

# MakingIt

Industry for Development

4th quarter 2011

- The end of growth?
- UN Women's Michelle Bachelet
- South Africa
- Hydrogen energy to the rescue?
- Paul Polak





NUMBER 1, DECEMBER 2009

● We must let nature inspire us – Gunter Pauli presents an alternative business model that is environmentally friendly and sustainable ● Hot Topic: Is it possible to have prosperity without growth? Is 'green growth' really possible?



NUMBER 2, APRIL 2010

● The International Energy Agency's Nobuo Tanaka looks at energy transitions for industry ● Energy for all – Kandeh Yumkella and Leena Srivastava on what needs to be done to improve energy access



NUMBER 3, JULY 2010

● China's stunning economic rise: interview with minister of commerce, Chen Deming ● Towards a more productive debate – Ha-Joon Chang calls for an acceptance that industrial policy can work



NUMBER 4, NOVEMBER 2010

● Strengthening productive capacity – Cheick Sidi Diarra argues that the LDCs should – and can – produce more, and better quality, goods ● Patricia Francis on climate change and trade ● Hot topic: The relevance of entrepreneurship



NUMBER 5, FEBRUARY 2011

● A window of opportunity for world trade? – Peter Sutherland assesses the prospects for the conclusion of a multilateral trade agreement ● A path to mutual prosperity – Xiao Ye on trade between sub-Saharan Africa and China



NUMBER 6, APRIL 2011

● Feeding a crowded world – IFAD's Kanayo Nwanze argues that smallholder farmers must have opportunities to be entrepreneurs ● Nestlé CEO Paul Bulcke on 'Creating Shared Value' ● Hot Topic: Does energy efficiency lead to increased energy consumption?



NUMBER 7, JULY 2011

● The globalization paradox – Dani Rodrik ● Unfair share – Thomas Pogge on affluent countries' responsibility for increasing global poverty ● Hot topic: Is nuclear power necessary for a carbon-free future?

A quarterly magazine. Stimulating, critical and constructive. A forum for discussion and exchange about the intersection of industry and development.

# Editorial

‘Women hold up half the sky’ is a Chinese proverb affirming women’s equal contribution to the human experience but it is an aspirational, rather than a factual, claim. In developed and developing countries alike, gender gaps persist in education, health, work, wages and political participation.

For this issue of *Making It*, the theme is gender equality and the economic empowerment of women. As Kofi Annan, former UN Secretary General, pointed out, “There is no tool for development more effective than the empowerment of women”.

Women work two-thirds of the world’s working hours but women earn only 10% of the world’s income, and women own less than 1% of the world’s property. Women lag far behind men in access to land, credit, and decent jobs, even though a growing body of research shows that enhancing women’s economic options boosts national economies. As the current UN Secretary-General, Ban Ki-moon, has said, “When we empower women, we empower communities, nations, and the entire human family.”

The first UN Women annual report, 2010-11, states, “Where women have equal access to economic assets, decent livelihoods and leadership opportunities – the building blocks of economic empowerment – economic well-being increases.”

We are delighted to have a keynote article on the challenge of empowering women by Michelle Bachelet, the Executive Director of UN Women. *Making It* thanks colleagues at UN Women for their help in putting this issue together.





Editor: Charles Arthur  
editor@makingitmagazine.net  
Editorial committee: Ralf Bredel,  
Tillmann Günther, Sarwar Hobohm,  
Kazuki Kitaoka, Wilfried Lütkenhorst  
(chair), Cormac O'Reilly and  
Jo Roetzer-Sweetland  
Website and outreach:  
Lauren Brassaw  
outreach@makingitmagazine.net  
Cover illustration: Maya Zankoul  
Design: Smith+Bell, UK –  
www.smithplusbell.com  
Thanks for assistance to  
Donna Coleman

Printed by  
Gutenberg Press  
Ltd, Malta –  
www.gutenberg.com.mt  
on FSC certified paper



To view this publication online and to  
participate in discussions about  
industry for development, please visit  
www.makingitmagazine.net

To subscribe and receive future issues  
of *Making It*, please send an email  
with your name and address to  
subscriptions@makingitmagazine.net

*Making It: Industry for Development*  
is published by the United Nations  
Industrial Development Organization  
(UNIDO),

Vienna International Centre,  
P.O. Box 300, 1400 Vienna, Austria  
Telephone: (+43-1) 26026-0,  
Fax: (+43-1) 26926-69

E-mail: [unido@unido.org](mailto:unido@unido.org)

Copyright © 2011 The United  
Nations Industrial Development  
Organization

No part of this publication can be  
used or reproduced without prior  
permission from the editor  
ISSN 2076-8508

The designations employed and the  
presentation of the material in this magazine  
do not imply the expression of any opinion  
whatsoever on the part of the Secretariat of the  
United Nations Industrial Development  
Organization (UNIDO) concerning the legal  
status of any country, territory, city or area or of  
its authorities, or concerning the delimitation  
of its frontiers or boundaries, or its economic  
system or degree of development. Designations  
such as “developed”, “industrialized” and  
“developing” are intended for statistical  
convenience and do not necessarily express a  
judgment about the stage reached by a  
particular country or area in the development  
process. Mention of firm names or commercial  
products does not constitute an endorsement  
by UNIDO.

The opinions, statistical data and estimates  
contained in signed articles are the  
responsibility of the author(s), including those  
who are UNIDO members of staff, and should  
not be considered as reflecting the views or  
bearing the endorsement of UNIDO.  
This document has been produced without  
formal United Nations editing.

## GLOBAL FORUM

### 6 Letters

**8 The future of corporations** – Paul Polak on  
creating vibrant new markets, serving customers  
living on less than two US dollars a day

**10 Hot Topic: Growth: the end of the world as we  
know it?** Richard Heinberg and Matthew  
Lockwood debate the ‘end of growth’ or the ‘start  
of green growth’

## 14 Business matters – news and trends

## FEATURES

**16 Empowering women entrepreneurs, at home  
and abroad** – Jan O’Sullivan sees gender  
equality as fundamental to Ireland’s  
overseas development programme

**18 Engineering  
eco-friendly solutions** –  
Carolina Guerra turns  
hazardous waste into  
useful products and won  
the 2011 Cartier Women’s  
Initiative Award for Latin  
America



**20 Promoting sustainable lives and livelihoods** –  
Omar Traboulsi on the challenges faced by rural  
women’s cooperatives in the Republic of  
Lebanon and their crucial role

## KEYNOTE FEATURE

**22 Closing the gender gaps** – Michelle  
Bachelet, Executive Director of UN Women,  
on how policymaking can advance the aim  
of gender equality, and how the barriers that  
prevent women from seizing economic  
opportunities can be overcome



22



30



45

- 30 Think bigger** – Gayle Tzemach Lemmon says women in poor countries need resources to tap their entrepreneurial potential
- 32 Coping with the crisis** – Zoe Elena Horn examines the impact of the global economic crisis on women in the informal economy
- 34 Country Feature – South Africa** Interview with the Minister of International Relations and Cooperation, Maite Nkoana-Mashabane
- 38 On the road again, with a new roadmap** – European Commissioner for Environment, Janez Potočnik, on why environmentalists and industry must work together

#### POLICY BRIEF

- 40 Gender-sensitive industrial development**
- 42 Measuring women's economic empowerment**
- 44 Solutions to the gender pay gap**

**46 Endpiece** – Interview with Dr. Mustafa Hatipoğlu, managing director of a UNIDO project aiming to usher in a hydrogen economy

Cover illustrator **Maya Zankoul** is an illustrator/graphic designer from Lebanon and author of the comic blog-turned-book *Amalgam*. She currently works from her design office in Beirut on mobile and tablet app design, and illustrations for personal projects and for magazines. Her latest work includes an avatar-creating online app (The Zankoulizer), and an illustrated poster exhibition about Lebanese cuisine and culinary traditions. Her next project is creating an animated cartoon series from her drawings.  
<http://pro.mayazankoul.com>







# GLOBAL FORUM

The Global Forum section of *Making It* is a space for interaction and discussion, and we welcome reactions and responses from readers about any of the issues raised in the magazine. Letters for publication in *Making It* should be marked 'For publication', and sent either by email to: [editor@makingitmagazine.net](mailto:editor@makingitmagazine.net) or by post to: The Editor, *Making It*, Room D2142, UNIDO, PO Box 300, 1400 Wien, Austria. (Letters/emails may be edited for reasons of space).

## LETTERS

### Barefoot economists

Thank you so much for the interview with Manfred Max-Neef (*Making It*, issue 7). He is quite correct that most people discussing, measuring, or tackling poverty, never know what poverty is. Beyond the physical deprivations observed in poverty, lie the hope, creativity and courage needed to tackle it. The poor themselves have to be involved in designing intervention strategies and successful plans.

Similarly, many vulnerable individuals can find their way out of poverty if empowered, especially through capacity-building and the availability of enabling institutions, frameworks, policies, rewarding markets and productivities. Years of working experience with the vulnerable groups in agriculture and the rural sector have revealed that production and marketing constraints are what keep farming households in poverty. Tackling poverty requires an in-depth understanding of the problems and prospects in peculiar settings, and lots of input from the poor themselves.

● **Taiwo Osun, Kiel, Germany, website comment**

Having Dani Rodrik and Manfred Max-Neef in the same

issue (*Making It*, issue 7) is funny. Professor Rodrik teaches at Harvard and must be a very clever man but I think the 'Barefoot Economist' is cleverer still. Prof. Rodrik states that countries that subsidize agricultural production pay the cost, and the countries that receive those subsidized agro-exports get the benefit because food is cheaper. He obviously knows nothing about the collapse of Haitian agriculture as a result of imported food surpluses from the United States. As the Haitian economist, Camille Chalmers – another 'barefoot economist', who works closely with peasant farmers' organizations – puts it: "The consequences are disastrous...a hundred thousand people lose their means of existence every year." As for the food being cheaper in Haiti, well, we know what is happening to international food prices now!

● **M. Fleurimond, website comment**

### Worker-friendly?

So, Bangladesh's minister of industries says his government is "worker-friendly" (*Making It*, issue 7). Is this the same Bangladesh denounced by the International Trade Union Congress (ITUC)? In its report on Bangladesh in 2010, the ITUC writes, "Garment workers began protests in April to demand a minimum wage of BDT 5,000 a month (€46).



**A revolution in electricity – Husk Power Systems uses rice husks to create gas that powers engines that generate electricity.**

These protests continued throughout the year, and many were met with violent repression: six workers were killed and many injured. Trade union leaders were arrested, tens of thousands of garment workers charged in connection with the protests, and the government closed hundreds of NGOs."

The report continues, "One union leader estimated that 5,000 garment workers had been fired because of their alleged involvement in protests. Although publicly sympathetic with the plight of

the garment workers, PM Sheikh Hasina was convinced that an "evil force" was behind a conspiracy to foment unrest in the industry. To address the unrest a special police force for the garment industry was created."

● **Farooq Javed, website comment**

### Beyond the grid

"A revolution in electricity" (*Making It*, issue 6) is a great article. I like it because it shows that even those living beyond the reach of the grid can enjoy access to energy and that it is good business too! Who can argue with that? I wonder why governments are not doing more to use biomass as an



For further discussion of the issues raised in *Making It*, please visit the magazine website at [www.makingitmagazine.net](http://www.makingitmagazine.net) and the social networking Facebook site. Readers are encouraged to surf on over to these sites to join in the online discussion and debate about industry for development.



energy source. 'Business as usual' is going to ruin our planet. Does no one care about our children's future?

● **Chris Mann, website comment**

## Rural blight

I was fascinated by the interview with Vandana Shiva (*Making It*, issue 6). She is right when she said that seeds have been "appropriated and colonized" by corporations. She talked of the double hazard of genetic engineering and seed patenting. Vandana shows how bad the attitude of the world's major companies and organisations like the World Bank towards farming in developing countries really is.

Agricultural output in the world has grown but it has not brought prosperity to most of the rural population (which accounts for over three billion people). It is in the countryside that people are most likely to starve because global agricultural markets are some of the most distorted in the world. Only 22% of agricultural exports flow from the developing world to the advanced. A handful of companies monopolize the commercial inputs into agriculture. Vandana showed this clearly with seeds and it applies to fertilizer and the buying of internationally traded foodstuffs.

In many parts of the world the poorest peasants produce

most of the food they need to survive – but they have also come to depend increasingly on non-farm work as well as money sent back by migrants to the towns in their own countries and abroad. More and more people will be driven off the land into non-farm work or urban migration.

● **James Greaves, New York City, by email**

## Praise

Congratulations on producing a substantial, readable and attractive journal! I just got a copy in the mail and was very impressed. May I add that before coming to Yale University in 2001, I was editor of the *Far Eastern Economic*

*Review* in Hong Kong, and have some idea what it takes to bring out a magazine like yours.

● **Nayan Chanda, Director of Publications, Yale Centre for the Study of Globalization, New Haven, USA**

I would like to thank you for sending *Making It*, issue 6, "Agribusiness: from farm to fork". It was really useful for getting to know some interesting agriculture initiatives around the world. We have circulated the report to members of the FICCI Agriculture Committee.

● **Dr S. Baskar Reddy, Agriculture Division, Federation of Indian Chambers of Commerce and Industry (FICCI), New Delhi, India**

**UNIDO**

**The new project fact sheet series**

Foster your understanding of sustainable development by reading more about the achievements and impact of technical cooperation projects. These project fact sheets provide concise, result-oriented information about UNIDO's global activities.

[www.unido.org/factsheets](http://www.unido.org/factsheets)



**Paul Polak** believes that, in the future, corporations will only remain competitive in the global marketplace by creating vibrant new markets – serving customers living on less than two US dollars a day – at scale.

## The future of corporations

Three years ago, General Motors, the biggest, most powerful corporation in the world, was brought to its knees by failing to react quickly and effectively to competition from Japanese imports, which were smaller, more fuel-efficient, and cheaper.

Companies like Wal-Mart, Coca-Cola, and Microsoft, will soon face the same 'do-or-die' crossroads that General Motors faced if they don't react quickly and effectively to the challenge of earning attractive profits, at scale, from emerging markets.

Thirty million people shop at Wal-Mart every day, but there are three billion people in the world that will never set foot inside a Wal-Mart store. They include 2.6 billion potential customers who live on less than two dollars a day. Most of them live in rural areas in developing countries and earn their livelihoods from one or two acre farms. Many more live in urban slums, and live on what they can earn from informal enterprises, like small shops selling consumer items, or tailoring enterprises.

Coca-Cola sells what amounts to an aspirationally branded, fizzy, sugar-water for about 25 cents a bottle in villages all over India. In those same villages, 50% of the children are malnourished. What would happen to Coca-Cola if a well-financed Chinese company started selling a nutritious soft drink at five US cents a

bottle in millions of villages around the world? I believe Coca-Cola could quickly find itself in the same position that General Motors faced three years ago.

The Gates Foundation has helped millions of people move out of poverty, and improved the health and education of millions more. But, as far as I know, Microsoft, the parent company, does not make a single product that sells to the 2.6 billion people in the world who live on less than two dollars a day.

However, the opportunities to create profitable businesses serving three billion by-passed customers are almost limitless. For example, there are a billion people who will never connect to electricity. That's about the same as the total population of the United States and Europe combined. There are another billion people who don't have access to safe drinking water. Many of them get sick and some of them die because of it.

Why aren't existing businesses successfully involved in emerging markets? There are three main reasons:

- They don't see a profit in it.
- They don't have a clue how to design the radically affordable products and services that poor people need.
- They don't know how to design and operate profitable last-mile supply chains.

Three key practical strategies need to be

incorporated by businesses serving 'two US dollars a day' customers:

- Small margins at large volumes equal attractive bottom-line profits. Supermarkets used this formula to replace 'mom-and-pop' grocery stores, and Wal-Mart improved on it. For emerging markets, it is really the Wal-Mart strategy multiplied one hundred times.
- Design for radical affordability. A movement called 'Design for the other 90%' is gaining a lot of momentum. It's about learning to design things that are affordable for people who live on less than US\$2 per day, and that also are income-generating.
- Implement profitable last-mile supply chains.

Spring Health, the company I've started with my partners in India will, if successful, create a model platform for profitable last-mile supply chains to small rural villages in India. The mission of Spring Health is to sell safe drinking water at scale to people who don't have access to it now.

There are some 300 million people in eastern India alone that don't have access to safe drinking water. Most of them live in small villages with 100 to 300 families, and those villages have little in the way of markets. But every one of these small villages has three or more 'mom-and-pop' shops. They sell everything from cigarettes to soap, to candy, to cookies, and all kinds of consumable household items. What Spring Health has done is to build a 3,000-litre cement water tank, for about US\$100, beside each shop, and then purify the water in it using a radically affordable water purifier liquid. The shopkeeper sells the purified water for less than half a cent a litre to people in the village. Our customers – most of whom live on less than US\$2 a day – report that they are experiencing a major drop in illnesses and in medical bills. Each family estimates that they pay between US\$25 and US\$250 a year for medicines to stop diarrhoea, for visits to clinics and



doctors, for electrolyte replacements, intravenous infusions, and hospital stays, all to treat the illnesses that they get from drinking bad water.

The mission of Spring Health is to provide safe drinking water to five million people through 10,000 village shops within three years, and to provide safe drinking water to more than 100 million people through shops in 400,000 villages around the world within ten years.

I believe there are thousands of opportunities for creating new markets and creating new companies to serve the three billion customers in the world who are bypassed by current markets. It will take nothing less than a revolution in how businesses design, price, market, and deliver their products and services to accomplish this. But the outcome of this revolution will be to create millions of new jobs, help more than a billion people move out of poverty, and take a giant step toward ending environmental imbalance on the planet.



Photo: Mukul Soni

The treadle pump is a human-powered irrigation device that sits on top of a well. Pumping is activated by stepping up and down on treadles which drive pistons, creating cylinder suction that draws groundwater to the surface. Paul Polak's International Development Enterprises (IDE) played an instrumental role in popularizing treadle pump technology in Bangladesh in the early 1980s through focused value chain and social marketing interventions. Eighty-four manufacturers now produce treadle pumps and 1.4 million treadle pumps have been sold to small plot Bangladeshi farmers since 1985. The United Nations Food and Agricultural Organization (FAO) and other organizations have since begun their own treadle pump initiatives in other countries.

**PAUL POLAK** – founder of Colorado-based non-profit International Development Enterprises (IDE) – is dedicated to developing practical solutions that attack poverty at its roots. For the past 25 years, Polak has worked with thousands of farmers in countries around the world – including Bangladesh, India, Cambodia, Ethiopia, Myanmar, Nepal, Vietnam, Zambia and Zimbabwe – to help design and produce low-cost, income-generating products that have already moved 17 million people out of poverty.

Right: Paul Polak leads a talk on affordable technology design for developing countries at PopTech 2008.

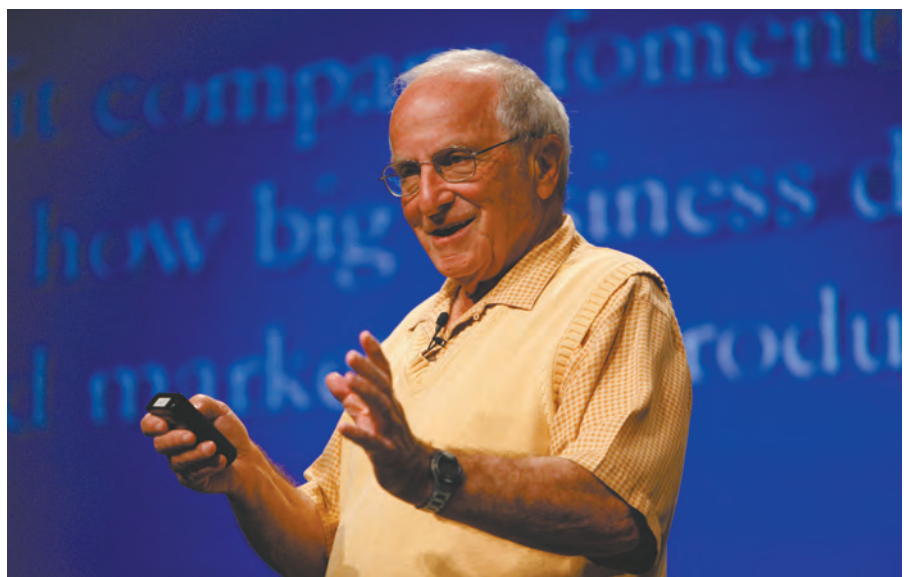


Photo: Kris Krüg

**HOT TOPIC**

# Growth: the end of the world as we know it?



Image: Adrian Teal/cartoonstock

# The end of growth

**RICHARD HEINBERG** is Senior Fellow-in-Residence at the Post Carbon Institute. He is the author of ten books, and is widely regarded as one of the world's most effective communicators of the urgent need to transition away from fossil fuels.

You've heard them. Politicians, economists, executives, all saying the same thing: "The economy is recovering". Recovering to what? – to its normal state of constant growth.

They are wrong. Economic growth is effectively over.

It started a couple of centuries ago. There had been economic expansion before, but

it was slow and cyclical. Empires rose and fell. But, with the Industrial Revolution, rapid growth became normal. Economists tell us that this was because of innovation, division of labour, and increased trade, but it was mostly as a result of cheap energy. It takes energy to do things, and with cheap coal and oil, suddenly, people could do more than ever. First coal, then oil, sped up trade by fuelling our prized inventions – railroads, automobiles, and airplanes.

Economists assumed that growth could go on for ever. It was an absurd notion. Nobody stopped to think that all this industrial growth was happening on a small planet, with only so much oil and soil, and only so many forests and fish. We were growing on borrowed time. We all got hooked on growth. Rising GDP figures became our main measure of success. More, bigger, and faster, meant better.

The first warning sign came in the ➤



Image: © Anastasia Sukhonosova / Dreamstime.com



## HOT TOPIC

► 1970s. A team of scientists programmed a computer with data about population growth, rising consumption, and resource depletion. Their conclusion?: there are limits to growth. Mainstream economists attacked those findings, using nasty rhetorical tricks but, 40 years later, the same conclusion holds. In fact, the economies of the world's wealthy nations started stagnating years ago. As resources began to run out, governments businesses and households went into hock, up to their eyeballs, gorging on easy credit. The financial system created ever more complex securities and derivatives schemes to soak up all that debt, and make perpetually rising, imaginary profits on imaginary assets.

But money and debt depend on natural resources. Piling up debt, year after debt, doubling it, and doubling it again, meant piling up claims on resources that were shrinking even as we depleted them. It was a pyramid scheme – the mother of all bubbles. And, in 2008, it burst. Governments and central banks tried to re-inflate the bubble with bailouts and stimulus packages funded by public debt, but there are practical limits to debt, and we are hitting them. There are practical limits to energy sources, and we are hitting them. There are real limits to the planet's ability to absorb our waste and industrial accidents, and we have hit those too.

We are being told that the economy is recovering, but take away new debt that the government has taken on since 2008 to stimulate the economy and there has been no real economic growth. There is no recovery. It has all been done with more debt.

We have already mortgaged our grandchildren's future, but to keep the economy from relapsing, we will need to

“Nobody stopped to think that all this industrial growth was happening on a small planet, with only so much oil and soil, and only so many forests and fish. We were growing on borrowed time.”

borrow even more. The game is up. We have reached the end of economic growth as we have known it. They are lying to you. But they can't help it. We are all addicted to growth. We all want better jobs and higher returns on investments. But we live on a finite planet. The end of growth is not the fault of any one politician or political party, but some people benefited from growth more than others.

We can live without economic growth, but we will have to start doing a few things differently. We have to measure and aim for improvements in life that don't require increasing our consumption of fossil fuels and other depleting resources, or piling on more debt: freedom; being with the people we love; good health and the time to enjoy it; a secure, happy community.

We have to work together to build local economies where we can live and prosper but – and this is a big but – without fossil fuels and without borrowing from the future. The longer we put this off, the harder it will be.

Economic growth, it's over. Let's move on.  
● Excerpted from Richard Heinberg's *The End of Growth: Adapting to Our New Economic Reality*.

## The start of green growth

**MATTHEW LOCKWOOD** is head of Climate Change at the UK's Institute of Development Studies, and was previously Associate Director for Climate, Transport and Energy at the Institute for Public Policy Research.

Economic growth has a lot to recommend it. Growth brought mass prosperity to Britain in the 20th century. It provided the resources to build the health, education, and social security systems that we value so much, and that have been so widely copied around the world.

At the same time, we know that we require government action to tackle the externality at the heart of climate change. Markets on their own will not deliver the emissions reductions we need – not until the point where low carbon technologies become competitive with their fossil fuel alternatives.

So, if we could get all the benefits of growth, without the environmental damage, wouldn't that be ideal? And isn't it clear that we need action by governments to deliver both parts of the green growth package?

The debate on green growth shows that things are not that simple.

The most fundamental criticism says that green growth is simply impossible: we cannot develop and invest in low carbon technologies quickly enough to avert dangerous climate change and a world warming by 3°C or more. This argument is

based on the failure to decouple growth from carbon emissions before the climate imperative became clear, and before many climate policies kicked in. However, although it is a very serious concern, it is not a foregone conclusion.

Rather, what this analysis shows is the difficulty of achieving growth that is green enough. Growth that avoids dangerous climate change will require a transformation of the economy, and especially our investment in low carbon energy infrastructure on an unprecedented scale and at an unprecedented speed. Of course, this applies to the global economy, but developed countries, like the UK, should be in the lead.

**“Growth that avoids dangerous climate change will require investment in low carbon energy infrastructure on an unprecedented scale and at an unprecedented speed.”**

This takes us to perhaps the most difficult aspect of the green growth agendas: the politics. There are problems at three levels. First, shaping green growth will require more active intervention in the economy, and that intervention has to be intelligent and confident. This is an enormous challenge for the political culture that has long relied on laissez-faire.

A second political challenge is that making growth green involves a restructuring in the economy, and like all restructuring, involves winners and losers. There will be additional costs in the short term. This presents a big problem for any government, especially as public attitudes to environmental taxes are so hostile, especially in areas like driving and flying.

The third problem relates to debt. There is a powerful logic to borrowing from the future to finance the investments we need to make today to decarbonise the economy. Certainly, this will leave a larger legacy of debt for future generations but, if we fail to do it, we will leave a much more devastating legacy of environmental damage, and in the future, because of the irreversibility of climate change effects. It will not be so easy for people to buy their way out of the environmental problems. At the same time, it also looks increasingly as if we will need some form of fiscal stimulus to restore growth in the short term, and the best way to do this would be to spend on infrastructure. However, many governments, like the current British one, have woven a powerful narrative of ruinous debt around their economic policy options, which makes it more difficult for them to move quickly and easily to do this.

Green growth, then, is far from inevitable or simple. Achieving it will be an unprecedented technological and political challenge. We'd best get started right away. ■





■ Economic growth is losing momentum in most emerging markets, and few countries will be able to grow at anything approaching trend rates if economic activity slows precipitously in the West. By region, Asia remains in the best shape overall. Recent data point to a broad slowdown brought on in part by anti-inflationary policy, but Japan's post-tsunami rebound is helping to cushion the impact of global weakness. Although there is now a real

danger that Asian economies will experience more than a benign slowdown, a return to recession remains unlikely. Unlike in the West, most countries could respond to such a scenario by introducing further fiscal and monetary stimulus. Chinese GDP growth will slow to a still-impressive 8.2% in 2012, assuming that the authorities stave off inflationary spirals or a property crash.

Latin America enjoyed a strong rebound in 2010, but

growth will slow to 3.7% in 2011 owing in part to efforts to ward off high inflation. Growth will moderate further next year, to 3.5%, although some countries may be able to cushion the impact of weak external demand by a degree of policy loosening. Economic expansion should pick up in 2013-16, thanks to rising domestic consumption, sound macroeconomic policies and Asian demand for commodities. However, high commodity prices will continue

to reinforce the region's traditional two-speed growth pattern, with South American economies performing better than elsewhere.

The recovery in eastern Europe is slackening. Although exports and industrial output are still growing, regional currencies and stock markets have suffered sharp falls. The spectre of contagion from the sovereign debt crisis in the euro zone, which is also eastern Europe's key export market, continues to loom large. Regional growth will slip to 3.3% in 2012. Russian growth prospects will continue to depend on world commodity prices.

## BUSINESS MATTERS

### New sustainability champions

The World Economic Forum and the Boston Consulting Group have issued a new report highlighting the innovative business practices of 16 'sustainability champions' in emerging markets.

The companies were chosen for creating unconventional, profitable solutions that positively impact economic growth and enhance overall sustainability in their regions.

The researchers deliberately did not look to governments, environmental organizations or multinational corporations from advanced economies – all sources of well-practiced but as yet insufficient answers. Instead, they went to agents who deal with a wide range of constraints in their daily business: rapidly growing companies originating and operating in the emerging markets, where economic prosperity and populations are growing fastest, and where environmental constraints and stresses are often highest.

As a result of a rigorous

research process, the report identified and assessed 16 emerging market-based companies that share a unique mindset and set of best practices. These 'New Sustainability Champions', based in countries such as Brazil, Costa Rica, Egypt and Kenya, provide inspiring examples for any corporation around the world interested in tackling the challenges of performance, innovation, growth and sustainability.

Specifically, these companies:

- Proactively turn constraints into opportunities through innovation.
- Embed sustainability in their company culture.

- Actively shape their business environments.

According to the World Economic Forum and the Boston Consulting Group, the mindset, practices, and business models of these 'New Sustainability Champions' offer critical insights for emerging market-based businesses, established multinationals, and governments. They could provide multiplier effects and create the basis for replication and extension among companies operating in emerging markets. They also serve as a starting point for redefining the future of growth: one that is robust and efficiently binds together all elements of sustainability – economic, environmental and social.

### The 'New Sustainability Champions' are:

- Broad Group – People's Republic of China ● Equity Bank – Kenya ● Florida Ice & Farm – Costa Rica ● Grupo Balbo – Brazil ● Jain Irrigation Systems – India ● Manila Water Company – The Philippines ● Masisa – Chile ● TR Corporation – China, Hong Kong SAR ● Natura – Brazil ● New Britain Palm Oil – Papua New Guinea ● Sekem – Egypt ● Shree Cement – India ● Suntech – People's Republic of China ● Suzlon – India ● Woolworths – South Africa ● Zhangzidao Fishery Group – People's Republic of China

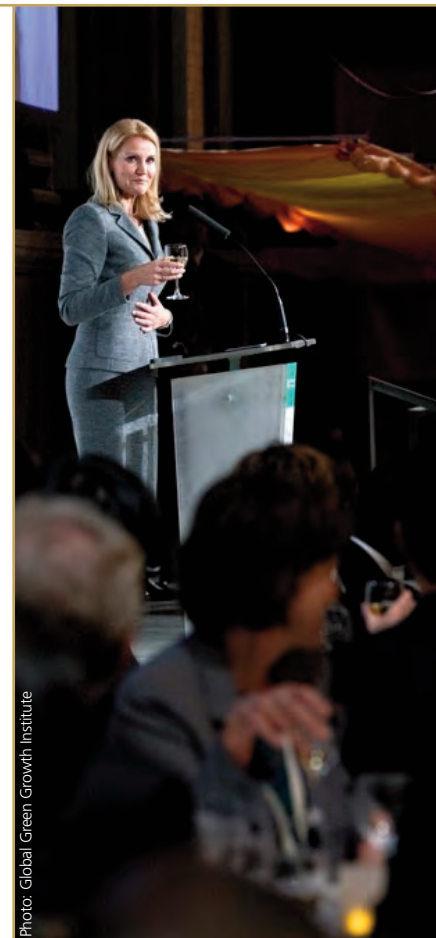


Photo: Global Green Growth Institute



Political upheaval and civil unrest have undermined economic growth across broad swathes of the Middle East and North Africa. However, the region is set to stage a recovery next year. Despite the worrying outlook for the developed world and somewhat weaker global oil prices, faster regional growth will be driven by massive public investment in Saudi Arabia, robust growth in Iraq and – assuming that major political turmoil subsides – a rebound in countries affected by the Arab Spring. Elsewhere, economic growth in sub-Saharan Africa will accelerate to 5% in 2012. Structural constraints remain serious, but

regional economies will draw strength from high commodity prices, rising external inflows, fiscal spending and sporadic economic reforms. (Economist Intelligence Unit)

■ A new report by PricewaterhouseCoopers (PWC) looks at the threats to and opportunities for achieving excellence in manufacturing production and supply.

“Events such as the Japan earthquake have highlighted the importance of supply chain resilience. We live in a world where the connections up and down the supply chain, as well as inside companies and outside to the

world around them, are increasingly important.” In this context, the report, *Achieving excellence in production and supply*, highlights five issues that PWC believes will play an important part in determining the difference between manufacturing excellence, adequacy or mediocrity:

- Identifying and preventing supply chain risk.
- Linking demand planning with the whole value chain.
- Making customer and supplier collaboration real.
- Addressing lifecycle opportunities and demonstrating sustainable value.
- Attracting the people and skills needed for the future.

The report concludes, “Common to all five is the importance of companies engaging and connecting better with customers, suppliers and the world around them. Companies that are disconnected or fail to engage appropriately will miss opportunities to achieve excellence or, worse, face the danger of ticking time bombs that could fatally disrupt production and supply. Those that are successful in making the connections have the opportunity to gain ground and move ahead of their peers in distinctive and tangible ways.” ([pwc.com/industrialmanufacturing](http://pwc.com/industrialmanufacturing))



Prime Minister of Denmark, Helle Thorning-Schmidt addressing the opening of the 3GF: “We have heard the green words before. The task now is to translate green words into green action. We need to work with our industries and businesses to find smart solutions, develop intelligent regulatory frameworks, and set priorities in research and development.”

## Global Green Growth Forum

The Global Green Growth Forum (3GF) held in Copenhagen, Denmark, in October, advanced ambitious public-private partnerships, focusing on energy, transport, trade, and finance – key elements of a green industrial revolution

The 3GF was attended by UN Secretary-General Ban Ki-moon, OECD Secretary-General Angel Gurría, Prime Minister of Ethiopia, Meles Zenawi, Prime Minister of Kenya, Raila Odinga, 12 ministers and deputy ministers, five leaders of UN organizations, 50 global corporate leaders, representatives of leading civil society organizations and green growth experts. The 200 participants came from 27 countries across five continents.

In his keynote speech, UN Secretary-General, Ban Ki-moon, stressed the importance of public-private collaboration, “The green growth agenda can help drive the advancement of sustainable development for the twenty-first century. It is good

business – good politics – and good for society.”

Director-General of the United Nations Industrial Development Organization (UNIDO), Kandeh K. Yumkella, who also took part in the 3GF, said, “For our future to be sustainable and economically viable, we have to ensure that our industry does not harm the environment and will not lead to global climate change. This is what Green Industry is all about. UNIDO is helping developing countries secure resource-efficient low-carbon growth, and create new green jobs, while at the same time protecting the environment. We also help developing countries move to clean technologies and implement environmental agreements, including the Montreal Protocol.”

Jan O'Sullivan TD, Ireland's Minister of State for Trade and Development sees gender equality as fundamental to Ireland's overseas development programme

# Empowering women entrepreneurs: at home



# and abroad



JAN O'SULLIVAN was elected a member of the Irish parliament in 1998, and was appointed Minister of State at the Department of Foreign Affairs with special responsibility for Trade and Development in March 2011.

We believe that gender equality is a human right. We also believe that equitable societies can build stronger and more sustainable economies, which are better positioned to engage in international trade.

Increased trade, regionally and globally, is central to sustained economic growth for the world's Least Developed Countries. But it cannot be gender-blind. The ability of a country to benefit from more liberalized trade depends on the strength and productivity of its domestic economy, which must include women's economic empowerment. Supporting economic activity focused on poverty reduction by empowering entrepreneurs in Africa – men and women – is therefore an essential part of my work as Ireland's Minister for Trade and Development.

A number of important factors often limit the capacity of women in developing countries from taking advantage of economic opportunities, including those generated through increased trade. Limited access to and control of productive assets, such as land and credit, is a key constraint for many women trying to establish or develop their own businesses. If a woman doesn't own her own land, it is difficult for her to secure credit.

Women's engagement in the economy in the developing world is often confined to the informal economy. On the margins of the economy, women are significantly over-represented in the more vulnerable areas of employment, such as unpaid family work, casual agricultural labour and as domestic servants. The burden of unpaid care work in the home is another limiting factor which can affect women's capacity to engage in commercial activity outside the home.

However, it is also important to reflect on broader issues of rights and empowerment. For example, educating girls is undoubtedly one of the most powerful tools for women's empowerment. Education provides women with the knowledge, skills and self-confidence they need to seek out economic opportunities. Women's role in decision-making is also a critical issue. This goes right from women's voices at community and local level, to increased representation in business and farmers associations, to increasing the numbers of women in parliament. Access to quality maternal and reproductive health, enabling women to control their fertility, is yet another key facet of empowerment.

## The Irish experience

Looking back at our own experience, Ireland has some lessons to share on gender equality and women's economic empowerment.

Much has changed for women in Ireland over the last 50 years. The women's rights movement became increasingly active during the 1960s when women began to demand greater equality. Free secondary education opened up vast new opportunities. From the 1970s onwards, large numbers of women began to attend universities and other third-level institutions. The workplace began to change. Women no longer had to give up their jobs in the civil service when they got married. Legislative reform was introduced on equal pay, employment and social welfare. In 1985, after a long campaign by the women's movement, the Health (Family Planning) (Amendment) Act was passed, legalizing the sale of contraceptives to anyone over 18.

Yet, despite nearly half a century of change and despite significant increases in the number of women in the workforce, Ireland, in common with many other developed countries, still has too few female entrepreneurs. Only 15-18% of established entrepreneurs in Ireland are women. Women are much more inclined to start business in the consumer sectors, with much smaller numbers entering the business services and manufacturing sectors. Surveys demonstrate significantly different attitudes amongst men and women to becoming entrepreneurs and growing their businesses. More men than women are confident that they have the necessary skills and knowledge to start a business – 57% of men compared to 42% of women – and this despite the fact that women early-stage entrepreneurs have higher education levels than men. Fear of failure amongst early stage entrepreneurs is higher amongst women than men – 43% versus 34%.

### Female entrepreneurs

So, what are the key challenges for female entrepreneurs in Ireland, and why are more of these entrepreneurs not engaged in export markets?

Clearly the choice of sector is one issue, but there also continue to be important cultural and gender issues limiting women's opportunities. The three most common causes of failure of female-owned businesses are cited as lack of proper financing, lack of proper experience, and lack of training. These factors also contribute to the failure of male-owned business. But if we dig a little deeper, there are other more entrenched gender issues which have an impact. Studies have shown that women are less likely to perceive themselves as entrepreneurs, and avoid training and courses targeted at 'entrepreneurs'. The impact of family life and child care, as

well as a lack of high profile role models are other limiting factors.

Supporting women as entrepreneurs is a key objective of Ireland's National Women's Strategy (2007-2016). A programme of positive action on female entrepreneurship fosters networking and training opportunities. One initiative targets women entrepreneurs who have the capacity to grow their businesses. Forty such women are selected each year to take part in a programme of mentoring provided on a pro-bono basis by some of Ireland's most successful women entrepreneurs.

The strategy also commits to improving access to child care as well as providing more flexible working arrangements and increased parental leave. In 2010, the Government introduced the Early Childhood Care and Education Programme which provides improved access to free pre-school education for children between three and five years of age.

### Irish aid

Many of these experiences and lessons learned are reflected in Ireland's overseas aid programmes. As Ireland's own progress on gender equality has demonstrated, equitable access to quality health and education is the bedrock on which women's economic and political empowerment is built. For example in 2010, Irish Aid contributed €25.5 m. to the education sectors in Zambia, Lesotho, Uganda and Mozambique. The gender parity in all of these countries, including at secondary level has improved significantly in recent years. In Lesotho and Ethiopia, Ireland has worked with Planned Parenthood Associations to provide greater access to reproductive health programmes.

We have supported reform of national policy and legislation, such as the introduction of new legislation on inheritance rights and land reform in countries such as Uganda and Sierra Leone.

Civil society organizations working on gender equality and women's empowerment are key partners in our work. One civil society partner providing micro-credit to women clients in Timor Leste reports that improving

**'Equitable access to quality health and education is the bedrock on which women's economic and political empowerment is built'**

household incomes through participation in trading has enabled women to enhance their status within the family and communities, and influence key decisions such as on their children's education.

### Fair Trade

Networking, alliance-building and capacity development are other components of our work in this area. Irish Aid has supported Fair Trade organizations in Central America and East Africa for a number of years now. During 2010, support was provided for the establishment of a local chapter of the "Women in Coffee Alliance" in Kenya, one of a very small number of organizations dedicated to improving the conditions of women in the coffee sector by providing information and capacity development. Evidence from fair trade programmes across the developing world suggests that this type of support is essential, as the Fair Trade focus on growing and trading export crops can often sideline women. Support for the International Labour Organization's Women's Entrepreneurship Development and Gender Equality programme resulted in more than 230 women in Tanzania strengthening their skills and thereby increasing their market access, including by participating in exhibitions and trade fairs inside and outside the country.

It is clear, therefore, that although the dynamics, pace, and direction of change will vary across countries and cultures, there are some insights from Ireland's experiences which can be shared with our partners. First of all, equal access to quality education, as well as maternal and reproductive health, are the foundations of equality and empowerment. Legislative and policy reform is critical. Undoubtedly, external influences such as Ireland's accession to the European Union were key junctures in the process of legislative and policy reform, which began in the 1970s. The women's movement drove change in Ireland from the bottom up, just as the women's movement in many the developing countries is a key driver of change and will continue to receive Irish Aid support. Women need role models and support networks to demonstrate what is possible. Finally, women's traditional "caring" roles, inequality in the sharing of these roles between men and women, as well as our perceptions of what are appropriate roles for women and men both in the home and in the economy, continue to be key constraints to women's economic empowerment. Progress on these issues can make a real difference to ensuring equality and empowerment for women in all countries and ultimately to building sustainable economies. ■





The Cartier Women's Initiative Awards are an international business plan competition created in 2006 by Cartier, the Women's Forum, McKinsey & Company and INSEAD business school. The Awards aim to encourage the most vulnerable category of entrepreneurs in their most vulnerable phase: women entrepreneurs starting up.

Each year, from over 1,000 entrants, a jury selects 18 finalists – the top three projects from six regions (Latin America, North America, Europe, sub-Saharan Africa, Middle East and North Africa, Asia-Pacific) – on the basis of their short business plans. The finalists are then invited to France for the final round of competition, which includes presenting a detailed business plan in front of the jury.

Based on the quality of the plan and their ability to demonstrate exceptional creativity, financial sustainability, and social impact, one Laureate from each of the six regions is selected. Each of the six Laureates receives the Cartier Women's Initiative Awards trophy, one year of personalized coaching, and US\$20,000 of funding.



**Carolina Guerra** is a pioneering eco-entrepreneur from Colombia who turns hazardous waste into useful products. In October 2011, she won the prestigious Cartier Women's Initiative Award for Latin America.

# Engineering eco-friendly solutions

Carolina Guerra set up her company, Ingerecuperar, in the city of Cali in western Colombia, in 2007. As its name suggests – inge for engineering, recuperar for recovery – the company engineers solutions to recover waste, but not just any kind of waste, specifically the hazardous type. “First, we research the best way to tackle the waste in question. Then we apply the process to re-use it, on an industrial scale,” says Guerra.

The idea for Ingerecuperar came from Guerra's former job at a company that generated aluminium dross, the residual waste material that is produced from any process in which aluminium is melted. “Despite our attempts to find a way to dispose of it all in an environmentally friendly manner, nobody in Colombia could provide one! Other firms have come up with solutions to recycle the metallic parts of the waste, but not the rest of it.”

## A good opportunity

Guerra decided to join forces with two colleagues to research how to make use of the dross in its entirety. “The results were excellent! Given how much aluminium dross is generated in our region, we saw a good opportunity for a useful business.”

Guerra's company managed to clinch the only environmental licence in the country to use aluminium dross in recycling. The initiative is an important step in the struggle to deal appropriately with hazardous waste in Colombia.

As Guerra explains, “There is an extensive legislation in Colombia against hazardous waste, and little by little, industries that generate waste are becoming aware of the importance of complying with legislation and are handling the hazardous waste in an appropriate way. Nevertheless, a high percentage of industrial businesses are still unaware of the damage that can be done in rivers and in the wider environment. And then there are other

companies that don't comply with environmental legislation related to waste because they lack resources.”

## Win-win alternative

Guerra's company offers a win-win alternative. “In our country, one solution for this kind of waste is to deliver it to hazardous waste disposal sites, which charge up to US\$700 per ton to dispose of it. Some companies find less ethical solutions, others even give it away. But we pay for it as a valuable commodity!”

Securing the environmental licence to recycle the aluminium dross was no mean feat. “It took a great deal of patience to convince the authorities,” says Guerra, “because this was such a novel solution here.”

Ingerecuperar now has 10 full-time employees, and in 2010 it recycled 195 tons of aluminium dross, a figure that doubled in the first half of 2011 alone. The company uses parts of the aluminium dross to produce a form of cement which it uses to manufacture building blocks, benches, and fence posts.

With Colombia producing an estimated 500,000 tons of hazardous waste each year, Guerra is embarking on other avenues of research and engineered solutions. These include projects to recycle incinerator ash, found for example in furnaces that burn hospital waste, and ‘pipeline powder’- the dust that is extracted from industrial pipelines and is collected in filters. “It's very dangerous,” says Guerra, “because it's full of heavy metals.”

## Role of the authorities

The control of hazardous waste in Colombia is the responsibility of two environmental authorities. As Guerra explains, “On the one hand, there is the Ministry of Environment, which is usually dedicated to issuing legislation, and on the other, there are the Regional Autonomous Corporations (Corporaciones Autónomas Regionales), which are supposed to enforce the legislation. However, the Cor-

porations complain about having neither the resources nor the personnel to monitor all the companies, and therefore, many companies fail to comply with legislation but are not punished.”

Asked what she would like to change to improve the business environment, Guerra is clear. “I would request more support from the government to small companies, like ours that are just starting out and are helping the environment – reducing taxes and giving assistance. And I would like to see an improvement in the performance of the Corporations so they could really force the hazardous waste-generating industries to deliver their wastes to companies like us.”

As for wider business awareness of the concept of green industry, Guerra says there is much to be done. “This concept of green industry has barely entered the minds of most entrepreneurs. It's very difficult for small entrepreneurs, who have to struggle for their survival every day, to implement green actions in their businesses. It is only the big companies that are taking on these issues.”

## On being a businesswoman

Guerra says she does not face much gender discrimination but does remember one incident in particular. A supplier whose contract hadn't been renewed called to convince Ingerecuperar to reinstate him, but he wasn't making himself clear. “When I asked him to explain, he lost his temper, and demanded to talk to the boss, saying he refused to justify himself to a secretary. Then, he threatened to get me fired for being rude and hung up!”

Regarding the situation of female entrepreneurs in Colombia in general, Guerra says, “It's not very different to the situation of men. Doing business is very hard in our country for men and women. I have faced situations when a man doesn't want to negotiate with me because of the fact that I am a woman, but this is not very usual.” ■



In Lebanon, grassroots agricultural producers are organizing within the framework of cooperatives. The key to cooperative work is to come together and pool resources – including agricultural production equipment and other inputs, but also knowledge and negotiating skills – in order to get members a better deal.

There are currently around 1,350 registered cooperatives in the country. In general, farmers' cooperatives tend to be dominated by men, but agro-processing cooperatives tend to have a female membership. There are around 125 rural women's cooperatives involved in agro-processing, most of them located in the Beqaa, South, and North administrative regions. The agro-processing that they are engaged in involves transforming raw agricultural produce into desirable products for the market, including many popular foods. The cooperative set-up helps the members to secure a place to produce their wares, and obtain equipment and raw materials, as well as helping them get into local and other markets.

### Challenges

Both male-dominated cooperatives and rural women's cooperatives face significant difficulties in accessing local and international markets. Key problems include decades of neglect of the agricultural sector of the economy, especially the lack of enabling policies for investment, particularly in the cooperative sector. The national budget allocation for the agricultural sector rarely exceeds 2%. Another

problem is the poor state of infrastructure, especially roads and irrigation canals, which reduces the chances of producing a good harvest and of getting crops to market while fresh.

A further issue is poor protection from risk. Agricultural workers and farmers typically lack access to safety nets, including insurance against crop failures and social security. Like everyone in Lebanon, farmers and agricultural producers are working against a backdrop of unrest – both political and economic. Conflict and economic downturns make it really hard to cope with damage to buildings, land and resources, interruptions in production, collapse of local markets, and so on.

Until very recently, the Ministry of Agriculture offered little support and accompaniment to rural cooperatives. At the widest level, political will is needed to challenge unfavourable national, regional, and global policies which allow unregulated market access for foreign goods, creating unfair competition, thus undermining local produce. Closer to the ground, many rural cooperatives face difficulties in meeting various legal and administrative requirements, as well as in keeping up with participatory and inclusive internal governance processes.

Whilst the above mentioned obstacles may seem to affect men and women equally, they have a more dramatic impact on women who, in addition, suffer from other gender-specific obstacles.

All these challenges pile up on top of each other, making agriculture precarious, stressful,

and unrewarding. The result is a growing trend amongst male cooperative members to abandon agriculture, at least as a main source of income, and to rely on non-farming activities and jobs. Women have fewer options as a rule, but where they can also find more profitable activities, they too are voting with their feet.

What do cooperatives need to stop the rot? They are crying out for the right support and investment. Lebanon's farmers and agro-processors need optimistic, energetic leadership from the government, recognition of the crucial role they play in the country's economic life, and support to help the agricultural sector grow and prosper. But if this leadership is to enable Lebanon's women cooperative members to play the fullest role they are capable of, it needs to understand the particular issues which shape women's lives in agriculture.

### Gendered differences

In Lebanon, rural women have had to become the main contributors to agricultural production, from planting to marketing, due both to extensive male migration to urban areas and to increasing widowhood as a result of war.

The development of rural women's cooperatives is believed to have started in the mid-1990s, shortly after Lebanon's 15-year-long civil war ended. As international post-war reconstruction money poured in, a significant amount of aid was channelled to establish income-generating structures for women. Some 50 rural women cooperatives were set up

# Promoting sustainable lives and livelihoods

**Omar Traboulsi** outlines the challenges faced by rural women's cooperatives in the Republic of Lebanon and introduces an initiative that supports the crucial role they play in the country's economic life.

**Pictured: Rural women's food-processing cooperative in Rashayya, Beqaa governorate.**

OMAR TRABOULSI is the manager of the Regional Economic Empowerment for Women project, an initiative of the Collective for Research and Training on Development-Action (CRTD-A), a non-governmental organization based in Beirut, The Republic of Lebanon. The CRTD-A seeks to contribute to the social development of local communities and organizations through enhancing capacities particularly in gender analysis, gender and development, poverty and exclusion. The project is funded by Oxfam Quebec and CIDA.



and benefited from interventions that included the provision of hardware, as well as training, mostly focusing on technical production and accounting.

However, such initiatives, although involving high capital investment, were oblivious to some critical factors determining success or failure. By early 2000, it became obvious that the focus on women's co-operatives was largely ill-planned and would be short-lived. Despite rural women's traditional know-how and the importance of their income in securing sustainable livelihoods, rural women's cooperatives face several problems.

Foremost among these is that even though they produce good-quality products, resulting from expert skills and knowledge, market access for rural women's cooperatives remains a huge problem.

One explanation for this is women's limited mobility. Women members of rural cooperatives report that even though they are the producers and provide all the labour in their small agro-processing businesses, restrictive social norms are such that they are not able to travel on their own and use public transport. As a result, they are not able to explore markets, meet and negotiate with clients and suppliers, or deliver and/or buy merchandise.

In addition, women need support to develop and acquire formal business skills. Rural women have had less chance of receiving the education and training that would give them the knowledge and technical skills they need to

compete on a level footing with commercial interests. Despite some rural women already having an amazing amount of natural ability and formidable levels of skills, it is true to say that women in the rural areas lack experience of independently organizing and running business operations, of handling significant sums of money, of undertaking financial transactions, and of establishing direct relations with relevant public institutions. The predominance of, mostly male, "middlemen" further complicates women's market access, enables men to cream off the profits from women's work, and reinforces the domination of existing markets by men.

Further problems arise from the enormous workload that women shoulder each day before they can turn to agricultural work. Rural women's unpaid, unaccounted, and invisible care work and care burden – which has to happen somehow, come what may – results in exhaustion and a lack of sleep and leisure.

### Engendering market access

In 2002, the Collective for Research and Training on Development-Action launched a national intervention with rural women's cooperatives focusing on some 40 active cooperatives distributed primarily in the Beqaa region. The membership of these cooperatives includes more than 600 women, most of who are either heads of households or contribute significantly to household income.

The initiative combines qualitative research,

direct support to women organizing in rural women cooperatives, and policy dialogue with decision-makers. Building on previous gaps, efforts were made to promote women's knowledge and leadership, as well as access to the public and political sphere. The initiative assumes that a transformation is necessary in the gender relations within households, so as to enable women to engage in fruitful economic activities and be active in the public sphere. On-going research seeks to identify the impact of rural women's cooperatives in supporting the emergence of rural women's leadership as well as the new possibilities created for sustainable solidarity marketing. A key research focus is also the impact and importance of the added value of the work of rural women's cooperatives, namely the wise and rational use of natural resources to promote sustainable lives and livelihoods.

Policy dialogue has been scaled up through full engagement with a national committee, newly established by the Ministry of Agriculture, with the aim of developing a national strategy in support of cooperatives, one aspect of which is sustainable market access, especially for rural women with a focus on their rational use of natural resources.

The late Nobel Prize laureate, Dr. Wangari Maathai, said, "You must not deal only with the symptoms. You have to get to the root causes by promoting environmental rehabilitation and empowering people to do things for themselves. What is done for the people without involving them cannot be sustained." ■



Photo: CRTD-A





# CLOSING THE

Photo: John Roberts  
Women  
attending a  
political rally  
in Bangalore,  
India, March  
2007.



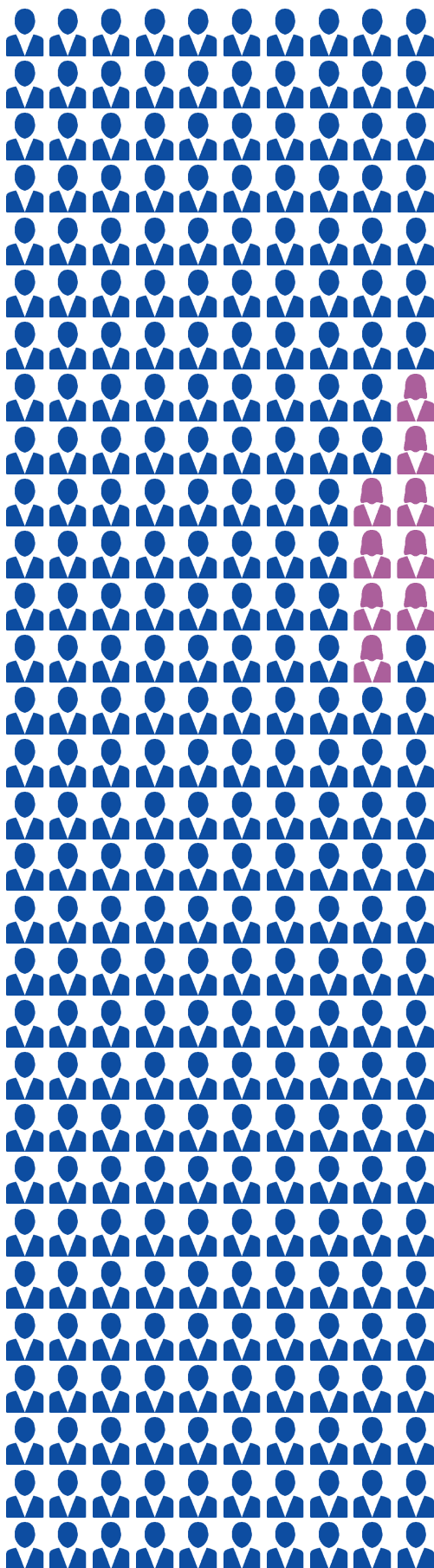


Photo: Iva Zimonjan / ainos

# GENDER GAPS

**Michelle Bachelet**, Executive Director of UN Women, explains why the organization focuses on the economic empowerment of women, how macroeconomic policies and policymaking can advance the aim of gender equality, and how the social and labour market obstacles that prevent women from accessing greater economic opportunities can be overcome.





“Only 13 of the  
world’s 500 largest  
corporations had a  
woman CEO in 2009”



MICHELLE BACHELET is the first Under-Secretary-General and Executive Director of UN Women, the United Nations Entity for Gender Equality and the Empowerment of Women, which was established on July 2, 2010. From 2006 to 2010, she served as President of Chile. Her accomplishments as President included the 2008 reform of the pension system, which introduced a basic pension for poor homemakers who have never earned a wage outside the home, as well as a stipend per child for all mothers. Another flagship programme of her administration, which has been replicated in other countries in Latin America, was Chile Crece Contigo (Chile Grows with You), which provided support for parents and children from conception through to the age of four. Other major gains for women under her government included the establishment of a large number of free day-care centres and nursery schools, which gave women more freedom to enter the labour market, and a law aimed at bridging the gender wage gap. A long-time champion of women's rights, she has advocated for gender equality and women's empowerment throughout her career.

Livelihoods, most often earned through paid employment or entrepreneurial activities, represent the most immediate and important indicator of empowerment and well-being. Like other development partners, UN Women recognizes that efforts to reduce poverty are most critically about empowering people economically, enabling them to earn sufficient livelihoods to lift them above the poverty line.

Women's experience of poverty is different from that of men, owing to structural inequalities in societies and households that restrict their ability to earn and control income. Empowered economically, they exercise greater control over their lives and can challenge the personal and social power relations that restrict their options and perpetuate their dependency. (The concept of empowerment therefore involves agency, assets, opportunity and capacity, and is both a human rights issue and a development issue.)

Making women's economic empowerment a reality requires bridging several gender gaps. Globally, the share of women in paid employment outside the agricultural sector has continued to lag behind that of men. In Southern and Western Asia, and in Northern Africa, only 20% of those employed outside agriculture are women. Gender inequality in the labour market is also a concern in sub-Saharan Africa, where only one in three paid jobs outside of agriculture are occupied by women. But even when women represent a large share of waged workers, it does not mean that they have good jobs, or even secure jobs. In fact, women are typically paid less and have less secure employment than men. For example:

- The International Labour Organization (ILO) estimates that the gender gap in wages averages between 10 and 30%. In Europe, the wage gap for 30 countries ranges from 15-25%, widening with level of education and experience.

- Globally, more than half of working women (53%) are in vulnerable jobs, as own-account or contributing

family workers, where they earn little or nothing, and lack security and benefits; in parts of Asia and Africa, over 80% of working women are in this category.

- At the other end of the spectrum, only 13 (3%) of the world's 500 largest corporations had a woman CEO in 2009. In Europe, for which there is more comparable data, the average share of women board chairs at top corporations is also just 3%.

- In 2009, there were over 200 million women-owned small and medium enterprises worldwide, almost 30% of the total. In the United States alone, there were over eight million women-owned businesses in 2010, employing over 23 million workers, and generating US\$2.86 trillion. In the Asia-Pacific, some 35% of all small and medium enterprises are headed by women. Yet mainstream financial institutions have been slow to meet the needs of these entrepreneurs.

- Many women, especially in rural areas, lack land or other forms of collateral needed to access capital. Yet the Food and Agriculture Organization (FAO) reports that stark gender disparities in landholdings persist in all regions, not only in ownership but also in plot size and quality.

- Time use studies across 44 countries show that women spend at least twice as much time as men on unpaid domestic work, and work longer hours juggling paid and unpaid work.

Closing these gender gaps is critical, not only for women but also for economies, societies, and even for business. There is increasing recognition that countries cannot grow and prosper without the equal rights and empowerment of women, one half of their populations.

Indeed, while there is a moral and rights-based argument for addressing gender inequality, at UN Women I am determined to continue to build compelling evidence that gender equality is good for economic prosperity and social well-being. ➤

# “In 2009, there were over 200 million women-owned small and medium businesses worldwide, almost a third of the total...”

► Much of this argument already exists.

The World Economic Forum's Gender Gap Report shows that, across 134 countries, greater gender equality correlates positively with GNP per capita. This makes sense: the World Bank and others have shown that women's increased labour force participation and earnings generate greater economic growth and have a multiplier effect on society as a whole, particularly in terms of education and health outcomes.

The FAO estimates that equalizing women's access to land and other agricultural inputs would boost agricultural productivity and reduce the number of people living in hunger by 100m-150m.

In the private sector, a study by management consultants McKinsey & Co. found that companies with three or more women on their boards or in top management outperformed those with no women by 53%.

## How macroeconomic policies can advance gender equality

Governments have a key role in redefining national goals and developing macroeconomic frameworks to meet these goals by facilitating a development strategy characterized by more equitable and inclusive growth, and greater economic stability.

Governments need to focus on regulating the markets – labour, credit, and goods and services – in ways that provide decent work and equal opportunities; and on making sure that macroeconomic policy and institutions, including the international financial architecture, aim to ensure that markets are expanding in a stable and sustainable way.

For this, governments need adequate fiscal policy space, enabling them to relax balanced budget requirements and debt ceilings, and target public investment in ways that avoid recession, keep people employed, and sustain growth over the medium and

long term, thereby generating increased revenues to pay off debt in future. And equally important, they need to actively use this space in ways that benefit all people, and especially those most vulnerable. The impact of the 2008-09 financial and economic crisis, and the responses of governments worldwide, illustrated what I have said often in the past, that ‘the state cannot be neutral’.

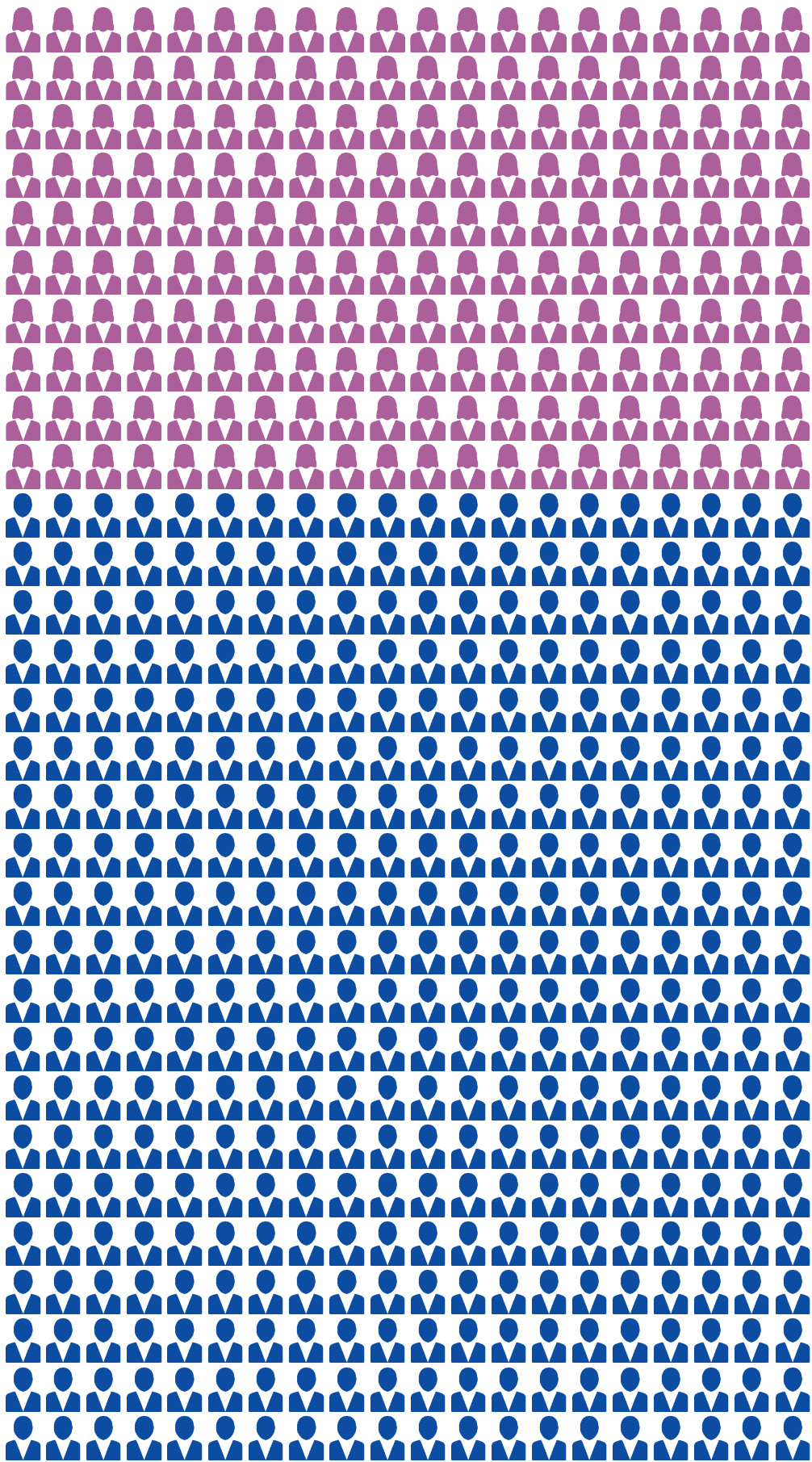
## Overcoming obstacles to women's economic empowerment

UN Women strategies to advance women's economic empowerment rest on three pillars: a favourable legal and policy enabling environment; expanding access to economic opportunities, including education and training, employment and entrepreneurship; and expanding leadership and participation in the policy decisions that affect them.

Many economies are no longer able to generate sufficient jobs and livelihoods for the growing number of new people entering the labour force every year, making jobs hard to find for both women and men, and especially for young people. Increasingly, those who have lost jobs or are just entering the labour force have to pick up some kind of work in the informal economy.

UN Women advocates for a more consistent and gender-equitable macroeconomic policy environment, one focused on domestic growth with high employment rather than low inflation, targeted public investment rather than cuts to public services and infrastructure. Our aim is to mobilize coordinated support across the UN system – to countries that are prioritizing women's economic empowerment, helping them to put gender equality at the heart of the decent work agenda, including social protection, and to adopt measures to increase women's access to, and control over, productive assets. ►





# “Women’s increased labour force participation and earnings generate greater economic growth and have a multiplier effect on society as a whole”

► This requires recognizing and supporting women’s economic potential. Policymakers need to revisit the conventional model of men as primary breadwinners and women as ‘secondary’ earners. With the decline of manufacturing in many developed countries, particularly since the global economic crisis, many men have lost the well-paid jobs that made this true. In the United States, for example, women were primary or co-breadwinners in two-thirds of households in 2010. Elsewhere, women in poor households are increasingly playing this role by migrating for work; in 2009 they comprised at least 50% of migrant worker flows from Africa and Latin America and up to 75 and 80% from parts of South and Southeast Asia. And even where men’s incomes are still higher than women’s, as is still the case in the vast majority of countries, women’s earnings are often the key to keeping households above the poverty line.

## The impact of the crisis on women’s employment

However, while, especially in industrialized countries, the impact of the crisis on women’s employment was generally less than it was on men’s employment, in large part due to women’s concentration in public sector jobs, the growth in employment that occurred during the partial recovery in 2010 was lower for women than for men, especially in developing countries. This trend is continuing, as public sector jobs are cut as part of the austerity policies governments are adopting – either as a condition of IMF loans or to pacify the bond markets. And whether it is men or women who are losing paid employment, in all countries it is still women who are taking on more unpaid care work (health, child, or elder care), to make up for loss of public services as well as lower household income.

A gender equitable policy environment also calls for increased provision of a social protection floor, as urged by the ILO’s Social Protection Advisory Group. This would guarantee basic income through social transfers in cash or kind, such as pensions, child benefits, employment guarantees and services for the unemployed and working poor, while providing universal access to affordable essential social services, such as health, education, transport and other services, including child care. Women in particular benefit from such measures, which do much to relieve their burden of unpaid care work.

Social protection should be considered an investment, and not a cost. It delivers significant future paybacks in terms of improved human development outcomes and as a key instrument for unlocking women’s productive capacity. This would enable them to more fully participate in economic life, as workers, employers, consumers and citizens.

Other kinds of public investment that can promote gender equality include labour-saving technology and alternative energy sources for cooking and food preparation; improved water and sanitation facilities to reduce the time women spend collecting water, transportation improvements to reduce the time spent in accessing markets and public services. These have the potential to reduce many hours of work to mere minutes, freeing women to engage in paid labour or entrepreneurial opportunities, including market trading and small businesses.

Monitoring the gender impact of public investment and public expenditure of all kinds, through a gender analysis of national and local budgets, has empowered women in countries in all regions to follow the money and to use the findings to advocate for gender-responsive budgeting in all sectors of the economy, not just education and health. UN Women is expanding its work in this area, empowering



UN Photo/Rick Bajomas

Panellists share a joke at the UN Women event: "Women's political participation – making gender equality in politics a reality", New York, September 2011.

women to hold governments accountable for commitments to gender equality in other sectors as well, including agriculture and trade.

In the run up to Rio+20 next year, UN Women is prioritizing women's economic empowerment through the promotion of gender-responsive green economy strategies, and institutional and governance frameworks, as well as national food security strategies that support women small-scale agricultural workers and other rural women. We will advocate for strengthened linkages between social and economic development and environmental protection for the benefit of gender equality and women's empowerment.

### Working with the private sector

UN Women is collaborating with private sector companies in building their capacity to better support women's economic empowerment throughout their value chain. This includes providing support to women in their capacity as farmers, producers, workers, vendors, and recyclers, among others. Support takes many forms, and ranges from capacity development, such as skills training, business support, information and knowledge sharing, to facilitating women's access to finance and networks and the establishing of women-friendly markets.

The large number of women working as own account workers calls for increased attention to strengthening women's economic literacy and awareness of the exigencies of the market, such as quality and standards, their access to markets, and the support from local authorities and trade support organizations. Existing practices that have proven successful should be scaled up and replicated. One of those is creating multi-service facilities for women entrepreneurs and business owners to overcome the barriers they face.

In line with this, we are also strengthening our partnership with the UN Global Compact to advance private sector commitment to the Women's Empowerment Principles, encouraging businesses to review recruitment and promotion policies to ensure equal opportunities and to proactively appoint women to boards of directors and top management positions, and to expand business procurement to include women entrepreneurs and women-owned businesses.

In our role as conveners on gender equality, and in the context of our mandate to coordinate the gender equality work of the UN system as a whole, UN Women is focusing on building communities of practice for women's economic empowerment, bringing experts, leaders, and women's groups together to share knowledge and good practices, and promoting South-South collaboration.

We are also advocating with governments and the corporate sector to support women's participation and leadership in economic policymaking, making the case in each country that this benefits economies, businesses, and communities at large.

In all of this, we need to guard against women being exploited rather than empowered. We can do this by making a link between women's economic empowerment and women's economic and social rights; and between economic policy and the obligations that governments have to progressively realize economic and social rights. This makes it more likely that participation in markets really does empower women, and in particular, poor women.

In the four years that remain to 2015, the deadline for achieving the Millennium Development Goals, UN Women is determined to work with UN and national partners to put gender equality at the centre of national and global efforts to achieve these goals; a key part of these efforts will be our work to improve livelihoods and well-being among women worldwide. ■



Microfinance can be an important start on the entrepreneurial path, but all too often conversations about women begin and end with the micro. Today, when we think of “entrepreneurs”, we tend to think of men, and when we think of “microfinance,” we tend to think of women. It is time to move beyond the micro when it comes to women.

When I first started reporting on women entrepreneurs in conflict and post-conflict zones in 2005, nearly everyone, from International Monetary Fund officials in their offices to development workers in the field, told me the only women I would find would be “selling cheese by the side of the road.” Women, I was told again and again, did not own the kind of growing businesses that created jobs and economic growth. This, it seemed, was strictly the purview of men.

Although the percentage of women involved in entrepreneurship is generally lower than that of men, there are however exceptions. In Ghana, for example, there are 120 female entrepreneurs for every 100 male entrepreneurs.

#### Beyond the micro

Even in the poorest and most traditional countries, women own businesses that go well beyond the micro. In Rwanda, I met a gas station owner with several workers, and a woman selling fruits and vegetables – not on “the side of the road” but rather for export to Belgium twice a week. Her work created jobs for eight people at the time, including her husband, and supported her own and several other adopted children. In Sarajevo, Bosnia-Herzegovina, I met a textile entrepreneur, with a new factory near the old front lines, whose company selling bed and bath linens employed 20 people, mostly women, who could now afford to send their own children to school.

In Afghanistan, a country famous for being among the toughest environments for women to thrive, I met a young woman who dared to turn down a well-paying job offer filled with perks from an international aid organization in order to start a business consultancy that she believed would create jobs for herself and many others. “If I go and

**Gayle Tzemach Lemmon** argues that women in poor countries need resources to tap their entrepreneurial potential and ease the path to taking small ventures and building them up.

# Think bigger

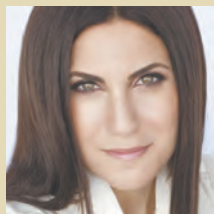
work with an international agency, they will give me a very high salary, but it is just for me and my family, it will not support other people,” Kamila Sidiqi told me at the time, in 2005. “If I work to start my own company, I will train a lot of people, I will help a lot of people.” Her story is told in *The Dressmaker of Khair Khana*, a book I wrote that was published in 2011.

According to research conducted by Ernst & Young, women own 40 to 50% of businesses in the developing world, and data from the Centre for Women’s Business Research reveals that in the United States women-owned firms have an economic impact of US\$2.8 trillion annually. These trends provide great potential as the belief in the power of growing businesses to help lift a community out of poverty is shared by women across borders and continents. Women around the world are actively

building better communities, and though the contexts are different, the challenges they face look remarkably similar:

#### Similar challenges

First, women face barriers in accessing capital. Globally, female entrepreneurs say that obtaining finances is their greatest obstacle to starting or growing a business. Discriminatory laws and traditions regarding property ownership and inheritance practices exacerbate difficulties women face in accessing collateral for loans. Inheritance often skips over women, and land remains in the hands – and names – of men, leaving women without guarantees acceptable to banks. Many women who already own businesses must thus use cash from their profits to sustain their enterprises, a limitation that hampers their ability to invest and to take on larger contracts.



**GAYLE TZEMACH LEMMON** is a Fellow at the Council on Foreign Relations, and the author of *The Dressmaker of Khair Khana*. Since 2005, she has reported on women entrepreneurs in conflict and post-conflict zones, including Afghanistan, Rwanda, and Bosnia-Herzegovina, and now serves as a contributing editor-at-large for *Newsweek/Daily Beast*. You can find more of her work at <http://www.gaylelemmon.com/journalism>



Photo: Miguel Samper for Mercy Corps

Afghani seamstress, Kabul.

Second, women face limited access to diversified markets. Social and cultural constraints contribute to women's reduced mobility, making it difficult for them to develop business networks beyond their local communities. Business networks and associations, when well run, can help to address this constraint, but funding is often spotty for these. Additionally, reaching international buyers is expensive and time-consuming. Women struggle to find new business opportunities as their networks strain to compete with more the expansive networks of male entrepreneurs.

Third, women often lack business management and technical skills, a disadvantage that is a result of broader gender disparities in access to quality education. For example, women account for roughly two-thirds of the world's 793 million illiterate adults, and in spite of an increase in the ratio of girls enrolled in primary and secondary school, higher enrollment rates have not translated into equal gains for women's economic empowerment and participation. Business education programmes for women are important because, as the International Centre for Research on Women has found,

they "go far beyond technical skills building." By providing women with the opportunity to expand their businesses, training also increases overall economic productivity and social investment, as women are more likely to invest in education and health care for themselves and their families.

### Entrepreneurial potential

Despite these numerous obstacles, the female entrepreneurs I met never gave up. Today, their tenacity should be matched by an investment in resources to tap their entrepreneurial potential and ease the path to taking small ventures and building them bigger. Mentoring women starting businesses and creating financial products tailored to their needs would benefit not just their families, but their economies. As US Secretary of State, Hillary Clinton, explained in a March 2011 article for Bloomberg, women are an emerging market, and when they "have freedom to start businesses, the economic, political, and social benefits ripple out far beyond their own home." By ignoring half of the entrepreneurial talent pool, countries across the globe cap their economic potential.

Organizations like Mercy Corps, Goldman Sachs 10,000 Women, Bpeace, and Peace Dividend Trust, among others, have focused their attention on these businesswomen in nations like El Salvador, Liberia, and Afghanistan, helping entrepreneurs to unearth market opportunities and learn the skills their growing ventures require. Their work should not be the exception, but instead become the rule as the world moves beyond the micro – and dreams bigger for women.

In the past decade, microfinance has won converts worldwide as the best way to lift women out of poverty. Stories of women owning cows, selling flowers, and sewing handicrafts have spread, while the recognition of women's importance as partners in fighting poverty and creating a more stable world has grown.

Yet, while microfinance is undoubtedly part of the solution, we risk confusing it with the entire solution when it comes to women. While focusing on the virtues of the small, we have largely ignored the medium, along with the contributions and the struggles facing women worldwide who are working to turn start-ups into thriving large businesses. ■

Perhaps the most enduring legacy of the global economic crisis is the intractable employment crisis gripping the world's workforce. Unemployment is at record highs in many of the world's richest countries, but it is underemployment that threatens the world's poorest and most vulnerable workers. With little access to formal employment opportunities – before or after the crisis – most income earning opportunities for those in the developing world are found in the informal economy. This employment is largely low wage and high risk, with scant legal or social protection. A rise in underemployment signals a rise in those working but not earning enough to escape poverty, and while another round of bailouts to the world's richest economies seems imminent, the pressure at the bottom of the global economic pyramid is growing.

Women tend to be dramatically over-represented in the informal workforce. In India, for example, informal employment accounts for nine out of every 10 women working outside agriculture. And there is a significant overlap between being a woman, working in the informal economy, and being poor. Compared to their male counterparts, women are more likely to be self-employed and sub-contracted workers, and less likely to be employers or paid employees of informal enterprises. Many are also breadwinners or contribute very high proportions of the household budget, putting informally employed women at the head of many of the world's most economically and socially vulnerable households.

#### Good times and bad

Though few dispute its ranks are swelling, the informal workforce has received little attention throughout economic crisis discussions – either as a point of interest for investigation or intervention. It is commonly assumed that the informal economy is flexible enough to adapt to economic shocks while simultaneously providing a refuge for retrenched formal workers. This is simply not the case. In a global economy where formal and informal economies are dynamically linked, informal workers cannot be immune from the impact of the crisis. Demand sensitivities, price fluctuations, and the dynamics of competition shape the informal economy in good times and in bad.

In late 2008, the partners of the Inclusive Cities project, with overall guidance and coordination by the global network, Women in Informal Employment: Globalizing and Organizing (WIEGO), set out to address the gap

## Zoe Elena Horn examines the impact of the global economic crisis on women in the informal economy.

in information about the impact of the crisis on informal workers, particularly women. Researchers conducted individual and focus group interviews in 14 urban locales across Africa, Asia and Latin America, and in three segments of the informal economy: home-based work, street trade, and waste collection.

First-round evidence, from early 2009, suggested that participants were affected by the crisis in much the same way as their formal counterparts. Self-employed workers suffered directly and indirectly from shrinking consumption and declining demand in local markets. Cash-strapped patrons forced street vendors and home-based producers to lower prices, in spite of rising work inputs. Waste pickers faced plummeting prices for their collected materials due to depressed global

demand for recyclables. Wageworkers faced decreased work orders for products bound for overseas. Compounding the problem, informal workers faced increased competition from new entrants to the workforce, and had no social or economic safety nets to fall back on.

#### Grim picture

A year later, respondents reported a similarly grim picture – a few positive developments, but a general lag in recovery in wages and working conditions. Persistent unemployment and underemployment pushed more workers into informal employment, and many respondents continued to work longer hours for less pay. While 77% of 2009 respondents reported that their incomes had fallen between early and mid-2009, 55% reported that their incomes had fallen further between mid-2009 and mid-2010. Some respondents reported an increase, but none had seen their income return to pre-crisis levels and most rising incomes had not kept pace with increased costs of living.

Vulnerability – the probability that a shock will result in a decline in well-being – has increased for households dependent on income from informal work, exposing women and children in particular. Strongly driven to continue working for the well-being of their families, women are struggling harder to feed them, while still providing equal or greater levels of unpaid care and domestic chores. Many such working women commit the entirety of their incomes to household expenditures – an increasing burden as chronic unemployment and underemployment take a toll on other household earners. Despite devoting more and more time to paid work, women were less likely to be able to afford the few conveniences that could lighten their unpaid load, like prepared meals and child-care.

Many respondents faced fewer resources that were stretched even further as food and fuel prices have remained high since early 2008. Restricting both the quantity and quality of food, women were serving fewer meals, while “luxury” items like milk and meat were eliminated from many households. School-related costs were also difficult to meet. While withdrawals were uncommon in 2009, the strain had taken its toll and drop-outs were increasing by 2010. Women were anxious about the impacts of these measures on their children, highlighting the fact that the crisis has heightened the role of women as gatekeepers in the inter-generational transfer of poverty.

# COPING WITH THE CRISIS

ZOE ELENA HORN coordinated the Inclusive Cities study on the impacts of the global economic crisis on informal workers, and is the author of *No Cushion to Fall Back On: The Global Economic Crisis and Informal Workers and Coping with Crisis: Lingering Recession, Rising Inflation, and the Informal Workforce*. Inclusive Cities is a collaboration of membership-based organizations (MBOs) of the working poor, international alliances of MBOs, and support organizations committed to improving the situation of the working poor.





## Response

It is essential that policymakers acknowledge the informal economy as a critical source of employment during good times as well as bad. With an extended forecast of economic uncertainty, and more and more of the world's workforce turning to informal livelihoods, extending social and economic protection for these workers has never been more critical. Informal employment is still an enigma to many policymakers, which makes consultation with informal workers even more essential in the development of any crisis-response strategy. In 2009 and 2010, respondents in the Inclusive Cities study were asked to propose and rank a variety of possible crisis interventions. Unsurprisingly, workers denounced stopgap measures and prioritized greater recognition for their livelihood activities.

First and foremost, workers must be allowed to earn a living. Reducing the barriers to informal work – harassment, raids, barring access to waste – allows workers to continue to feed their families during desperate times. Wage protection and inclusion in minimum wage schemes are also critical to protect workers' incomes, and small workplace investments – access to water and toilets at markets, safe waste-handling equipment, subsidized electricity for home-based workers – could have substantially magnified effects on earnings and well-being. Workers would also benefit greatly from programmes to improve financial literacy and access to financial services. With an eye to the future, respondents were eager for skills training and upgrading, and improved access to and knowledge of markets, such as inclusion in municipal waste collection schemes. Finally, the greatest investment should be made in the creation of targeted social protection measures for informal workers – such as specialized childcare and health services – to address the chronic insecurities in food, health, and education faced by these workers.

Informally employed women will play a particularly important role as agents of change. Women tend to be the least visible and most vulnerable in the informal economy, and yet are often the most powerful economic and social agents in their households and communities – their mobilization and leadership will be critical to improving the lives of many workers and their families across the developing world. For this reason, it is critical that greater gender-specific monitoring in the informal economy becomes a priority both for governments and for economic and international institutions in the future. ■





# Africa's

Very much Africa's superpower, South Africa has the continent's biggest economy. Since the end of apartheid and the first all-race elections in 1994, the country has experienced robust economic growth. The global economic downturn in 2009 triggered South Africa's first recession in 17 years but, by the end of 2010, there was a broad-based upturn, driven primarily by renewed global demand for commodities, spending related to the 2010 World Cup, a revival in the automobile industry, and increased demand for chemical products.

Best known for its precious metals, fruit, and wine, in recent decades, South Africa's economy has undergone a transition from one dominated by mining and agriculture to one in which manufacturing and financial services contribute the larger share of Gross Domestic Product (GDP).

South Africa manufactures a wide range of consumer goods, including foodstuffs, textiles and clothing, footwear, and metal, chemical and paper products. However, this sector contracted when the ending of the protective trade regime applied during the apartheid era

left some consumer goods industries unable to compete in the global market. At the same time, since 1994, the output of capital goods – objects that are used to produce other goods and services – has increased. Metals and engineering, particularly steel-related products and the automotive industry, are key elements of this sector. During the first decade of the 21st century, an infrastructure-driven construction boom created high demand for related goods, such as electrical machinery, iron and steel, non-ferrous metal products, metal products, and machinery.

Today, manufacturing contributes 15% of GDP, and is a crucial employer and source of exports. Some sub-sectors, such as textiles, will continue to suffer from competition from cheap Asian suppliers, but the vital vehicle segment, which is the country's biggest manufacturing industry, is poised for further growth, thanks to new investment from key multinationals.

The growth of the economy in recent years has enabled a measurable decline in income poverty. Notable development achievements include an increase in net secondary school

enrolment from 45% to 72% between 1991 and 2008; the construction of 1.6 million free housing units for low-income families since 1994; an increase in access to electricity from 34% in 1993 to 81% in 2007, with similar improvements recorded for water and sanitation; and an expanded coverage of the social grant system, which primarily supports children, from 2.5 million beneficiaries in 1999 to over 13 million in 2009.

Despite these advances, South Africa continues to grapple with extreme differences in incomes and wealth. Inequality has increased, and the poor continue to have limited access to economic opportunities and basic services. Human development challenges loom large. Life expectancy is just 51 years, and South Africa has the largest number of people living with HIV/AIDS in the world (over 5.5 million). Current health problems are rooted in the apartheid legacy, with the migrant labour system responsible for social changes that have led to the destruction of family life, alcohol abuse, and violence – particularly gender-based violence.

Johannesburg, is the provincial capital of Gauteng, the wealthiest province in South Africa, and is the economic and financial capital of sub-Saharan Africa.



# superpower

Photo: Allan Baxter/Getty Images

The health delivery system remains heavily skewed in favor of the elite.

One of the key challenges for the economy is the high level of unemployment. South Africa has one of the world's lowest labour-participation rates and one of its highest unemployment rates. According to a recent report by the Organization for Economic Cooperation and Development (OECD), out of the 32 million working-age population, only about 13 million people (40%) have jobs, compared with around 60-75% in other middle-income emerging markets. One in three South Africans in the labour force, including half of young black people aged 15-24, is unemployed.

Recognizing the gravity of the situation, the authorities made job creation the top priority in the 2010 and 2011 budgets. The New Growth Path (NGP) sets an ambitious target of creating five million more jobs in the next decade, so as to reduce the unemployment rate by 10%. The NGP strategy is based on enhanced investment in five key sectors, skills development,

improved public service delivery, and enhanced regional economic integration. Pravin Gordhan, the finance minister, recently estimated that it would require economic growth of 6% a year for the next 20-30 years to make significant inroads into the ranks of the unemployed. As critics have pointed out, that level of sustained growth has not been seen since the mid-1960s, and looks unlikely to return now.

President Jacob Zuma has made outreach to emerging economies and alliances a priority for his presidency, and, in April 2011, South Africa was formally inducted into the BRIC group (henceforth, BRICS), alongside economic giants, Brazil, Russia, India, and China. South Africa is also according more importance to its membership of the IBSA Dialogue Forum, an international grouping for promoting international cooperation between India, Brazil, and South Africa. IBSA represents three important poles for galvanizing South-South cooperation, and provides the three countries with a platform to engage in discussions for cooperation in the

fields of agriculture, trade, culture, and defence, among others.

Another significant challenge is climate change and carbon emissions, especially given the country's carbon-intensive economy. South Africa meets 77% of its power needs with coal, and has the highest carbon emissions per capita of any developing country – even though many people have no access to electricity. Work on a formal climate change policy, based on renewables, energy efficiency, and low-carbon green industries, is continuing. Speaking at UNIDO's Vienna Energy Forum in June 2011, Dipuo Peters, the energy minister, said that solar and wind are fine as energy sources for small energy needs like household lighting, but not for the baseload power needed for heavy industry. She said South Africa has large power needs and abundant reserves of coal, so will proceed with construction of two huge 4,500 MW coal power plants. Responding to criticism of the carbon emissions, Peters said the new coal plants would use carbon capture and storage technology. ■







Photo: Department of International Relations and Cooperation, the Republic of South Africa

# Agents of change

Ahead of the UNFCCC climate change conference that will take place in Durban from November 28 to December 9, 2011, *Making It* spoke to South Africa's International Relations and Cooperation Minister, **Maite Nkoana-Mashabane**

**You recently said that climate challenges cannot be solved without empowering and educating women. Can you explain why?**

Women in developing countries are highly dependent on local natural resources for their livelihood, because it is their responsibility to secure water, food, and energy for cooking and heating for their families. The effects of climate change, including drought, uncertain rainfall, and deforestation, make it harder to secure these resources. Therefore, any efforts to address the threat posed by climate change will be insufficient if they do not include empowering and educating women.

Internationally, women are well-positioned to be agents of change through mitigation and adaptation activities in their households, workplaces, communities and governments. Global efforts to address the challenges of climate change cannot afford to ignore them. Empowered and educated women can make wiser environment choices, especially when securing natural resources for their livelihoods. They can also select greener options for heating, cooking and energy.

Women produce up to 80% of the food in the developing world, as they do here in South Africa. Knowledge will assist women to farm in a smarter way with seeds and products which are better suited for the world's current changing environment. Only when women have equal access to training, information, credit and skills-development programmes will they be able to fully participate in climate change initiatives.

**What are the climate change adaptation measures and actions that will help advance the emancipation of Africa's women?**

A global effort is required to ensure not only support for women as they deal with disasters, but also to make meaningful interventions to address climate change. I believe adaptation and mitigation policies that fail to consider gender equity will be inefficient, and will increase poverty and food insecurity.

A coherent approach is required to address the particular challenges faced by women and their role in advancing sustainable development. Such an approach should include climate change adaptation which responds and successfully reduces the vulnerability of natural and human systems to climate change effects.

For Africa to adapt in a manner that creates a climate conducive to the advancement of the emancipation of its women, the international agreements reached on climate change must, as a key element, have support for adaptation in all its forms, be it technology, capacity-building or finance. Africa is one of the most vulnerable continents because of the range of projected impacts and the low adaptive capacity of the region. Adaptation must therefore be central to the Durban climate change conference (COP17/CMP7) outcome, with an urgent need for immediate and adequate support for measures and actions, including the provision of substantial new and additional public financial resources, environmentally sound technologies, and capacity-building in a reliable and prompt manner.

Africa's priorities are to implement climate change programmes and projects to

attain development goals, including the Millennium Development Goals. In this regard, it is important that developed countries and partners provide full support for adaptation strategies in Africa, in particular the implementation of national adaptation programmes of action prepared by the least developed countries in Africa. As incoming president of COP17/CMP7, one of my primary objectives is to ensure the package of agreements adopted in Durban will build on this. In this regard, I am supported by the African Union whose heads of state have already prioritized adaptation in climate change.

**What can be done to ensure that the financing mechanisms for adaptation will be flexible enough to reflect women's priorities and needs?**

We know that climate change impacts and mitigation and adaptation responses affect women and men differently. Women are more dependent on the natural resources most threatened by climate change, but also have more restricted access to credit, technology, and information.

A transitional committee made up of representatives from 25 developing and 15 developed countries was commissioned to design the Green Climate Fund. It was asked to submit its recommendations for approval at COP17/CMP7 in Durban in November 2011. Women leaders in Durban should therefore scrutinize these recommendations to ensure that it reflects the priorities and needs of women.

**You have stated that the participation of women in climate change initiatives must be ensured. Given that women are currently under-represented in the decision-making process of environmental governance, how can the role of women's groups and networks be strengthened?**

Women are under-represented in the decision-making process on environmental governance which is a major concern to me and other women leaders. I, along with many other world leaders, believe women should be equally represented in decision-making

structures to allow them to contribute their unique and valuable perspectives and expertise on climate change.

As incoming COP17/CMP7 president, I call on all relevant stakeholders to facilitate and increase the participation of women, particularly at grass roots levels, as decision-makers. It is vital that, before implementing climate change policies, governments, United Nations programmes, funds and agencies and other relevant bodies take the necessary measures to enable women to participate fully in all levels of decision-making relevant to climate change.

As part of the work we do to prepare for the COP17/CMP7, the South African government will be engaging widely with the various communities in South Africa, and women should be part of these dialogues. We want to encourage the women from every part of South Africa to become part of the dialogue and share their ideas and concerns with us.

I will do everything in my power to ensure women have a strong voice in Durban.

**The BASIC group of countries (Brazil, South Africa, India and China) are some of the fastest industrializing countries in the world, and, as such, have a pivotal role to play addressing climate change challenges. How can the BASIC group call on other countries to limit their GHG emissions, while increasing their own?**

The BASIC group appeals for an inclusive, fair and effective climate change deal, which is favourable to both developed and developing countries. This group of developing economies calls for an agreement that recognizes the common responsibility of all countries to commit to the reduction of emissions, including themselves, while not inhibiting the development of developing countries.

South Africa is implementing nationally appropriate mitigation actions, which will result in the reduction of emissions by 34% by 2020, and by 42% by 2025. We are also in the process of completing our White Paper on National Climate Change Response Policy, which will outline the country's leadership in response to climate change. ■

**“Adaptation and mitigation policies that fail to consider gender equity will be inefficient.”**



# On the road again – with a new roadmap

European Commissioner for Environment, **Janez Potočnik**, on why environmentalists and industry in Europe must work together to decouple growth from resource depletion.

During the 20th century, the world population grew by four times, and its economic output by 40 times. We increased our fossil fuel use by 16 times, our fishing catches by 35 times, and our water use by nine times. It was called the “great acceleration” – which fits nicely with this article’s motoring metaphor title.

One hundred years ago, when the world population was 1.5 billion, this growth path was fine. It gave us health, well-being, and wealth. But with a population of seven billion, it is not fine. Every day, 140,000 more people are sharing a planet which will stay the same size. As we don’t have another planet, we have no choice but to use the resources on this one more efficiently.

Resource efficiency is not a choice, it is inevitable. Our choice is whether to do it now, or wait until we are forced to do it, when critical resources are exhausted and expensive. To go back to the motoring metaphor, if we want to continue to accelerate, we need to change roads or we are going to start driving straight into some walls.

## Prices and costs

So, what should the new roadmap look like? Let’s look at what made us so competitive so far, and see how that is changing.

Europe is poor in mineral resources. We get 48% of our copper ore from abroad, 64% of our zinc and bauxite, and 78% of our nickel. We import all of our cobalt, platinum, titanium, and vanadium. As a highly import-dependent continent, you would expect that we would manage our resources efficiently. The reason we don’t is because their prices have actually been decreasing in real terms for the last 150 years, excepting occasional wars and oil crises.

At the same time, labour costs continued to rise. To remain competitive, we had to use all our ingenuity to match these increased costs with massive increases in labour productivity – increasing it about 20 times in the same 150 years. This mutually reinforcing increase in costs and productivity fuelled the engine of our technological progress.

## Ingenuity and innovation

The mega-trend today is the end of perpetually cheaper resources. With material costs making up more than 40% of total costs in manufacturing industries, compared to less than 20% for labour, it is clear that we need to apply the same ingenuity and innovation to improving our resource productivity now, as we did to improving our labour productivity in the past.



In a resource-constrained world, our resource poverty means that the old cycle of extract-use-throw away, extract-use-throw away, will only lead to further dependency on external sources and vulnerability to price hikes.

This is the message that leaps out at me from reading the background papers. It is the message that leaps out from the industrial policy of Japan and Korea. It is the message that leaps out from the latest Chinese five-year plan.

### Locked-in

Our challenge is that, after a few centuries of resource-intensive growth, we are “locked-in” to resource-inefficient infrastructures, resource-inefficient economic and financial systems, resource-inefficient business models, and resource-inefficient behaviour. This is a problem that is not faced by the BRICs, which are able to quickly change direction in response to resource constraints. If we in Europe are to remain competitive in this new paradigm, we will have to achieve a major structural transformation.

There will be no growth if it is not green growth. That is why environmentalists and industry must move away from their old polemics and work in partnership. Environment policy cannot just be about punishing polluters. We must build it into the very way we produce and consume.

If we are able to do this, we will start to see environment policy not as a constraint on competitiveness, but rather as essential to ensuring our future competitiveness. Or to look at it another way, we are not protecting the environment from business, so much as using business to protect the environment.

### Resourcefulness

I remain optimistic, because one resource that we have in plentiful supply in Europe is resourcefulness itself. The power of our ideas and creativity gives us a comparative advantage for future growth. There is a huge margin for increasing the efficiency of our resource use through innovation:

- Turning coal into light is still only 3% efficient;
- Only 15% of the energy you put in your petrol tank is used to actually move your car down the road;
- 80% of what we produce is used once then discarded;
- 80% of the world's resources are used by 20% of its population; and
- Only 1% of the valuable rare earth metals that we use in products are recycled at the end

of the product's life.

By being the first to tackle these inefficiencies, we will get first-mover advantage in global markets for our technologies.

But innovation is not enough. As an economist, I learned that the first rule of competitiveness is the rational allocation of resources, and in our markets we use prices to do that. But how can we be expected to be rational and efficient, if the prices bear little relation to the value of those resources? Most raw materials are traded and managed pretty well, but we will never manage other valuable resources such as water or forests properly as long as there is no incentive to do so. We have to use market-based instruments to provide those incentives.

### Hard to swallow

Here we reach the more difficult aspect of the relationship between resource efficiency and competitiveness in Europe. I will not hide the fact that the relative prices of some resources will need to increase. Nor will I hide the fact that our levels of consumption will need to be reduced. These messages are not easy for industry to swallow, so let me tackle them head on.

First, it may seem counter-intuitive to suggest that increasing prices of some inputs can make us more competitive, but that is because we take a short-term perspective. Not only will getting prices right mean we manage resources better, it will mean we manage them sustainably and avoid hitting those walls I mentioned earlier. We should not kid ourselves that we can go on relying on cheap resources; we need to provide the right pricing signals in a predictable way that gives industry the time to invest in ensuring that resource productivity keeps pace with resource costs.

Second, when we talk about reduced consumption, what we are actually saying is less “stuff”, but that does not mean less profit. We need to develop smarter products that do the same with fewer resources. And we need to sell the associated services. We need new business models that encourage greater value added,

and more life-cycle thinking, such as chemical leasing. And we need to develop the financing tools and the skills to ensure that there are no bottlenecks to developing these approaches.

### Get together

I want the European Commission's ‘Roadmap for a resource-efficient Europe’ to be seen as a partnership of old adversaries. Just as the 2009 climate and energy package of legislation to reduce CO<sub>2</sub> emissions from new cars and transport fuels brought together the two sides of the argument who together could actually make things happen, I want environment and industry to get together to recognize that the environment and the economy must coexist and depend on each other.

Antonio Tajani, European Commissioner for Industry and Entrepreneurship, and I are already on the same wavelength, but achieving our ambition of decoupling Europe's growth from resource depletion requires more than we have in our Brussels toolkits. We need national action, and we need the private sector on board.

Europe's industry ministers will be a central part of achieving resource efficient growth and I look forward to working with them to make sure that...doing more with less becomes our comparative advantage in the 21st century. ■



Janez Potočník, speaking at a press conference on the Roadmap towards resource-efficient growth in Europe, September 2011.

**“Industry ministers, we don’t have another planet, so we have no choice but to use more efficiently the resources on this one.”**

Shea butter-producing women's group receiving training, Mali.

Photo: UNIDO



# Gender-sensitive industrial development

By the Gender Mainstreaming Steering Committee of the UN Industrial Development Organization (UNIDO)

UNIDO's mandate focuses on promoting industrial development for poverty reduction, inclusive globalization, and environmental sustainability. This cannot be achieved without taking into account the full economic potential of women. We believe that expanding economic opportunities for women should be central to all development responses and



policies, with a focus on gender-sensitive employment creation, the provision of productive resources, such as finance, market-information, technology, skills and sustainable energy, and simultaneous investment in care services that reduces the burden on women's unpaid domestic and care work. UNIDO therefore pursues the goal of the economic empowerment of women through gender-sensitive industrial development policy advice, technical cooperation programmes, and organizational strategies, in conjunction with full gender mainstreaming at the institutional level.

In our policy advice and technical cooperation programmes, we primarily focus on transferring skills and technologies to assist women in entering the labour market, both in formal and self-employment. UNIDO has accumulated over 30 years of expertise in women's entrepreneurship development, using various tools and mechanisms such as capacity-building at policy, institutional and enterprise levels; creating an enabling environment for women entrepreneurs by strengthening business support services; and helping women entrepreneurs gain access to productive and financial resources. We also organize women entrepreneurs into clusters to facilitate their collective access to raw materials, information, technology, and markets.

For example, one of UNIDO's ongoing projects in the southern part of Mali, one of the poorest regions in Africa, is building the capacity of women's groups to produce shea products. Shea butter is a product that is very popular in cosmetic products due to its considerable health and beauty benefits. How are we helping these women's groups to capitalize on this demand? By introducing them to appropriate technologies that increase their productivity; raising awareness and providing training on quality control

**“Investing in gender-sensitive industrial development has a multiplier effect on productivity, efficiency and sustained economic growth, as well as strengthening women's rights.”**

systems, product certification and marketing; and linking them to international markets where they can sell their products.

In the northern region of Morocco, UNIDO has developed an entrepreneurship programme to improve the income opportunities of the rural population, while enhancing the competitiveness of small-scale olive oil producing, textiles, and fruit and vegetable-drying groups managed by women. The women participating in the

programme have experienced a 40% increase in productivity and a 50% increase in earnings. In addition, a strong network of local support institutions in production technology, business management, and marketing has been established. As a result, the women entrepreneurs are better organized, make better use of local raw materials, and sell their products locally and internationally. Furthermore, and while respecting cultural values, the project has also helped to economically empower rural women: they now create wealth and employ others, and their standing within their families and communities has improved.

Education, both formal and non-formal, is necessary if we want women and girls to have access to decent work and be able to improve their standards of living. UNIDO assists developing countries in addressing the discriminatory attitudes and gender stereotypes in the education system, by promoting education and skills acquisition for industrial development through the Entrepreneurship Curriculum Programme. The programme delivers practical hands-on entrepreneurship courses to young boys and girls in secondary and vocational schools. Within these courses, girls are encouraged to take non-traditional entrepreneurial initiatives that challenge the stereotypes of society and develop a positive attitude towards entrepreneurship, business, and self-employment. The project was launched in 2001 in Uganda, and has expanded to several other countries. In the period 2006-2009, the courses were delivered in a total of 1,397 schools, reaching out to more than 416,000 students.

Women, particularly in rural areas, spend a significant proportion of their day engaged in fuel collecting activities, often having to travel long distances. In such endeavours they become exposed to potential risks of violence, rape and



► abuse. The availability of modern, off-grid energy sources would greatly ease this domestic burden and allow them to pursue education, economic and other opportunities. It would also reduce their exposure to harmful fumes, and provide them with the necessary energy to develop rural and cottage industries. In addition to technical cooperation programmes delivering decentralized energy solutions in rural areas, UNIDO, together with our partners in UN-Energy and the Secretary General's High-level Group on Sustainable Energy for All, is therefore working actively at the global level to raise awareness of the crucial role of energy access for sustainable development and women's economic empowerment.

UNIDO is at the forefront of efforts to promote sustainable industrial development through its Green Industry Initiative. The aim is to achieve resource-efficient and low-carbon industrial production, by ensuring that industries around the world adopt cleaner production methods, techniques and policies. This also applies to micro-industries in rural areas, where women are heavily involved. UNIDO promotes the transfer of cleaner production methods and solutions that can substitute for traditional approaches, thereby reducing the emission of greenhouse gases, and improving the livelihoods of women and their communities.

These are only a few practical examples of how investing in gender-sensitive industrial development has a multiplier effect on productivity, efficiency and sustained economic growth, as well as strengthening women's rights. Empowering women yields the highest returns of all development investment, and UNIDO will continue to invest in women and girls and ensure they are mainstreamed and benefit from industrial development activities. ■

# Measuring women's economic empowerment

By **GILLIAN GAYNAIR**, writer and editor for the International Centre for Research on Women

Women's economic empowerment is critical for reducing poverty and achieving broader health and development objectives. However, there is limited evidence on how programmes can economically empower women and which measures can be used to know whether programmes are effective.

No single programme can address every underlying influence in the process to economically advance women. Instead, those working in global economic development should choose an area within the process where they can make the most difference – and measure its impact, according to a paper by the International Center for Research on Women (ICRW).

The brief paper defines women's economic empowerment and provides a framework developed by ICRW to guide the design, implementation and evaluation of economic advancement programmes. The framework is built on concepts that ICRW experts gathered from existing literature and from their experience of integrating economic empowerment for women into programmes and evaluating it.

“An increasing number of governments, corporations and donor organizations recognize that women's involvement in the global marketplace is critical to alleviating poverty,” said Anne Golla, a senior economist and evaluation specialist at ICRW. “But it became clear to us that many are unsure how to determine whether their work – and investments – is indeed economically empowering women.”

“We believe ICRW's framework will help provide some guidance to practitioners, donors and other researchers working on the issue,” she said.

However, Golla stressed that for a woman living in impoverished conditions to arrive at a point where she is armed with the ability to make her own financial decisions and succeed economically, is a complex, multidimensional process. “There is no ‘one-size-fits-all’ approach to ensure the success of programmes that focus on and want to measure women's

“No single programme can address every underlying influence in the process to economically advance women.”

economic empowerment,” she said. “It depends on the context in which you’re working and which underlying factors that contribute to women’s empowerment you’re trying to address.”

Those factors vary, according to ICRW’s paper. They can include the resources available to help a woman prosper, such as skills training and loans, to the institutions that determine how those resources reach her, such as legal bodies. Each influences a woman’s path to economic empowerment.

The key to creating meaningful economic empowerment programs is to select a slice of this complex economic empowerment process where the most impact can be made – given the project timeframe and funding – and concentrate on that. ICRW also recommends that the project’s evaluation should align with the particular slice it chooses to address.

To provide more guidance, ICRW offers within its measurement framework several examples of indicators of success, not only at the individual and household level but at the community and institutional level, too.

“Measuring women’s economic empowerment is akin to measuring outcomes for poverty reduction,” noted Anju Malhotra, ICRW’s vice president of research, innovation and impact and a co-author of the paper. “It’s a complex process but it can and should be measured.”

● *Understanding and Measuring Women’s Economic Empowerment* was published by the ICRW in October 2011.



# Solutions to the gender pay gap

By Soroptimist International of the Americas

Despite decades of anti-discrimination laws and changes in the policies of companies and businesses worldwide, women are still not earning as much as men do in the workplace. As such, a gender pay gap exists across the globe. It is a complex problem calling for multi-level solutions. Some of these measures include:

### Education

One of the most important strategies for ensuring that girls and boys will have equal income-earning opportunities as adults is to give them equal access to education. Also needed is promotion of careers in science, technology, engineering and mathematics in ways that appeal to women and girls, as well as encouraging girls to take advanced courses in mathematics. In addition, increasing resources for non-traditional skills training and improving access to vocational training – especially for single mothers – is critical. Also important is providing information to girls and young women still in school about career options, as too many have been discouraged from pursuing higher education and/or job training for occupations not traditionally held by women.

Girls and women, however, should feel free to study for careers in teaching, nursing and care-giving, and other so-called “pink ghetto” jobs, and not view this

work as demeaning or insignificant. Jobs do not need to be defined as successful “solely in terms of the money, prestige and obvious power available in some traditionally male jobs.” A world with nurses and teachers is equally as important as a world with lawyers and accountants. These jobs need to be financially remunerated and valued according to the work itself and not according to gender.

While women and girls in developed nations have made great strides with education, sometimes surpassing men, school curricula in developing countries need to be free of gender biases. As such, governments, parents and international donors “must work together to ensure that schools are girl-friendly.” This includes, among other measures, ensuring there are schools near girls’ homes (to mitigate long and dangerous commutes) and making school facilities safe from gender-based violence.

### Supporting working families

Long work hours have a disproportionate impact on women because they are still the main care providers, “thus reducing their options as to whether they work, where they work and in what types of jobs they

work.” As such, governments, industry and businesses need to create more family-friendly workplaces and workplace policies. The issue is critical as it impacts women’s earnings, and as such, workplaces need to consider more flexible hours; provide parental leave and paid leaves of absence for sickness and family care; offer affordable, high-quality childcare arrangements; and encourage the development of more part-time jobs that pay well and also have good benefits. Not only are such policies/benefits good for working mothers, but they also benefit businesses that need to attract a female workforce if they want to survive the retirement of large numbers of “baby boomers.”

In addition, if working mothers earned as much as men, their income would increase by 17% and their poverty rate would halve from 25.3% to 12.6%. Also needed are supports for women-headed households. “Families headed by single mothers who face discrimination and lower earnings in the labour market are much more likely to live in poverty.” Therefore, these women need improved childcare support and access to vocational training.

While many businesses provide family-friendly environments, the culture of that organization may still foster backlash, guilt and discrimination. Some women workers feel that organizations pay lip service to family-friendly policies, but there remains an unspoken feeling that employees who use these policies are not as committed to the organization. Others have stated that while employers offer balanced work/personal policies on paper, employees often find it difficult to take advantage of these policies in reality.

### Better data and analysis

Although there are sufficient studies to show that women tend to work more and

“Governments, industry and businesses need to create more family-friendly workplaces and workplace policies.”



A domestic worker,  
Bangalore, India.



Photo: © International Labour Organization/Dutta B.

earn less than men, more detailed analyses of the issue are needed. Governments need to collect and share reliable national earnings data from which the respective national gender pay gaps can be calculated and compared. This would allow the “identification of possible ways of dealing with the problem in a targeted manner and to identify possible improvements to existing legal frameworks likely to lead to a significant reduction in the pay gap.”

#### Training women to ask for more pay

Women need to assume that most things in their lives are negotiable, and that they

don't have to accept the status quo as rigid and settle for what they're offered. “This one mental adjustment can produce extraordinary results for women.” In addition to thinking of the world as a more negotiable place, women can begin thinking differently about negotiation – seeing it as an opportunity to benefit everyone involved rather than as an aggressive or adversarial act. “In this way, they can reframe their negotiations in ways that make them feel more comfortable with the whole process.”

Today's younger generation of women, may be more comfortable with discussing

their salaries and their earning power as a whole, and as such, may negotiate for better salaries. For these women, salary information is openly discussed, at least among friends. Several workers under 25 said that “greater salary transparency among friends only makes sense in an age when so much information is freely available online.” Such sharing of salary information helps women to know when to push for a raise, when to start looking for another job or when it might be necessary to pursue legal action.

● Extract from the Soroptimist white paper: *The Gender Wage Gap*

# Ushering in a hydrogen economy

Looking ahead to the next issue that focuses on the coming Industrial Revolution, *Making It* interviewed **DR. MUSTAFA HATİPOĞLU**, who is managing director of the International Centre for Hydrogen Energy Technologies (ICHET), a UNIDO project supported by the Turkish Ministry of Energy and Natural Resources.

**A hydrogen economy – a system of delivering energy using hydrogen – is proposed as a solution to some of the negative effects of using hydrocarbon fuels. What might a hydrogen economy look like in practice?**

Currently, the world relies heavily on fossil fuel products to provide a considerable proportion of our present energy needs. A hydrogen economy would mean using hydrogen at every instance where fossil fuels are used. Hydrogen is a gas that can be burned in a manner similar to natural gas or it can be used to produce electricity using a device called a fuel cell. It is possible to be used as a direct replacement for petroleum products in internal combustion engines, heating appliances, and similar applications. As an elemental gas, it does not contain carbon and its combustion cannot release carbon products into the atmosphere, rendering its use totally clean.

Hydrogen is found, bound with oxygen in water, or with carbon in methane and other compounds. In order to release the hydrogen, we have to supply energy obtained from other sources. Thus, it

cannot be considered to be a primary source of energy, but more of an energy vector or carrier.

The benefits of using renewable energy sources, such as sun, wind, geothermal, hydroelectric, or tides, are well known. However, a problem shared by many renewable energy sources is that they are intermittent, meaning that they are only available at certain times. For example, solar energy is only available during the day, wind energy cannot be extracted during periods of calm, and hydropower is only available when streams are in full spate. This means that for an electricity grid to be able to meet peak demand there needs to be some form of storage of the power derived from intermittent sources, to smooth over the periods when these sources are not productive. Hydrogen is an excellent method of providing such storage. During times when there excess electricity is being produced, it can be converted to hydrogen through water electrolysis; and conversely, at times of peak demand, the stored hydrogen can be converted back to electricity. Since every region of each country has its share of

**“The clean hydrogen technology era is coming – climate change, the depletion of fossil fuels, and the issue of countries’ energy security make it inevitable.”**

Dr. Mustafa Hatipoğlu demonstrating ICHET’s H<sub>2</sub> Ecocart at the Hydrogen and Fuel Cell Exhibition in Hanover, Germany.



Photo: ICHET

renewable resources, energy would be produced and used locally, rather than being imported and distributed.

**One of the main aspects of a hydrogen economy is the widespread use of hydrogen fuel cell vehicles. How do these vehicles work?**

Fuel cells consist of sets of membranes, or solid electrolytes, sandwiched between gas inlets for hydrogen on one side, and oxygen or air on the other. When hydrogen gas comes into contact with the electrolyte plate, electrons are stripped of hydrogen atoms and the positively charged protons migrate through the electrolyte until they combine with oxygen molecules on the opposite surface to form water vapour. The stripped electrons form an electric current as they travel through an external circuit. The more gas that is applied, the more electrons flow, and the larger the current.

Fuel cells can be used instead of batteries in electric cars and other vehicles. The time needed to recharge a battery pack will typically be up to eight hours, whereas it

takes just matter of minutes to fill a tank with compressed hydrogen gas. Battery vehicles typically have ranges around 130km, whereas recent fuel cell vehicles can manage 500-800 km. Conversely, fuel cells are more expensive to purchase and have lower energy conversion efficiencies than batteries.

**Could you summarize the state of the worldwide drive to increase the use of hydrogen fuel cell vehicles?**

Currently, almost every major international automotive manufacturer is developing a hydrogen-fueled vehicle, either around a modified internal combustion engine or a fuel cell configuration. Similarly, almost every major petrol company is diversifying into renewable energies, with hydrogen playing a major role. Thus, there will be automotive companies able to supply vehicles, and fuel companies able to supply fuel. The trick will be to get both in adequate numbers. We expect to soon see vehicles being deployed in California and parts of Germany where the infrastructure will exist. There will also be hydrogen filling points in a number of cities outside these regions. This will form a nucleus that may allow the infrastructure to spread. If the political will is in place to provide incentives of various kinds for the use of hydrogen-based systems, there will always be entrepreneurs ready and willing to exploit possible new products and concepts. Thus, the key area is the recognition by national governments that the introduction of cleaner transportation technologies requires their considerable support and collaboration.

Today, the world is concentrating on electric battery cars rather than hydrogen fuel cell vehicles because they are cheaper, but this will change once the public becomes aware of the

limitations of electric battery vehicles due to their short driving ranges and long charging times. The need for continuous and longer driving ranges will promote the implementation of hydrogen fuel cell vehicles and their infrastructure. The implementation date of 2015 may shift to 2020 or a little later, but in any case the clean hydrogen technology era is coming – climate change, the depletion of fossil fuels, and the issue of countries' energy security make it inevitable.

**Is the hydrogen economy just something for the rich countries to develop, or does the concept have something to offer developing countries too?**

Hydrogen-based technologies are certainly not cheap in comparison with the current costs of fossil fuels. However, as petrol prices rise, either through increased competition from developing countries or by the slow but inexorable depletion of resources, there will come a time when the costs of conventional and unconventional energy technologies become more equal, and the advantages of being clean and renewable will be yet more attractive. At that time, hydrogen will be a must for all countries, not only the developed and industrialized ones. Many developing countries, such as China, India, Malaysia, South Africa, and Turkey, already have developed, or are developing, hydrogen programmes, and they can be expected to embrace the hydrogen economy. It may well turn out that these countries will be able to export energy as hydrogen to the industrialized North. Already, schemes are being considered to export energy derived from the enormous wind potential of the Atlantic coastline of Morocco and Mauritania, possibly by transporting hydrogen by pipeline to Europe. ■

## FURTHER READING

- Azim, Firdous and Sultan, Maheen (eds) – Mapping Women's Empowerment: Experiences from Bangladesh, India and Pakistan  
 Edigheji, Omano – Constructing a democratic developmental state in South Africa: Potentials and challenges  
 Eisenstein, Heather – Feminism Seduced: How Global Elites Use Women's Labour and Ideas to Exploit the World  
 Iversen, Torben and Rosenbluth, Frances – Women, Work, and Politics: The Political Economy of Gender Inequality  
 Jacka, Tamara and Sargeson, Sally (eds) – Women, Gender and Development in Rural China  
 Kristof, Nicholas and Wu Dunn, Sheryl – Half the Sky: Turning Oppression into Opportunity for Women Worldwide  
 Marais, Hein – South Africa Pushed to the Limit: The Political Economy of Change  
 Pearson, Ruth and Sweetman, Caroline – Gender and the Economic Crisis  
 Polak, Paul – Out of Poverty: What Works When Traditional Approaches Fail  
 Shiva, Vandana – Staying Alive. Women, Ecology and Development  
 Visvanathan, Nalini, Duggan, Lynn et al. (eds) – The Women, Gender and Development Reader  
 World Bank – 2012 World Development Report on Gender Equality and Development

## FURTHER SURFING

- <http://wiego.org> – Women in Informal Employment: Globalizing and Organizing is a global action-research-policy network that seeks to improve the status of the working poor, especially women, in the informal economy.  
<http://womenatthetop.ft.com> – Financial Times blog about women's advancement, fairness and equality in the business arena, and the world's most prominent women in business.  
[www.awid.org](http://www.awid.org) – The Association for Women's Rights in Development is an international, feminist, membership organization committed to achieving gender equality, sustainable development and women's human rights.  
[www.icrw.org](http://www.icrw.org) – The International Centre for Research on Women works to make women in developing countries an integral part of alleviating global poverty.  
[www.learningpartnership.org](http://www.learningpartnership.org) – Women's Learning Partnership is an international non-governmental organization dedicated to women's leadership and empowerment.  
[www.pathwaysofempowerment.org](http://www.pathwaysofempowerment.org) – An international research and communications programme linking academics with activists and practitioners to find out what works to enhance women's empowerment.  
[www.thewip.net](http://www.thewip.net) – The Women's International Perspective reports news, world opinion, and commentary.  
[www.un.org/womenwatch](http://www.un.org/womenwatch) – Central gateway to information and resources on the promotion of gender equality and the empowerment of women throughout the United Nations system.  
[www.womenofchina.cn](http://www.womenofchina.cn) – All-China Women's Federation works to unite and mobilize women to take part in China's reform, opening-up, and socialist modernization programmes, and to promote scientific development and social harmony.



# MakingIt

Industry for Development

A quarterly magazine to  
stimulate debate about global  
industrial development issues



partner for prosperity