Goals through Knowledge Sharing", launched on 14 November 2011, and in particular the newly-introduced Connectedness Index and the recommendations in the same report,

- 1. *Requests* the Director-General to continue to develop and foster, within the Organization's mandate and within existing resources, activities that:
 - (a) Promote international knowledge networking and knowledge governance structures for achieving local, regional and global development objectives;
 - (b) Encourage and facilitate the international knowledge networking capacities of public and private institutions in developing countries;
 - (c) Improve the inter-institutional information and knowledge exchange systems of UNIDO in the wider United Nations context;
 - (d) Support the establishment of international and cross-sectoral consultation networks to further develop the initial findings on knowledge networking and connectedness and to expand the geographic coverage of the Connectedness Index;
- 2. Encourages the Secretariat to strengthen its efforts to mobilize funds for the implementation of the above-mentioned activities;
- 3. Invites development partners to enhance their financial support to the Organization for the implementation of the present resolution;
- 4. Requests the Director-General to submit a report on the progress made in implementing the present resolution to the Industrial Development Board at its fortieth session.

Box 1.1: UNIDO General Conference Resolution GC.14/Res.2

Inspired by the success of the first report, this second report Networks for Prosperity: connecting development knowledge beyond 2015 was prepared with the aim of building on the initial findings. It intends to provide a more in-depth account and insights into the internal functioning of knowledge networks and knowledge platforms, and to define the critical factors that influence the creation and successful development of a knowledge network. For this purpose, some twenty academic and practical experts from around the world were selected as contributors after a global call for proposals and an experts group meeting that took place in September 2012 in Vienna (see box 1).

Box 1.2: Expert group meeting and its findings

On September 26th 2012, an Expert Group Meeting on Knowledge Networking and Network Governance took place in Vienna, co-organized by UNIDO and the Leuven Centre for Global Governance Studies. Participants included representatives from the European University Institute (EUI), the University of Belgrade, the non-governmental organization KNOWHOW3000, the Leuven Centre for Global Governance Studies, the Institute for International and European Policy of the University of Leuven, UNIDO, the University of California San Diego, the University of Padua, the University of Georgia School of Law, the University of Coimbra, the Institute for Economic Research on Innovation (IERI) of the Tshwane University of Technology, the International Institute of Social Studies of the Erasmus University of Rotterdam, the ALTERA Research Group of the Wageningen University and ESADE Business School.

The meeting was organized with the overarching goal of peer-reviewing the latest academic insights on knowledge management and knowledge networking. Papers were presented around three themes: (i) the conceptualization, design, management and measurement of networks; (ii) knowledge diffusion through networks; and (iii) transferring knowledge from networks to users. After the day of discussions on networks and knowledge management, the group itself inadvertently formed a network of researchers and practitioners in the field of knowledge networking in the public sector. A selected number of papers were selected to form the conceptual and academic basis of this second Networks for Prosperity report.

This report is divided into five parts:

- *Part 1* sheds light on the changes in the development landscape over the past two decades from the global development conferences to the MDGs and beyond and discusses the newly emerging development architecture and potential scenarios for a post-MDG world. It also links these broad developments to the increased relevance of South-South and triangular development cooperation, thus demonstrating the connection between this rise of "the South" and knowledge networks and network governance.
- *Part 2* presents an empirical analysis of knowledge networks and international connectedness, and their relevance to development effectiveness and economic development. A new, updated, version of global Connectedness Index is introduced for 132 countries, along with an analysis on correlations between a country's connectedness and its economic success factors. This part also includes a network-based empirical analysis on economic globalization.
- O Part 3 shows how knowledge networks actually work in the real world. From the Costa Rican case of the establishment of a competitiveness council to the networked system of business development services in Brazil and the global knowledge-networking concept of an Austrian NGO, the reader is invited to explore recent case studies that show knowledge networking and network governance in real life. In addition, this chapter illustrates the utilization of knowledge networking in the field of trade policy, comparing several trade administrations.
- O Part 4 explores how and to what degree knowledge networks differ and provides several think pieces on knowledge networks and epistemic cooperation in the respective environments of regulatory agencies, business and international organizations, such as UNIDO and IRENA. An additional chapter calls for the free movement of knowledge as a principal factor for targeted human capital development, an essential prerequisite for any knowledge economy.
- O *Part 5* provides conclusions on the aforementioned items and formulates some recommendations that Member States may wish to consider in their deliberations on the report.

PART 1: Towards a New Era of Networked Development



Towards a New Era of Networked Development

Part 1 traces the emergence of an embryonic network-based approach to the global development agenda. It charts the experience of elaborating the Millennium Development Goals (MDGs) in the 1990s, largely a result of distilling existing knowledge towards specific aims, before examining efforts in the 2000s to encourage greater participation by nontraditional development actors. In this connection, it also explores the parallel rise of South-South and triangular cooperation as well as moves by the development community to expand the global partnership for development to include more complex forms of cooperation. It goes on to examine what appears to be the beginning of a new agenda beyond the projected expiration of the MDGs in 2015, one which is likely to place greater emphasis on building and accessing knowledge in a more decentralized and dynamic way than before. Finally, it concludes by providing suggestions to developing countries on matters to consider concerning their own roles in the emerging development architecture.

1. KNOWLEDGE FUNNELLING: THE CASE OF THE MILLENNIUM DEVELOPMENT GOALS

The establishment of the MDGs as the over-arching framework for global development efforts is frequently recalled as a key outcome of the adoption of the Millennium Declaration by the General Assembly in 2000, a process in which every United Nations Member State had the opportunity to play an equal part. The Millennium Declaration could therefore be regarded as the conclusion to the ultimate participatory process - the coming together of all nations to agree a common position on how to achieve a better future for mankind. The Declaration itself had its origin in a wide range of international development publications, initiatives and conferences spanning many decades but particularly gathering steam in the early- to mid- 1990s. The publication by the United Nations Development Programme (UNDP) of its first Human Development Report in 1990 began a rapid shift away from an emphasis in development discourse on economic growth and infrastructure development towards one which saw development as a means to enrich human life and to enlarge the individual's choices. A number of mainly UN-led global conferences in the following years highlighted the need to invest in social needs such as access to nutrition, education and health services, as well as links between development and the environment, human rights, population, and gender (see Manning, 2009).

By 1995 the breadth of information on global development issues had possibly never been greater, but there was a growing feeling in some quarters that this information needed to be better analysed to arrive at areas of prioritization. The OECD's Development Assistance Committee (DAC) took it upon itself to review the future of development aid and the role of the DAC within this. One of its tasks was to examine declarations made at some of the recent UN conferences and to extract a set of actionable principles. This led to the publication in 1996 of a paper entitled "Shaping the 21st Century: the Contribution of Development Cooperation", which included a short set of proposed "International Development Goals" (IDGs), largely drawn from UN summit declarations but including rudimentary targets and indicators. The period from 1996 to 2000 saw increasing engagement and policy coordination in favour of the IDGs from a smaller group of DAC donors (mainly the "Utstein Group" of the United Kingdom, Germany, Norway and the Netherlands).

Meanwhile the Secretary-General of the United Nations began the process of preparing the Millennium Declaration, which would also contain a set of goals. Adoption of the Declaration by the General Assembly would give unimpugnable intergovernmental authority to these proposed 'Millennium Goals'. Discussions between Member States on the text eventually led to a long list of goals covering peace, security and disarmament; development and poverty eradication; the environment; human rights, democracy and good governance; protecting the vulnerable; meeting the special needs of Africa; and strengthening the United Nations. The goals went far beyond the DAC/Utstein Group's proposal for prioritized, concrete, monitorable, achievable IDGs.

Following the Millennium Summit, discussions on how to bring the development agenda forward moved to an informal group of like-minded entities, spearheaded by members of the Utstein Group together with the DAC secretariat, individuals from some UN entities, and the Secretary-General's office. This group tasked itself with agreeing a set of goals that would highlight a limited number of commitments in the Millennium Declaration that could be quantified, and for which there were established indicators for which reasonable data existed. The result of this exercise was a framework containing 8 goals, 18 targets, and 48 indicators, which was annexed to a road map on follow-up to the Millennium Summit released by the SecretaryGeneral in 2001. This list became the authoritative statement of the MDG framework despite the fact that it had not been agreed in the General Assembly or on a truly multilateral basis. In essence, the MDGs had been 'funneled' into existence by a small, informal, but highly influential network. The Goals went on to receive informal endorsement at the UN Conference on International Financing for Development in Monterrey in 2002, and it was there that funding commitments started to be made on the basis of the MDGs.

Against this backdrop, the rapid acceptance of the MDGs as a set of goals shared by all is an interesting phenomenon. The clear consensus that emerged around the framework was one of its greatest strengths, and certainly helped to mobilize resources for development. However the lack of a more inclusive consultation process also arguably led to gaps in knowledge that weakened the scope of the MDGs, and their targets and indicators, from the beginning. For example, a large range of important issues were either ignored or inadequately addressed - including productive employment (and economic aims generally), peace and security, governance and the rule of law. There was also a general lack of understanding at the outset that achieving MDGs at the country level required extensive adaptation to given country contexts - tapping into local knowledge and, above all, keeping those closest to this knowledge in the driving seat.

Ironically, perhaps, one of the MDGs did point the way towards a more broad-based approach. MDG 8, the goal to develop a global partnership for development, aimed to galvanize support particularly financial support – for the achievement of the MDGs as a whole. However, a number of the targets related to this proposed global partnership for development were defined in an imprecise manner, weakening the likelihood of establishing the networks needed to provide such support (see United Nations, 2011). In the first attempt by the United Nations system to apply lessons learned from the MDGs to a new post-2015 development agenda, one of the most striking recommendations is that, for a global partnership of this type to succeed, it should not be limited to resource mobilization and should be constructed in a much more participatory manner, with more reflection given to the knowledge that resides in a wider range of actors, including governments, civil society, the private sector and foundations (United Nations, 2012).

2. THE NEW KNOWLEDGE PLAYERS: FROM BRICS TO BUSAN

Just as the MDG framework became the dominant paradigm for development cooperation, noticeable changes were emerging in how industrialized and developing countries, or North and South, related to each other. Between 1990 and 2008, world trade expanded fourfold, spurred on by a wave of globalization that saw South-South trade escalate by more than twenty times its initial level. Indeed, despite the ongoing financial and economic crises, South-South relations have continued to be characterized by a noticeable increase in trade and investment (United Nations, A/66/229). The ascendancy of emerging economies from the South, including – but not limited to – the BRICS countries of Brazil, Russia, India, China and South Africa, brings important implications for international approaches to development and multilateral prioritysetting.

This is not to claim that the role of the South in development cooperation is a new one. Many developing countries have themselves been engaged for many years in activities to promote economic development and welfare, to provide technical assistance, and to give humanitarian aid (Mawdsley, 2012). As Mawdsley notes, the role of the South as a positive actor in development, even as it has grown, has nevertheless appeared to be somewhat out of the mainstream. One reason for this is that, while traditional donors of the DAC or Utstein school influenced the agenda towards human development, "the (re)emerging partners appear to be re-animating the modernization theories of the 1950s and 1960s, in which economic growth is the primary and prior requirement of 'development'" (Mawdsley, due 2013). Another may quite simply be that these actors are often hesitant to use terms like 'donor' or 'aid' to describe their cooperation and may characterize their actions in different ways.

However described, during the course of the 2000s it became apparent to the traditional donors that there was a need to connect to this new stream of development actors, in part because of their growing conviction that meeting the MDGs would require a much greater degree of donor togetherness. The Paris Declaration, agreed at the OECD/DAC's High-level Forum on Aid Effectiveness (HLF) in 2005, advocated recipient country ownership, donor alignment, in-country harmonization, and mutual accountability for results. This was again a clear example of an avant-garde action spearheaded by a core group, with the expectation that this would become the dominant paradigm for aid effectiveness. While supported by a range of developing countries, and also agreed to by the United Nations system and regional development banks, the new actors from the South were conspicuously absent in Paris.

Attempts were made to include a wider range of partners at the next HLF, held in Accra in 2008. Developing countries played a more active role in the preparations and agenda, with a number of regional preparatory events hosted and organized by these countries. Civil society was also included in discussions. However, it was the fourth HLF in Busan, Republic of Korea, held in 2011, which proved to be the game changer. The final independent evaluation of the Paris Declaration had been critical of donors for not adequately adhering to the majority of principles (Wood et al, 2011), while other analyses showed that coordination between the traditional donors had even weakened (Nunnenkamp et al, 2011).

Busan echoed commitments made in Paris and Accra, but in a looser way. The emphasis was no longer on the OECD/DAC's driving role - there would now be a new 'Global Partnership for Effective Development Cooperation' which would be inclusive and represent the entire international community. Most notably, Brazil, China and India voluntarily joined in agreeing to the outcome document, a text which brings South-South cooperation and the knowledge and expertise of emerging economies into the heart of development cooperation. The document explicitly recognizes that the Global Partnership must be a multi-speed one, as different types of countries have 'differential commitments' (paragraph 1) and 'the nature, modalities and responsibilities that apply to South-South cooperation differ from those that apply to North-South cooperation' (paragraph 2). Language in the document reaffirmed commitment to economic development and the role of the private sector, while singling out South-South and triangular cooperation as extending 'well beyond financial cooperation to the knowledge and development experience of all actors and countries' (paragraph 30). Moreover, signatories agreed to encourage 'the development of networks for knowledge exchange, peer learning and coordination among South-South cooperation actors as a means of facilitating access to important knowledge pools by developing countries' (paragraph 31).

How the Global Partnership will operate in practice remains to be seen. After much discussion, a light secretariat has been established, supported by the OECD and the United Nations Development Group, with the aim of improving networking in an increasingly complex world, in which many diverse forces have an impact on development. The Partnership is therefore likely to be a far more inclusive and representational network than its predecessor, a Working Party of the OECD/DAC. However, it is uncertain if it will manage to work effectively, or with sufficient voice for weaker countries. Whatever the case, it is clear that Busan marks a profound shift in the development landscape, with consequences for the future development agenda as well as for how complex and highly varied development actors should coordinate, create and transmit knowledge.

Whether this emerging development architecture will redefine the global aid architecture in a way that will bring "more coherence to the chaos that characterizes international cooperation initiatives", as Severino and Ray (2010) wish for, is another point that remains to be seen. It is without doubt, however, that the next era of globalization will require everincreasing degrees of international coordination, especially calling for a strengthened United Nations system, due to its catalyst role and universal membership and legitimacy.

Equally, South-South partnerships and regional cooperation are likely to rapidly become more dominant features in the unfolding international development architecture, with network governance structures, based on multi-stakeholder knowledge networks, increasingly gaining key importance in local, regional and global policymaking. In this context, as described in the first Networks for Prosperity report (UNIDO 2011), the role of knowledge networks in processes of regional or interregional integration should be emphasized as a mechanism for strengthening the innovation capacities of countries, prerequisites for the achievement of development goals, including inclusive growth and sustainable development.

3. THE CRUCIAL ROLE OF MIDDLE-INCOME COUNTRIES

Since the adoption of the Millennium Declaration and the creation of the MDGs, millions have been lifted out of poverty. The percentage of the world's population living on less than \$1.25 a day fell from 42 per cent in 1990 to 25 per cent in 2005, and is projected to fall to 14 per cent by 2015. This impressive success on income poverty is largely due to the increased industrialization and growth of related economic activities in a range of developing countries, and especially China. Indeed, MICs are the fastest growing group of countries, both in terms of population and key economic and human development indicators, today with a share of more than 30 per cent of global manufactured value added. However, progress towards reaching the full range of MDGs, which did not prioritize economic growth as a means of achieving development objectives, remains uneven. One remarkable change in the past two decades has been the shift in location of the world's poor from low-income countries (LICs) to MICs. It is estimated that in 1990 over 90 per cent of the world's poor people lived in LICs, while there is evidence that today almost three-quarters of the world's poor live in MICs. At the same time, the ongoing global financial and economic crises, the food and energy crises, as well as the more recent European sovereign debt crisis, have had a negative effect on world economic growth and continue to pose challenges to development efforts. Therefore, poverty reduction strategies that do not include MICs cannot be successful. They need to be seen in the global context and include economic structural transformation policies, human resource investments and targeted private sector development strategies in MICs.

Also at the centre of most forward-looking analyses or studies on global development is sustainable development. It is almost axiomatic to say that the ongoing financial and economic crises have been aggravated by negative environmental trends, of which climate change has the most critical consequences. Yet, despite the fact that the concept of sustainable development with its economic, environmental and social pillars was first articulated by the Brundtland Commission as early as 1987, its operationalization as a development paradigm has proven difficult. Indeed, resource efficiency will play an increasingly important role in the context of global stability, security and development. Inefficient technologies and operating practices currently in use by many industries in developing countries will need to be replaced. This is particularly true for MICs with a high degree of employment-creating manufacturing industries. In addition, energy access is one of the most pressing of

all the global challenges and is central to all the three pillars of sustainable development. As the impacts of climate change become clearer, it is increasingly evident that a growing share of humanity will become vulnerable to its effects, which renews the urgency to move towards "green" industry in developing and industrialized countries alike. In the light of the United Nations Conference on Sustainable Development held in Rio de Janeiro in June 2012 (Rio+20), at which Member States agreed to a process to draw up a set of sustainable development goals (SDGs), the opportunity to do so has now arisen. In the Conference outcome document, The Future we Want, Member States recognized that the SDGs need to be coordinated and coherent with related processes to set the post-2015 development agenda. It will be essential that MICs not only participate in the deliberations of these crucial negotiations; their active leadership and commitment will determine how successful and inclusive the emerging development framework will be.

Finally, recession in many industrialized countries has led to pressure on global official development assistance (ODA) budgets, the total spend for which declined in 2011 for the first time since 1997. On the other hand, MICs are rapidly increasing their own development cooperation and particularly triangular (North-South-South) and South-South cooperation are recognized as potential drivers of future development finance. According to some estimates, South-South cooperation already accounts for about \$15 billion in development cooperation each year and could provide over \$50 billion by 2025 (Kharas et al, 2012). Some analyses of South-South cooperation spending indicate a firmer emphasis on industry and economic activity generally, compared to the tendency of traditional donors to fund the social, humanitarian and governance sectors (Turner et al, 2012). It is well known that opportunities for the creation, transmission and dissemination of knowledge have transformed industry worldwide, yet there remain significant gaps in access to knowledge by many developing countries, even in upper MICs. Over the past decade it has become evident that the importance of knowledge transfer is equal to, or in some cases exceeds, the importance of technology transfer. Limited access to knowledge hampers progress towards inclusive growth and employment creation, as well as technological progress for sustainable development, and for food, nutrition and energy security. As described in the first Networks for Prosperity report (UNIDO 2011), a major challenge is thus to enhance access to policy-relevant knowledge in sustainable economic development, and to create the space for national, regional and global knowledge streams and networks for policymaking and capacitybuilding, particularly among MICs.

4. BEYOND 2015: AN ECOSYSTEM OF DEVELOPMENT KNOWLEDGE

The tracks leading to the development agenda beyond 2015 are complex, increasing in number, and quite different to those that led to the MDGs. First, the outcome document of the 2010 High-level Plenary Meeting of the United Nations General Assembly on the progress towards the MDGs requested the Secretary-General to make recommendations to advance the United Nations development agenda beyond 2015. Initial recommendations in this regard were presented in August 2011 in the Report of the Secretary-General on accelerating progress towards the MDGs (United Nations, A/66/126), with special reference to the need for an open and inclusive process of consultations on the agenda. This led to the establishment by the Secretary-General of a systemwide Task Team (UNTT), which was charged with producing a report reviewing the successes and challenges of the MDG process and providing some general options on the way forward for the development agenda (United Nations, 2012).

The UNTT report provides one basis for discussion of a High-level Panel on the Post-2015 Development Agenda (HLP), established by the Secretary-General in June 2012 under the tripartite co-chairmanship of the United Kingdom (Prime Minister Cameron), Liberia (President Johnson Sirleaf), and Indonesia (President Yudhoyono). The HLP has been tasked with producing a major report by May 2013, which is expected to inform discussions among Member States in a High-level Meeting on the MDGs and post-2015 to be held in autumn 2013 at the General Assembly. Further relevant reports will be prepared by the Secretary-General for ECOSOC and for the General Assembly. Consideration of the parameters and detail of the post-2015 development agenda will eventually take place in the General Assembly, most likely during 2014.

In June 2012, the outcome document of the United Nations Conference on Sustainable Development (Rio+20) provided for an Open Working Group (OWG) of 30 Member States to be inaugurated at the beginning of the 67th session of the General Assembly in September 2012 (United Nations, A/66/288). The OWG is tasked with submitting a report to the 68th session of the General Assembly containing a proposal for a set of sustainable development goals (SDGs). According to the outcome document (para 249), the SDG process "needs to be coordinated and coherent with the process leading to the post-2015 development agenda". In order to provide technical support to this process and to the work of the working group, the Secretary-General was asked to ensure all necessary input and support to this work from the UN system including through the establishment of an inter-agency technical support team (TST, of which UNIDO is a member agency) and expert panels as needed, drawing on all relevant expert advice. Reports on the progress of work will be made regularly to the General Assembly.

In addition to the above, there are a range of formal and informal processes, publications and events that are seeking to influence the agenda beyond 2015, many of which are taking place at the country level. From the side of the United Nations, there is a determination to make sure that accusations of lack of inclusiveness cannot be levelled this time. However, this is tempered by the experience of how the actionable MDGs, whatever their faults, were derived from a more exclusive process than that which led to the Millennium Declaration. One potential solution to this conundrum is to recognize and embrace the multi-polarity of the development landscape, building an ecosystem of decentralized and flexible networks for development knowledge and development results. In essence, this means building the post-2015 agenda around an improved version of the maligned MDG 8, instead of merely viewing partnership as supportive of other goals.

Although the MDG conception of a global partnership was framed as incentivizing stakeholders in all countries, the subtext was mostly about a compact between the industrialized North (through official development assistance (ODA), debt relief, extensions to market access, and established private sector entities making technologies more accessible) and a poor South. This framing is increasingly losing its relevance as the lines between country typologies blur, and new modes of cooperation become more important. Southern-led or triangular development initiatives, knowledge exchange activities and partnerships to address poverty and other socioeconomic issues can become a determining feature of the international development architecture in a multipolar world.

There are already some clear instances of how the international community is using networks to deal with complex facets of the post-2015 agenda. The decision by the United Nations Secretary-General and the President of the World Bank to further a global initiative on Sustainable Energy for All through establishing a 'network of networks', building on expertise residing in the public sector, private sector, civil society and academia, is one such example. Similarly, UNIDO's Green Industry initiative is built on the recognition that the future of industrial governance will be of a multi-sector and actionoriented nature.

In view of the importance of knowledge networking and the potential to make knowledge exchange a defining pillar for the implementation of any post-2015 development strategy, some of the most successful networks appear to be those addressing regional or global issues through cross-border, peerto-peer knowledge sharing and multi-stakeholder governance. This second Networks for Prosperity report aims to contribute to this development with new empirical findings on the importance of domestic and international connectedness for achieving development objectives, academic think pieces on various aspects of knowledge networking, and examples for good network governance from around the world.

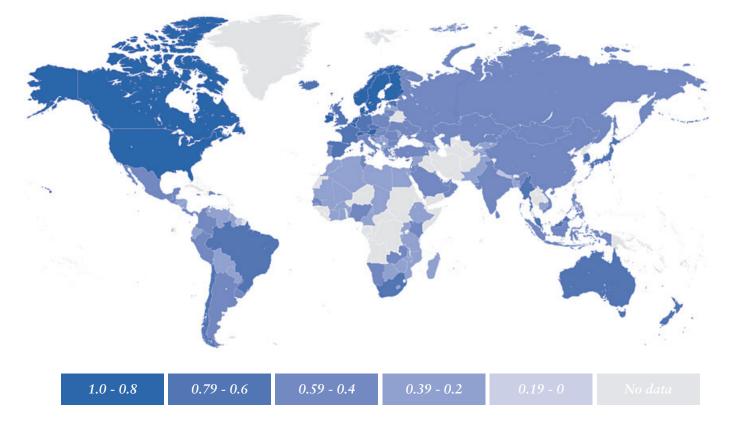
PART 2: Measuring Connectedness and its Impact



Measuring Connectedness and its Impact

The intricacies of knowledge networks present a variety of innovative mechanisms for alleviating or circumventing typical barriers to industrial development. But at first glance, networks are abstract and nebulous in nature, differing greatly from traditional governance structures easily identified by a parliament, head of state or an administration. This in mind, a sound understanding of network characteristics is necessary for understanding the true potential of knowledge networks to impact development goals. A thoroughly conceptualized concept of networks allows a deeper delve into understand the variety of networks, their magnitude, and how, specifically, they can impact private sector development and overall economic growth.

Noting a marked gap in academic literature, contributions in this section set forth two distinct measurements of networks. Both highlight connectedness, or the degree to which a country is networked. Measuring how well a country is connected can indicate whether networks are indeed contributing factors for development. Rankings are generated that list the countries from most connected to least connected as follows:



The Connectedness Index 2012 is the average of three subindices (International, Inter-organizational, and Intraorganiutional Networks). This map shows the level of overall connectedness of countries for which data was available.

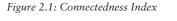
Table 2.5: Connectedness Index

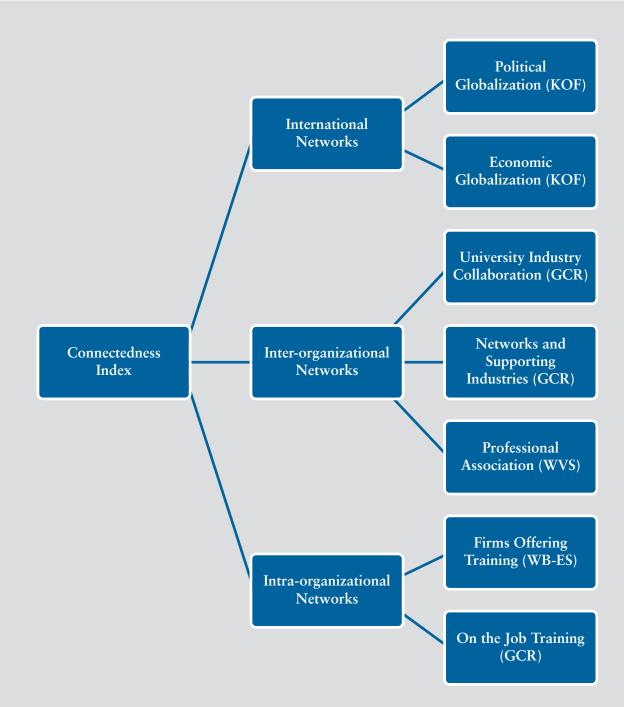
		Connectedn	ess 2012	Connectednes	ss 2011	Ranking
		Index	Rank	Index	Rank	Differences
ISO code	•					2011-2012
CHE	Switzerland	0.977	1	0.971	1	0
SWE	Sweden	0.915	2	0.913	2	0
DNK	Denmark	0.886	3	0.901	3	0
NLD	Netherlands	0.873	4	0.886	5	1
BEL	Belgium	0.859	5	0.875	6	1
FIN	Finland	0.849	6	0.863	7	1
SGP	Singapore	0.838	7	0.836	9	2
IRL	Ireland	0.822	8	0.803	12	4
CAN	Canada	0.822	9	0.813	11	2
USA	United States	0.820	10	0.887	4	-6
NOR	Norway	0.818	11	0.813	10	-1
AUT	Austria	0.818	12	0.837	8	-4
GBR	United Kingdom	0.785	13	0.770	14	1
CZE	Czech Republic	0.758	14	0.705	20	6
AUS	Australia	0.758	15	0.755	16	1
LUX	Luxembourg	0.741	16	0.695	21	5
ISL	Iceland	0.729	17	0.748	17	0
DEU	Germany	0.723	18	0.773	13	-5
MYS	Malaysia	0.711	19	0.716	19	0
NZL	New Zealand	0.701	20	0.682	22	2
FRA	France	0.691	21	0.756	15	-6
JPN	Japan	0.687	22	0.736	18	-4
THA	Thailand	0.666	23	0.650	26	3
EST	Estonia	0.653	24	0.640	28	4
CHL	Chile	0.640	25	0.609	33	8
ZAF	South Africa	0.625	26	0.622	30	4
ESP	Spain	0.624	27	0.613	32	5
SVN	Slovenia	0.622	28	0.666	24	-4
СҮР	Cyprus	0.619	29	0.583	35	6
ISR	Israel	0.618	30	0.677	23	-7
KOR	Korea, Republic of	0.610	31	0.654	25	-6
BRA	Brazil	0.603	32	0.561	39	7
POL	Poland	0.598	33	0.523	42	9
PRT	Portugal	0.582	34	0.562	38	4
QAT	Qatar	0.577	35	0.569	37	2
TUN	Tunisia	0.574	36	0.635	29	-7
IND	India	0.573	37	0.554	40	3
ARE	United Arab Emirates	0.565	38	0.506	46	8
HUN	Hungary	0.548	39	0.590	34	-5
ITA	Italy	0.538	40	0.575	36	
CRI	Costa Rica	0.537	41	0.507	44	3
CHN	China	0.536	42	0.613	31	-11
SVK	Slovakia	0.530	43	0.645	27	-16
MLT	Malta	0.525	44	0.464	56	12
PAN	Panama	0.513	45	0.506	45	0
ARG	Argentina	0.512	46	0.469	53	7
mo	Ingentina	0.303	10	0.107	33	/

BRB	Barbados	0.503	47	0.470	52	5
PER	Peru	0.496	48	0.475	51	3
RUS	Russian Federation	0.496	49	0.423	70	21
COL	Colombia	0.482	50	0.451	60	10
DOM	Dominican Republic	0.480	51	0.430	66	15
SAU	Saudi Arabia	0.477	52	0.469	54	2
PRI	Puerto Rico	0.477	53	0.463	58	5
VNM	Viet Nam	0.476	54	0.429	67	13
IDN	Indonesia	0.474	55	0.502	47	-8
JOR	Jordan	0.472	56	0.491	48	-8
KEN	Kenya	0.469	57	0.468	55	-2
HRV	Croatia	0.466	58	0.484	49	-9
LTU	Lithuania	0.463	59	0.544	41	-18
JAM	Jamaica	0.459	60	0.514	43	-17
SLV	El Salvador	0.457	61	0.405	76	15
KAZ	Kazakhstan	0.454	62	0.421	70	10
BHR	Bahrain	0.450	63	0.477	50	-13
TTO	Trinidad and Tobago	0.445	64	0.420	74	10
NGA	Nigeria	0.443	65	0.444	62	-3
LKA	Sri Lanka	0.443	66	0.464	57	-9
GTM	Guatemala	0.439	67	0.418	75	8
UKR	Ukraine	0.435	68	0.421	73	5
NAM	Namibia	0.434	69	0.399	73	9
MEX	Mexico	0.433	70	0.397	78	9
TUR	Turkey	0.431	70	0.402	77	6
PHL	Philippines	0.428	71	0.451	61	-11
GRC	Greece	0.428	72	0.422	71	-2
BGR	Bulgaria	0.427	73	0.454	59	-15
GMB	Gambia	0.422	75	0.356	92	-13
ARM	Armenia	0.421	76	0.369	88	17
SEN	Senegal	0.420	70	0.394	80	3
ZMB	Zambia	0.420	78	0.425	69	-9
OMN	Oman	0.416	78	0.388	82	3
ROU	Romania	0.413	80	0.436	63	-17
URY	Uruguay	0.411	81	0.378	84	3
MNG	Mongolia	0.404	82	0.317	104	22
MNE	Montenegro	0.402	83	0.375	85	2
GUY	Guyana	0.389	84	0.303	107	23
KHM	Cambodia	0.389	85	0.366	89	4
KWT	Kuwait	0.388	86	0.431	65	-21
HND	Honduras	0.386	87	0.374	86	-1
SRB	Serbia	0.385	88	0.384	83	-1
MUS	Mauritius	0.383	89	0.431	64	-25
BWA	Botswana	0.379	90	0.353	93	3
EGY	Egypt	0.378	91	0.363	90	-1
BRN	Brunei Darussalam	0.378	92	0.346	96	4
LVA	Latvia	0.375	93	0.425	68	-25
MAR	Morocco	0.374	94	0.391	81	-13
ECU	Ecuador	0.373	95	0.370	87	-8
100	Loudor	0.073	25	0.070		0

GHA	Ghana	0.365	96	0.347	95	-1
MWI	Malawi	0.364	97	0.337	99	2
UGA	Uganda	0.360	98	0.338	98	0
AZE	Azerbaijan	0.351	99	0.356	91	-8
MDG	Madagascar	0.350	100	0.310	106	6
BOL	Bolivia, Plurinational State of	0.350	101	0.319	102	1
MLI	Mali	0.347	102	0.317	105	3
LSO	Lesotho	0.340	103	0.298	110	7
ZWE	Zimbabwe	0.335	104	0.331	100	-4
BIH	Bosnia and Herzegovina	0.331	105	0.295	112	7
CIV	Côte d'Ivoire	0.329	106	0.348	94	-12
MOZ	Mozambique	0.326	107	0.302	108	1
LBY	Libya	0.326	108	0.290	114	6
TZA	Tanzania, United Republic of	0.325	109	0.228	125	16
CMR	Cameroon	0.307	110	0.318	103	-7
TCD	Chad	0.303	111	0.246	121	10
PRY	Paraguay	0.300	112	0.266	117	5
MRT	Mauritania	0.296	113	0.300	109	-4
MKD	Macedonia, the former Yugoslav Republic of	0.296	114	0.343	97	-17
KGZ	Kyrgyzstan	0.292	115	0.297	111	-4
VEN	Venezuela, Bolivarian Republic of	0.292	116	0.295	113	-3
BEN	Benin	0.288	117	0.255	120	3
ETH	Ethiopia	0.287	118	0.320	101	-17
ALB	Albania	0.282	119	0.227	126	7
NIC	Nicaragua	0.281	120	0.244	122	2
DZA	Algeria	0.280	121	0.243	123	2
РАК	Pakistan	0.274	122	0.261	118	-4
BFA	Burkina Faso	0.265	123	0.278	115	-8
SYR	Syrian Arab Republic	0.263	124	0.260	119	-5
MDA	Moldova	0.243	125	0.235	124	-1
TMP	East Timor	0.225	126	0.200	130	4
GEO	Georgia	0.223	127	0.225	127	0
TJK	Tajikistan	0.221	128	0.274	116	-12
BDI	Burundi	0.206	129	0.147	132	3
BGD	Bangladesh	0.204	130	0.219	128	-2
NPL	Nepal	0.127	131	0.186	131	0
SUR	Suriname	0.081	132	0.204	129	-3
	Median:	0.441		0.429	Average Difference:	6.636

The first Network for Prosperity report provided the first contribution to constructing a measure which aims to capture the degree to which countries are networked, both internally as well as externally. The key effort last year was to identify the information necessary to quantitatively capture the importance of networks. In this year's report, results are updated and compared with a similar index (Ghemawat Index) commissioned and published by DHL. The UNIDO Connectedness Index identifies three distinct levels of networks (international, interorganizational, and intra-organizational) and incorporates relevant economic and political variable to construct a connectedness ranking across the three identified levels.





THE CONNECTEDNESS INDEX 2011 AND 2012 COMPARED

The Connectedness Index 2012 is compared with the Connectedness Index 2011. The differences between these indices are presented in table 2.5. Minimal differences separate the rankings of the countries in the top of the list. The three countries in the top of the list – Switzerland, Sweden and Denmark – reach exactly the same positions. The Netherlands, Belgium and Finland increased their ranking by one position each. Singapore increased two spots in the ranking.

Among the top ranked countries, the most significant changes are in the United States and the Czech Republic's rankings. Between 2008 and 2009, the United States score on the international networks sub-index decreased; the country consequentially dropped from the 4th to the 10th position in the 2012 Connectedness Index. In contrast, the Czech Republic jumped 6 positions, from the 20th to 14th. The Czech Republic increased in all three sub-indices, most dramatically in the intra-organizations subindex.

The average difference (up or down) is 6.6 ranking positions. Nine countries keep the same positions as in the previous ranking and another 38 change a maximum of 3 positions. 26 countries change more than 10 positions from one year to the next. Mauritius and Latvia experience the greatest changes (from 64th to 89th, and from 68th to 93rd), the latter dropping 25 positions between the two indices. On the other hand, Guyana, Mongolia and Russia most significantly increased their ranking positions. Guyana jumps 23 positions, from the 107th to 84th; Mongolia increases 22 positions, rising from 104th to 82nd: and Russia improves 21 positions, from the 70th to the 49th position. Overall, there was a slight increase in the median score of countries, from 0.429 to 0.441, indicating that more countries achieve higher scores indicating that they are becoming more connected.

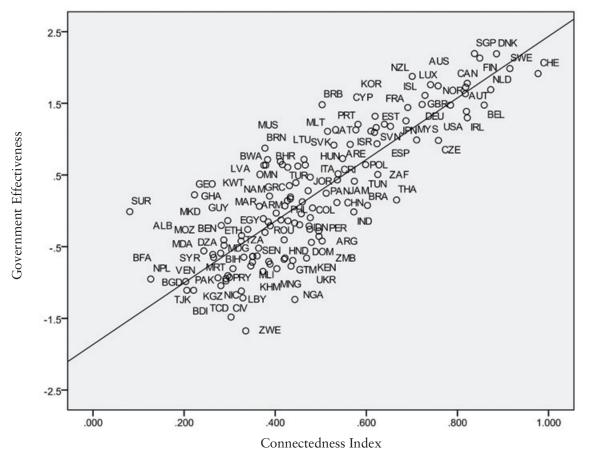
It is interesting to note that, given the methods for calculating scores and the 0 and 1 scoring range, small score differences can make significant differences in the ranking positions. Serbia and Singapore, for example, present a very small increase in their scores from 2011 to 2012 (almost the same score), but Serbia decreased 5 positions and Singapore won 2. On the other hand, the differences in scores are higher in the case of Switzerland (positive) or Malaysia (negative), but the countries maintain the same rankings in the 2011 and 2012 Connectedness Indices.

THE RELATIONSHIP BETWEEN CONNECTEDNESS AND GOVERNMENT, INDUSTRIAL AND ECONOMIC PERFORMANCE

The quantitative nature of data produced lends to a series of graphs and a correlation matrix. Arranging the results in this way helps expose the relationship between connectedness and government effectiveness, regulatory quality, competitive industrial performance, and GDP per capita PPP. The graphs clearly show a strong positive linear relationship between connectedness and the various performance indicators. Given the linear relationship between the variables (see graphs 2.4-2.7), the Pearson Product-Moment Correlation Coefficient is used to measure the relationship between the different indicators, although no causal inferences were intended with this analysis. The correlations between the Connectedness Index and the four development measures listed above are high, ranging from 0.721 (connectedness x GDP per capita) to 0.845 (connectedness x Government Effectiveness) (presented in table 2.6). This indicates that, in the majority of the cases, connectedness and these development measures follow the same direction, i.e., when one increases (decreases), the other follows a similar standard. Graphs 2.4 to 2.7 demonstrate this trend.

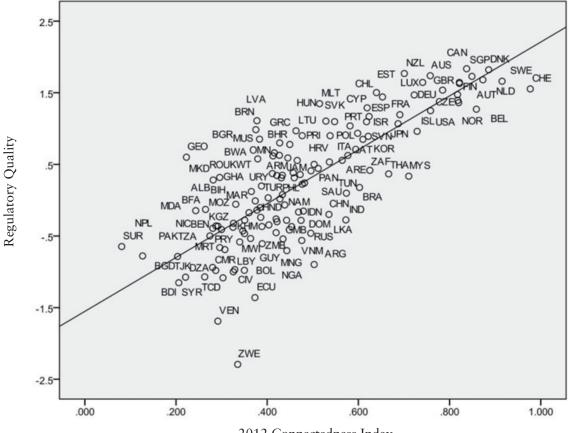
A second contribution comes from researchers at the European University Institute in Florence. In contrast to the first contribution, efforts here target the measurement of networks' impact on economic growth. The authors focus on the causal relationship between networks, utilizing bilateral trade and economic data to measure a state's connectedness via a measure of trade integration.

Taken together, these contributions offer nuanced approaches to measuring networks. The differences in methodologies and data used in the two measurements (as well as in the Ghemawat Connectedness Index which is extensively discussed in the first contribution) indicate that the idea of networks, particularly knowledge networks, demands further quantitative conceptualization and methodological validation but hold great exploratory and explanatory value. These quantitative endeavours exploring how to describe a country's connectedness set the stage for contributions further on in the report that explore specific countries' and NGOs ' experiences with networks and as well as contribution that highlight the complexities of networks.

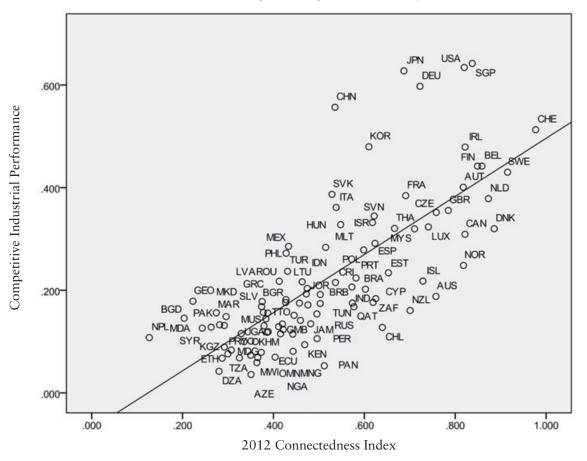


Graph 2.4: Government Effectiveness x Connectedness Index

Graph 2.5: Regulatory Quality x Connectedness Index



2012 Connectedness Index



Graph 2.6: Competitive Industrial Performance x Connectedness Index

Graph 2.7: GDP per capita PPP x Connectedness Index

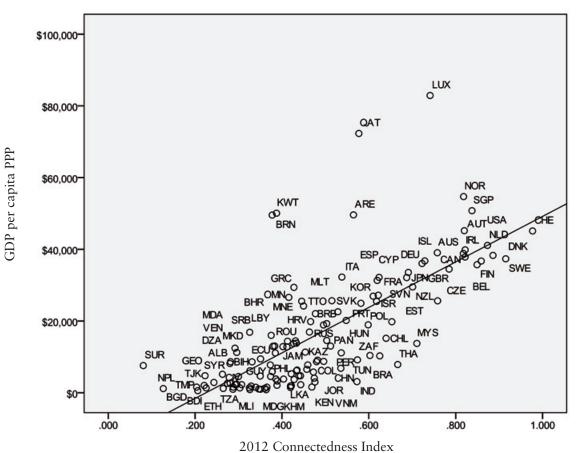


Table 2.6: Correlations

	Connectedness Index	Political globalization	Economic globalization	International Net.	Inter-firm Networks	University-industry Net.	Professional Association	Inter-org. Networks	% firms offering formal training	On-the-job Training	Intra-org. Networks	Government Effectiveness	Regulatory Quality	Competitive Industrial Performance	GDP per capita PPP
Connectedness Index	1														
Political globalization	.525**	1													
Economic globalization	.599**	036	1												
International Networks	.779**	.795**	.578**	1											
Inter-Firm Networks	.854**	.468**	.315**	.529**	1										
University- Industry Net.	.906**	.406**	.420**	.570**	.823**	1									
Professional Association	.111	131	092	162	.049	.066	1								
Inter-org Networks	.904**	.408**	.340**	.511**	.904**	.932**	.328**	1							
% firms offering formal training	.510**	.181	.332**	.360**	.181**	.192**	076	.157	1						
On-the-Job Training	.926**	.394**	.466**	.597**	.885**	.918**	.037	.905**	.198**	1					
Intra-org. Networks	.929**	.366**	.440**	.559**	.778**	.843**	.009	.814**	.868**	.896*	1				
Government Effectiveness	.845**	.176**	.489**	.449**	.748**	.814**	.086	.797**	.281**	.839**	.709**	1			
Regulatory Quality	.792**	.236**	.467**	.483	.715**	.741**	.046	.731**	.284	.773**	.658**	.928**	1		
CIP	.746**	.446**	.314**	.529**	.761**	.771**	011	.754**	.255**	.758**	.687**	.703**	.657**	1	
GDP per capita	.721**	.275**	.490**	.533**	.665**	.690**	040	.667**	.311**	.714**	.638**	.788**	.733**	.605**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

PART 3: Knowledge Networks in Practice

8

Knowledge Networks in Practice

Theoretical explorations of networks are only valid if they hold in practice. This section turns attention to networks in the real world, looking at four separate, issue-specific networks. Regional, business, trade, and development cooperation networks are the subject of the case studies that follow. Each contribution highlights the interworking of these networks and draws attention to the relevant actors, strategies, and outcomes across organizational units.

The first contribution, by Jorge Rodríguez Vives, documents the creation of a Competitiveness Council within Costa Rica. The Brunca Region, located in the southwest corner of Costa Rica, introduced the Council in order to revive local private sector development and vamp efforts to improve local welfare, particularly for women and youths. The contribution documents the Council's experiences pairing policy makers, business owners and community members with academic support to address competitiveness in four key local business sectors: agri-business, tourism, municipal sectors, and government agencies. In turn, the Council fermented information transfer and learning, two key functions of knowledge network and a prime example of an inter-organizational network.

Trade networks are the subjects of the second contribution by Johan Adriaensen. The trade and development link, in particular, is examined, and the author employs network theory to understand how trade administrations work. Three specific trade administrations are highlighted, and the administrations' role in building a knowledge network is seen to be instrumental to develop a trade policy and as input in trade negotiations. A third contribution, by Ariane Agnes Corradi, shifts attention south of the equator to Brazil but keeps sights on business development. This case study focuses on the impacts of networks in business incubators which are designed to aid new businesses in overcoming barriers to market entry and participation. The business incubators under study uniquely emphasize the role of informal networks at the inter-organizational level and the importance of incubator managers as network facilitators.

A fourth case study, by Thomas Vogel and Petra Koppensteiner, comes from an Austrian NGO dedicated to development cooperation. The report from HORIZONT3000 documents the construction of a network for the sharing of "best practices" among partner organizations in the developing world. The organization's experiences in building a knowledge network are detailed, noting their construction of an international network consisting of Austrian organizations, local development partners, and research partners. HORIZONT3000's contribution incorporates a practitioner's perspective and the organization's efforts to encourage "systematization" - a participatory process of generating and sharing knowledge- yield lessons for knowledge management in practical situations.

Though each case covers different actors, regions, or sectors, they together form a dynamic picture of various functioning networks and how knowledge make a difference and create added value. Challenges and responses for the Brunca Region's construction of a Competitiveness Council, for example, can underscore the lessons exposed in HORIZONT3000's contribution. The diversity of public and private actors and their functioning across the international, inter-organizational and intra-organizational levels also point to boundaries for knowledge networks, later detailed in section 4.

PART 4: Exploring the Boundaries of Knowledge Network Governance

Exploring the Boundaries of Knowledge Networks Governance

The case studies presented in part 3 detail networks as they occur in four distinct environments. This sections attempts to dig deeper into understanding how and to what degree knowledge networks differ. This task in turn exposes factors that influence network formation, a network effectiveness, and a network's capacity to manage and create knowledge. Here, attention moves to knowledge networks. Knowledge networks foster the flow of know-how, learning processes, and management practices. Within these capacities we see how the design and management of knowledge networks can inspire private sector development. The contributions in this part reflect on these issues and provide key insights on network governance. Jacint Jordana provides the first contribution to this section. His contributions focuses on the impressive growth of regulatory agencies across policy sectors in most countries from the OECD. Regulatory agencies are explored here, as they act as nodes in a network. In focusing on how regulatory agencies collect and distribute relevant information to interested parties, this piece demonstrates the capacity for quasigovernment organizations to help overcome information disadvantages, which often decreases performance of pertinent sectors. This contribution points to the central role played by regulatory agencies in a global knowledge network. The contribution from Ettore Bolisani and Enrico Scarso follows, shifting the focus from regulatory agencies to inter-organizational knowledge networks. Their research identifies a host of new challenges for business management and policy-making, and sees knowledge networks as a potent solution for many of these issues. Various typologies of knowledge networks are parsed out in this piece, as are the factors that influence knowledge sharing among firms. Doing so indicates that within knowledge networks, the success of one network member influences the success of a single company in the network. Ana Aleksić Mirić authors the third contribution to this section and focuses on barriers to learning in business network forms of governance. Her research emphasizes that not all knowledge networks are learning networks, and, concentrating on the intra-organizational and inter-organizational level, that network design (and redesign) can improve learning flows across the network.

Turning attention to international networks, Timothy Meyer's research concentrates on the governance systems best capable of transferring scientific information. His research presents networks as a middle way between markets and hierarchical governance architectures, keenly noting that there are costs associated with both markets and hierarchical types of architecture. In this way, there are instances where networks (as opposed to markets or hierarchies) are the most efficient in terms of costs, but such is not always the case. A case study focusing on the International Renewable Energy Agency (IRENA) serves to exemplify the author's proposition.

Human capital and knowledge retention is the subject of Orly Lobel's contribution. Like the contribution by Ana Aleksić Mirić, the author treats hurdles for knowledge network creation. Recognizing recent, significant changes in economic structures, the author investigates the way knowledge flows can contribute to innovation and explores the barriers preventing knowledge flows between firms. Intellectual property issues are at the core of arguments presented, as overprotection of such rights impedes the improvement of a given idea, technology, or practice. Encapsulation of human capital results, thus impeding knowledge network formation and inhibiting innovative behaviors. The implications of this contribution are profound for international knowledge management.

Michele Clara of UNIDO rounds out this section and incorporates the perspective of policy-makers on the subject of knowledge networks. Significant challenges threaten industrial development, and this contribution presents arguments for a realignment of the academic debate of growth and development that embrace industrial developments' potentials. UNIDO's member states, sensing the need for such a shift, are rallying around the idea of knowledge networks as a mechanism for overcoming barriers to private sector and industrial development. An approach that crosses the international, inter-organizational, and interorganizational network levels is stressed, and multilateral organizations such as UNIDO serve as key players in networks dedicated to improving global industrial development.

Overall, these chapters paint a complex picture of knowledge networks and depict a complicated system of actors. But in each contribution lie insights with the potential to inform knowledge network construction and maintenance; as a result, these are findings that pave the way for policies supporting successful private sector development. Though these networks prove to be intricate, these contributions demonstrate that knowledge networks hold the potential to mitigate traditional governance hurdles and pave a path for effective industrial development through private sector growth.

PART 5: Networks for Prosperity – Connecting development knowledge beyond 2015

Networks for Prosperity – Connecting development knowledge beyond 2015

KEY FINDINGS

Without doubt, knowledge networks and network governance will play a crucial role in the emerging post-2015 development agenda and the new post-Busan aid architecture. Networks do not only constitute a distinct way of organizing transactions between actors but more importantly are emerging as a new paradigm for governance. A key component of this paradigm revolves around the exchange of information and the creation of knowledge. In the first Networks for Prosperity report (UNIDO 2011) we conceptually clarified this and linked it to private sector development. The first report argued that networks play a key role in diffusing information and generating knowledge and hence contribute directly to economic development. Moreover the report illustrated that network governance is becoming increasingly important on a local, national, regional and global scale. Consequently the report introduced network governance as a distinct way of governing. Most importantly the report made a conceptual distinction in types of networks in order to clarify that networks differ in nature and that this difference is relevant in the context of knowledge management and information provision. The key points stressed were:

- Networks are crucial for information exchange and knowledge creation and diffusion and contribute significantly to knowledge management.
- 2. Networks are becoming increasingly a distinct form of governance with the aim of including different types of public and private actors within and across organizational and national boundaries.
- 3. Not all networks are equivalent and differ in nature. Different types of networks exist and some are more instrumental in the context of learning, information exchange and knowledge creation.

- 4. There is a significant benefit to be gained from institutionalizing or embedding networks and hence investing in networks. The creation of trust and social capital which follows from this is beneficial for organizations and the economy as a whole.
- 5. It is crucial not only to embed networks but also to be involved in other or new networks which will provide new information, knowledge and opportunities.
- 6. From an actor's or organization's perspective successful networking implies the development of solid networks which continue over time and are built on trust; and constantly moving between relevant other networks to capture new information.
- 7. Networks are proliferating. Given the increasing choice of networks, the importance of seriously investing in some networks and institutionalising network ties in these networks (high administrative co-ordination cost) and the importance of balancing arm-length ties with embedded ties it is becoming important to develop clear networking strategies with specific objectives.
- 8. Knowledge on networking strategies and managing effective and efficient networks is more limited. Efforts to generate knowledge and best practices on network management and the development of network strategies, especially in the context of private sector development, would be welcomed. The latter can be achieved via study visits, workshops or illustrative case studies. These activities can contribute to identifying success factors for network management.

This second report builds on this in several ways. First, the report launched a new edition of the connectedness index and compared it to other indices. Indeed, since the launch of the first report we saw several related new indices see the light. Many of these build on earlier efforts to capture a degree of globalization and basically measure the degree to which countries are internationally networked or integrated. The UNIDO Connectedness Index is conceptually distinct in that it not only measures the degree to which countries are internationally, externally networked but also internally. Indeed, as many contributions in this report highlight, the importance of networks lies not only in making international connections, but also internally. Jacint Jordana highlights the network nature of many regulatory agencies across the world and Johan Adriaensen identifies distinct forms of network organization in the context of trade policy in three distinct policy administrations. Proposing a multilevel concept of connectedness captures better the ideas embedded in the notion of network governance. What emerges from these rankings is not so much a division between the 'North' and 'South', but between highly networked societies and less networked societies, countries moving from the periphery to the core grasping the importance of being connected. The hypothesis is that those countries that understand the importance of networks, as is illustrated in the case of Costa Rica, can develop distinct advantages in their pursuit of prosperity.

Secondly, the report presented a set of case studies which delve further into the diversity of networks and highlights that network governance ranges from the local to the global and from public actors to private actors such as NGO's. Thirdly the essays in the third part reflect on different key aspects related to network governance focusing on the diversity of networks (Bolisani) and the importance of overcoming different types of barriers in effective network governance (Mirić). These essays also reflect on key issues in relation to the management of knowledge in international organizations and beyond. Tim Meyer describes different strategies and governing knowledge in international organizations and Orly Lobel expands the issues by reflecting on how different types of knowledge should or should not be governed. The implications of these contributions are profound. They sketch a silent transformation which (international) organizations have to confront. This transformation is one in which knowledge is managed in hierarchical terms within the boundaries of an organization to a context in which knowledge moves in and out of organizations depending on the networks in these organizations

operate. How to deal with this will have significant implications for the design and management, including the human resources management, of these organizations. As Michele Clara identifies, this opens opportunities for international organizations but will also require vision and a well-developed change management plan.

To further investigate these profound changes the United Nations Industrial Development Organization (UNIDO) and the Leuven Centre for Global Governance Studies (GGS) intend to further collaborate. Expounding the dynamics of networks and network governance is the goal of the partnership between UNIDO and GGS. This undertaking combines UNIDO's recognition of networks as major contributors to private sector development. To this end, UNIDO founded a concerted, long-term programme to utilize knowledge networks to support developing countries in acquiring and adapting PSD-relevant knowledge to their specific contexts and needs. Research at the GGS undergirds these efforts; recognizing networks as an emerging governance structure, the profound lack of scientific research on this phenomenon, and the potential for such research to more efficiently utilize network to reach development goals, the partnership has identified three intermediate goals to better understand the dimensions of network governance.

First, our partnership strives to more concretely define network governance. Initial collaboration identified three levels on which networks operate (the inter-governmental, inter-organizational, and intraorganizational levels) and three general types of networks (learning, information exchange, knowledge management), but networks as governance mechanisms remain poorly conceptualized. To this end, research empirically and qualitatively analyses various network structures between and within countries, among private and public actors; doing so allows a more accurate picture to be drawn of the capacity for networks to more succinctly identify how these networks govern. The policy interest that prompt such a question triggers a theoretical investigations into marketbased, hierarchical, and network governance architectures and their relevance given recent patterns and innovations in global governance. In order to

achieve this aim the partnership will continue to approach network governance from a multidisciplinary perspective, taking into account the various political, economic, sociological, psychological and legal studies of network governance building on the group of experts who are already involved in the initiative.

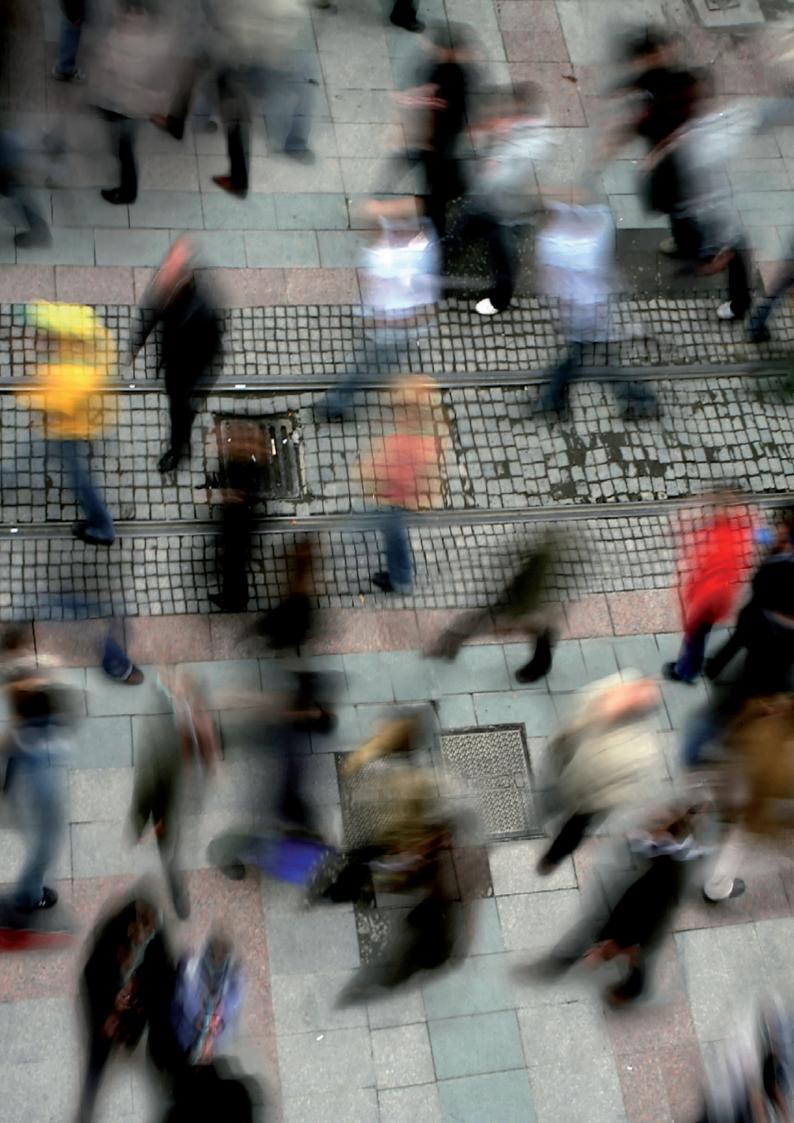
Secondly, the partnership aims to gain in-depth knowledge on the emergence, development and effectiveness of networks with special attention to private sector development and success factors for designing network forms of governance. Here we will have to break new ground. The essays and cases gathered in this report point to some success factors in terms of strategy, leadership and culture but also provide a canvass of the diversity of issues and organizations we capture under the umbrella of networks. Identifying success factors will require understanding this diversity. There will be no one-fit for all. In this context it is also crucial to better understand what we mean with success factors of effective networks. Effectiveness of networks can be understood to mean different things to different people. As a result, it is important to approach effectiveness as a multi-dimensional concept which can be analysed according to a number of interrelated dimensions, which include problem solving effectiveness, process effectiveness, behavioural effectiveness, constitutive effectiveness and evaluative effectiveness. These different dimensions capture different elements of effectiveness:

- Goal attainment/problem solving effectiveness refers to the degree to which specific goals, as stated for example in the mission statement of a network organization, are achieved.
- Process effectiveness refers to the degree knowledge generated in a network is adopted by the partners of the network.
- Behavioural effectiveness is a measure of the degree to which the network and the knowledge generated in a network generates differences in behaviour and practices of the members or actors in the network.
- Constitutive effectiveness refers to the acceptance of a network by a large group of stakeholders as a key institution in a given policy area.
- Evaluative effectiveness assesses networks on a set of criteria such as equitability and legitimacy.

As a result, networks can achieve different things and be effective on one or more of these dimensions. If we want to understand factors contributing to success we need to understand how networks make an impact on these different dimensions. The partnership will continue to investigate this and build a knowledge base on designing effective networks to achieve public policy goals.

A third aim is to empirically capture the importance of networks. Here, attention focuses on constructing an empirical measurement of networks, which can evidence the tangible effects of networks on PSD and progress towards international goals, such as the current MDGs or the new development agenda expected to emerge after 2015. This empirical measurement is developed at the nation-state level and seeks to explore variation between countries. The 2011 Networks for Prosperity report contains a first attempt at describing networks in its construction of a global Connectedness index, which is followed in this report by presenting the 2012 Connectedness Index. The same caveats as identified in the first report remain and trigger our eagerness to develop better and strong indicators and indices. As argued by many leading scholars Governance by Indicators is becoming an important instrument to steer policies of countries and stimulate convergence on specific parameters. For governance by indicators to work, we need robust and validated indicators. We already have a pool of relevant indicators but much more empirical work needs to be done to better capture the degree of connectedness.

These three aims and challenges will define the further analytical work in the framework of the Networks for Prosperity initiative and will act as a guide in expanding the number of experts who are involved in the initiative. What we are witnessing and aim to grasp is a paradigm shift in governance in which a key role is reserved for international coordination and cooperation. Multilateral organizations, by nature, are central players in this new governance context. However, a particular focus should be put on the increasingly dominance of South-South cooperation and the emerging leadership of middle-income countries in the post-2015 development landscape.



Recommendations

THE FIRST NETWORKS FOR PROSPERITY REPORT (UNIDO 2011) RECOMMENDED THAT

- The international community should actively promote knowledge networking and network governance structures for achieving local, regional and global development objectives;
- Member States should encourage and facilitate the international knowledge networking capacities of their own public and private institutions;
- (iii) International organizations should improve their inter-institutional information and knowledge exchange systems and facilitate better knowledge networking among their members; and
- (iv) An international and cross-sectoral consultation network should be established to further develop the initial findings.

While all four initial recommendations remain valid and highly relevant, it can be observed that progress has been made on all four levels, in particular in the framework of the emerging post-2015 development landscape. However, more work needs to be done. Based on this and the findings and conclusions of experts in this second Networks for Prosperity report, THE FOLLOWING ADDITIONAL RECOMMENDATIONS HAVE BEEN FORMULATED FOR CONSIDERATION BY MEMBER STATES:

- The international community should recognize (v) that knowledge networks, multi-sector partnerships and network governance should be at the centre of any emerging post-2015 development agenda as these are crucial ways and means towards tackling the complexities of today's state of development and globalization. In particular, a bigger picture approach should be taken in the deliberations on the future of MDG-8 on the global partnership for development, enriching it with considerations of knowledge networking and network governance, and mainstreaming it to the centre of the development agenda. It should be recognized that without knowledge sharing and networking, including technology transfer, sustainable and inclusive patterns of global development cannot be achieved.
- (vi) Middle-income countries should enhance their role in global development cooperation through intensified knowledge networking, policy coordination and the establishment of network governance structures in fields of their shared interest. In particular, it is proposed to organize a conference of middle-income countries to allow for focused deliberations on such shared interests in the fields of inclusive economic growth, sustainable development and finance for development. It should be recognized that without the pro-active and constructive cooperation and collaboration of middle-income countries, no meaningful global development agenda, strategy or goal can be formulated or achieved.
- (vii) The international community should embrace South-South and triangular cooperation, based on knowledge exchange and technology partnerships, as effective ways for achieving development goals, and anchor these in the post-2015 development agenda. In particular traditional donors and international organizations should consider triangular cooperation modalities for sustainably supporting capacity building efforts, especially in middle-income countries, and for ensuring long-term results and impact of development activities, beyond the immediately visible outputs. Also, middle-income countries and international organizations should actively support bilateral and multilateral South-South cooperation, both on regional and global levels.
- (viii) The international community should advance its analysis on the link between a country's connectedness and its population's prosperity as the ultimate goal of development. In particular, international organizations, financial institutions and their academic partners should intensify their empirical research and policy analysis in this field, and collaborate amongst each other to leverage each other's knowledge. Member States should encourage their academic institutions and development agencies to actively engage in programmes that advance the understanding of the nexus between knowledge networking, economic network governance and prosperity, and support ongoing efforts in this regard.

Acronyms

OECD

Organization for Economic Cooperation and Development

ADC	Austrian Development Cooperation	OEM	Original Equipment Manufacturer
ANPROTEC	National Association of Promotion	OVI	Objectively Verifiable Indicators
	Companies for Innovative Enterprises	PCM	Project Cycle Management
BRICS	Brazil, Russia, India, China and South	PPP	Purchasing Power Parity
	Africa	R&D	Research and Development
CIP	Competitive Industrial Performance	SDGs	Sustainable Development Goals
COMTRADE	E Commodity Trade Database	SEBRAE	Brazilian Service for the Support of
CSO	Civil Society Organization		MSMEs
DCED	Donor Committee for Enterprise	SMEs	Small and Medium Enterprises
	Development	UNCTAD	United Nations Conference on Trade
DG	Directorate General (of the European		and Development
	Union)	UNDP	United Nations Development
ERI	Enabling Rural Innovation		Programme
EU	European Union	UNEP	United Nations Environmental
FAO	Food and Agriculture Organization of	UTILI	Programme
1110	the United Nations	UNESCO	United Nations Educational, Scientific
FDI	Foreign Direct Investment	UNLUCO	and Cultural Organization
GDP	Gross Domestic Product	UNFCCC	United Nations Framework
IEA	International Energy Agency	0111 0000	Convention on Climate Change
IEC	Inter-ministerial Economic	UNIDO	United Nations Industrial
ile	Conferences	UNIDO	Development Organization
ILO	International Labour Organization	WIPO	World Intellectual Property
IMF	International Monetary Fund	WIIO	Organization
IOM	The International Organization for	WTO	World Trade Organization
10101	Migration	WIO	world frade organization
IRENA	International Renewable Energy		
IIIII	Agency		
ISO	International Organization for		
150	Standardization		
IT	Information Technology		
ITU	International Telecommunication		
110	Union		
KM	Knowledge Management		
KN	Knowledge Networks		
KOF	Konjunkturforschungsstelle der ETH		
KOI	Zurich (Swiss Economic Institute)		
MDGs			
NGO	Millennium Development Goals Non Governmental Organization		
NGO NGDO			
NGDU	Non Governmental Development		
NIH	Organization Not Invented Here		
ODA	Official Development Assistance		





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