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research update

No. 3/4, 2008

Research and Statistics Branch

In a combined edition, *Research Update* rounds off 2008 by focusing on the role of public goods in economic development, crucial factors affecting investment in the sub-Saharan region, a Japanese development model transplanted into Africa and the transformation of UNIDO's industrial statistics database. In the newsletter's regular column of economic perspectives, a UNIDO researcher examines the threats as well as the opportunities that today's financial crisis pose for developing countries.

The current global economic chaos sets the backdrop to a major new UNIDO study that has been three years in the making. The editor of *Public Goods for Economic Development* highlights economic fundamentals underlying the financial instability and social inequality associated with the failure of policies and institutions to provide for international public goods.

With the decline in foreign direct investment into sub-Saharan Africa, an economist from the Research and Statistics Branch (RST) draws on a UNIDO survey of 800 multinational enterprises in the region to explore the key considerations that influence potential investors. Emerging from the analysis of investment location decisions are the implications for policy makers of how to attract increased foreign partnerships in their industries.

Having its roots in the revitalization of Japan's Oita prefecture and successfully replicated in a number of Asian nations, the economic phenomenon known as one village one product is the subject of a recent UNIDO study on its potential adaptation to African conditions.

The RST author makes the case for a dual approach involving complementary but distinct roles for national governments and the Organization.

At the heart of UNIDO's statistical expertise is a unique repository of industrial data for developing countries covering more than three decades. A RST statistician outlines the painstaking process of enhancing its versatility by moving from a traditional mainframe computer to a state-of-the-art self-reliant client/server system.

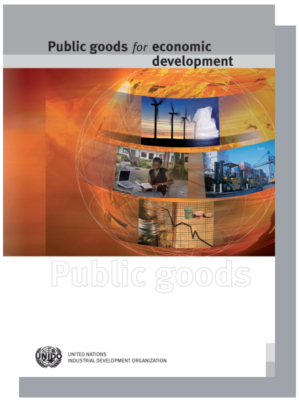
The impact of the financial crisis on developing countries is scrutinized when RST's "In Short" columnist considers the negative effects on those dependent on exports of raw materials and those embarked on fully-fledged industrialization. In the long term, he speculates, the restructuring likely to occur during the inevitable economic rebound will favour those developing nations prepared to take advantage of such change.

With *Research Update* in its third year of publication, the current number includes a survey, which, consisting of only one question, I hope as many readers as possible will answer. Simply tick one box on the enclosed card and send it through the internal mail system of UNIDO.

Yoshiteru Uramoto
Deputy to the Director-General,
Managing Director
Programme Coordination and
Field Operations Division

Electronic version, containing links to full articles is available at: www.unido.org/doc/3474

Public Goods for Economic Development



The fundamental role of public goods in ensuring global economic stability, environmental sustainability and economic development is highlighted in a major new UNIDO publication. *Public Goods for Economic Development* puts the issue in the context of the challenges presented by intensified globalization and poverty reduction. Globalization involves different types of externalities and international interdependencies. From them emerges the specific domain of international public goods, whose benefits spread beyond national borders.

To compete in the current global economy, the study points out, developing countries require a host of national and international public goods that promote good governance, financial stability, commerce, technological progress, health, peace and environmental sustainability. The need for adequate provision of both national and international public goods is central to the United Nations' Millennium Development Goals for knowledge, health, governance and the environment. While much research has been done in this field, *Public Goods for Economic Development* aims to bridge the gap in understanding how to ensure adequate provision of the public goods most urgently required for economic development.

Provision of international public goods, the study argues, takes more than financial resources. Rather, it requires appropriate regulatory frameworks and institutional responses to ensure their supply. Although the world has made enormous strides in communications and economic interdependence between the countries that are driving economic integration forward, the development of policies and institutions requisite to manage the process have not kept pace.

Public Goods for Economic Development claims that this asymmetry constitutes the basis for the increased levels of risk and instability that have resulted, for example, in global warming and the current world financial crisis.

Insufficiencies in provision of the international public goods that society requires reveal the limited investment countries have made in cooperation to address these challenges. As a result, the world is more unstable and unequal, as well as less safe and wealthy, than it could be.

Stemming from a research project UNIDO initiated in 2005, *Public Goods for Economic Development* is based on contributions from and consultations with more than 30 international economists and development experts. The study encompasses chapters on the concept of international public goods, financial stability, the international trade regime, knowledge and environment, followed by conclusions and policy recommendations. It draws on a literature review by José Antonio Alonso, Isabel Álvarez, Daniele Archibugi, Carlos Garcimartin, Todd Sandler and Olga Memedovic.

The study is informed by an accompanying three-part compendium. The first part consists of issue papers by Robert Mundell, Carl Dahlman, Joseph Francois, Raphael Kaplinsky, Arvind Panagariya, Michael Braungart, Per Bondesen, Albin Kälin, Benson Gabler and Richard Higgott. The second comprises regional studies by Marek Dabrowski, Artur Radziwill, Jean-Claude Berthélemy, Samir Radwan, Richard N. Cooper, Siow Yue Chia, Joaquín Cottani, Claudia Silva and Ivanna Bandura. The compendium finishes with the deliberations of the 2005 UNIDO Conference on International Public Goods for Economic Development, at Harvard University, which was attended by some 90 academics and policy makers.

Correcting the undersupply of international public goods, the study concludes, will grow in importance over the coming decades as globalization and international interdependence intensify. Corrective public policies hinge on the goods' properties. Rather than a single prescription, adequate provision of different kinds of international public goods requires different kinds of public policies and institutional arrangements. *Public Goods for Economic Development* addresses these requirements by using the modern principles of collective action.

Olga Memedovic

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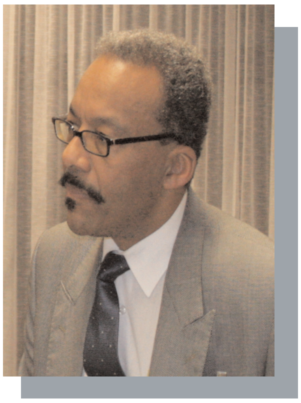
Sub-Saharan Africa: determinants and location of FDI decisions



Political investment climate is the foremost deciding factor for potential foreign investors in sub-Saharan Africa, according to a study by three RST researchers, presented at the thirty-fourth European international Business Academy annual conference (11-13 December 2008). Organized by Tallinn University of Technology and Tallinn School of Economics and Business Administration, this year's gathering focused on international business and the catching-up economies, from such perspectives as emerging markets dynamics, internationalization, foreign direct investment, technology and innovation and trade.

Despite recent improvements in commodities trade with China and India, sub-Saharan Africa (SSA) economic performance has been relatively poor in comparison with South-East and East Asia, where foreign direct investment (FDI) has played a major role in economic development. SSA countries feature prominently in the Failed States Index, compiled by Foreign Policy/The Fund for Peace. The 1980-2002 period was one of dismal GDP per capita performance. Thirty of the 45 SSA economies experienced either negative compound annual growth or between zero and one per cent growth in real GDP per capita. The rest grew at rates between one and four per cent real GDP per capita. Since then, though, SSA performance has improved with real GDP growth rates moving from three to four per cent in 2002 to five to six per cent in 2006. However, Africa's share of global FDI inflows decreased from 3.3 per cent in 2003 to 2.7 per cent in 2006. Between 1995 and 1999, the average FDI inflow per capita was US$11.9—the lowest ratio worldwide—while the annual share of SSA in global FDI inflows has remained at an average of only 1.2 per cent since 1992.

Based on data from UNIDO's 2003 survey of 800 multinational enterprises (MNEs) in sub-Saharan Africa, the RST study examined the determinants of FDI decisions in relation to location factors using factor analysis techniques. The results of principal components factor analysis revealed that MNEs and other foreign firms were overwhelmingly and primarily concerned with the characteristics of the political economy that ensure sound investment climates and transparent legal frameworks. This was found to be some three times more crucial than the second most important FDI-decision factor, trade agreement dependence.

In the study, the variables influenced by factors describing the political economy and regulatory climate were country legal framework, transparency of investment climate and political stability. Location-specific advantages comprised local market, local suppliers, raw materials, quality of infrastructure and quality of life. The findings remain unchanged when controlled for two clusters of host countries. The other important factors in MNE investment location decisions were international trade agreements and production inputs, followed by local market demand and availability of production inputs. The inclusion of local market demand revealed that African countries were achieving limited success in harmonizing the many overlapping and contradictory regional trade agreements.

EIBA
European International Business Academy

The empirical results of the study support evidence in the literature on determinants of FDI. However, the risk perception of SSA appears to shift the emphasis in FDI motivations towards considerations of political economy and externally, rather than internally, generated location advantages related to trade. The commodity structure of SSA economies was confirmed by the factor of availability of production inputs, while the low explanatory power of the factor of local market demand attested to the fragmented nature of SSA markets. The analytical results suggested that creating a benign political and investment climate should be a top priority for policy makers in the region. Furthermore, a non-transparent and unstable regulatory framework could not be outweighed by any amount of fiscal and financial incentives. Emerging from the study was the conclusion that attention to the business environment and macro-economic stability was crucial for SSA policy makers.

Frank L. Bartels

One village one product

The economic phenomenon of one village one product (OVOP) is expanding well beyond its birthplace, Japan, to provide a model for African development. Based on a community approach that originally revitalized disadvantaged towns in Oita prefecture, OVOP has been adopted in such countries as Cambodia, China, Indonesia, Laos, Malaysia, Malawi, Mongolia, the Philippines, Thailand and Tunisia. Recognizing its potential for fostering trade, this May's Fourth Tokyo International Conference on African Development (TICAD IV) gave priority to the OVOP initiative for product development and export promotion in Africa, as set out in the Yokohama Plan of Action for 2008 to 2012.

In cooperation with Japan, UNIDO is promoting OVOP in its work to alleviate poverty in Africa. Since the success of transplanting this approach rests largely on its adaptation to African conditions, RST recently completed a study to clarify the OVOP concept, illustrate different countries' experiences and make recommendations to serve as inputs to subsequent project formulation.

Following a desk study, I visited OVOP sites in Oita and interviewed leaders, participants and supporters in the movement. My investigations revealed fundamental differences between the original OVOP movement in Japan and similar projects in developing countries.

The Japanese experience was based on a bottom-up approach, in which villagers took such initiatives as participating in the organization of associations, identification of suitable products and implementation of joint production and sales plans before receiving any government support. By contrast, OVOP projects in developing countries, which initially borrowed the idea from Japan, had a top-down approach under the auspices of central government. In terms of sustainability and impact on community-wide welfare improvements, the original, grass-roots-based OVOP approach seemed to have advantages due to the greater involvement and commitment of community people. The downside, however, was that it required often more than 10 to 15 years to achieve definitive results.

Since poverty alleviation is an urgent matter, developing countries rarely have such time to wait for impact on the ground. In this context, government support may be requisite to accelerating product selection, coordinating production and promoting sales. The challenge of this approach lies in the experience gained so far, namely, that the benefits of such transplanted OVOP projects are confined and less sustainable compared with the original Japanese model.

After examining both approaches, the study recommended combining the advantages of the two, by working both from the top down and the bottom up. While government support accelerates the OVOP process, UNIDO is expected also to strengthen community capabilities and ownership, in order to increase the chances of sustainability through a participatory approach.

Nobuya Haraguchi

Pressing the data button

A quiet but revolutionary event took place recently when UNIDO's Statistics Unit cut the electronic umbilical cord to its data repository of more than 30 years. In pressing the red button linking it to the mainframe computer of the fellow International Atomic Energy Agency, UNIDO's industrial statistics database was transformed into totally self-reliant client/server system.

Following the prevailing trend in the computer industry to downsize information systems, in 2003, UNIDO took the first step towards migrating host applications from a centralized mainframe unit to a disaggregated client-server system.

The first step was an in-depth analysis of the existing system, with its hundreds of programmes written in several computer languages and data stored in a variety of data formats, followed by development of a data model as generic as possible in order to accommodate subsequent changes. Based on this model, a loader application was developed to synchronize data on the mainframe system with that in the Sybase database of the new client/server system. In parallel, development of a new metadata subsystem was initiated in the form of a tool for maintenance of the structural metadata. The outcome of this initial phase proved that the migration concept would be feasible.

The next stage entailed development of a capture-and-maintenance tool for reference metadata. Methodological metadata, then in the form of Word documents or Excel worksheets, were entered into the system as was the mainframe footnote database, consisting of data-item level metadata.

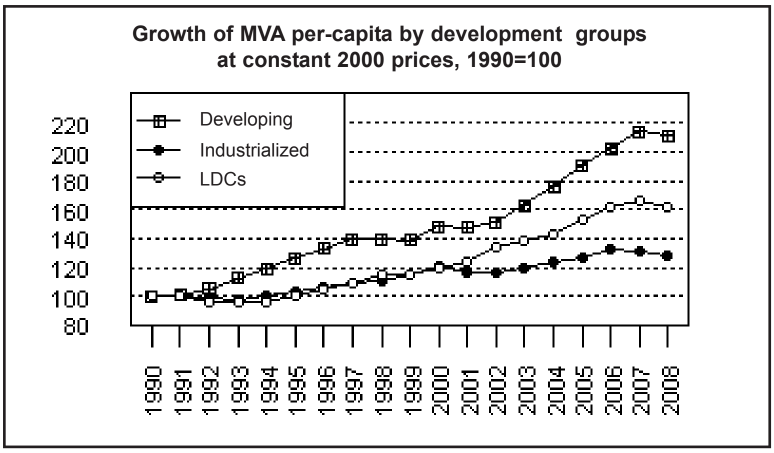
This completed the process of migrating the maintenance of available metadata to the client/server platform. It allowed development of data dissemination applications for production of UNIDO's statistical publications and products from the mainframe system and from the client/Server platform in parallel, which was an ideal acceptance test for the new applications.

The final step consisted of enabling the data questionnaire to be pre-filled as well as implementing the data capturing and maintenance tools. UNIDO's new statistical system was ready to decouple from the mainframe.

Among the numerous benefits will be on-the-fly plots from the statistical tables featured in the 2009 edition of the *International Yearbook of Industrial Statistics* bringing a new graphical section to UNIDO's annual publication, as illustrated in the below graph.

The successful migration to a new platform and new technology offers a host of other bonuses. With the system in place, UNIDO can now leverage the provided information technology infrastructure and concentrate on the next stage of meeting the modern requirements of statistical data production, such as supporting the Statistical Data and Metadata Exchange technical standards and introducing advanced visualization tools.

Valentin Todorov



Crisis, opportunities and reality

A global financial crisis is in full swing. Starting in the United States, it has quickly spread to other industrialized countries—where the seeds of crisis already had been firmly sown—and, further on, to the industrializing part of Asia as well as to Latin America. Whereas financial crises tend predominantly to hit the nominal side of the economy, this one is also having severe consequences for real activities. As firms can no longer borrow with the same ease and speed as before, planned investments are postponed or even abandoned. Workers are laid off *en masse* and predictions about the future are bleaker than ever. In short, the financial crisis has been accompanied by economic recession. Most unfortunately, this recession might trigger a second waive of financial crisis.

For developing countries, the financial crisis is less damaging than the recession. Although international investors might be less inclined to invest in the developing world, capital flows, in any event, have different destinations. The real worry is the on-going recession in the rich world because of its negative implication for demand for products from developing countries. Moreover, many of the poorest developing countries are providers of raw materials, which are in decreasing demand worldwide. On the other hand, those in rich countries might turn to less expensive food alternatives imported from developing countries, which somewhat mitigates the overall economic adversity. For developing countries that are industrializing, the implications are far from clear. In the best case, structural change is delayed and slowed down, while, in the worst, structural change comes to a halt. Those countries with poor resilience might even regress. In some cases, social unrest might ensue.

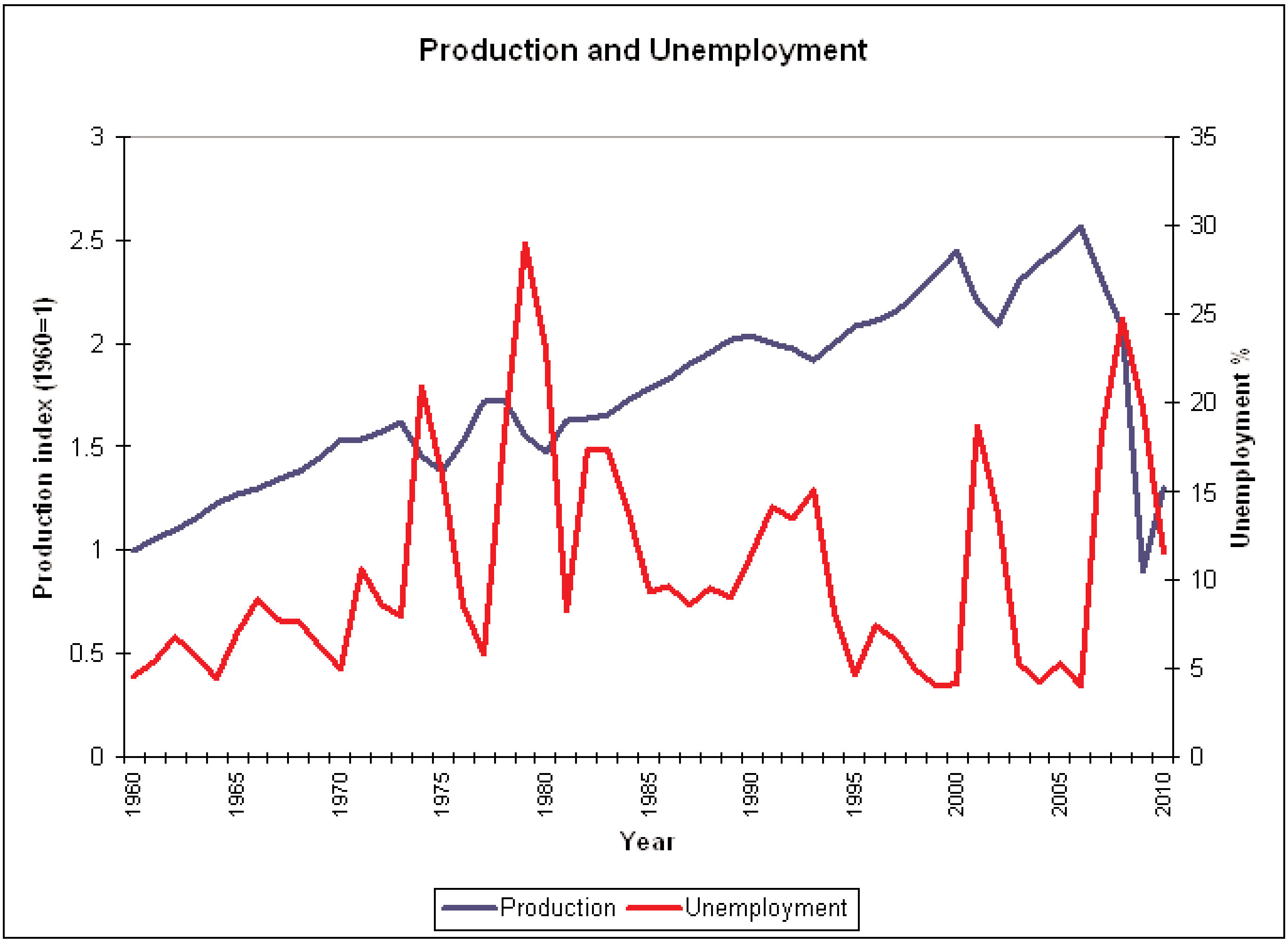
Luckily, the darkest hour also implies an eventual turnaround. However deep the recession might prove, it does not call into question whether there will be a rebound. The uncertainty is the speed at which the day will start to brighten. One may conjecture that flexible economies, such as the United States, which fell into recession both earlier and faster than the rest of the world, will rise more quickly. On the other hand, due to its relative inflexibility, Europe may take longer.

But recessions and financial crises also create opportunities. A textbook version of what could happen is that, as the rich world leaves some manufacturing industries, others step in. For example, if China, India and a few other developing countries move into automotive manufacturing and other related tasks, they will open opportunities for lesser-developed economies to take up tasks that generate higher value added than previous activities. With much lower production costs than in rich countries, Chinese and Indian carmakers are slowly but surely taking market shares, even acquiring brands such as Jaguar and Rover. Although some carmakers in Europe, Japan and the United States will survive—the love of product variety suggests this to be the outcome—many may go under.

Crises can, therefore, be seen as signaling possibilities for restructuring, benign to all except perhaps those in frictional unemployment. But, then, reality enters the picture.

A recent example of what is likely to happen is in shipbuilding, which was a major industry in Sweden until the 1970s. Competition from Asia in the form of Japan and the Republic of Korea was stiffening. Ships of the same quality or better could be built there at much lower cost. While, in hindsight, the signals were clear, at the time, the Swedish Government decided to protect uncompetitive shipyards, only to see the production moving to Japan and South Korea anyway. To be sure, there were some important social virtues in terms of saving workers from unemployment, but, overall, the policy turned out to be a waste of taxpayers' money. What should have happened was to allow shipbuilders to go bankrupt and workers to move on to greener pastures, such as the automotive industry. This also occurred but with a costly delay. So often, though, political-economy considerations have other developments that prove that reality trumps textbooks.

History tends to repeat itself, so massive amounts of tax money are used to protect what might be a doomed industry in rich countries. This is industrial policy in its prime. Is this reminiscent of the European Union's agricultural policy? Yes, of course! It follows, therefore,



that many European farmers should also seek other occupations. Rich countries will implement whatever industrial policies they find necessary to protect their industries. Although the intention is not to damage developing countries—only to ensure their own well-being—for the developing world these will be lost opportunities. Hence, damage will be inevitable. And, then, the next election is just around the corner.

Will there be any opportunities at all for developing countries? Well, in the short- and medium-term there will, for sure, be fewer than those predicted by economic textbooks and what would be beneficial for the world as a whole. But, in the long-term—just as in the case of the Swedish shipyards—change is inevitable. Those developing countries prepared for such change will constitute the next generation fast growers. The others, however, might have to wait for the next recession.

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